

GLYCOSURIA.

A STUDY OF 700 CASES.

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The object of the present work is to consider individually and collectively a large group of Glycosurias and, if possible, to eliminate such errors and defects as may exist in standard teaching. From September 1939 until February 1941, seven hundred men between the ages of seventeen and fifty five years were referred by Medical Boards for blood sugar investigation because of the discovery of glycosuria in the course of routine examination. The glycosuria was found for the first time in six hundred and eighty five. It had been discovered previously in fifteen, three of whom had sought medical advice because of symptoms suggestive of Diabetes Mellitus, the remaining twelve being discovered during examination for life insurance or in the investigation of a past illness.

The blood sugar and urinary examination was carried out by the author who as the result of previous hospital experience was familiar with the technique of blood sugar investigation and the standard classification of blood sugar readings. It soon became evident that hitherto unsuspected technical difficulties were apt to arise and some blood sugar readings did not fall into the standard types. Furthermore, reference to authorities showed divergence of views both with regard to etiology and prognosis, even in the standard types. Decisions had to be made in the light of personal experiences and the present work is a record of these together with the

conclusions drawn from them. Since the non-diabetic types of glycosuria were the chief source of difficulty, consideration of these forms the main part of the thesis. Before dealing with the results and discussing the conclusions which might be drawn from them, it would perhaps clarify matters if the position with regard to non-diabetic glycosuria prior to this investigation was considered historically .

in a small percentage of individuals and non-diabetic types due to a variety of causes, and can be divided into two main groups:-

1. Glycosuria associated with hyperglycaemia.
2. Glycosuria without hyperglycaemia.

The normal person has a very high tolerance for glucose. Taylor and Hulten (1915) and later Hulten (1921) found that it is extremely difficult to produce glycosuria in a normal individual by feeding large quantities of glucose.

CHAPTER II.

Bennett and Dodds (1925) found that a normal person could tolerate 500 gm. of glucose without producing glycosuria.

HISTORICAL REVIEW.

- (a) with 100-200 gm. of glucose no glycosuria appears.
- (b) with 300-500 gm. of glucose a very slight glycosuria but the amount does not reach the renal threshold.
- (c) with 600 gm. and over the limits of tolerance are reached and nausea and sickness develop which prevents the determination of the renal threshold.

The slight glycosuria produced by 300-500 gm. of glucose would appear to be due to a slight rise in the renal threshold since the blood sugar is not raised.

Lawrence (1921) was the first to show that the renal threshold is not a fixed value but varies with the amount of glucose in the blood. He found that the renal threshold is raised in the case of diabetes mellitus.

explain the glycosuria, for glucose in large quantities has a diuretic action.

I. GLYCOSURIA ASSOCIATED WITH HYPERGLYCAEMIA.

Etiology.

The etiology of non-diabetic hyperglycaemic glycosuria is not yet clearly defined and in a large number of cases no definite cause can be ascertained.

A. Nervous.

Glycosuria can be produced by stimulation of the nerve centres in the hypothalamic region of the brain. To this type belongs the experimental glycosuria produced by the piquère diabétique of Claude Bernard when he "needle-punctured" the floor of the fourth ventricle of dogs. Analogous to this is the glycosuria which may accompany pathological conditions such as brain tumour, cerebral haemorrhage and fractured skull where increased intracranial pressure or local irritation of nerve centres may stimulate the hypothalamic region. According to most authorities the stimulation passes along the splanchnic nerves to the suprarenals and liver, sets free adrenalin and causes glycogenolysis, but Dunlop^(c) states "Russel Brain has shown that glycosuria without hyperglycaemia, apparently identical to low renal threshold glycosuria may follow certain hypothalamic lesions."

B. Endocrine.

Endocrine upset (other than that of the pancreas) is frequently associated with diminished glucose tolerance.

Joslin and Lahey ⁽⁷⁾ (1928) found that glycosuria was present in secondary hyperthyroidism almost twice as often and in primary hyperthyroidism almost three times as often as in a control group of cases. Andersen ⁽⁸⁾ (1933) found that patients with Exophthalmic Goitre had a general increase in the height and length of the blood sugar curves. Wilder ⁽⁹⁾ (1926) stressed the action of hyperthyroidism in lowering sugar tolerance but was very doubtful if it ever precipitated Diabetes except in a patient who had already latent Diabetes.

More complex is the relationship between hyper-pituitarism and sugar tolerance. In 1927 Cushing and Davidoff ⁽¹⁰⁾ reported 25% of 100 cases of Acromegaly with glycosuria. In 1927 Colwell ⁽¹¹⁾ reviewed the literature and found 40% of reported Acromegalics had glycosuria and half of these had symptoms of Diabetes. Coggeshall and Root ⁽¹²⁾ (1940) reported 36% of 153 cases of Acromegaly with glycosuria and 17% of them with Diabetes. The anterior pituitary hormone is closely related to the action of insulin and the previous figures are sufficient to indicate that the pituitary gland is not only instrumental in affecting sugar tolerance but can by hypersecretion produce true diabetes.

C. Emotion.

A cause of transient hyperglycaemia and glycosuria is emotional upset which acts as a stimulant for excess secretion of adrenaline. Blum⁽¹³⁾ (1901) discovered that the parenteral administration of adrenaline raised the blood sugar level by mobilising hepatic glycogen. Folin, Denis and Smillie⁽¹⁴⁾ (1914) found 18% of 33 apparently normal students had transient glycosuria after an important examination. Cannon and his colleagues⁽¹⁵⁾ (1929) in their experiments on bodily changes in pain, hunger, fear and rage found that any stimulus which resulted in excess secretion of adrenaline raised the blood sugar level. Cannon and Fiske⁽¹⁶⁾ (1929) discovered sugar in the urine of members of a football team who were acting as substitutes and had not played showing that the glycosuria was due to emotional and not to physical stress.

D. Carbohydrate Starvation.

Carbohydrate starvation is another cause of diminished sugar tolerance. In 1889 Hofmeister⁽¹⁷⁾ produced glycosuria in starving dogs by giving them a carbohydrate meal and this he termed Hunger Diabetes. Since then this has been confirmed by many workers, among them Bang⁽¹⁸⁾ (1913), Staub⁽¹⁹⁾ (1922), Himsworth⁽²⁰⁾ (1924), Goldblatt⁽²¹⁾ (1925), Du Vigneaud and Karr⁽²²⁾ (1925), Sweeney⁽²³⁾ (1927) and Malmos⁽²⁴⁾ (1928). They found that the glucose tolerance

is decreased by carbohydrate starvation, and if patients were starved of carbohydrate or kept on a very low carbohydrate diet prior to a glucose tolerance test the blood sugar rose higher and had a delayed fall to normal and in some cases resembled the diabetic type. When a normal diet was resumed the glucose tolerance curves became normal. In 1940 Conn⁽²⁵⁾ reviewed these results and advised a standard preparatory diet of 300 gm. carbohydrate and 80 gm. protein for at least three days before a glucose tolerance test is done.

E. Infection.

Infections lower the tolerance to Glucose. The term Saproaemic glycosuria was introduced by Higgenson⁽²⁶⁾ to describe glycosuria which accompanies tonic and infectious diseases in non-diabetic persons. According to Cammidge⁽²⁷⁾, the reducing substance which not infrequently appears in the urine in furniculosis is glycureonic acid, pseudolaevulose or pentose more often than dextrose and when dextrose appears he is inclined to regard the patient as a potential diabetic. Williams⁽²⁸⁾ and Dick (1932) found that 41% of 108 patients with acute infections had glycosuria after being given 100 gm. glucose in the case of adults and 1 gm. per pound body weight in the case of children.

F. Hepatic.

Hyperglycaemia and glycosuria are sometimes associated with chronic liver disease and Joslin⁽²⁹⁾ thinks this is most probably due to impairment of normal processes of glycogenesis and glycogenolysis.

Carcinoma, Kidney disease and hypertension are sometimes associated with slight glycosuria.

G. Doubtful Etiology.

Outnumbering by far these which have at least a partial etiology, there still remains a group with no satisfactory explanation for the hyperglycaemia. The individuals are apparently healthy but have reduced tolerance to glucose. The fasting blood sugar level is normal but after the intake of glucose the blood sugar rises quickly to a level above the renal threshold with accompanying glycosuria and falls to normal within two hours. When carbohydrate has been taken in a more complex form the rate of rise and fall of the blood sugar varies with the rate of absorption and assimilation of the food. This condition has been called Alimentary Glycosuria since it is related to the ingestion of carbohydrate. In 1922 MacLean⁽³⁰⁾ gave the name Lag Curve to this and attributed the transient hyperglycaemia following the administration of glucose to a delayed action of the glucose storage mechanism. In 1936 Lawrence⁽³¹⁾ offered another

explanation. He noted a large percentage of cases developed glycosuria after an operation for gastroenterostomy and also a greater frequency of it in cases with quickly emptying stomachs e.g. some cases of Duodenal Ulcer and of Diarrhoea. On this he based his theory that the hyperglycaemia and resulting glycosuria were caused by rapid absorption of glucose from the bowel and flooding of the liver with more than it could deal with at the time, and he stated that rapid absorption was probably the cause of all cases of alimentary glycosuria.

Symptoms.

Very few references exist about detailed investigation of symptoms occurring in this type of glycosuria. It is generally accepted as symptomless but in 1933 Murray-Lyon⁽³²⁾ reported symptoms of Diabetes in 66% of 224 cases of non-diabetic glycosuria but the exact type of glycosuria was not specified.

Prognosis.

There is general hesitancy about making a prognosis in non-diabetic hyperglycaemic glycosuria. MacLean⁽³³⁾ states that "it is impossible to say with certainty what the condition indicates but on the whole it would seem to be of little importance. Generally speaking it is probable, that in the great majority of cases the 'lag' curves do not indicate a potential

diabetic condition". Most insurance companies, however will not accept alimentary glycosuria for life insurance. Marble, (34) Joslin, Dublin and Marks found that of a series of 2046 cases which were classified as non-diabetic glycosurias between 1900 and 1935, 9.9% were reclassified as Diabetics in 1937 (on an average 9 years later over all) a much higher incidence than in the population at large. The features favouring the onset of diabetes were:-

- (a) advancing years.
- (b) Overweight.
- (c) A blood sugar value above normal although below the diabetic level.
- (d) in the younger cases a family history of Diabetes.

(35)

Wilder states that the prognosis is less favourable than in the renal type of glycosuria. The above findings suggest a need for caution in prognosis in the so called alimentary glycosuria especially where there is a family history of diabetes.

2. GLYCOSURIA WITHOUT HYPERGLYCAEMIA.

Glycosuria without hyperglycaemia is designated Renal Glycosuria, Diabetes Innocens or Normoglycaemic Glycosuria. Difference of opinion exists as to what constitutes true renal glycosuria. (36) MacLean and (37) Lawrence accept glycosuria with the blood

sugar at or below 0.18 gm.% as renal in type. Wilder divides⁽³⁸⁾ it into two sub-types - the first where the renal threshold for sugar is very low and glycosuria is persistent and the second where the renal threshold is higher and glycosuria appears only after food - this latter he calls Cyclical renal glycosuria.

Joslin⁽³⁹⁾ classifies as true renal glycosuria only those with normal blood sugar and persistent glycosuria no matter when the urine is examined and he regards the others as examples of storage defect glycosuria with renal threshold for glucose a little below the average.

Etiology.

A. Nervous.

According to Dunlop⁽⁴⁰⁾ "Russel Brain has shown that glycosuria without hyperglycaemia apparently identical to low renal Threshold glycosuria, may follow certain hypothalamic lesions"

B. Pregnancy.

Renal glycosuria sometimes appears during pregnancy.

C. Phloridzin Poisoning.

Poisoning by phloridzin can produce renal glycosuria.

D. Idiopathic.

Most commonly renal glycosuria is idiopathic. It may show a familial tendency. Brown and Poleshuck⁽⁴¹⁾ have reported four cases occurring in three generations of one family.

Falta⁽⁴¹⁾ mentions a family in which six of seven children

had renal glycosuria and also quotes the family reported by Brutsch and Dresel in which thirteen of fifty five descendants had renal glycosuria. Hjarne⁽⁴²⁾ reported thirty three of one hundred and ninety nine blood relations with renal glycosuria. Powelson and Wilder⁽⁴³⁾ obtained a family history of benign glycosuria in twenty three of eighty two patients with renal glycosuria but they make no mention of the numbers in each family nor of the types of benign glycosuria.

Symptoms.

The condition is usually reported to be symptomless, but Joslin⁽⁴⁴⁾ states that some patients complain of lassitude and reduced capacity for work, and Crawford⁽⁴⁵⁾ reported six Renal Glycosurias four of whom sought medical advice because of symptoms of functional nervous disorder.

Prognosis.

Joslin⁽⁴⁶⁾ thinks that a careful follow up of cases might show a tendency for the renal threshold to rise with age but there is no confirmation of this in the literature.

In association with pregnancy and phloridzin poisoning renal glycosuria is transitory but the idiopathic type has been accepted as permanent by Lawrence⁽⁴⁷⁾, Wilder⁽⁴⁸⁾ and Joslin⁽⁴⁹⁾. The general opinion is that it is of no special significance. In their

series of 2046 cases of non-diabetic glycosuria, Marble, Joslin,
Dublin and Marks at first classified 2.3% as renal glycosuria
and after an interval of 9 years, on an average, none of them
had progressed to Diabetes. Powelson and Wilder reported 82
cases seen at the Mayo Clinic in 1931 and none had developed
Diabetes by 1940. Vegter and Bertram believe that it might
progress to true Diabetes.

CHAPTER III

PROCEDURE OF INVESTIGATION and CLASSIFICATION.

Procedure.

The tests were made as standard as possible. Cooperation on the part of the men was excellent. They were allowed a cup of tea without sugar and a biscuit or slice of toast not less than three hours before the test began. A sample of the fasting capillary blood and of the fast had been obtained for glucose estimation. They were given 10 gms of glucose dissolved in 100 ccs. of water and specimens of capillary blood and urine were collected at half hourly intervals for two hours.

CHAPTER III.

The best methods for glucose methods are the blood sugar or **PROCEDURE of INVESTIGATION and** the Shaffer method. **CLASSIFICATION.**

by the various methods of _____ the sugar of Folin and Jensen are only 10% higher than that of Jensen and 10% lower than that of Shaffer. Estimations of venous blood sugar give readings 10% lower than capillary and arterial blood, except in the cases where they are similar. It is advisable at all times to state whether they have been obtained from capillary or venous blood.

Remarks.

Procedure.

The tests were made as standard as possible and co-operation on the part of the men was excellent. They were allowed a cup of tea without sugar and a biscuit or small piece of toast not less than three hours before the test began. After a sample of the fasting capillary blood and of the fasting urine had been obtained for glucose estimation they were given 50 gm. of glucose dissolved in 150ccs. of water and specimens of the capillary blood and urine were collected at half hourly intervals for two hours. The blood sugar was estimated by the colorimetric micro-method of Folin and Wu.

The most generally recognised methods for estimation of blood sugar are those of Folin and Wu, Hagedorn and Jensen, and Shaffer-Hartman. According to Harrison⁽⁵⁴⁾, the results obtained by the various methods differ very little, the micro-method of Folin and Wu reading only .007 gm.% higher than that of Hagedorn and Jensen and .009 gm.% lower than that of Shaffer-Hartman. Estimations of venous blood sugar give readings 0.02 - 0.05 gm.% lower than capillary and arterial blood, except in the fasting state where they are similar. It is advisable at all times when giving readings to state whether they have been obtained from capillary or venous blood.

Technique.

The technique is simple and the method fairly accurate

but the final estimation is colorimetric and the examiner's estimation of matching of colours is not absolutely constant so that a series of readings has to be made and a mean test taken. Furthermore, when estimations are being made by different people a personal factor is noticeable, some tending to match a little higher and others a little lower.

To give readings to the third decimal place is overstraining the accuracy of the test. Difficulties with reagents are apt to occur.

My first difficulty was with the phosphomolybdate solution. When this reagent, made in the prescribed manner, is added to the previously boiled mixture of copper solution and blood filtrate a blue colour is produced and this colour retains its intensity for some hours. When one sample of the Phosphomolybdate Solution was used, the blue colour was fairly intense but faded to a very pale blue within seconds. The fading of the colours upset the ratio of standard to unknown and extremely high readings were obtained, these becoming higher the longer the matching was delayed.

The Alkaline Copper Solution also gave rise to difficulties. It was suspected that samples of this, made at different times by the same chemist, gave blues of different intensity in the solution to be matched, although each contained the same amount of sugar. Two such samples were tested against each other. Two blood sugar curves being done on

the same patient at the same time but different copper solutions being used for each. The curves were identical. The solutions in the "Standard" cups were then compared and one was of a deeper blue than the other although they were known to contain the same quantity of glucose. Therefore, the results can be relied upon only when the "unknown" and "standard" cup with which it is compared contain copper reagent from the same sample. In an emergency a supply was obtained from a different chemist. This had a greenish blue opalescence instead of the usual clear blue colour, the apparent explanation being that in its preparation the copper solution had been added to the mixture of Tartaric Acid in water before the latter had completely dissolved. Alkaline copper Solution becomes cloudy and precipitates on standing for some time. Harrison⁽⁵⁵⁾ recommends decanting and using the clear fluid. I preferred to discard the solution. It would appear that the accuracy of the blood sugar estimation is very much at the mercy of the chemist making up the reagents, and one must be on the lookout constantly for any deviation from the normal reaction. When a large number of estimations is being done and the solutions are being renewed frequently any variation is readily noted and can be checked but when the estimations are done infrequently fallacies may easily be overlooked.

The urinary sugar was not estimated quantitatively but Benedict's qualitative test was carried out and the results recorded as:-

Very slight green reduction.....	B.V.S.R.
Slight green reduction.....	B.S.R.
Moderate green reduction with yellow tinge.....	B.R.
Considerable yellow green reduction....	B.G.R.
Light brown reduction.....	+
Darker brown reduction.....	++
Very dark brown or red reduction.....	+++

...indicated (page 1) then gradually ...
 ...increased ...
 ...solved by reference to authorities. The first difficulty
 ...countered was to obtain a standard for differentiation
 ...Diabetes Mellitus and Simple Glycosuria. According to
 ...laid down by most authorities for the diagnosis of
 ...by blood sugar estimation, fully 3/4 of my cases
 ...identified. It seemed to me that this figure
 ...standard for simple glycosuria too strict
 ...and the greater ...
 ...

Classification.

The generally accepted essentials for a normal blood sugar curve with the 50 gm. glucose test are:-

1. A fasting blood sugar not exceeding 0.12 gm. %
 ⁽⁵⁶⁾ Joslin accepts the normal limits of fasting
 blood sugar as 0.07 to 0.12 gm. %. Wilder as ⁽⁵⁷⁾
 0.06 to 0.12 gm. %, Harrison as ⁽⁵⁸⁾ 0.08 to 0.12 gm. %
 and Dunlop ⁽⁵⁹⁾ gives the average figure as 0.08 gm. %.
2. The peak of the curve not exceeding 0.18 gm. % and
 occurring thirty to sixty minutes after the
 ingestion of glucose.
3. Return of the blood sugar to or below the fasting
 level within two hours.

I indicated (page 11) that problems in classification soon presented themselves and were increased rather than solved by reference to authorities. The first difficulty encountered was to obtain a standard for differentiation between Diabetes Mellitus and Simple Glycosuria. According to the criteria laid down by most authorities for the diagnosis of Diabetes by blood sugar estimation, fully 30% of my cases would be so classified. It seemed to me that this figure was too high and the standard for simple glycosuria too strict and new standards had to be made. Before dealing with these it will clarify matters if I discuss the classifications given

by Joslin in his textbook and by Peel in a recent publication.

Joslin divides glycosuria into:-

1. Diabetes.
2. Potential Diabetes.
3. Renal Glycosuria.
4. Unclassified Glycosuria, which he sub-divides into
 - a. that associated with endocrine upset.
 - b. that caused by stimulation of the intracranial nerve centres.
 - c. alimentary glycosuria and "hunger" diabetes.
 - d. that associated with chronic and degenerative diseases.
 - e. that due to chemical agents.

For a diagnosis of Diabetes he accepts a fasting blood sugar of 0.13 gm.% or a capillary blood sugar of 0.20 gm.% any time during the day (estimated by the method of Folin and Wu.) According to this classification either of the following curves is diabetic if glycosuria is present:

(1)	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hr.	2hr.
Blood sugar....	0.13	0.18	0.12	0.09	0.10 gm %
(2)	Fasting	$\frac{1}{2}$ hr	1 hr.	$1\frac{1}{2}$ hr.	2hr.
Blood sugar....	0.10	0.14	0.20	0.10	0.10 gm %

(1) is diabetic because of the raised fasting blood sugar.

(2) is diabetic because the blood sugar at one hour reaches 0.20 gm. %.

He classifies as Potential Diabetes glycosuria which is related to diet and which disappears with slight restrictions,

where the fasting blood sugar is less than 0.13 gm% and the capillary blood sugar after a meal never reaches 0.20 gm% meaning that in a patient with glycosuria a blood sugar curve such as the following is Potential Diabetes.

	Fasting	$\frac{1}{2}$ hr.	1hr.	$1\frac{1}{2}$ hr.	2hr.
Blood sugar.....	0.10	0.19	0.15	0.11	0.10 gm. %

Peel gives the following classification:-

Diabetic. Maximum blood sugar above 0.18 gm.% in more than one specimen, or above 0.20 gm.% in one specimen, with delayed return to original level.

Borderline Diabetic Curves: Maximum blood sugar between 0.18 and 0.20 gm.%, not exceeding 0.18 in more than one specimen, but slow fall and delayed return to original level.

MacLean's Lag Curve. Maximum blood sugar exceeding 0.18 gm.% in one specimen only, followed by a steep and rapid return to original level.

Renal Glycosuria. Maximum blood sugar below 0.18 gm.% -

- a. with normal blood sugar curve, reaching its maximum in $\frac{1}{2}$ to 1 hour and showing no delay in falling to its original level.
- b. with abnormal blood sugar curve, showing delay in falling if the maximum has been reached in 1 hour, or failing to show any fall before $1\frac{1}{2}$

or 2 hours, with a steady rise up to that point.

The inconsistency of this classification is best shown by studying actual cases from Peel's paper.

The following is a diabetic blood sugar curve.

	Fasting	$\frac{1}{2}$ hr.	$\frac{3}{4}$ hr.	1hr.	$1\frac{1}{2}$ hrs.	2hrs.
Blood sugar..	0.09	0.185	-	0.19	0.118	0.098 gm%

because the blood sugar exceeds 0.18 gm.% in two half hour specimens, while this is a lag:-

	Fasting	$\frac{1}{2}$ hr.	$\frac{3}{4}$ hr.	1hr.	$1\frac{1}{2}$ hrs.	2hrs.
Blood sugar..	0.141	0.204	0.168	0.141	0.104	0.113 gm%

because the blood sugar exceeds 0.18 gm.% in only one half hour specimen. Apparently no importance is attached to the raised fasting blood sugar.

The classifications of Joslin and Peel are at variance. Both of Joslin's "diabetics" would be considered by Peel to have simple glycosuria and Peel's "lag" would be considered diabetic by Joslin because of the elevated fasting blood sugar and the peak above 0.20 gm.%. These classifications not only fail to agree but in my opinion they are both too inelastic. We are in the habit of thinking in terms of normal variations with regard to most bodily functions and it seems strange that the maximum error permissible on the part of the glucose storage and utilisation mechanism (and of the technician) is 0.001 gm.%.

I admit that standards and upper limits are necessary for the assessment of blood sugar curves, but the blood sugar mechanism is complex and liable to disturbance from various sources, extrinsic and intrinsic, which must be taken into account when limits are being set. It is the failure to pay sufficient attention to the effects of these possible disturbing influences which renders the previous classifications too inelastic.

The upper limit of normal fasting blood sugar has been fixed at 0.12 gm.%. This is satisfactory for the most part but there are occasions as I shall show later, when a fasting blood sugar above 0.12 gm.% may not have the significance usually attached to it.

The peak of the curve offers another difficulty.

I cannot see how the peak for the upper limit of a non-diabetic blood sugar curve can be fixed at 0.199 gm.%. If too rapid absorption be a cause of storage defect glycosuria one should expect fairly wide variations in the peak of the blood sugar curve and a peak of 0.30 gm.% such as I describe later, should not warrant the transference of this case to the diabetic group.

Again it seems false reasoning to me to regard all blood sugar curves in which the level is above 0.18 gm.% at two half hour readings as Diabetic. If delayed storage or utilisation of glucose be factors, it should be possible with slight variation in the rate of absorption to have a raised

blood sugar in either one or two of the half hour specimens.

This is best illustrated by examples:

(1) When absorption is rapid, a curve such as the following might be obtained:-

	Fasting	$\frac{1}{4}$ hr	$\frac{1}{2}$ hr	$\frac{3}{4}$ hr	1hr	$1\frac{1}{4}$ hr	$1\frac{1}{2}$ hr	$1\frac{3}{4}$ hr	2hr
Blood sugar.	0.09	0.181	<u>0.184</u>	0.183	0.16	0.14	0.13	0.12	0.09

gm%

giving elevation of the blood sugar above 0.18 gm.% in only one half hour specimen.

(2) When the rate of absorption is a little slower the following result might be obtained, giving elevation of the blood sugar above 0.18 gm.% in two of the half hour specimens.

	Fasting	$\frac{1}{4}$ hr.	$\frac{1}{2}$ hr	$\frac{3}{4}$ hr	1hr	$1\frac{1}{4}$ hr	$1\frac{1}{2}$ hr	$1\frac{3}{4}$ hr	2hr
Blood sugar.	0.09	0.13	<u>0.181</u>	0.184	<u>0.183</u>	0.16	0.14	0.13	0.12

gm%

Thus it seems to me that a curve such as

	Fasting	$\frac{1}{2}$ hr	1hr	$1\frac{1}{2}$ hrs	2hrs
Blood sugar.	0.09	0.15	0.181	0.184	0.13 gm%

is simple storage defect rather than true Diabetes. As will be shown later (page 105), further tests on some of these patients did support the view that the glycosuria was of the innocent type.

My own classification is open to criticism in that it describes some of the cases as "indeterminate". The use of the $\frac{3}{4}$ hour specimen of blood and urine recommended by Peel would

probably have reduced the number of indeterminate lag or renal cases, but there will always be "indeterminates" where there is no opportunity for complete follow up.

My classification recognises six types of blood sugar curve:-

1. Normal tolerance to 50 gm. glucose.
2. Glucose storage defect glycosuria.
 - a. typical.
 - b. with slight delay in the absorption or clearing of the blood of glucose.
3. Renal Glycosuria.
4. Indeterminate storage defect or renal glycosuria.
5. Diabetes.
6. Potential Diabetes.

The criteria for inclusion in each group will be discussed in turn.

Normal.

In about a seventh of my cases no glycosuria developed in the course of the glucose tolerance test and the peak of the curve did not rise above 0.20 gm.%. These were considered to have normal tolerance to 50 gm. of glucose.

Glucose Storage Defect Glycosuria.

a. Typical.

The essentials generally accepted for inclusion in this group are:-

- a. Fasting blood sugar not above the upper limit of normal (0.12 gm.%), and no fasting glycosuria.
- b. Rapid rise of the blood sugar above the normal renal threshold (0.18 gm.%) after the consumption of 50 gm. of glucose with the appearance of glycosuria.
- c. fall of the blood sugar to the normal fasting level within two hours, with disappearance of glycosuria.

These essentials in my opinion are too strict and although most of my cases classified as simple storage defect glycosuria do satisfy these requirements, others show some variation. Let us consider in detail the points to which exception is taken:

No fasting glycosuria. A number had traces of sugar in the fasting urine which could be accounted for by some sugar remaining in the bladder from the last meal.

Disappearance of glycosuria in two hours. Some had traces of sugar in the last specimen of the test, almost certainly due to incomplete emptying of the bladder when the previous specimens were passed. A possibility of this happening has been mentioned by Lawrence ⁽⁶³⁾ (1940). Immediately after urine containing sugar had been passed, the bladder was washed out and enough glucose was present in the returned solution to give a sugar reduction.

Upper limit of the fasting blood sugar. An upper limit of 0.12 gm.% for the fasting blood sugar seems to me to be too low, especially when making assessments on a single blood

sugar curve. Either nervousness or a cold environmental temperature may cause a rise above this level (pages 87,88). When the curve returned to 0.12 gm.% or less in two hours, slight elevations in the fasting blood sugar have been disregarded for purposes of classification.

When considering the outline of the blood sugar curve two points have to be dealt with -

1. Height of the curve.
2. Length of time the blood sugar remains above the renal threshold.

I cannot see how an upper limit to the peak can be set when both rise and fall is abrupt. A curve such as the following is in my opinion typical glucose storage defect and in this series if the curve rose rapidly and fell rapidly to normal it has been classified as typical storage defect whether the peak was 0.20 or 0.30 gm.%.

	<u>Fasting.</u>	<u>$\frac{1}{2}$hr</u>	<u>1hr</u>	<u>$1\frac{1}{2}$hr</u>	<u>2hr</u>	
Blood sugar....	0.09	0.30	0.16	0.10	0.09	gm.%

As has been shown above (page 23) where less rapid absorption occurs a blood sugar level above 0.18 gm.% in two half hour specimens would seem possible and should not preclude exclusion from this group provided the fasting blood sugar is low and the curve returns to or about its original level in two

hours. The following is recognised in this classification as a typical storage defect curve.

	Fasting	$\frac{1}{2}$ hr	1hr	$1\frac{1}{2}$ hr	2hr	
Blood sugar..	0.11	0.21	0.19	0.13	0.10	gm. %

b. With slight delay in the absorption or clearing of the blood of glucose. A subgroup of the storage defect type has been differentiated. In this the curves resemble the typical storage defect glycosuria except at the end of two hours the blood sugar had not fallen beyond 0.13 and 0.14 gm. %.

Renal Glycosuria.

The renal threshold for glucose has been taken as 0.18 gm. % and glycosuria which appeared when the blood sugar had not risen above this level has been accepted as renal. Two types are described. A. where the blood sugar curve did not rise above 0.15 gm. % and B. where the peak of the curve was between 0.16 and 0.18 gm. %. B is distinct from the indeterminate storage defect or renal group to be described later in that -

1. glycosuria appeared when the blood sugar curve was still rising and before the blood sugar had reached the normal renal threshold, evidence that the glycosuria was not due to the peak of the curve having risen above 0.18 gm. % in an interval between the taking of specimens.

or

2. the urinary sugar increased when the blood sugar was below the renal threshold. An example of this is given below:-

	Fasting	$\frac{1}{2}$ hr	1hr	$1\frac{1}{2}$ hr	2hr	gm. %
Blood sugar....	0.10	0.17	0.16	0.11	0.08	
Urinary sugar..	nil	+	+	B.G.R.	nil	

It will be seen that the blood sugar might have risen above the renal threshold in the first half hour, causing glycosuria in the second specimen of urine, or the glycosuria might have been due to a low renal threshold. The third specimen decided it to be renal since the urinary sugar increased when the blood sugar remained below the renal threshold level.

(39)

Joslin says that in true renal glycosuria sugar is present in every specimen of the test and in any casual specimen of urine examined. Those with the peak of the curve reaching almost to the renal threshold before glycosuria appears have storage defect glycosurias with a renal threshold a little below the average. Most of the cases in group B fell into this class and in many of them only traces of sugar appeared in the urine when the peak of the blood sugar curve reached 0.16 to 0.18 gm.%, but for purposes of classification a dividing line had to be drawn and the 0.18 gm.% level is most generally accepted as the average renal threshold for glucose (Harrison,⁽⁶⁴⁾ Lawrence,⁽³⁴⁾ MacLean⁽³⁵⁾). Probably there is a superadded glucose storage defect in some of the group B cases but it is certain that the renal threshold was lowered in all of them.

Indeterminate storage defect or renal glycosuria.

The cases included in this group could equally well be classified as renal glycosuria with a slightly lowered renal threshold giving rise to a variable glycosuria, or as mild storage defect. In none did the blood sugar reach a higher level than 0.18 gm.% in any of the half hour specimens, but this did not exclude the possibility of its being raised in one of the intervals. The following examples illustrate this:-

(1)	Fasting	$\frac{1}{2}$ hr	1hr	$1\frac{1}{2}$ hr	2hr	
Blood sugar...	0.10	0.17	0.14	0.12	0.10	gm. %
Urinary Sugar.	nil	B.G.R	B.V.S.R.	nil	nil	

(2)	Fasting	$\frac{1}{2}$ hr	1hr	$1\frac{1}{2}$ hr	2hr	
Blood sugar...	0.10	0.17	0.14	0.12	0.10	gm. %
Urinary sugar.	nil	nil	B.G.R	B.V.S.R.	nil	

In the first, the glycosuria appearing in the half hour specimen might have been caused by elevation of the blood sugar above the renal threshold in the interval between the taking of the fasting and half hour specimens or it might have been due to a slightly lowered renal threshold.

In the second, the blood sugar could have risen between the taking of the half and the hour specimens or the glycosuria could have been renal in type.

In a few glycosuria was absent when the blood sugar

was at 0.18 gm.% but was present in the next when the blood sugar was at a lower level as shown by the following example:

	Fasting	$\frac{1}{2}$ hr	1hr	$1\frac{1}{2}$ hr	2hr	
Blood sugar..	0.10	0.18	0.16	0.12	0.10	gm.%
Urinary sugar.	nil	nil	B.V.S.R.	nil	nil	

Two possibilities suggest themselves. The first, and more likely, is that the blood sugar rose above 0.18 gm.% in the interval and glycosuria developed; the second, that 0.18 gm.% was the peak of the curve, the patient's renal threshold was slightly below this and the glycosuria of the subsequent specimen was delayed. For classification purposes these had to be included in the indeterminate group.

Diabetes.

The essentials taken for inclusion in this group are:

- (1) elevation of the fasting blood sugar.
- (2) a peak above the renal threshold for glucose.
- (3) the blood sugar still above .18 gm.% at the end of two hours.

This standard may be open to criticism in that it will only include Diabetes of moderate and severe degree and exclude the milder forms of Diabetes. The point I wish to emphasise is that one should not diagnose the milder forms of Diabetes on a single blood sugar curve. They should be regarded as Potential Diabetes until confirmation is obtained by at least

a second test. The result obtained from repeat examinations of a number of the potential diabetics (see page 105) seems to justify this apparent laxity in classification.

Potential Diabetes.

A number resembled the diabetic group in some respects but for reasons best illustrated by example they are classified as doubtful or potential Diabetes.

(1)	<u>Fasting</u>	<u>$\frac{1}{2}$hr</u>	<u>1hr</u>	<u>$1\frac{1}{2}$hr</u>	<u>2hr</u>	
Blood sugar...	0.09	0.30	0.22	0.24	0.18	gm. %
Urinary sugar..	nil	B.G.R.	+	++	B.G.R.	

The fasting blood sugar was normal, the curve rose rapidly to 0.32 gm.% and had reached only 0.18 gm.% in two hours. Had the fasting blood sugar been elevated the curve would have been regarded as diabetic.

(2)	<u>Fasting</u>	<u>$\frac{1}{2}$hr</u>	<u>1hr</u>	<u>$1\frac{1}{2}$hr</u>	<u>2hr</u>	
Blood sugar....	0.13	0.17	0.18	0.195	0.20	gm. %
Urinary Sugar..	nil	+	++	++	++	

The fasting blood sugar was slightly elevated, the curve rose slowly and reached its highest point of only 0.20 gm.% in two hours.

(3) a.	<u>Fasting</u>	<u>$\frac{1}{2}$hr</u>	<u>1hr</u>	<u>$1\frac{1}{2}$hr</u>	<u>2hr</u>	
Blood sugar....	0.11	0.14	0.18	0.20	0.18	gm. %
Urinary sugar..	nil	nil	B.V.S.R.	B.G.R.	B.V.S.R.	

b.	<u>Fasting</u>	<u>½hr</u>	<u>1hr</u>	<u>1½hr</u>	<u>2hr</u>	
Blood sugar...	0.11	0.22	0.28	0.24	0.15	gm. %
Urinary sugar.	nil	B.V.S.R.	++	++	++	

The remaining cases classified as potential diabetic are illustrated by the two examples given above; the fasting blood sugar was normal or slightly elevated, the curve rose above the renal threshold and had a delayed fall, all being at or over 0.15 gm. % in two hours.

One cannot exclude the possibility of Diabetes in any of the examples quoted but where opportunity arose for repeating the test it was found that eleven out of thirteen had curves of a normal or storage defect type. I wish to make it clear that I do not dismiss altogether the possibility of some of these becoming Diabetic but this can only be determined by follow up examinations.

2. Relation of the blood sugar curves above described

3. Specimens

4. Pathologic significance

5. Incidence of hyperosmolar and hypoglycemia.

Family history of Diabetes and Glycosuria.

The findings will be detailed and later correlated and discussed.

CHAPTER IV.

ANALYSIS OF EACH TYPE.

Each type will be considered separately with reference to the following features:-

1. Total number of cases.
2. Number known to have had glycosuria on a previous occasion.
3. Age distribution.
4. Fasting blood sugar.
 - a. levels.
 - b. incidence of nervousness in those with fasting blood sugar over 0.12 gm.%
 - c. incidence of elevation of the fasting blood sugar above 0.12 gm.% in those examined in the cold months.
5. Height of the blood sugar curves where relevant.
6. Symptoms.
7. Build and Physique.
8. Incidence of nervousness and hyperthyroidism.
9. Family history of Diabetes and Glycosuria.

The findings will be detailed and later correlated and discussed.

In one instance and three cases no glycosuria
in the course of the glucose tolerance test and the post
the blood sugar curve did not rise above 0.150 g/dl. These
have been considered to have normal tolerance to 50 g/dl.

Normal tolerance.

One case was known to have had glycosuria in
previous occasions.

Normal tolerance.

CASES WITH NORMAL TOLERANCE TO

shown below.

50 GM. GLUCOSE.

Case No.	Number of Tests	Result of Tests
1-10	1	Normal
11-20	2	Normal
21-30	3	Normal
31-40	4	Normal
41-50	5	Normal
51-60	6	Normal

Normal tolerance.

a. Level of always also cases (total) the blood
sugar was between 0.100 and 0.150 g/dl. In the following
cases 0.100 g/dl was 100 mg/dl and over. The tolerance was

Level:

Case No.	Number of Tests	Result of Tests
1-10	1	Normal
11-20	2	Normal
21-30	3	Normal
31-40	4	Normal
41-50	5	Normal
51-60	6	Normal

In one hundred and three cases no glycosuria developed in the course of the glucose tolerance test and the peak of the blood sugar curve did not rise above 0.20 gm.%. These have been considered to have normal tolerance to 50 g.m. of glucose.

Previous History.

One man was known to have had glycosuria on a previous occasion.

Age Distribution.

The age distribution in periods of five years is shown below.

<u>Age Groups.</u>	<u>Number of Cases.</u>
Under 20 yrs.	9
20-24 "	49
25-29 "	29
30-34 "	11
35-39 "	2
40-44 "	3

Fasting Blood Sugar.

a. Level. In eighty nine cases (86.4%) the fasting blood sugar was between 0.07 and 0.12 gm.%. In the remaining 14 cases (13.6%) it was 0.13 gm.% and over. The figures are given below.

<u>Fasting Blood Sugar Level.</u> (in gm.%.)	<u>Number of Cases.</u>	<u>%age of Total.</u>
0.12 and under	89	86.4
0.13	8	7.8
0.14	3	2.9
0.15	2	1.9
0.16	1	1.0

b. Incidence of nervousness in men with fasting blood sugar over 0.12 gm.%. One of the men of the 0.13 gm.% group was of anxious appearance, one of the 0.15 gm.% group was recovering from two boils and the man with the fasting blood sugar of 0.16 gm.% was recovering from a carbuncle.

c. Incidence of elevation of the fasting blood sugar above 0.12 gm.% in the cold months. Forty one were seen in the colder months i.e. November to February inclusive and the fasting blood sugar was raised above 0.12 gm.% in six. The blood for estimation of the fasting blood sugar was taken as soon as the patients entered from the outside before any effect of cold had time to pass off.

Height of Blood Sugar Curves.

The maximum height attained by the blood sugar after the ingestion of 50 gm. of glucose is shown in Table I. One cannot be sure that the peak was not missed between the taking of samples but the group is large enough to give average figures. 36.9% had the peak between 0.17 and 0.18 gm.% and 35.9% had the peak between 0.15 and 0.16 gm.% i.e. in 72.8% of the total the maximum height reached was between 0.15 and 0.18 gm.%

Table I. Peak of Blood Sugar Curves in the "Normal" Cases.
(in gm.% Glucose.)

Age Groups.	0.11-0.12	0.13-0.14	0.15-0.16	0.17-0.18	0.19-0.20
Under 20 yrs.	-	2	5	2	-
20-24 "	2	12	17	13	5
25-29 "	-	3	11	13	2
30-34 "	-	2	4	5	-
35-39 "	-	-	-	3	-
40-44 "	-	-	-	3	-
Total	2	19	37	38	7
%	1.9	18.4	35.9	36.9	6.9

TABLE II. shows that as age advanced a greater number reached the higher blood sugar levels.

TABLE II. Peak of Blood Sugar Curves in the "Normal" Cases expressed in percentages of the total cases at age groups of 10 years (in gm. % glucose.)

Age Groups	0.11-0.12	0.13-0.14	0.15-0.16	0.17-0.18	0.19-0.20	Average Height of Curve.
Under 25 yrs.	3.4	24.1	38.0	25.9	8.6	0.157
25-34 "	-	12.5	37.5	45.0	5.0	0.163
35-44 "	-	-	-	100.0	-	0.175

Fifty eight of the men were under and forty five of them over twenty five years of age. This dividing line has been chosen since the two groups thus contain a comparable number of cases. The blood sugar curve attained a higher level in the older groups (Table III.)

TABLE III. Comparison of the heights of the blood sugar curves in the "Normal" cases over and under 25 years of age.

Height of Curve in gm. % Glucose.	Percentage of cases under 25 years of age	Percentage of Cases over 25 years of age
0.11-0.12	3.5	0
0.13-0.14	24.0	11.1
0.15-0.16	38.0	33.3
0.17-0.18	35.9	31.1
0.19-0.20	8.6	4.4
Total	100.0	99.9

Symptoms.

A survey of the case records showed that none of the men complained of any symptoms of Diabetes but after direct questioning fifteen of them gave symptoms detailed in Table IV. Two complained of being easily tired. Five had a history of gastro-intestinal upset: one had epigastric pain eased by food, two had had an operation for gastric or duodenal ulcer but the nature of the operation was not known, and two gave a history of vague indigestion. Six had a history of recent sepsis.

Build and Physique.

For classification purposes the build and physique of the men has been divided into ten groups and the distribution of the cases in those groups is shown in Table V.

TABLE V. Build and Physique of the "Normal" Cases.

Build and Physique.	Number of Cases	Percentage of Total
Good to average....	37	35.9
Tall and slim.....	8	7.8
Small and Slim.....	4	3.9
Tall and stout.....	1	1.0
Small and stout....	0	0
Medium height and slim.....	21	20.4
Burly, squat, or stocky.....	7	6.8
Small.....	14	13.6
Tall.....	8	7.8
Heavy or Obese.....	3	2.9
Total	103	100.1

TABLE IV. Symptoms given by men with normal glucose tolerance to 50 gm. glucose in answer to direct questions.

Age Groups.	Slight thirst	Slight loss of weight	Slight Nocturia	Slight Polyuria	Slight thirst, Polyuria and Nocturia.	Slight loss of weight and Nocturia	Slight thirs Polyuria, Nocturia and Abscess.
Under 20 yrs.	-	-	-	-	-	-	-
20-24 "	1	1	1	2	-	-	1
25-29 "	-	3	1	-	1	-	-
30-34 "	-	-	-	2	1	-	-
35-39 "	-	-	-	-	-	-	-
40-44 "	-	-	-	-	-	1	-
Total	1	4	2	4	2	1	1

TABLE VI. Signs of Nervousness and Hyperthyroidism in cases with normal glucose tolerance to 50 gm. Glucose.

Age Groups.	Nervous or Anxious X looking.	Tachycardia Pulse rate of 100 and over per minute.	Tremor of out-stretched hands and Tachycardia.	Nervous and Tremor of out-stretched hands	Nervous Tachycardia, slight exophthalmos
Under 20 yrs.	-	-	-	-	-
20-24 "	4	-	-	-	1
25-29 "	1	1	-	-	-
30-34 "	2	-	-	1	-
35-39 "	-	-	1	-	-
40-44 "	-	-	-	-	-
Total	7	1	1	1	1

Nervousness and Hyperthyroidism.

There was no advanced hyperthyroidism in any of the patients but evidence of nervousness and signs suggestive of mild Hyperfunction of the Thyroid were present in 10.7%. These signs are detailed in Table VI.

Family History of Diabetes and Glycosuria.

Three men gave a history of diabetes in their families. Another man "thought" that his mother had diabetes but was unable to supply any confirmatory evidence.

Two hundred and forty six cases have been classed as glycosuria of the glucose defect type (see page 27).

Previous History.

Only three were aware of having glycosuria on a previous occasion.

Age Distribution.

The age distribution of the cases at age groups of five years is shown below.

<u>Age Groups.</u>	<u>Number of Cases.</u>
GLUCOSE STORAGE DEFECT GLYCOSURIA.	
Under 20 yrs.	10
20-24 "	61
25-29 "	99
30-34 "	57
35-39 "	11
40-44 "	3
45-49 "	3
50-54 "	2

Fasting Blood Sugar.

Level. One hundred and ninety seven cases had the normal blood sugar between 0.08 and 0.12 gm.%. The remaining 149 cases have been included for classification purposes as they fulfilled the requirements of the storage defect type in that when at the end of two hours the blood sugar was 0.12 gm.%. The blood sugar levels are given below.

Two hundred and forty six cases have been classified as glycosuria of the glucose defect type (see page 24).

Previous History.

Only three were aware of having glycosuria on a previous occasion.

Age Distribution.

The age distribution of the cases at age groups of five years is shown below.

<u>Age Groups.</u>	<u>Number of Cases.</u>
Under 20 yrs.	10
20-24 "	61
25-29 "	99
30-34 "	57
35-39 "	11
40-44 "	3
45-49 "	3
50-54 "	2

Fasting Blood Sugar.

a. Level. One hundred and ninety seven cases had the fasting blood sugar between 0.08 and 0.12 gm.%. The remaining forty nine have been included for classification purposes as they fulfilled the requirements of the storage defect type in other respects and at the end of two hours the blood sugar was not above 0.12 gm.%. The blood sugar levels are given below.

<u>Fasting Blood Sugar Level in gm.% glucose</u>	<u>Number of Cases</u>	<u>Percentage of Total.</u>
0.12 and under	197	80.1
0.13	17	6.9
0.14	13	5.3
0.15	10	4.1
0.16	8	3.3
0.17	1	0.4

b. Incidence of nervousness in men with fasting blood sugar over 0.12 gm.%. Some degree of nervousness or mild hyperthyroidism was present in four cases of the 0.13 gm.% group, three of the 0.14 gm.% group, two of the 0.15 gm.% group and three of the 0.16 gm.% group i.e. 24.5% of the men with the fasting blood sugar over 0.12 gm.% had signs of nervousness of mild hyperthyroidism. (One man with a fasting blood sugar of 0.14 gm.% later admitted to having a breakfast roll one hour before the test began.)

c. Incidence of elevation of the fasting blood sugar above 0.12 gm.% in the colder months. The glucose tolerance test was carried out in the cold months in sixty two cases and the fasting blood sugar was elevated above 0.12 gm.% in twenty of those. Signs of nervousness were present in seven of the twenty cases.

Height of the Blood Sugar Curves.

The peak of the blood sugar curves did not rise above 0.24 gm.% in two hundred and thirty four cases. In the remaining twelve it was between 0.25 and 0.32 gm.%. Table VII shows there

was a definite tendency for the curve to become higher as age advanced.

TABLE VII. Comparison of the maximum height of the Blood Sugar Curve in men under and over 30 years of age with Storage Defect Glycosuria.

Height of Curve in gm. %	Percentage of cases under 30 years.	Percentage of cases over 30 years.
0.185-0.20	67.6	56.6
0.21-0.22	22.4	21.1
0.23-0.24	5.3	17.1
0.25-0.26	3.5	1.3
0.27-0.28	0	1.3
0.30-0.32	1.2	2.6
Total	100.0	100.0

Symptoms.

No symptoms of Diabetes were volunteered by any of the patients but after direct questioning forty four gave mild symptoms detailed in Table VIII. Six complained of tiredness of weakness. Eleven had a history of gastrointestinal upset: one of those had a gastroenterostomy done for duodenal ulcer two years previously and his blood sugar rose quickly to 0.30 gm. % and fell quickly to normal: three had an operation for perforation of an ulcer but the exact nature of the operation was unknown: one gave a history of symptoms suggestive of

duodenal ulcer: five had a history of indigestion and one complained of bowel movements two or three times per day with occasional attacks of greater frequency. Four had a history of recent sepsis.

TABLE VIII. Symptoms given by men with Glucose Storage Defect Glycosuria after direct questions were asked.

Age Groups.	Slight Thirst	Slight Polyuria	Slight Nocturia	Slight Polyuria & Thirst	Slight Loss of Weight.
Under 20 yrs.	-	-	-	-	-
20-24 "	2	1	2	1	1
25-29 "	3	2	1	1	12
30-34 "	4	1	3	4	2
35-39 "	1	-	1	-	1
40-44 "	-	-	-	-	-
45-49 "	-	-	-	-	-
50-54 "	1	-	-	-	-
Total	11	4	7	6	16

Build and Physique.

Classification has been made under the same ten headings as for the normal group.

TABLE IX. Build and Physique of the Glucose Storage Defect Glycosuria.

Build and Physique	Number of Cases	Percentage of Total.
Good to average.....	101	41.1
Tall and Slim.....	13	5.3
Small and Slim.....	9	3.7
Tall and Stout.....	4	1.6
Small and Stout.....	12	4.9
Medium height and slim.....	38	15.4
Burly, squat or stocky.....	16	6.4
Small.....	39	15.8
Tall.....	11	4.5
Heavy or Obese.....	3	1.2
Total	246	99.9

Nervousness and Hyperthyroidism.

None had a severe degree of hyperthyroidism but a number had signs of nervousness and some had mild to moderate hyperthyroidism. These make up 14.7% of the total. The signs are detailed in Table X.

TABLE X. Signs of nervousness and hyperthyroidism in the cases with Glucose Storage Defect Glycosuria.

Age Groups.	Nervousness.	Eyes slightly prominent.	Tachycardia Pulse rate 100 and over per minute.	Anxious, Tremor Exophthalmos.	Tremor Exophthalmos.	Tachycardia.	Anxious, Tremor.	Anxious, Thyroid enlarged and Tachycardia.	Anxious and Thyroid enlarged.	Tremor.	Anxious Exophthalmos.	Thyroid enlarged Exophthalmos.
Under 20 yrs.	1	1	1	1	1	1	1	1	1	1	1	1
20-24 "	2	1	1	1	1	1	1	1	1	1	1	1
25-29 "	3	1	1	1	1	1	1	1	1	1	1	1
30-34 "	2	1	1	1	1	1	1	1	1	1	1	1
35-39 "	1	1	1	1	1	1	1	1	1	1	1	1
Total	11	5	5	-	1	1	1	1	2	1	2	1

Family History of Diabetes and Glycosuria.

Fourteen (5.7%) had a family history of Diabetes: the mother or father of seven, the brother of one, a grandparent of two, an aunt of one, an uncle of one, the father and a paternal aunt of one and the mother, father and aunt of one. Three (1.2%) had a family history doubtful Diabetes: a parent of two and a brother of one. Four (1.6%) had a family history of symptomless glycosuria: a parent of one and a brother of three.

ON THE HISTORY OF DIABETES
IN RELATION TO THE ABSORPTION
OF DIETARY CARBOHYDRATE.

This group consists of thirty eight cases with normal sugar curves of the storage defect type except that at the end of two hours the level had not fallen beyond 0.13 and 0.14.

Previous History.

None gave a history of having had glycosuria on any previous occasion.

Age Distribution.

The age distribution in periods of five years is shown below.

GLUCOSE STORAGE DEFECT WITH SLIGHT DELAY IN THE ABSORPTION OR UTILISATION OF GLUCOSE.	
20-24	1
25-29	1
30-34	1
35-39	1
40-44	1
45-49	1

Fasting blood sugar.

a. Level. The fasting blood sugar was between 0.07 and 0.12 gm. % in twenty three of the cases and over 0.12 gm. % in fifteen. The figures are given below.

<u>Fasting Blood Sugar</u> <u>(gm. %)</u>	<u>Number of Cases</u>	<u>Percentage of</u> <u>Total.</u>
0.07 and under	23	60.4
0.08	4	10.5
0.09	7	18.3
0.10	1	2.6
0.11	1	2.6

This group consists of thirty eight cases with blood sugar curves of the storage defect type except that at the end of two hours the level had not fallen beyond 0.13 and 0.14%.

Previous History.

None gave a history of having had glycosuria on a previous occasion.

Age Distribution.

The age distribution in periods of five years is shown below.

<u>Age Groups.</u>	<u>Number of Cases.</u>
Under 20 yrs.	1
20-24 "	15
25-29 "	10
30-34 "	8
33-39 "	2
40-44 "	1
45-49 "	1

Fasting Blood Sugar.

a. Level. The fasting blood sugar was between 0.07 and 0.12 gm.% in twenty three of the cases and over 0.12 gm.% in fifteen. The figures are given below.

<u>Fasting Blood Sugar Level in gm.%</u>	<u>Number of Cases</u>	<u>Percentage of Total.</u>
0.12 and under	23	60.4
0.13	4	10.5
0.14	7	18.4
0.15	1	2.6
0.16	3	7.9

b. Incidence of nervousness in the men with fasting blood sugar over 0.12 gm. %. One of those with a fasting blood sugar of 0.13 gm. % was apprehensive looking and another looked anxious, had slightly prominent eyes, tachycardia and palpable Thyroid isthmus. One of the 0.14 gm. % group had slightly prominent eyes and one of the 0.16 gm. % group looked nervous. Thus 26.6% of these with the fasting blood sugar over 0.12 gm. % had signs of hyperthyroidism.

c. Incidence of elevation of the fasting blood sugar above 0.12 gm. % in the cold months. Thirteen were examined in the cold months and the fasting blood sugar was elevated above 0.12 gm. % in eight.

Height of the Blood Sugar Curves.

<u>Peak of Curve (in gm. % glucose)</u>	<u>Number of Cases.</u>	<u>Percentage.</u>
0.185-0.20	18	47.4
0. 21-0.22	14	36.8
0. 23-0.24	2	5.3
0. 25-0.26	4	10.5
Total	38	100.0

At the end of two hours the blood sugar had returned to 0.13 gm. % in twenty one and to 0.14 gm. % in seventeen.

Symptoms.

Mild symptoms of Diabetes were given by four but only after direct questioning. These are detailed in Table XI. Two gave a history of gastro-intestinal upset: one had symptoms

of duodenal ulcer seven years ago and one complained of recurrent attacks of diarrhoea lasting a day at a time with mucus in the stool at times. Four had recent sepsis.

TABLE XI. Symptoms given, after direct questioning, by the men with Storage Defect Glycosuria who had slight delay in the absorption or clearing of the blood of glucose.

Age Groups.	Slight Loss of Weight	Pruritus of Genitalia	Pruritus of Back
20-24 yrs.....	1	1	-
30-34 "	-	-	1
40-44 "	1	-	-
Total	2	1	1

Build and Physique.

The build and physique of the men is detailed in

Table XII.

TABLE XII. Build and Physique of the men with Storage Defect Glycosuria and slight delay in the absorption or clearing of the blood of glucose.

Build and Physique.	Number of Cases.	Percentage of Total.
Good to average.....	15	39.6
Tall and slim.....	1	2.6
Small and slim.....	4	10.5
Tall and stout.....	0	0
Small and stout.....	1	2.6
Medium height and slim	4	10.5
Burly, squat, stocky..	0	0
Tall.....	6	15.8
Small.....	5	13.1
Heavy or Obese.....	2	5.3
Total	38	100.0

Nervousness and Hyperthyroidism.

Seven (18.4%) were nervous or had signs of hyperthyroidism: one of these, aged thirty eight years, was definitely hyperthyroid - he looked anxious, his eyes were prominent, pulse rate was 104 per minute and the thyroid isthmus was palpable. Four looked anxious or nervous and two had slightly prominent eyes. All were between the ages of twenty and twenty nine years.

Family History of Diabetes and Glycosuria.

A history of maternal Diabetes was obtained in one case and of paternal Diabetes in two. One man thought his grandfather had "a touch of Diabetes."

One hundred and forty one cases were classified as glycosuria: fifty seven were of A type and eighty four of B type. Only forty nine satisfy Joslin's requirements of persistent glycosuria and a flat or normal blood sugar curve and objection could be taken to some of these since trace amounts of sugar might be present in the first and last specimens for the reasons described previously (page 25).

RENAL GLYCOSURIA

There are RENAL GLYCOSURIA cases in this group. In all of these the urine was free from sugar in either first or last, or both first and last specimens. In two a fourth specimen of urine was not obtained. In the remaining four, glycosuria was present in all specimens of the test, again one cannot be sure it was due to a very low renal threshold.

Previous History.

None was aware of having had glycosuria on a previous

Age Distribution.

The age distribution is given below, in age group

One hundred and forty one cases were classified as renal glycosuria: fifty seven were of A type and eighty four of B type. Only forty nine satisfy Joslin's requirements of persistent glycosuria and a flat or normal blood sugar curve, and objection could be taken to some of these since traces of sugar might be present in the first and last specimens for the reasons described previously (page 25).

GROUP A.

There are fifty seven cases in this group. In thirty one of these the urine was free from sugar in either first or last, or both first and last specimens. In two a fasting specimen of urine was not obtained. In the remaining twenty four, glycosuria was present in all specimens of the test but again one cannot be sure it was due to a very low renal threshold.

Previous History.

None was aware of having had glycosuria on a previous occasion.

Age Distribution.

The age distribution is given below, in age groups of five years.

<u>AGE GROUPS.</u>	<u>NUMBER OF CASES.</u>
Under 20 yrs.	3
20-24 "	23
25-29 "	20
30-34 "	9
35-39 "	1
50-54 "	1

Fasting Blood Sugar.

a. Level. In fifty three the fasting blood sugar was at or below 0.12 gm.%. In four it was 0.13 gm.%.

b. Incidence of nervousness in the men with fasting blood sugar over 0.12 gm.%. One man with a fasting blood sugar of 0.13 gm.% looked nervous and had tachycardia.

c. Incidence of elevation of the fasting blood sugar above 0.12 gm.% in the cold months. Thirteen were examined in the cold months and the fasting blood sugar was elevated to 0.13 gm% in
Symptoms. (two of these.)

On direct questioning seven gave mild symptoms suggestive of Diabetes (Table XIII.) One man said he was always hungry. Two complained spontaneously of being easily tired and one of these when questioned admitted slight loss of weight. Three had a history of gastrointestinal upset: one gave a vague story of gastric upset associated with giddiness and one had attacks of "gastritis" causing anorexia, epigastric pain and diarrhoea: one had a history of mucoid diarrhoea. Two had a history of recent sepsis.

TABLE XIII. Symptoms given in Group A Renal Glycosuria after direct questioning.

Age Groups.	Slight Thirst	Slight Loss of Weight	Slight loss of weight & Tiredness	Slight Thirst and Polyuria	Slight thirst, Slight polyuria or Nocturia and slight loss of weight.
20-24 yrs.	-	2	-	1	1
25-29 "	1	-	-	-	1
30-34 "	-	-	1	-	-
Total	1	2	1	1	2

Build and Physique.

The build and physique of the men in this class is shown in Table XIV.

TABLE XIV. Build and Physique of Group A Renal Glycosuria.

Build & Physique.	Number of Cases.	Percentage.
Good to average.....	28	49.1
Tall and slim.....	1	1.76
Small and slim.....	1	1.76
Tall and Stout.....	1	1.76
Small and Stout.....	0	0
Medium height and slim.....	9	15.8
Burly, squat or stocky.....	4	7.0
Small.....	3	5.3
Tall.....	7	12.3
Heavy or Obese.....	3	5.3
Total	57	100.08

Nervousness and Hyperthyroidism.

The incidence of nervousness and mild hyperthyroidism in this group is 10.5%. The signs are detailed in Table XV.

TABLE XV. Incidence of Nervousness and Hyperthyroidism in Group A Renal Glycosuria.

Age Groups.	Slight Exophthalmos	Slight Tremor	Tachycardia (Pulse rate of 100 and over per minute.)	Slight Exophthalmos and Tachycardia	Anxious Tremor, Thyroid isthmus palpable.
20-24 yrs.	-	-	1	-	1
25-29 "	-	-	-	2	-
30-34 "	1	1	-	-	-
Total	1	1	1	2	1

Family History of Diabetes and Glycosuria.

One patient had a family history of Diabetes - his father was diabetic and his brother had glycosuria. Five gave a family history of symptomless glycosuria: a mother or father in four cases and a brother in one.

GROUP B.

This group consists of eighty four cases.

Previous History.

Three men gave a history of previous glycosuria. In one the glycosuria had been discovered fourteen years before at which time it had been investigated and considered to be of no significance. A second was aware of glycosuria for twelve years and the third for two months.

Age Distribution.

The age distribution in periods of five years is given below.

<u>Age Groups.</u>	<u>Number of Cases.</u>
Under 20 yrs.	2
20-24 "	34
25-29 "	25
30-34 "	18
35-39 "	1
40-44 "	2
45-49 "	2

Fasting Blood Sugar.

a. Level. Seventy one had fasting blood sugars at or under 0.12 gm.%. In the remaining thirteen it was over 0.12 gm.%. The figures are given below.

<u>Fasting Blood Sugar Level in gm. %.</u>	<u>Number of Cases</u>	<u>Percentage of Total</u>
0.12 and under	71	84.5
0.13	8	9.6
0.14	3	3.6
0.15	2	2.4

b. Incidence of nervousness in the men with fasting blood sugar over 0.12 gm. %. One of the 0.15 gm. % group looked anxious and had tachycardia.

c. Incidence of elevation of the fasting blood sugar above 0.12 gm. % in the cold months. Twenty one were seen in the cold months and the fasting blood sugar was elevated above 0.12 gm. % in two of those.

Symptoms.

On direct questioning thirteen men gave symptoms suggestive of mild Diabetes. These are detailed in Table XVI. Five complained of tiredness: after direct questioning one of these said he was losing weight, and had slight polyuria while ^{*} another said he was losing weight and had a craving for carbohydrate, symptoms which were found to date from restriction of carbohydrate in his diet after the discovery of glycosuria two months before. Two had a history of gastrointestinal upset: one was very nervous and complained of attacks of indigestion and palpitation, the other complained of nausea which he ascribed to working with red lead. Five had a history of recent sepsis.

* This case has been omitted from the table since symptoms were probably due to Carbohydrate restriction.

TABLE XVI. Symptoms given, after direct questioning, by cases of Group B Glycosuria.

Age Groups.	Slight loss of weight	Slight Thirst	Slight Frequency of mict-urition	Slight loss of weight Thirst & polyuria	(tired) Slight loss of weight & polyuria	Slight pruritus	Thirst slight loss of weight.
20-24 yrs.	1	1	1	-	-	1	-
25-29 "	1	1	-	1	-	-	-
30-34 "	1	-	-	-	1	-	1
40-44 "	-	-	1	-	-	-	-
45-49 "	1	-	-	-	-	-	-
Total	4	2	2	1	1	1	1

Build and Physique.

This is given in Table XVII. under the same ten headings as in the previous groups.

TABLE XVII. Build and Physique of the men in Groups B Renal Glycosuria.

Build and Physique.	Number of Cases.	Percentage.
Good to average.....	36	42.9
Tall and slim.....	4	4.8
Small and slim.....	3	3.6
Tall and Stout.....	0	0
Small and Stout.....	0	0
Medium height and slim.....	9	10.7
Burly, squat, stocky.	6	7.1
Small.....	16	19.2
Tall.....	6	7.1
Heavy or Obese.....	4	4.8
Total	84	100.2

Nervousness and Hyperthyroidism.

Nine men had signs of nervousness or mild hyperthyroidism. These are enumerated in Table XVIII.

TABLE XVIII. Signs of Nervousness and Hyperthyroidism in Group B Renal Glycosuria.

Age Groups.	Anxious or Nervous	Eyes slightly prominent	Tachycardia (Pulse rate of 100 and over per minute.)	Slight Stammer.	Anxious and eyes prominent.	Tremor of outstretched hands and tachycardia	Anxious and Tachycardia	Tachycardia and Nail Biter.
20-24 yrs.	2	-	-	1	1	-	-	-
25-29 "	-	-	-	-	-	1	1	-
30-34 "	-	1	1	-	-	-	-	1
Total	2	1	1	1	1	1	1	1

Family History of Diabetes and Glycosuria.

A family history of Diabetes was obtained from seven of the men: the mother or father of four, the brother of one, the grandfather of one, and the mother and sister of one were diabetic. The mother or father of two, and the brother of one had symptomless glycosuria which required no treatment.

The number of thirty seven cases have been placed in the indeterminate group (see page 29).

Previous History.

Three were aware of previous glycosuria.

Age Distribution.

The age distribution in periods of five years is given below.

Age Group Number of Cases

**INDETERMINATE GLUCOSE STORAGE DEFECT
OR RENAL GLYCOSURIA.**

Fasting Blood Sugar.

a. Level. The majority of the cases had fasting blood sugar at or below 0.12 gms. In almost all cases it was raised above this level. The figures are given below.

<u>Fasting Blood Sugar Level</u> <u>in gm. % glucose</u>	<u>Number of</u> <u>Cases</u>	<u>Percent</u>
0.12 and under	11	30.
0.13	11	30.
0.14	4	11.
0.15	3	8.
0.16	1	3.

One hundred and thirty seven cases have been placed in the indeterminate group (see page 29).

Previous History.

Three men were aware of previous glycosuria.

Age Distribution.

The age distribution in periods of five years is given below.

<u>Age Groups.</u>	<u>Number of Cases.</u>
Under 20 yrs.	8
" 20-24 "	55
25-29 "	43
30-34 "	25
35-39 "	5
45-49 "	1

Fasting Blood Sugar.

a. Level. One hundred and eighteen men had fasting blood sugar at or under 0.12 gm.%. In nineteen it was raised above this level. The figures are given below.

<u>Fasting Blood Sugar Level</u> <u>in gm. % Glucose.</u>	<u>Number of</u> <u>Cases</u>	<u>Percentage.</u>
0.12 and under	118	86.1
0.13	11	8.0
0.14	4	2.9
0.15	3	2.2
0.16	1	0.7

b. Incidence of nervousness in men with the fasting blood sugar over 0.12 gm. %. One of the 0.13 gm. % group had signs of hyperthyroidism: he was of anxious appearance, pulse rate was raised and the isthmus of his thyroid was palpable. Another had slight tremor of the outstretched fingers. One of the 0.15 gm. % group looked apprehensive and signs of hyperthyroidism were presented by the men whose fasting blood sugar was 0.16 gm. %.

c. Incidence of elevation of the fasting blood sugar above 0.12 gm. % in the cold months. Forty six were examined in the cold months and the fasting blood sugar was elevated above 0.12 gm. % in twelve. Four of these twelve had signs of nervousness.

Symptoms.

Symptoms suggestive of Diabetes were given by eighteen but only after direct questioning. These are enumerated in Table XX. Five volunteered tiredness or weakness. One had symptoms of duodenal ulcer and another had symptoms rather suggestive of this. Three gave a history of indefinite dyspeptic symptoms and one had a history of melaena on two occasions - two years, and again, two months, before; he also suffered from chronic constipation. Four had recent sepsis.

TABLE XX. Symptoms given after direct questioning by patients of the Indeterminate Group.

Age Groups.	Slight Thirst	Slight Polyuria	Slight Nocturia	Slight loss of Weight	Slight loss of weight and boils	Thirst and slight loss of Weight
Under 20 yrs.	-	1	-	-	-	-
20-24 "	-	2	-	3	-	1
25-29 "	-	1	-	4	1	-
30-34 "	2	-	1	1	-	-
35-39 "	-	-	-	1	-	-
45-49 "	-	-	-	-	-	-
Total	2	4	1	9	1	1

Build and Physique.

The build and physique of the men in this class is given in Table XXI.

TABLE XXI. Build and Physique of the men of the Indeterminate Group.

Build and Physique.	Number of Cases.	Percentage.
Good to average....	64	46.7
Tall and slim.....	5	3.7
Small and slim.....	4	2.9
Tall and stout.....	0	0
Small and stout....	1	0.7
Medium height and slim.....	18	13.1
Burly, squat or stocky.....	6	4.4
Small.....	20	14.6
Tall.....	17	12.4
Heavy or Obese.....	2	1.5
Total	137	100.0

Nervousness and Hyperthyroidism.

Fifteen had signs of nervousness or hyperthyroidism.

These signs are detailed in Table XXII.

TABLE XXII. Signs of Nervousness and Hyperthyroidism in patients of the Indeterminate Group.

Age Groups.	Tachycardia Pulse rate of 100 and over.	Thyroid slightly enlarged.	Nervous or Anxious.	Tremor of the outstret- ched hands.	Anxious and Thyroid. slightly enlarged	Anxious and Tremor of outstretched hands.	Anxious and slight Exophthalmos	Anxious and Tachycardia	Tachycardia, slight exoph- thalmos, tremor.	Slight exoph- thalmos, tremor & thyroid slightly en- larged.
Under 20 yrs	1	1	1	1	1	1	1	1	1	1
20-24 "	2	1	1	1	1	1	1	1	1	1
25-29 "	1	1	1	1	1	1	1	1	1	1
30-34 "	1	1	1	1	1	1	1	1	1	1
35-39 "	1	1	1	1	1	1	1	1	1	1
45-49 "	1	1	1	1	1	1	1	1	1	1
Total	3	2	1	2	1	2	1	1	1	1

Family History of Diabetes and Glycosuria.

Ten had a family history of Diabetes: a parent in four, a brother in two, an aunt in two and a grandparent in two. Three had a family history of doubtful Diabetes: the mother in two and the brother in one having glycosuria which required only very slight dietary restrictions.

Thirty five diabetics and potential diabetics make up the remainder.

Eight were typical diabetics: twenty four had blood sugar curves of potential or doubtful diabetes and three had curves of an unusual type.

The potential diabetics and the three with unusual types of curve were recalled for further test but only thirteen of the twenty four potential diabetics were available. The eleven classified on a single test will be discussed now and the others will be considered later (see Chapter VI).

eleven men had curves of potential diabetes and were not available for further investigation. The reasons for inclusion in this group are discussed on page 44.

Previous History.

None gave a previous history of glycosuria.

Age Distribution.

The age distribution in periods of five years is given below:

POTENTIAL DIABETES.

<u>Age Groups.</u>	<u>Number of Cases.</u>
Under 20 yrs.	1
20-24 "	5 (diagnosed on a single blood sugar curve.)
25-29 "	2
30-34 "	2
35-40 "	1

Fasting Blood Sugar.

a. Level. The fasting blood sugar was at or below 0.12 gm% in eight and in the other three was raised above 0.12 gm%. The figures are given below:

<u>Fasting Blood Sugar</u>	<u>Number of Cases</u>	<u>Percentage</u>
at or below 0.12 gm%	8	80%
above 0.12 gm%	2	20%

Eleven men had curves of Potential Diabetes on a single test and were not available for further investigation. The reasons for inclusion in this group are discussed on page 31

Previous History.

None gave a previous history of glycosuria.

Age Distribution.

The age distribution in periods of five years is given below.

<u>Age Groups.</u>	<u>Number of Cases.</u>
Under 20 yrs.	1
20-24 "	5
25-29 "	2
30-34 "	2
45-49 "	1

Fasting Blood Sugar.

a. Level. The fasting blood sugar was at or below 0.12 gm.% in eight and in the other three was raised above 0.12 gm%.

The figures are given below.

<u>Fasting Blood Sugar Level in gm. %.</u>	<u>Number of Cases.</u>	<u>Percentage.</u>
0.12 and under	8	72.7
0.125	1	9.1
0.13	1	9.1
0.14	1	9.1

b. Incidence of nervousness in those with fasting blood sugar over 0.12 gm. %. One man with fasting blood sugar of 0.13 gm. % had tachycardia.

c. Incidence of elevation of the fasting blood sugar above 0.12 gm. % in the cold months. Two were seen in the cold months and one of these had a fasting blood sugar of 0.13 gm. %: he also had tachycardia.

Outline of Curve.

In one case the peak of the curve was only 0.19 gm. % but the two hour specimen was still at 0.16 gm. %. Another had a peak of 0.21 gm. % and a two hour level of 0.16 gm. %. Five had peaks of 0.22 gm. %: the two hour level was 0.15 gm. % in two, 0.17 gm. % in two and 0.19 gm. % in one. One had a peak of 0.23 gm. % a blood sugar above 0.20 gm. % in two specimens and a two hourly blood sugar level of 0.18 gm. %. Three had peaks of 0.24 gm. %, blood sugar above 0.20 gm. % in two specimens and a two hour level of 0.16 gm. %.

Symptoms.

Apart from one man of thirty three years of age who had slight frequency of micturition, none had symptoms relevant to the investigation of glycosuria. Three complained of gastrointestinal upset: one had epigastric pain for 4-5 years, associated with bilious vomiting and headaches, not related to food: another

had a history of sickness and pain occurring about ten minutes after food, relieved by vomiting X-ray examination one year before showed ? pylorospasm: one man had symptoms of dyspepsia for five years - he complained of a nervous feeling in his stomach associated with nausea, flatulence and constipation - X-ray examination had been negative.

Build and Physique.

The build and physique of the men of this group is set out in Table XXIII.

TABLE XXIII. Build and Physique of the men with Potential Diabetes.

Build and Physique.	Number of Cases.	Percentage.
Good to average.....	4	36.4
Tall and slim.....	0	0
Small and slim.....	1	9.1
Tall and stout.....	0	0
Small and stout.....	0	0
Medium height and slim	1	9.1
Burly, squat, stocky..	1	9.1
Small.....	2	18.2
Tall.....	2	18.2
Heavy or Obese.....	0	0
	11	100.1

Nervousness and Hyperthyroidism.

Only one had signs of nervousness. He was twenty two years of age and had a pulse rate of 110 per minute.

Family History of Diabetes and Glycosuria.

The mother of one had glycosuria which was controlled by diet.

DIABETES.

DIABETES.

DIABETES.

Eight had blood sugar curves of Diabetes (page 30).

Previous History.

Four had already sought medical advice because of symptoms, three being diagnosed as Diabetes and the fourth as glycosuria of unspecified type. In a fifth glycosuria had been discovered three years previously in the course of routine examination. The remaining three were unaware of having glycosuria until its discovery by the medical board.

Cases Previously Diagnosed.

Case 678, 23 years of age, had a fairly severe diabetic blood sugar curve:-

	<u>Before Glucose.</u>	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hr.	2 hr.
Blood Sugar.....	0.22	0.27	0.29	0.30	0.29 in gm. %
Urinary Sugar....	+	+	++	++	+

He had no symptoms at the time of examination but stated that two years before he suffered from thirst and loss of weight which had made him consult his doctor. For one and a half years he had been on a diet of 140 g. carbohydrate with 15 units insulin daily. He gave no family history of Diabetes.

Case 680, 27 years of age, was a known diabetic for two years. He had been in hospital on two occasions because of severe

acidosis and incipient coma. For one year he had been on a diet containing 120 g. carbohydrate and 20 units insulin daily. At the onset he had thirst, polyuria and loss of weight but his symptoms disappeared after the institution of treatment. One brother had died of Diabetes. The glucose tolerance test showed:-

	<u>Before Glucose</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2hr.</u>
Blood Sugar.....	0.14	0.19	0.22	0.22	0.23 gm.%
Urinary sugar.....	B.G.R.	B.G.R.	+	++	++

Case 682, 34 years of age, was in the R.A.F. in 1938 when he began to feel easily tired. Thirst and polyuria became troublesome and he noticed he was losing weight. At the beginning of 1939 Diabetes was diagnosed and he was put on a diet and 10 units insulin daily. He reduced the insulin gradually because of hypoglycaemic attacks and for nine months before examination by the medical board he had no insulin. At the time of examination he had no symptoms.

The glucose tolerance test showed:-

	<u>Before Glucose</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>
Blood Sugar.....	0.21	0.28	0.38	0.34	0.32 gm.%
Urinary sugar.....	B.G.R.	B.G.R.	++	+++	+++

Case 681, 32 years of age, said he felt well but on direct questioning admitted a loss of three stones in the past year

and a half, and said he was thirsty at times and had polyuria and nocturia. He had sought medical advice, was told he had glycosuria and advised to avoid excess of starchy foods. He had no family history of Diabetes.

The glucose tolerance test showed:-

	<u>Before</u> <u>Glucose.</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>	
Blood sugar.....	0.20	0.36	0.48	0.52	0.49	gm.%
Urinary sugar.....	+++	+++	+++	+++	+++	

Case 684, 55 years of age, had no symptoms and was on no special diet. Glycosuria had been discovered three years before in the course of routine examination. He had no family history of Diabetes.

The glucose tolerance test showed:-

	<u>Before</u> <u>Glucose</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>	
Blood Sugar.....	0.14	0.30	0.29	0.27	0.21	gm.%
Urinary sugar.....	nil	B.G.R.	+	++	++	

Cases not Previously Diagnosed.

Case 677, 23 years of age, said he felt well but had been more easily tired than usual for a few months. On direct questioning he admitted that for a year he had been troubled with thirst which was severe enough to make him rise at night to drink water

polyuria and nocturia, but he had not consulted his doctor. He had no family history of Diabetes.

The glucose tolerance test showed:-

	<u>Before</u> <u>Glucose.</u>	<u>$\frac{1}{2}$ hr.</u>	<u>1 hr.</u>	<u>$1\frac{1}{2}$ hr.</u>	<u>2 hr.</u>
Blood Sugar.....	0.26	0.48	0.50	0.45	0.38 gm.%
Urinary sugar....	++	++	+++	+++	+++

Case 679, 24 years of age, had no complaints but said he had lost some weight in recent months, but he attributed this to indoor work.

He gave no family history of Diabetes.

The glucose tolerance test showed:-

	<u>Before</u> <u>Glucose.</u>	<u>$\frac{1}{2}$ hr.</u>	<u>1 hr.</u>	<u>$1\frac{1}{2}$ hr.</u>	<u>2 hr.</u>
Blood Sugar.....	0.28	0.38	0.44	0.44	0.42 gm.%
Urinary sugar.....	++	++	+++	+++	++

Case 683, 49 years of age, complained of slight rheumatic pains in both legs for four years and said he had several boils six months before. He had no family history of Diabetes.

The glucose tolerance test showed:-

	<u>Before</u> <u>Glucose.</u>	<u>$\frac{1}{2}$ hr.</u>	<u>1 hr.</u>	<u>$1\frac{1}{2}$ hr.</u>	<u>2 hr.</u>
Blood Sugar.....	0.16	0.20	0.28	0.42	0.19 gm.%
Urinary sugar.....	no spec.	no spec.	+	++	+

To summarize:-

Age distribution.

The age distribution of the eight diabetics is shown below:-

<u>Age Groups.</u>	<u>Number of Cases.</u>
20-24 yrs.	3
25-29 "	1
30-34 "	2
45-49 "	1
55-59 "	1

Symptoms.

Three had symptoms of Diabetes and three others had had symptoms until these were controlled by diet and insulin. One man's only complaint was of pains in his legs and another had no complaints; these two were older than the others, the man with rheumatic pains being forty nine and the man with no symptoms being fifty five years of age.

Build and Physique.

Five were of average physique, one was tall, one was tall and slim and one was small.

Nervousness and Hyperthyroidism.

One appeared to be nervous - he was twenty four years of age.

Family History of Diabetes and Glycosuria.

A brother of one had died of Diabetes. The brother of another had had Diabetes but had died of Cardiac disease.

CHAPTER V.

CORRELATION & DISCUSSION.

In Chapter III, we have seen that all glycosurias are classified as idiopathic. In order to see whether any light could be thrown on the etiology of any of the types of non diabetic glycosuria, the information obtained from the study of the individual cases has been screened, and this will be discussed under the following headings:

1. Relative frequency of each type.
2. Age in relation to
 - a. incidence of the different types
 - b. glucose tolerance of normal and abnormal cases.
 - c. **CHAPTER V** id in renal glycosuria.
3. Effect of
 - a. nervousness and
 - b. environmental temperature on the fasting blood sugar.

CORRELATION & DISCUSSION

1. Diagnosis
2. Prognosis and Treatment
3. Nervousness
4. Family History

1. Relative Frequency

The commonest type of glycosuria is that due to defective storage of glucose or to excessive absorption of glucose from the bowel, the so called renal type accounts for 42% of the total, a figure which is probably underestimate in that there would fall to be added to it

In Chapter II. we have seen that many non diabetic glycosurias are classified as idiopathic. In order to determine whether any light could be thrown on the etiology of any of the types of non diabetic glycosuria, the information obtained from the study of the individual cases has been correlated and this will be discussed under the following headings:-

1. Relative frequency of each type.
2. Age in relation to
 - a. incidence of the different types
 - b. glucose tolerance of normal and storage defect cases.
 - c. renal threshold in renal glycosuria.
3. Effect of
 - a. nervousness and
 - b. environmental temperature on the fasting blood sugar.

Significance in each type of -

4. Symptoms.
5. Build and Nutrition.
6. Nervousness.
7. Family History.

1. Relative frequency.

The commonest type of glycosuria is that which may be due to defective storage of glucose or too rapid absorption of glucose from the bowel, the so called lag curve. This accounts for 42% of the total, a figure which is probably an underestimate in that there would fall to be added to it some of the indeterminate lag or renal cases and also some of the

normals, the latter of whom may have defective storage for larger quantities of glucose (see page 136).

Renal glycosuria accounts for 20% but this may also be raised by the addition of some of the indeterminate lag or renal glycosurias. Of the one hundred and forty one cases of renal glycosuria fifty seven were of the A type and eighty four of the B. type (see page 27).

3.4% were at first classified as doubtful or potential diabetics but after further tests were carried out in some of these the figure was reduced to 1.9%.

Diabetes accounted for 1.3% and indeterminate storage defect or renal glycosuria for 19.9% of the total.

TABLE XXIV. Relative Frequency of each type when classified on a single glucose tolerance test.

Type of Curve.	Number of Cases.	Percentage.
Normal.....	103	14.7
Typical "Lag".....	246	35.1)
Lag with slight de- lay in the absorp- tion or in the clearing of the blood of glucose..	38	5.4)
Renal Glycosuria - Group - A...	57	8.1)
Group - B...	84	12.0)
Indeterminate Lag or Renal Glycosuria..	137	19.6
Diabetes.....	8	1.1
Potential Diabetes..	24	3.4
Unusual type of Curve	3	0.4
Total	700	99.8

TABLE XXV. Relative Frequency of each type after second test in some of the doubtful cases.

Type of Curve.	Number of Cases.	Percentage.
Normal.....	104	14.9
Typical "Lag".....	257	36.6)
Lag with slight delay in the absorption or clearing of the blood of glucose...	38	5.4)
Renal Glycosuria -		
Group - A..	57	8.1)
Group - B.	84	12.0)
Indeterminate lag or renal glycos- uria.....	138	19.9
Diabetes.....	9	1.3
Potential Diabetes...	13	1.9
Total	700	100.1

2 Age in relation to:

a. Incidence of each type.

The relationship of age to the incidence of each type was considered from three aspects:-

1. Average Age (Table XXVI.)
2. Proportional age distribution (Table XXVII and Figures 1,2 and 3.)
3. Proportional frequency of types at specific ages (Table XXVIII).

It has to be admitted that the results obtained are incomplete in so far as the average ages are based on the examination of patients most of whom are between the twenties and

forties and also the percentage frequency at specific ages in one type is bound to be affected by variations in frequency of the others. Let me give an example:- The proportional frequency of Diabetes appears to decrease between twenty five and thirty five years but a study of Table XXVIII shows this is really due to a sharp increase in the frequency of storage defect glycosuria. In spite of these deficiencies, some useful information can be obtained.

Average Ages.

The average age of the diabetics is the highest of all types and that of the potential diabetics lowest. The average age of the typical storage defect is the highest amongst the non-diabetics, being only slightly greater than that of the storage defect with delayed absorption of glucose. In the renal glycosurias, the average age of group B is greater than of group A.

Proportional Age Distribution and Proportional Frequency of types. at Specific Ages.

Since the number of cases examined at different ages varied considerably, the figures in Table XXVII are only of value when comparing the maximum age incidence of types and for this reason the proportional age distribution and the proportional frequency of types at specific ages are best discussed together.

Figures 1, 2, and 3 give the graphical interpretation of Table XXVII. From Tables XXVII and XXVIII certain conclusions may be drawn:

"Normal": The number of normal cases becomes less with age, being greatest in the twenty to twenty four age group. After twenty five it decreases more rapidly than in any other type except in the potential diabetics.

Storage defect: Storage defect glycosuria is the most common at all ages and is much more frequent from twenty five years onwards. Those with slight delay in the absorption of glucose have a younger age distribution, the peak appearing between twenty and twenty four years, whilst the peak of the typical group appeared between twenty four and twenty nine years.

Renal. The proportional age distribution shows that each of groups A. and B. have their maximum incidence between twenty and twenty four years: A. is more common under twenty and B. over thirty four years. Table XXVIII would seem to indicate a fall in the incidence of renal glycosuria with age but this is probably due to the very rapid rise in the incidence of the storage defect type outweighing the minor variations of age incidence of the renal.

Diabetic: The peak of the age distribution comes at the twenty to twenty four period. The proportional frequency seems to show a decrease in the incidence of Diabetes between twenty five and thirty five years of age. This is unexpected since it is known that the incidence of Diabetes increases steadily until well beyond this age but a possible explanation is that the gradual rise in the incidence of Diabetes is greatly outweighed by the rapid increase in the incidence of storage defect glycosuria.

Potential Diabetic: More than half of this group were between twenty and twenty four years. Table XXVIII is not of much value in showing proportional frequency at ages since the number of cases in this type is small and changes in frequency are obscured by changes in the larger groups.

TABLE XXVI. Average Age of Types of Glycosuria in years.

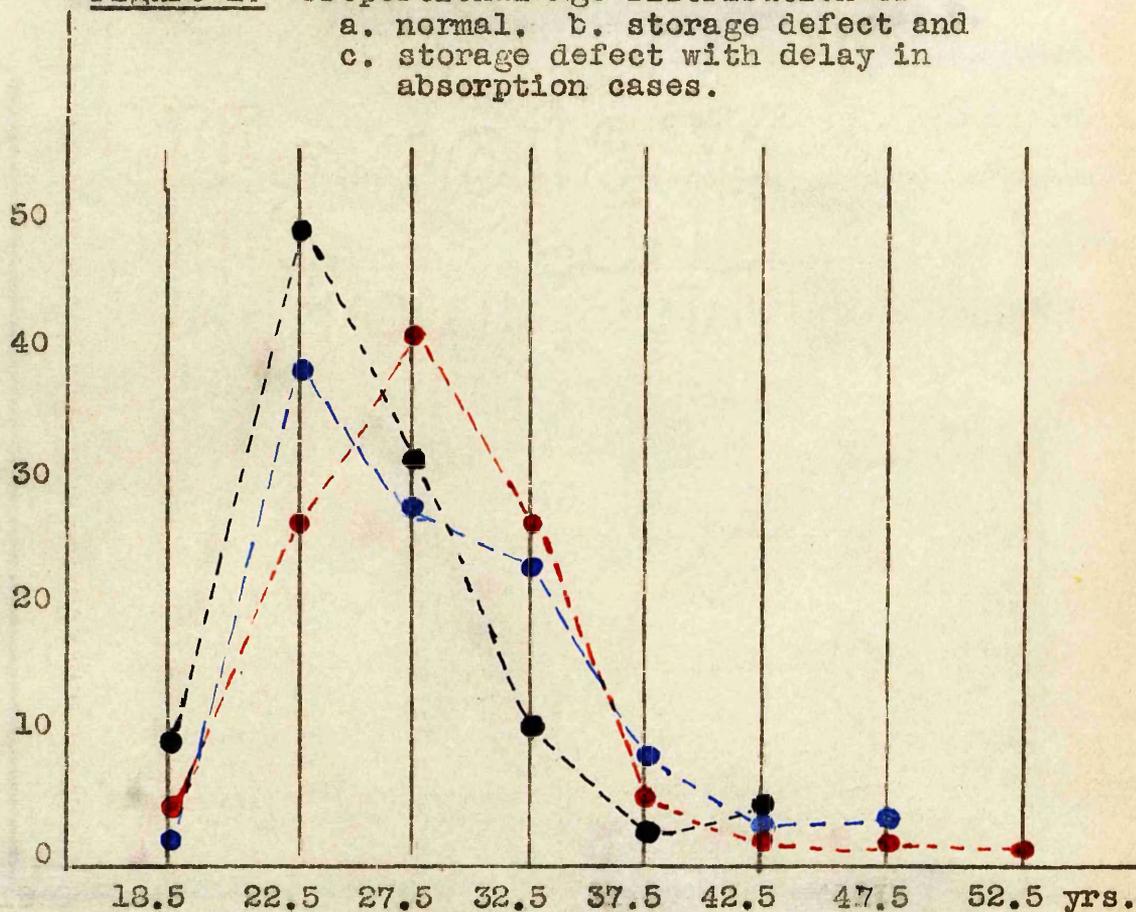
Renal Glycosuria	Storage Defect	Storage defect with slight delay in absorption	Renal Glycosuria	Diabetes	Potential Diabetes
15	3.89	2.63	5.26	25.47	28.12
48.08	24.51	33.47	40.34	27.79	26.93
37.36	40.86	26.22	55.08	26.41	27.29
11.58	23.35	21.05	15.79	26.30	31.94
1.92	4.28	5.26	1.75	25.12	
1.59	1.17	2.53	-		
	1.17	2.53	-		
	0.78	-	1.75		
100	120	100	100		

TABLE XXVIII. Proportional Frequency of each type at specific age periods.

Type	Under 25 yrs.	25-34 yrs.	Over 35 yrs.
Normal.....	20.63	10.81	11.36
Storage Defect..	25.52	44.59	43.19
Storage Defect with slight de- lay in absorp- tion.....	5.59	4.86	9.09
Renal - Total...	21.68	19.46	15.91
Group A.	9.09	7.84	4.55
Group B.	12.59	11.62	11.37
Indeterminate...	22.38	18.38	13.64
Diabetes.....	1.40	0.81	4.55
Potential Diabetes.....	2.80	1.08	2.27
Total	100	100	100

Number of cases expressed in Percentages of total in group.

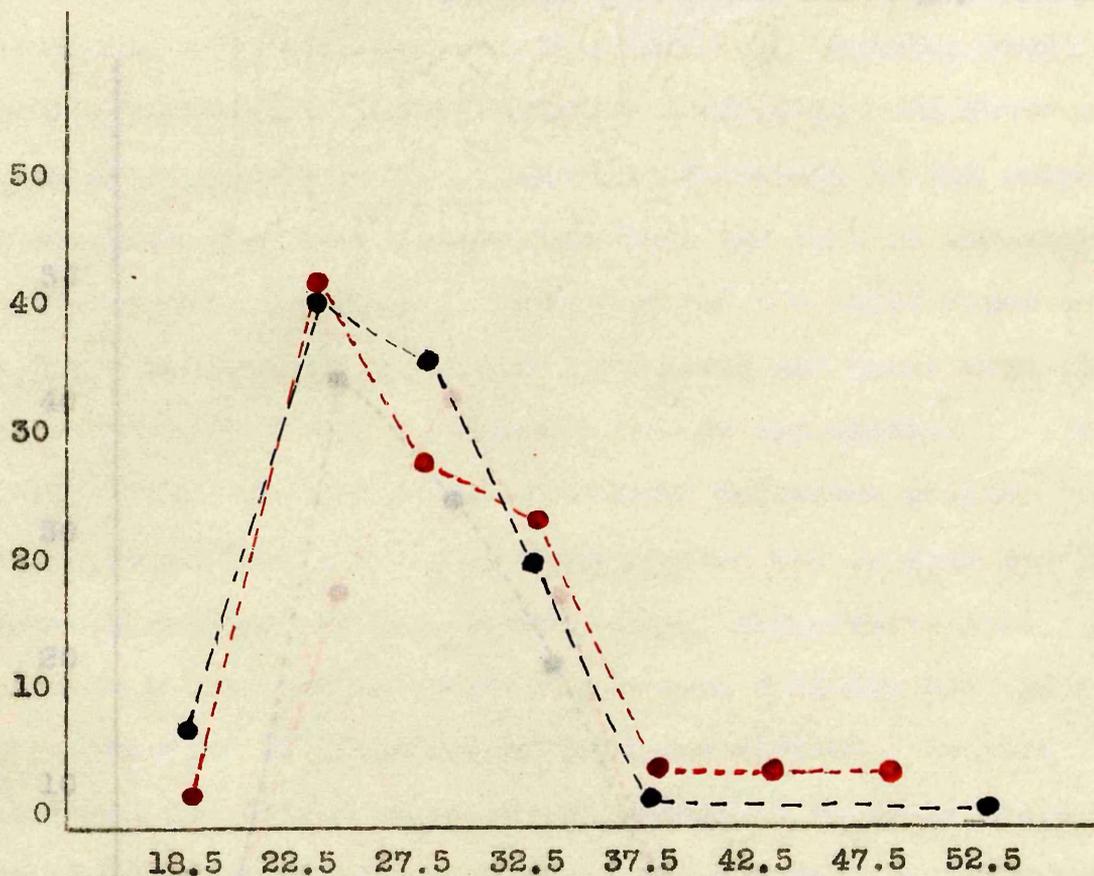
Figure 1. Proportional Age Distribution of
a. normal. b. storage defect and
c. storage defect with delay in
absorption cases.



- Normal
- Storage defect
- Storage defect with delay in absorption.

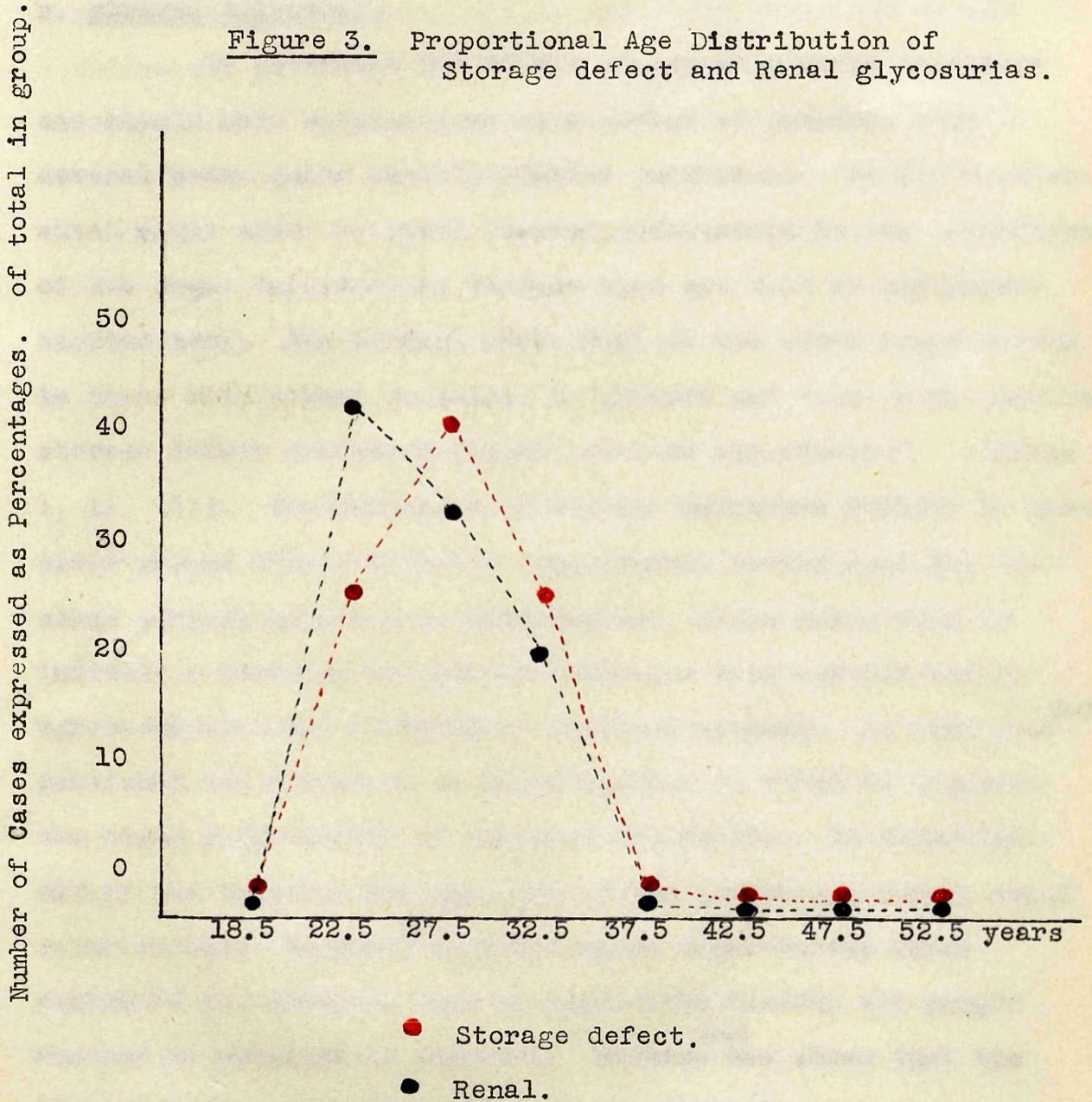
Figure 2. Proportional Age Distribution of renal glycosuria - groups A. and B.

Number of cases expressed as Percentages. of total in group.



● Renal A.
● " B.

Figure 3. Proportional Age Distribution of Storage defect and Renal glycosurias.



b. glucose tolerance.

To determine the effect of age on glucose tolerance one should make examinations of a number of patients over several years under exactly similar conditions. An alternative which might offer at least limited information is the comparison of the sugar tolerance at various ages and this is the method adopted here. The average peak level of the blood sugar curves in those with normal tolerance to glucose and those with glucose storage defect reached a higher level as age advanced. (Tables 1, 11, 111). The frequency of storage defect was greater in the older groups (Table XXVIII). The present series does not include elderly people but, nevertheless, these facts seem to indicate a decrease in glucose tolerance with age and are in agreement with the findings of previous workers. In 1934 John⁽⁶⁵⁾ published the result of an investigation in which he compared the blood sugar curves of children and adults. He found that 82% of the children but only 62% of the adults had normal blood sugar curves. Marshall⁽⁶⁶⁾ obtained blood sugar curves which resembled the diabetic type in apparently healthy old people who had no symptoms of Diabetes. Bertram⁽⁶⁷⁾ has shown that the glucose tolerance curves approach the diabetic type as age advances.

c. renal threshold in renal glycosuria.

⁽⁴⁶⁾ Joslin states that a careful follow up of the renal

glycosurias might show a rise in the renal Threshold as age advances but he offers no proof. The effect of age on the renal threshold of renal glycosuria can be determined either directly, by following the progress of individual renal glycosurias over a number of years, or indirectly, by finding the average ages of group A. and group B. renal glycosurias and by comparing the relative number of each type at different ages.

Only the second method is available here.

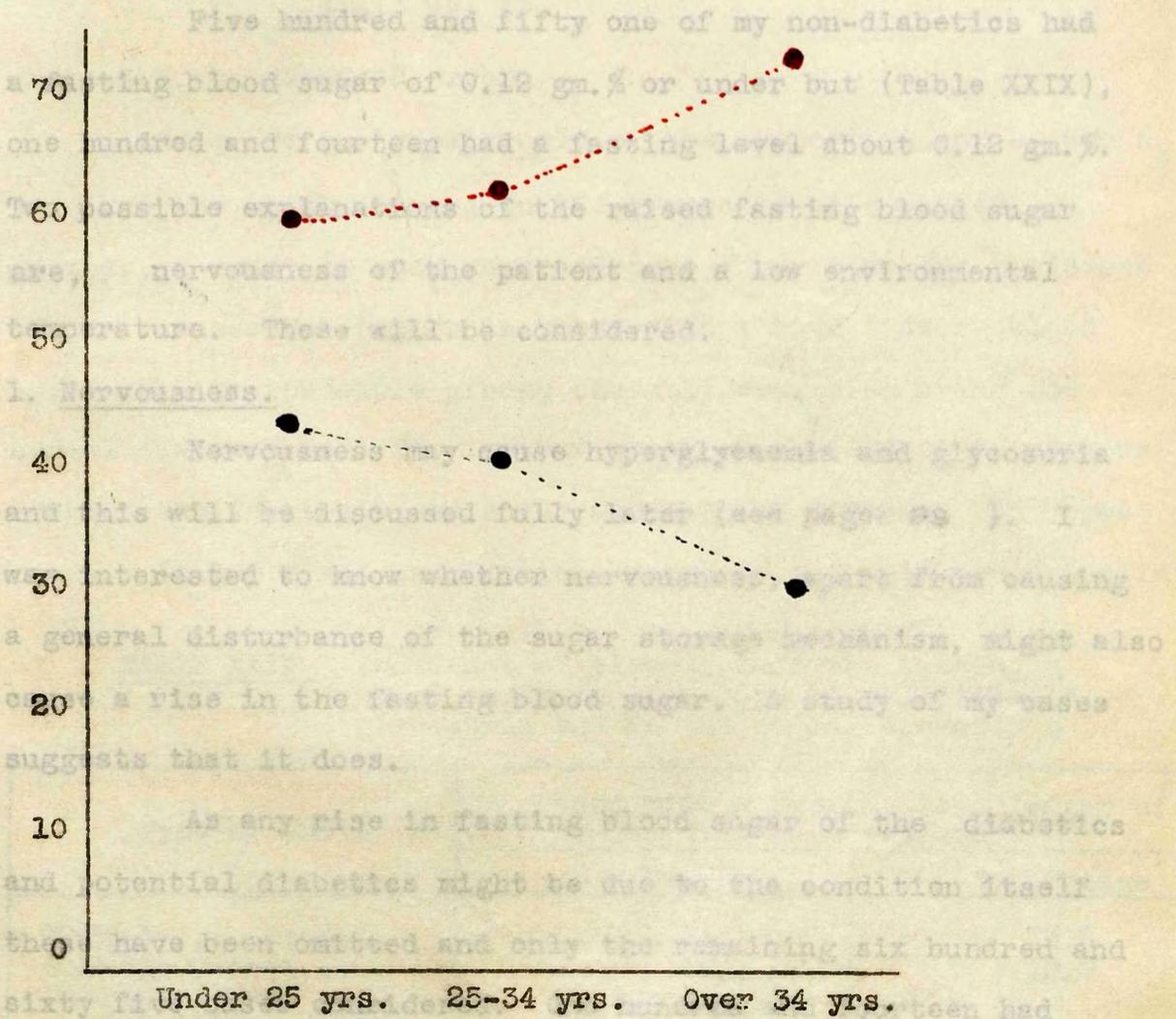
The average age of group A. is less than that of group B. (Table XXVI). The proportional age distribution shows that under twenty years the incidence of A. is greater than of B. whilst over thirty four the incidence of B. is greater than of A. (Table XXVII). In Table XXVII change in the relative frequency of each group of renal glycosuria is apt to be obscured or distorted by more marked changes in other types of glycosuria. To exclude this possibility the relative number of cases in groups A. and B. at age groups has been compared and the results shown graphically in Figure 4. B is more common at all ages but the relative frequency of A. decreases and of B. increases with age.

None of the differences is very marked and the great increase in relative frequency of group B over group A. at the older ages is not so conclusive as it might appear at first

glance owing to the smallness of the total number in the older age group. Nevertheless, they all seem to indicate that the renal threshold of renal glycosuria tends to rise slightly with age.

Figure 4. Relative Frequency of group A. and B. Renal Glycosuria at age groups.

Percentages of total renal glycosurias at the specific age group.



- Renal A.
- Renal B.

Elevation of the Fasting Blood Sugar in the Normal and Non-diabetic Glycosuria Cases.

The range of normal fasting blood sugar is generally taken to be between 0.07 and 0.12 gm.%. ^(5a) Joslin accepts these limits, ⁽⁵⁷⁾ Wilder fixes them between 0.06 and 0.12 gm.%, ⁽⁵⁸⁾ Harrison at 0.08 to 0.12 g.%, ^(5a) MacLean at 0.09 to 0.11 gm.% and ⁽⁵⁹⁾ Dunlop gives the average figure as 0.08 gm.%.

Five hundred and fifty one of my non-diabetics had a fasting blood sugar of 0.12 gm.% or under but (Table XXIX), one hundred and fourteen had a fasting level about 0.12 gm.%. Two possible explanations of the raised fasting blood sugar are, nervousness of the patient and a low environmental temperature. These will be considered.

1. Nervousness.

Nervousness may cause hyperglycaemia and glycosuria and this will be discussed fully later (see page 98). I was interested to know whether nervousness, apart from causing a general disturbance of the sugar storage mechanism, might also cause a rise in the fasting blood sugar. A study of my cases suggests that it does.

As any rise in fasting blood sugar of the diabetics and potential diabetics might be due to the condition itself these have been omitted and only the remaining six hundred and sixty five cases considered. One hundred and fourteen had

elevation of the fasting blood sugar between 0.13 and 0.17 gm.%, the numbers being greater at the lower levels. 21.1% of these had signs of nervousness and hyperthyroidism whilst the incidence in the total cases was only 12.6%. This difference is significant since it is greater than twice the standard error (± 3.4), calculated from the formula:

$$S.E. = \sqrt{\left(\frac{1}{n_1} + \frac{1}{n_2}\right) pq}$$

where S.E. = standard error

p and q are the reciprocals of the proportion and n_1 and n_2 are the total numbers in the groups to be compared

Further, a study of each separate type shows that the incidence of nervousness was higher in those with a high fasting blood sugar than in the whole group, the only exception being the normal (Table XXIX). Yet further proof of the effect of nervousness on the fasting blood sugar seems to be given by the repeated cases. At the first examination, seven of the thirteen potential

TABLE XXIX. Incidence of elevation of the fasting blood sugar in each type of non-diabetic glycosuria and in the normal cases.

Type of Curve	Cases with a fasting blood sugar of 0.13 gm.% and over.	
	Number	Percentage
Normal.....	14	13.6
Storage Defect.....	49	19.9
Storage defect with slight delay in the absorption of glucose..	15	35.5
Renal.....	17	12.8
Indeterminate storage defect or renal..	19	13.8

TABLE XXX. Incidence of nervousness and hyperthyroidism in (a) those with elevation of the fasting blood sugar and (b) the whole group.

Type of Curve.	Percentage of cases with elevation of the fasting blood sugar who had signs of nervousness or hyperthyroidism	Percentage of cases with nervousness or hyperthyroidism in the whole group.
Normal.....	7.1	10.7
Storage defect.	24.5	14.7
Storage defect with slight delay in the absorption..	26.6	18.4
Renal.....	11.6	10.5
Indeterminate storage defect or renal.....	26.3	10.9

diabetics had an elevated fasting blood sugar but when the test was repeated and the men were less nervous only three had an elevated fasting blood sugar and of these one was diabetic and the other two remained potential diabetics.

2. Lowered environmental temperature.

A low environmental temperature appears to raise the blood sugar level. Cannon, Querido, Brittain and Bright support this view and ascribe the rise to the setting free of adrenaline in greater quantities in cold weather. Samaras found that when rats were plunged into ice cold water their blood sugar rose.

In the present investigation the first specimens of blood were taken as soon as the men entered from the outside and before any effect of cold could have worn off.

For the reasons given above (page 87) only the six hundred and sixty five non-diabetic patients will be considered. These were examined at all seasons and the fasting blood sugar was elevated in 17.1%. One hundred and ninety two were examined at the cold season and the fasting blood sugar was elevated in 26.0%. Tables XXXI and XXXII show the incidence of elevation of the fasting blood sugar at the cold and other seasons. It has to be admitted that a much smaller number were seen in the colder than in the warmer months and this makes it necessary to prove that the higher incidence of elevation in the smaller group has not arisen by chance. In Table XXXI the significance of the results is dealt with by finding the standard error (see Page 88). The difference was significant in the storage defect, storage defect with delayed absorption and indeterminate storage defect or renal cases. It had a positive trend in the normal and renal of the group A type, but was not significant. In the renal of the group B type the difference was in the negative direction. In the total the difference is significant since the difference is more than three times the standard error.

Nervousness affects the blood sugar level (see above) and this possible fallacy had to be eliminated. When those cases

with signs of nervousness were excluded elevation of the fasting blood sugar in the colder months was still more frequent (Table XXXII).

TABLE XXXI. Comparison of incidence of elevation of the fasting blood sugar in each type in the cold and other seasons. (expressed as percentages.)

Type of Curve	Cold season	Other seasons	Difference + standard error.	Significance of difference.
Normal.....	14.63	12.90	1.73 ± 21.81	not significant
Storage defect	32.25	15.76	16.49 ± 5.87	significant
Storage defect with delayed absorption...	61.54	28.00	33.54 ± 16.71	significant
Renal A.....	15.38	4.55	10.83 ± 8.07	not significant
Renal B.....	9.52	17.46	7.94 ± 9.11	not significant
Indeterminate storage defect or renal	26.09	7.69	18.30 ± 6.25	significant
Total	25.51	13.65	11.86 ± 3.21	Significant

TABLE XXXII. Effect of Environmental Temperature on Blood Sugar Level.

Type of Curve.	Cold Season				Warmer Season				All Seasons			
	A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.	L.
	Number seen in cold season.	Number of A. with raised fasting blood sugar.	B. Less than those with signs of nervousness	C. as a percentage of A.	Number seen in warmer season.	Number of F. with raised fasting blood sugar.	F. Less than those with signs of nervousness.	G. as a percentage of H.	Number seen at all seasons.	Number of I. with elevated fasting blood sugar.	J. Less than those with signs of nervousness.	K. as percentage of L.
Normal.....	41	6	6	14.6	62	8	7	11.3	103	14	13	12.6
Lag (Total).	75	28	21	28.0	209	36	26	12.4	284	64	47	16.5
Renal.....	34	4	4	11.8	107	13	11	10.3	141	17	15	10.6
Indeterminate lag or renal	42	12	8	17.4	95	7	6	6.3	137	19	14	10.2
Total	192	50	39	20.3	473	64	50	10.6	665	114	89	11.9

One of the storage defect cases who had a fasting blood sugar of 0.14 gm. % has been excluded from the table because he had eaten a breakfast roll one hour before the test began.

Symptoms.

The seven younger of the nine Diabetics had symptoms of thirst, loss of weight or polyuria but of the two older, one aged forty nine complained only of pains in his legs and the other aged fifty five had no symptoms.

None of the non-diabetics volunteered symptoms indicative of Diabetes but after direct questioning 15.8% admitted to having symptoms. This figure is much less than the 66% obtained by Murray-Lyon in his study of two hundred and twenty four cases. Although information obtained after direct questioning has not the same significance as that given spontaneously it cannot be disregarded. The incidence of symptoms in each type of glycosuria is shown in Table XXXIII, the greatest incidence being in the storage defect type.

As moderate loss of weight might have been due to dietetic restriction and the stress of extra work, slight decreases of weight alone have been omitted, leaving thirst, polyuria and nocturia, singly or in combination, to be considered. After making this allowance the relative frequency of symptoms in the renal and storage defect types remained unchanged Table XXXIII). The comparatively high incidence of symptoms in the "normal" cases is disturbing at first glance but it has to be borne in mind that these patients were normal only in the sense

that they showed normal tolerance to 50 gm. of glucose. They were referred for examination because they had glycosuria so that at the time of the examination at the Medical Board they may have had a transient rise of blood sugar due either to nervousness or to a carbohydrate meal of more than 50 gm. We have no proof that they would have had a normal curve if they had been given a larger amount of glucose.

The incidence of polyuria and nocturia in the six hundred and sixty five cases of non-diabetic glycosuria was 5.7% whereas only one of a control group of one hundred men who had orthostatic albuminuria gave a positive history of polyuria and nocturia.

It is evident, therefore, that non-diabetic glycosuria does not produce clamant symptoms but in some, especially of the storage defect type, there may be slight thirst and polyuria which could be due to the excretion of sugar.

The frequency of tiredness as a symptom was low (Table XXXVIII). ⁽⁴⁴⁾ Joslin states that some of the renal glycosurias become easily tired and complain of lassitude and Crawford ⁽⁴⁵⁾ found a tendency to neuraesthesia in the renal type of case. The incidence in the present series was slightly greater among the renal glycosurias but even here it was too low to be significant.

The incidence of gastrointestinal upset in each type

was considered. Duodenal ulcer, gastroenterostomy and diarrhoea may cause hyperglycaemia, glycosuria and the blood sugar curve of the storage defect type through too rapid absorption of glucose from the bowel (Lawrence)⁽³¹⁾. The incidence of the various types of gastrointestinal upset in this series is shown in Table XXXIV. There does not seem to be any point of significance in the figures detailed, except that vague gastrointestinal complaints were more frequent among those with renal and indeterminate storage defect or renal glycosuria.

TABLE XXXIII. Symptoms given by patients with non-diabetic blood sugar curves.

Type of Curve.	Cases complain- ing of tired- ness.		Cases giving symptoms suggestive of Dia- betes after direct questioning.		Cases with thirst polyuria or both.	
	Number	%	Number	%	Number	%
Normal.....	2	1.9	15	14.4	11	10.8
Lag.....	6)	2.3)	48)	18.7)	28)	11.4)
Lag with slight delay in ab- sorption of glucose.....)6 -)))2.1 -)))52))4))18.3))10.5))28))-))9.9))-)
Renal A.....	2)	3.5)	7)	12.3)	4)	7.1)
B.....	4) 6	4.8) 4.3	13) 20	15.5) 14.2	5) 9	6.0) 6.4
Indeterminate Lag or renal	5		18		8	5.9

TABLE XXXIV.

History of gastrointestinal symptoms given by patients with non-diabetic blood sugar curves. (The results are expressed as percentages of the total cases in the group.)

Type of Curve.	Suspected Duodenal Ulcer.	Gastro-enterostomy	Suspected gastro-enterostomy	Diarrhoea	Indigestion and vague complaints.
Normal.....	1	1	1.9	0	1.0
Total Leg.....	0.7	0	1.1	0.7	1.8
Total Renal.....	0	0	0	0.7	3.5
Indeterminate Leg or Renal..	1.5	0	0	0	3.2

Number

Percentage

	Normal	Lag	Lag with delayed absorption.	Renal A.	Renal B.	Indeterminate lag or renal	Potential Diabetes	Diabetes	Total	Normal	Lag	Lag with delayed absorption	Renal A.	Renal B.	Indeterminate lag or renal.	Potential Diabetes	Diabetes	Total
Tall (Heavy)	1	4	-	1	-	-	-	-	6	0.97	1.63	-	1.75	-	-	-	-	0.9
(Medium)	8	11	5	7	6	17	2	1	54	7.77	4.47	13.16	12.28	7.14	12.41	18.18	12.5	8.1
(Light)	8	13	1	1	4	5	-	1	32	7.77	5.28	2.63	1.75	4.76	3.65	-	12.5	4.8
Med. (Heavy)	3	3	2	3	4	2	-	-	17	2.91	1.22	5.26	5.26	4.76	1.46	-	-	2.6
(Medium)	37	101	15	28	36	64	4	5	281	35.92	41.06	39.47	49.12	42.86	46.72	36.36	62.5	42.3
(Light)	21	38	4	9	9	18	1	-	99	20.39	15.45	10.53	15.79	10.71	13.14	9.09	-	14.9
Short (Heavy)	7	28	1	4	6	7	1	-	53	6.80	11.38	2.63	7.02	7.14	5.11	9.09	-	8.0
(Medium)	14	39	6	3	16	20	2	1	98	13.59	15.85	15.79	5.26	19.05	14.60	18.18	12.5	14.7
(Light)	4	9	4	1	3	4	1	-	25	3.88	3.66	10.53	1.75	3.57	2.92	9.09	-	3.8
Tall	17	28	6	9	10	22	2	2	92	16.50	11.38	15.79	15.79	11.90	16.06	18.18	25.0	13.8
Medium	61	142	21	40	49	84	5	5	397	59.22	57.72	55.26	70.18	58.33	61.31	45.45	62.5	59.7
Short	25	76	11	8	25	31	4	1	176	24.27	30.89	28.95	14.04	29.76	22.63	36.36	12.5	26.5
Heavy	11	35	3	8	10	9	1	-	76	10.68	14.23	7.89	14.04	11.90	6.57	9.09	-	11.4
Medium	59	101	26	38	58	101	8	7	433	57.28	61.38	68.42	66.67	69.05	73.72	72.73	87.5	65.1
Light	33	60	9	11	16	27	2	1	156	32.04	24.39	23.68	19.30	19.05	19.71	18.18	12.5	23.5
Total	103	246	38	57	84	137	11	8	665									

TABLE XXV. Build and Height of Patients with each type of glycosuria.

Build and Physique.

Obesity in the adult is frequently associated with Diabetes. Joslin^(y1) thinks it is the most important precipitating factor in an individual who has a hereditary predisposition. He admits that both conditions are probably due to an underlying endocrine imbalance but states that "conditions favouring obesity are undoubtedly related to concomitant variations in the incidence of diabetes". Rony^(y2) on the other hand found that obesity per se had no effect on glucose tolerance.

Joslin^(y3) quotes statistical evidence to show that the average height of the adult diabetic is normal but Priscilla White^(y4) found 86% of four hundred and seventeen children were overheight.

As no authoritative statement could be obtained about build and nutrition in non-diabetic glycosuria an analysis was made of the present series in order to determine whether there was any significant variation in the different types of non-diabetic glycosuria.

Statistical investigation shows that the differences are not significant and could have arisen by chance.

Nervousness and Hyperglycaemia.

Nervousness may produce hyperglycaemia and glycosuria by setting free adrenaline. Blum⁽¹³⁾ (1901) discovered that the

parenteral administration of adrenaline raised the blood sugar level by mobilising liver glycogen and this was confirmed by Cannon and his colleagues⁽¹⁵⁾. Folin, Denis and Smillie⁽¹⁴⁾ found transitory glycosuria in six of thirty three apparently normal medical students after sitting an important examination.

Cannon and Fiske⁽¹⁵⁾ discovered sugar in the urine of members of a football team who had not played in the game but had acted as substitutes, showing that the glycosuria was due to emotional stress and not to physical exertion.

There is some difference of opinion as to the effect of hyperthyroidism on sugar tolerance. According to Wilder⁽⁹⁾, the blood sugar curves may resemble the alimentary type whereas Andersen⁽⁸⁾ found a general increase in the height and length of the blood sugar curves in thirty eight patients with exophthalmic goitre. The signs of nervousness and hyperthyroidism in my patients have been noted and the incidence calculated for each type (Table XXXV). The incidence of nervousness and hyperthyroidism was more or less constant in the normal, renal, and indeterminate storage defect or renal but greater in those with storage defect type of glycosuria and especially in the thirty eight whose blood sugar curves had not quite reached the base line in two hours. This latter finding seems to be in agreement with Andersen's work (see above). The higher incidence of nervousness in the storage defect would suggest that it might

be a factor in producing this type of curve, particularly where there is slight delay in the blood sugar's return to normal.

TABLE XXXVI. Incidence of nervousness and hyperthyroidism in the non-diabetic glycosurias and normal cases.

Type of Curve.	Number of Cases.	Percentage.
Normal.....	11	10.7
Typical lag.....	36	14.6)
Lag with slight delay in the absorption or clearing of the blood or glucose.....	7	18.4)
Renal A.....	3	10.5)
B.....	8	10.7)
Indeterminate lag or renal..	15	10.9

15.1
10.6

Family History of Diabetes and Glycosuria.

An attempt was made to ascertain the familial incidence of glycosuria in the various types and the figures obtained are shown in Table XXXVI.

These figures are not accurate for several reasons. In the first place very few of the men knew anything about the health of any but their immediate relatives and secondly most of them thought that sugar in the urine always indicated Diabetes. A third possible cause of error is that there was no means of determining the frequency of undetermined glycosuria. This might mean that the figures given are too small but it should not disturb the relative familial frequency in the various types of glycosuria.

Three groups were obtained by rough and ready separation.

1. Family history of Diabetes.

For inclusion in this group it was necessary to have a history of a relative having

(a) had symptoms of Diabetes for which he or she received treatment, either dietetic or dietetic and insulin or

(b) died of Diabetes.

2. Family history of Doubtful Diabetes.

Some gave a vague history of a relative being on a mild carbohydrate restriction diet because of glycosuria. This was classified in each case as doubtful diabetes.

3. Family History of symptomless glycosuria.

Some gave a history of a relative having had glycosuria which was known to be of no importance or which had been of long standing without causing symptoms or necessitating treatment. This was classified as symptomless glycosuria.

Familial Incidence of Diabetes.

The incidence of a positive family history amongst the diabetics was high - three out of nine or 33% and in the potential diabetics it was two out of thirteen or 15.4%. In the non-diabetics it was 2.9% in the normal, 5.8% in the storage defect, 5.7% in the renal and 7.3% in the indeterminate storage defect or renal group. The figures in the non-diabetics agree fairly closely with the 2.8% of ⁽¹⁵⁾Umber, 3.4% of ⁽¹⁶⁾Cambridge and 6.2% of ⁽¹⁷⁾Kern.

Familial incidence of Symptomless glycosuria.

The familial incidence of symptomless glycosuria is greater in the renal glycosurias and especially in those of Group A. In this rough classification, cases of doubtful Diabetes and symptomless glycosuria must inevitably be intermixed and to eliminate this fallacy they

were slumped together. This made little difference to the results (Table XXXVII). 5.7% of the total renal glycosurias and only 1.0% of the normal and 3.2% of the storage defect having a family history of doubtful diabetes and symptomless glycosuria.

These results seem to show that the familial incidence of Diabetes in the storage defect and renal types is much the same but the incidence of non-diabetic glycosuria is higher in the renals and especially in those with a very low renal threshold. This would suggest that there is a hereditary factor in renal glycosuria.

Previous workers have noted a familial incidence of symptomless glycosuria in the renal type. Brown and Poleshuck⁽⁴⁰⁾ reported four cases of renal glycosuria in three generations of

one family. Falta⁽⁴¹⁾ instanced a family of seven children six of whom had renal glycosuria. Hjarne⁽⁴²⁾ reported thirty three of one hundred and ninety nine blood relations who had renal glycosuria. Powelson and Wilder⁽⁴³⁾ obtained a history of familial benign glycosuria in twenty three of eighty two cases of renal glycosuria at the Mayo Clinic.

TABLE XXXVI. Familial Incidence of Diabetes and Glycosuria.

Type of Curve.	Total Cases	Percentage of each group with a family history of:-		
		Diabetes	Doubtful Diabetes	Symptomless Glycosuria.
Normal.....	104	2.9	1.0	0
Storage Defect.	295	5.8	1.8	1.4
Renal Glycosuria.				
Type A.....	57	5.7	0	8.8
Type B.....	84		0	3.6
141				
Indeterminate group.....	138	7.3	2.3	0
Potential Diabetes.....	13	15.4	7.7	0
Diabetes.....	9	33	0	0

TABLE XXXVII. Familial Incidence of Doubtful Diabetes and Symptomless Glycosuria.

Type of Curve.	Percentage with a family history of doubtful Diabetes and symptomless glycosuria in each type.
Normal.....	1.0
Storage Defect.....	3.2
Renal A.....	8.8)
B.....	3.6) 5.7

A STUDY OF THE REPEATED
CASES.

Repeat examination was made in thirteen cases and the blood sugar curves were that of mild or potential Diabetes in three because the outline of the curves were unusual.

CASES SUGGESTIVE OF MILD OR POTENTIAL DIABETES.

Twenty four had blood sugar curves which might be mild or potential Diabetes. In seven instances was repeated in children, the interval between the first and next varying between 1 to 7 years.

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second in three to six years. In one instance in the the first of a simple atrophic defect, in another of a glycosuria a diabetic and the still ~~more~~ diabetic curves months later one of these was the most repeated at the preliminary phase he had normal blood sugar.

A STUDY OF THE REPEATED CASES.

Each of the repeated cases will be discussed as follows:

Cases reclassified as showing:-

1. Normal Glucose Tolerance.

Case 689, 21 years of age. This man had no symptoms

Repeat examination was made in thirteen cases because the blood sugar curves were that of mild or potential Diabetes; and in three because the outline of the curves were unusual.

CASES SUGGESTIVE OF MILD OR POTENTIAL
DIABETES.

Twenty four had blood sugar curves which suggested mild or potential Diabetes. The glucose tolerance test was repeated in thirteen, the interval between the first and second test varying between five days and twenty seven months. The second test led to alteration in classification in eleven of the thirteen: one had a normal glucose tolerance, eight a simple storage defect, one an indeterminate glycosuria, one a diabetic and two still had potential diabetic curves (some months later one of these had the test repeated at the Western Infirmary when he had normal sugar tolerance.)

Each of the repeated cases will be discussed separately.

Cases reclassified as showing:-

1. Normal Glucose Tolerance.

Case 689, 21 years of age. This man had no symptoms. He gave no family history of Diabetes. General examination was negative. The glucose tolerance test on 11/9/39 showed:

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2hr.</u>
Blood Sugar.....	0.12	0.16	0.215	0.23	0.16 gm%
Urinary Sugar.....	nil	nil	+	B.G.R.	B.R.

A borderline diabetic curve.

The glucose tolerance test was repeated on 18/3/40 when it showed:

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>
Blood Sugar.....	0.12	0.15	0.16	0.12	0.12 gm%
Urinary sugar..	nil	nil	nil	nil	nil

Normal sugar tolerance.

Case 687, 21 years of age. He had no symptoms. His paternal grandfather and aunt had Diabetes. General examination was negative.

The glucose tolerance test on 7/10/39 showed:

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>
Blood sugar.....	0.16	0.24	0.25	0.175	0.16 gm%
Urinary sugar....	nil	B.G.R.	B.G.R.	B.R.	nil

Potential Diabetes.

The test was repeated on 18/11/39 when it showed:

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>
Blood Sugar.....	0.15	0.22	0.25	0.19	0.15 gm%
Urinary sugar...	nil	B.R.	B.G.R.	B.G.R.	nil

Potential Diabetes.

Some months later this man had a glucose tolerance test done at the Western Infirmary when it showed normal sugar tolerance (personal communication from Dr. Douglas Stevenson).

2. Simple Glucose Storage Defect.

Case 685, 20 years of age. He had no symptoms and no family history of Diabetes. General examination was negative. The glucose tolerance test on 23/10/39 showed:

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>	
Blood sugar.....	0.09	0.32	0.22	0.24	0.18	gm%
Urinary Sugar...	nil	B.G.R.	++	+	B.G.R.	

Potential Diabetic.

He was recalled and the test repeated on 7/9/40 when it showed:

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>	
Blood Sugar....	0.10	0.21	0.19	0.11	0.09	gm%
Urinary Sugar..	B.S.R.	B.S.R.	+	B.G.R.	B.R.	

Simple Storage Defect.

Case 686, 21 years of age. One year previously he had been feeling below par but improved after a nasal operation. Immediately after this operation he developed Influenza and became troubled with flatulent dyspepsia. This was said to be due to "nerves" and he felt better after a holiday but had lost one stone in weight.

He looked anxious, had fine tremor of the outstretched fingers and tachycardia of 120 per minute. He had no family history of Diabetes. The glucose tolerance test on 26/9/39 showed:

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>	
Blood Sugar....	0.15	0.18	0.19	0.22	0.19	gm%
Urinary Sugar..	nil	B.G.R.	++	B.R.	B.G.R.	

Potential Diabetes.

Very soon afterwards he was admitted to hospital where he was treated as an in-patient for three weeks and dismissed on a diet of 160 gm. carbohydrate, 80 gm. protein and 120 gm fat, to which he adhered. (Personal communication from Dr. Muir Crawford.)

He was recalled on 12/12/41 and the test repeated. He had been feeling well during the interval and his weight had been steady. He was still a little nervous but on the whole was much more self possessed. On this occasion the glucose tolerance test showed:

	<u>Fasting.</u>	<u>$\frac{1}{2}$ hr.</u>	<u>1 hr.</u>	<u>$1\frac{1}{2}$ hr.</u>	<u>2 hr.</u>	
Blood Sugar....	0.12	0.21	0.13	0.10	0.07	gm%
Urinary sugar..	nil	nil	B.V.S.R.	B.V.S.R.	nil	
<u>Simple storage defect.</u>						

Case 693, 25 years of age. He gave a history of pain in the right iliac fossa, aggravated by exertion, especially by walking. On direct questioning about symptoms of Diabetes he said he had slight thirst and had lost some weight.

The family history was negative. General Examination was negative. The glucose tolerance test on 7/6/40 showed:

	<u>Fasting</u>	<u>$\frac{1}{2}$ hr.</u>	<u>1 hr.</u>	<u>$1\frac{1}{2}$ hr.</u>	<u>2 hr.</u>	
Blood sugar....	0.11	0.14	0.18	0.20	0.18	gm%
Urinary sugar.	nil	nil	B.V.S.R.	B.G.R.	B.G.R.	
<u>Potential Diabetes.</u>						

He was recalled on 6/12/41 and the test repeated. In the interval he had been on an unweighed diet containing a reduced amount of carbohydrate. He was feeling well but had lost a little weight. On this occasion the test showed:

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>	
Flood sugar....	0.115	0.19	0.15	0.11	0.105	gm.%
Urinary sugar..	nil	B.S.R.	B.S.R.	nil	nil	

Simple storage defect.

Case 694. 27 years of age. He was losing weight and consumed a fair amount of water and beer. His appetite was poor in the morning and he had pain in the region of the umbilicus about half an hour after food. For a month he had pain in the lumbar region, relieved by rest. His father had a "touch" of Diabetes a year before.

General examination revealed hyperaesthesia of the left costal margin and tenderness to pressure over the lumbar region of the back. The urine contained a trace of albumin. The glucose tolerance test on 5/6/40 showed:

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>	
Blood sugar...	0.12	0.24	0.20	0.19	0.15	gm.%
Urinary sugar.	nil	B.R.	++	++	B.V.S.R.	

Potential Diabetes.

He was recalled on 28/8/40 when the curve showed:

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>	
Blood Sugar...	0.10	0.21	0.20	0.14	0.08	gm.%
Urinary Sugar.	nil	B.R.	++	++	nil	

Simple storage defect.

Case 696, 28 years of age. He had no symptoms. His mother had glycosuria. He was overweight and had perforation of the left ear drum. The glucose tolerance test on 7/6/40 showed:

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>	
Blood Sugar...	0.13	0.20	0.19	0.19	0.15	gm.%
Urinary sugar.	nil	B.V.S.R.	no spec.	++	B.R.	

Potential Diabetes.

He was recalled on 6/12/40. He was still overweight and had been on no particular diet. The second test showed:

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>	
Blood Sugar....	0.12	0.20	0.15	0.09	0.09	gm.%
Urinary sugar.	nil	+	B.S.R.	B.S.R.	nil	

Simple storage defect.

Case 697, 29 years of age. He had no symptoms and no family history of Diabetes. General examination was negative except that the kidneys were palpable through a lax abdominal wall.

The glucose tolerance test on 17/7/40 showed:

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>	
Blood sugar...	0.14	0.195	0.22	0.21	0.20	gm. %
Urinary sugar. no spec.	nil	+	B.G.R.	B.G.R.		

Potential Diabetes.

He was recalled on 10/12/41. He was still symptomless, had been on no particular diet and had been passed fit for superannuation four months previously. The second test showed:

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>	
Blood sugar...	0.11	0.20	0.22	0.135	0.10	gm. %
Urinary sugar. nil	nil	nil	B.G.R.	B.S.R.	nil	

Simple storage defect.

Case 699, 31 years of age. He had no complaints but when questioned directly he said he drank a lot of water and gave a doubtful history of polyuria. He drank a moderate amount of alcohol. The glucose test on 2/8/40 showed:

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>	
Blood Sugar.	0.115	0.22	0.28	0.24	0.15	gm. %
Urinary sugar. nil	nil	B.V.S.R.	++	++	++	

Potential Diabetes.

He was recalled on 7/9/40 and the test repeated. In the interval he had no alcohol. The second test showed:

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>	
Blood sugar...	0.12	0.23	0.17	0.12	0.09	gm. %
Urinary Sugar.	B.R.	+++	+++	+	B.V.S.R.	
<u>Simple storage defect.</u>						

Case 698, 31 years of age. He complained of having been more breathless than usual for some years. There was no family history of Diabetes. General examination was negative except that he had a longish systolic murmur obscuring the first sound at the apex, well heard towards the sternum where it was slightly harsh when he was recumbent and conducted towards the right nipple. The glucose tolerance test on 19/11/40 showed:

	<u>Fasting</u>	<u>$\frac{1}{2}$ hr.</u>	<u>1 hr.</u>	<u>$1\frac{1}{2}$ hr.</u>	<u>2 hr.</u>	
Blood Sugar...	0.09	0.22	0.28	0.24	0.16	gm. %
Urinary sugar.	nil	B.R.	+++	++	++	

Potential Diabetes.

He was recalled on 6/12/41 when he stated that he felt well and that his tendency to breathlessness was less. The test on this occasion showed:

	<u>Fasting</u>	<u>$\frac{1}{2}$ hr.</u>	<u>1 hr.</u>	<u>$1\frac{1}{2}$ hr.</u>	<u>2 hr.</u>	
Blood sugar...	0.08	0.22	0.16	0.14	0.09	gm. %
Urinary sugar..	nil	B.S.R.	++	B.R.	nil	

? 3. Indeterminate storage defect or renal glycosuria.

Case 688, 21 years of age. His only complaint was of itching of the front of his chest. He had no family history of Diabetes. General examination was negative. The glucose tolerance test on 11/11/39 showed:

	<u>Fasting</u>	<u>$\frac{1}{2}$ hr.</u>	<u>1 hr.</u>	<u>$1\frac{1}{2}$ hr.</u>	<u>2 hr.</u>	
Blood sugar....	0.13	0.17	0.18	0.195	0.20	gm.%
Urinary sugar..	nil	+	++	++	++	

Potential Diabetes.

The test was repeated on 13/12/41 when it showed:

	<u>Fasting</u>	<u>$\frac{1}{2}$ hr.</u>	<u>1 hr.</u>	<u>$1\frac{1}{2}$ hr.</u>	<u>2 hr.</u>	
Blood sugar....	0.11	0.18	0.18	0.12	0.10	gm.%
Urinary sugar...	nil	B.R.	++	+	B.S.R.	

This curve is an example of the type discussed under renal glycosuria where the glycosuria is almost certainly storage defect in type but where there is also slight lowering of the renal threshold. He was still symptomless and had been taking an ordinary mixed diet.

4. Potential Diabetes.

Case 692, 25 years of age. He had not felt well for fifteen months when he was in hospital for about four months with rheumatic fever. Glycosuria was discovered when he was in hospital and he was dismissed on a diet containing a reduced amount of carbohydrate but he had not kept to it. His mother had Diabetes and died of Tuberculosis . General examination was negative. The glucose tolerance test on 12/4/40 showed:

	<u>Fasting</u>	<u>$\frac{1}{2}$ hr.</u>	<u>1 hr.</u>	<u>$1\frac{1}{2}$ hr.</u>	<u>2 hr.</u>	
Blood sugar....	0.146	0.20	0.24	0.18	0.14	gm.%
Urinary sugar..	B.G.R.	+	++	++	B.G.R.	

Potential Diabetes.

He was recalled on 17/12/41. He had been on no particular diet in the interval and was feeling well.. The result of the second test showed:

	<u>Fasting</u>	<u>$\frac{1}{2}$ hr.</u>	<u>1 hr.</u>	<u>$1\frac{1}{2}$ hr.</u>	<u>2 hr.</u>	
Blood sugar...	0.13	0.25	0.15	0.12	0.14	gm.%
Urinary sugar.	B.R.	++	++	B.S.R.	B.S.R.	

Potential Diabetes.

5. Diabetes.

Case 691, 23 years of age. He had no complaints but said he drank two pints of water and ate $\frac{1}{4}$ lb. chocolates daily His mother was diabetic and took insulin. General examination was negative. The glucose tolerance test on 10/3/40 showed:

	<u>Fasting</u>	<u>$\frac{1}{2}$ hr.</u>	<u>1 hr.</u>	<u>$1\frac{1}{2}$ hr.</u>	<u>2 hr.</u>	
Blood sugar..	0.134	0.24	0.26	0.18	0.17	gm.%
Urinary sugar.	++	++	+++	++	++	

Potential Diabetes.

He was recalled on 17/12/41. In the interval he had been sent to the Victoria Infirmary where he had been put on a diet of 173 gm. carbohydrate with 20 units Protamine Zinc

Insulin daily. When he adhered to this diet he felt well but if he lapsed he was troubled with thirst. Since his first examination he had discovered that his mother's sister and brother were diabetic. The second glucose tolerance test showed:

	<u>Fasting</u>	<u>$\frac{1}{2}$ hr.</u>	<u>1 hr.</u>	<u>$1\frac{1}{2}$ hr.</u>	<u>2 hr.</u>	
Blood sugar..	0.14	0.27	0.26	0.28	0.24	gm. %
Urinary sugar. B.S.R.		+++	+++	+++	+++	

Diabetes.

CASES WITH AN UNUSUAL BLOOD SUGAR CURVE.

Three were repeated because of an unusual type of blood sugar curve.

Case 690, 23 years of age. He was often thirsty. He had no family history of Diabetes. General examination was negative. The glucose tolerance test on 5/6/40 showed:

	<u>Fasting</u>	<u>$\frac{1}{2}$ hr.</u>	<u>1 hr.</u>	<u>$1\frac{1}{2}$ hr.</u>	<u>2 hr.</u>	
Blood sugar.	0.09	0.12	0.18	0.21	0.24	gm. %
Urinary sugar.	nil	nil	nil	B.R.	++	

Very delayed absorption of glucose with some storage defect. He was recalled on 22/6/40 when the test showed:

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>	
Blood sugar....	0.11	0.17	0.17	0.12	0.10	gm.%
Urinary sugar..	B.V.S.R.	B.V.S.R.	B.G.R.	B.S.R.	nil	

Indeterminate storage defect or renal glycosuria.

Case 695, 27 years of age. He had no symptoms. There was no family history of Diabetes. General examination was negative. The glucose tolerance test on 7/6/40 showed:

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>	
Blood sugar....	0.09	0.16	0.16	0.155	0.16	gm.%
Urinary sugar.	nil	B.R.	++	++	++	

Renal glycosuria with flat curve remaining at 0.16g% level. He was recalled on 7/7/40 and on this occasion the glucose tolerance test showed:

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>	
Blood sugar...	0.11	0.225	0.17	0.175	0.12	gm.%
Urinary sugar.	nil	B.G.R.	++	++	B.G.R.	

Simple storage defect glycosuria.

It would appear that the peak of the curve in the first instance had been missed between the taking of the half and the hour specimens, and on the first occasion the renal threshold for glucose was about 0.16 g%.

Case 700. 33 years of age. For five or six years he had had bouts of giddiness at three monthly intervals, lasting about a quarter of an hour and coming on at any time. They were not related to gastric upset. He had no family history of Diabetes. General examination was negative. The glucose tolerance test on 5/8/40 showed:

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>	
Blood Sugar.....	0.19	0.25	0.19	0.14	0.09	gm. %
Urinary Sugar..	++	++	++	++	+	

Simple storage defect with a very high fasting blood sugar.

It was suspected that he had had food shortly before the test began but he did not admit this. The test was repeated five days later (10/8/40), when it showed.

	<u>Fasting</u>	<u>½ hr.</u>	<u>1 hr.</u>	<u>1½ hr.</u>	<u>2 hr.</u>	
Blood sugar....	0.12	0.19	0.25	0.14	0.08	gm. %
Urinary sugar... B.S.R.		+	++	++	++	

Simple storage defect.

After a second blood sugar test, eleven of thirteen Potential Diabetics had a different type of curve, one normal, nine non-diabetic glycosuria and one diabetic. Two remained potential diabetic but it appears that one of these on a third examination showed a normal curve. One naturally asked why

these variations should occur after tests which were carried out under similar circumstances and in which the same methods were used. The cases were reconsidered to note if anything in history, physical examination or blood sugar curve at the first examination could be correlated with the changes in the blood sugar curve at the subsequent examination.

Technique.

No alteration in technique could explain the differences. Several other patients were examined on the same days and none of these showed any unusual abnormality in the blood sugar curve.

Physical condition of the patient.

Alteration in the physical condition of the patient did not appear to be a factor. None showed signs of infection and none gave a history of recent infection.

Temperature.

Variation in the environmental temperature could not account for the changes since most of the repeat examinations were made during the cold season when the fasting blood sugar should if anything be higher.

Diet.

Diet can influence the blood sugar curves (see page 6). All our cases had been on an ordinary diet prior to both tests

except that two had reduced the carbohydrate intake after the discovery of glycosuria on the first occasion and had continued to do so until the second test was done. Both of these had a mild glucose storage defect glycosuria the second time. Explanation cannot be found, therefore, in the previous diet of the patient.

History.

None of the patients volunteered symptoms of Diabetes. One (case 691) who later gave a typical diabetic curve stated that he drank a lot of water and was very fond of chocolate. Three (Cases 693, 694 and 699) who had a simple storage defect glycosuria on the second examination also stated that they drank a lot of water and one of these (case 693) had a doubtful history of polyuria and the others (cases 693 and 694) said they had lost some weight. The two who remained potential diabetic had no specific symptoms although one complained of "not being up to the mark". It would seem that symptoms offer no help in deciding the further course.

Family History.

Three (cases 687, 692 and 691) had a family history of Diabetes and of these one (case 69) became diabetic and two (cases 687 and 692) remained potential diabetic. One man who gave a family history of glycosuria had a simple storage defect

curve at the second examination. This would indicate that the family history should be considered carefully if an assessment has to be made on a single blood sugar curve.

Nervousness.

Only one had obvious nervousness at the first examination but this does not exclude the possibility that the rest were less upset at their second examination and that nervousness did play some part in causing the unusual result of the first test. In favour of this is the higher incidence of nervousness among the glycosurias with storage defect and delay in returning to the fasting level than among the typical storage defect cases.

Fasting blood sugar level.

The fasting blood sugar was at the normal level in the first test in six cases and raised in seven. None of the six with normal fasting blood sugar had diabetic or potential diabetic curves at the subsequent examination. One of the seven with raised fasting blood sugar had a diabetic and two a potential diabetic curve at second examination. If a diagnosis has to be made on a single examination a raised fasting blood sugar reduces the possibility of potential diabetes proving to be an innocent glycosuria.

Height of the curve.

The height of the curve at the first examination does

not appear to be important. Three had high peaks, one of 0.32 and two of 0.28 gm. % and in all of them the subsequent tests gave a simple storage defect glycosuria with peaks of 0.21, 0.22, and 0.23 gm. % respectively.

VII.

DEFECT OF GLYCOGEN STORAGE.

Little is known about the incidence of glycosuria in the population at large. Watson, in a routine examination of college students, found an incidence of 1.1%.⁽⁷²⁾ He thought that about 5-10% of the population have a low threshold for sugar and that about 1% have a storage type of glycosuria. Scott and Gray studied the incidence in different age periods in 10,000 unselected individuals going classification for military service and after adjusting for age the incidence was 1.1% in the United States, 1.5% in Great Britain, and 7.0% in the United States.

INCIDENCE OF GLYCOSURIA.

The present study was undertaken to afford a opportunity of estimating the relative frequency of glycosuria among males between the ages of seventeen and fifty five. For this purpose, a study was made of the total number examined and the number referred for investigation because of glycosuria by one medical board. This particular board chosen because they sent all men with glycosuria for investigation and they used Benedict's test for detecting the presence of glycosuria.

Little is known about the incidence of glycosuria in the population at large. Watson⁽⁷⁸⁾, in a routine examination of college students, found an incidence of 1.14%. Lawrence⁽⁷⁹⁾ thought that about 5-10% of the population have a low renal threshold for sugar and that about 2% have a storage defect type of glycosuria. Short and Ley⁽⁸⁰⁾ studied the incidence at different age periods in 10,000 unselected individuals undergoing examination for life insurance and after adjusting the figures to the age and sex distribution of the population of the United States, they found that 9.2% males and 7.9% females had a glycosuria of 0.15% or more. The incidence was much lower in the younger age groups where the alimentary type accounted for most of the cases.

The present investigation seemed to afford an opportunity of estimating the relative frequency of glycosuria among males between the ages of seventeen and fifty five years. For this purpose, a study was made of the total number of men examined and the number referred for investigation because of glycosuria by one medical board. This particular board was chosen because they sent all men with glycosuria for further investigation and they used Benedict's test for determining the presence of glycosuria.

Between October 1939 and December 1940, 18443 men were examined and 350 of these had glycosuria: an incidence of

1.9%. The percentage frequency of the different types of glycosuria is shown in Table XXXVIII and the relative frequency of each type is given in Table XXXIX.

TABLE XXXVIII. Percentage frequency of types of glycosuria in 18443 unselected cases.

Type of Curves.	Number of Cases.	Incidence per 100 of the population
Normal.....	69	0.37
Storage defect glycosuria	122	0.66
Storage defect glycosuria with slight delay in the absorption of glucose..	19	0.10
Renal glycosuria - A.Type	27	0.15
B.Type	31	0.18
Indeterminate storage defect or renal glycosuria.....	76	0.41
Potential Diabetes.....	4	0.02
Diabetes.....	2	0.01

TABLE XXXIX. Relative frequency of each type of case in 350 glycosurias.

Type of Curves.	Number of Cases	Percentage of Total.
Normal.....	69	19.7
Storage Defect.....	122	34.9)
Storage Defect with delay in the absorp- tion of glucose.....	19) 40.3)) 5.4)
Renal Glycosuria -		
Type A.....	27	7.7)
Type B.....	31	8.9) 16.6
Indeterminate storage defect or renal glycosuria.....	76	21.7
Potential Diabetes....	4	1.1
Diabetes.....	2	0.6
Total	350	100.0

These figures agree fairly closely with those in Table XXV. (page 75) which gives the relative frequency of each type in the total 700 cases investigated.

CHAPTER VIII.

EFFECT OF AGE ON THE INCIDENCE
OF GLYCOSURIA.

The incidence of glycosuria is a function of age, and the incidence increases with age. This is due to the fact that the capacity of the kidney to excrete glucose is limited, and as the amount of glucose in the blood increases with age, the kidney is unable to excrete all of it, and the excess is excreted in the urine.

The incidence of glycosuria is also affected by other factors, such as diet, exercise, and disease. A diet high in carbohydrates can increase the amount of glucose in the blood, and thus increase the incidence of glycosuria. Exercise can decrease the amount of glucose in the blood, and thus decrease the incidence of glycosuria. Disease, such as diabetes, can also increase the incidence of glycosuria.

The incidence of glycosuria is also affected by the duration of the disease. The longer the disease has been present, the more likely it is that the kidney will be unable to excrete all of the glucose in the blood, and the incidence of glycosuria will increase.

A record of the number of men examined in each age group would have shown whether age caused any significant variation in general frequency of relative incidence of different types. This was not obtainable but I had full particulars of all cases, non-glycosurias as well as glycosurias, sent for further investigation by the medical board already mentioned during the period under consideration and a comparative study of the non-glycosuria with the glycosuria figures seems to yield some useful information.

The incidence of glycosuria during the quarterly periods between October 1939 and December 1940 is given in Table XL. The incidence of non-glycosuria cases during the same quarterly periods is shown in Table XLI. A comparison of Tables XL and XLI shows:-

1. The incidence of reference because of glycosuria (1.9%) was very close to that of other conditions (1.8%) which I refer to as non-glycosuria.
2. The incidence of glycosuria was fairly constant in the quarters between January and September 1940 but was very much less in the quarters October to December 1939 and 1940. The incidence of the non-glycosurias did not show this variation: it was fairly constant at all seasons, the greatest difference being 0.5%.
3. The bulk of the cases in each came into the 20-30 age period.

There are three possible explanations of the low incidence in the October to December months of 1939 and 1940.

- A. Seasonal variation.
- B. Carbohydrate restriction.
- C. Age variation.

Seasonal variation can only be accepted as a cause if no other is available and even then one would be hesitant to accept any slight variation that may occur between October and December of one year and January and March of the next as sufficient to affect the incidence of glycosuria.

Carbohydrate restriction could not be a factor. It was minimal in October to December 1939 and was not severe during any of the time under review. Furthermore, if food restriction was a factor it should affect the storage defect type of glycosuria much more than the renal and cause a fall in the storage defect incidence with the renal incidence remaining more or less constant. This was not so. Table XLII shows that the incidence in all types was affected.

Variation of age remains as a possible cause. Table XLI. shows that there is no real change in the incidence of referred non-glycosuria cases during any of the periods under consideration and from this it can be inferred that age has no disturbing effect on incidence and that the number of non-glycosurias in the various age groups should reflect closely the total numbers examined. During the periods October to December 1939 and October to December 1940 most of the non-glycosurias were under 25 years of age, 90% in October to December 1939 and 85% in October to December 1940 and these figures would suggest

that the great majority of the men examined at these times would be under twenty five years of age. These were the periods (see table XL.) when the incidence of glycosuria was particularly low.

On the other hand, during the periods April to June 1940 and July to September 1940, which were characterised by high incidence of glycosuria, 56% and 59% of the non-glycosurias were over twenty five years of age. These figures suggest that age had a determining influence on the incidence of glycosuria and that the incidence increased with advance in years. An apparent contradiction is offered by the period January to March 1940 in which there was a preponderance (75%) of non-glycosurias below twenty five but a high incidence of glycosuria. Examination of the yearly age groups in the October to December 1939 and January to March 1940 periods seems to offer an explanation. Table XLIII shows that 86% of the patients examined during October to December 1939 were under twenty two years of age whereas in January to March 1940 77% were twenty two years and over.

Without exact numbers one is diffident about drawing conclusions but the figures available seem to show that the incidence of glycosuria is low in those below twenty years of age, rises from twenty years onwards and shows a sharp rise at twenty two years of age.

TABLE XL. Incidence of glycosuria in 18443 unselected cases at quarterly periods (given in age groups of five years.)

Quarterly Period	Ages in years.										Total Glycosurias.	Total Cases Examined	Incidence of glycosuria per cent.
	Under 20	20-24	25-29	30-34	35-39	40-44	45-49	50-54					
Oct-Dec. '39.	2	31	1	-	-	-	-	1	-	-	35	3553	1.00
Jan-Mar. '40	7	57	10	6	4	3	2	2	-	-	89	3654	2.43
Apr-June '40	6	22	67	14	5	2	5	-	1	1	122	4286	2.84
Jul-Sep. '40	9	9	37	29	3	2	-	-	2	-	91	3573	2.55
Oct-Dec. '40	8	1	1	2	1	-	-	-	-	-	13	2377	0.55
Total	32	120	116	51	13	7	8	3			350	18443	1.9

TABLE XLI. Incidence of reference of cases for conditions other than glycosuria in 18443 unselected cases at quarterly periods (given in age groups of five years.)

Quarterly Periods	Ages in years.										Total Cases Referred	Total Cases Examined	Incidence of reference per cent.
	Under 20	20-24	25-29	30-34	35-39	40-44	45-49	50-54					
Oct-Dec. '39	2	53	3	1	2	-	-	-	61	3553	1.74		
Jan-Mar. '40	3	41	7	2	1	3	2	-	59	3654	1.61		
Ap-June '40	14	21	37	6	1	1	-	-	80	4286	1.87		
July-Sep. '40	14	19	28	14	3	2	1	1	81	3573	2.27		
Oct-Dec. '40	22	9	11	4	1	1	-	-	48	2377	2.12		
Total	53	143	86	27	8	7	2	1	329	18443	1.8		

TABLE XLIII. Seasonal incidence of each type of glycosuria in 18443 unselected individuals.

Quarterly Period.	Type of Curve.											
	Normal		Storage Defect Glycosuria		Renal Glycosuria		Doubtful Storage Defect or Renal Glycosuria		Potential Diabetic		Diabetic.	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Oct-Dec. '39	8	0.23	14	0.40	5	0.14	8	0.23	-	-	-	-
Jan-Mar. '40	19	0.52	25	0.68	17	0.47	25	0.68	2	0.05	1	0.03
Ap-June '40	26	0.61	50	1.17	22	0.51	21	0.49	2	0.05	1	0.02
July-Sep. '40	11	0.31	47	1.32	14	0.39	19	0.53	-	-	-	-
Oct-Dec. '40	5	0.21	5	0.21	-	-	3	0.13	-	-	-	-

TABLE XLIII. Ages of Glycosurias and Non-glycosurias referred in the quarters October - December 1939 and January - March 1940.

Ages in Years.	October-December 1939			January-March 1940.				
	Glycosuria	Non-Glycosuria	Total	%	Glycosuria	Non-Glycosuria	Total	%
	Under 20.....	2	2	4)		7	3	10)
20	12	23	35)	86	9	11	20)	33
21	13	22	35)		4	-	4)	
22	6	2	8)		28	20	48)	
23	-	1	1)	14	8	6	14)	77
24	-	5	5)		8	4	12)	
25								
and over	2	6	8)		25	15	40)	

The object of the present work was to consider individually and collectively a large group of glycoses in order to eliminate such defects and contradictions which exist in standard teaching and to determine whether or not light could be thrown on the etiology of the various types. Previous chapters have dealt with individual and collective study together with some of the conclusions drawn from these. It now remains to consider the signs of the various glycoses.

CHAPTER IX.

Diagnosis.

The present and previous chapters dealing with blood sugar and its diagnosis and treatment are summarized as follows:

SUMMARY AND CONCLUSIONS.

For the most part accurate and reliable diagnosis can be made by the use of the various methods which have been used in the past but I have pointed out that, being conservative, it should be a careful and individual variation assessment of colour and condition, it has been my opinion that errors creep in from time to time due to faulty reagents. In my opinion, therefore, small differences in sugar levels should not be given the absolute significance which appears to be attached to them at present and that the

The object of the present work was to consider individually and collectively a large group of glycosurias and if possible to eliminate such defects and contradictions as may exist in standard teaching and to determine whether any fresh light could be thrown on the etiology of the various types. Previous chapters have dealt with individual and collective study together with some of the conclusions to be drawn from these. It now remains to consider the significance of the various findings.

Technique.

The recognised methods of estimating blood sugar, Folin and Wu, Hagedorn and Jenson and Shaffer-Hartmann, are for the most part accurate and give closely comparable results. The Folin and Wu micro method which I have used is as reliable as any but I have pointed out that, being colorimetric there is bound to be a certain amount of individual variation in the assessment of colours and in addition, it has been my experience that errors creep in from time to time due to faults in the reagents. In my opinion, therefore, small differences in blood sugar levels should not be given the absolute significance which appears to be attached to them at present and that the explanation of unusual readings should not always be sought in the individual being examined but also in the technique employed.

These errors are less likely to occur and will be more readily noted where a large number of blood sugar estimations are being carried out. They are more likely to pass unnoticed in the ordinary hospital ward, or any other place where blood sugar examination is made infrequently. I would suggest that under these circumstances a check of reagents should be made from time to time by testing against a standard glucose solution. It follows from the above that I cannot agree with the attempts to separate the different types of glycosuria by means of blood sugar readings varying only by 0.005 gm.%. Where any room for doubt exists a second or even a third blood sugar curve should be done. Based on my own experience I have given the following as a working classification:-

1. Normal tolerance to 50 gm. glucose.
2. Glucose storage defect glycosuria.
 - a. typical.
 - b. with slight delay in the absorption or clearing of the blood of glucose.
3. Renal Glycosuria.
4. Indeterminate storage defect or renal glycosuria.
5. Diabetes.
6. Potential Diabetes.

(see pp 24-31a).

The individual types of glycosuria have been analysed (pp 32-72) and the following conclusions drawn:-

1. Fully 42% of the cases were of the storage defect type and at least 20% of the renal. Diabetes accounted for only 1.3% of the total (p. 73).

2. An investigation of the effect of age on the various types has been made (p 75):-

a. The average age of the diabetics was highest of all whilst the average age of the storage defect type was highest of the non-diabetic group.

b. The storage defect type was the commonest at all ages and its relative incidence increased from twenty five years onwards. The storage defect with slight delay in the absorption of glucose had a younger age distribution than the typical storage defect type.

c. The A. type of renal glycosuria was more common than B. in those under twenty years of age whereas B. was more common than A. in those over thirty four years of age.

d. The tolerance to glucose decreases with age (p 84.)

e. The renal threshold in renal glycosuria probably rises with age (p 84.).

3. The fasting blood sugar may be raised by nervousness (p 87) and by lowered environmental temperature (p 89) Slight elevation of the fasting blood sugar above 0.12 gm.% is not necessarily evidence of diabetes.

4. Most of the diabetics had symptoms but the two older had little or no symptoms.

Non-diabetic glycosuria does not produce clamant symptoms but in some, especially of the storage defect type, there may be slight thirst and polyuria.

The incidence of tiredness or lassitude in renal glycosuria was slightly higher than in the other non-diabetic glycosurias but not sufficient to be significant.

5. The higher incidence of nervousness in the storage defect type would suggest that it might be a factor in producing this type of curve, particularly where there is slight delay in the blood sugar's return to normal fasting level.

6. Various reasons are given why the assessment of family history of glycosuria and Diabetes must be inaccurate (p101), but in spite of these difficulties there appears to be sufficient evidence to show that the familial incidence of Diabetes in the storage defect and renal types is much the same, but the incidence of familial non-diabetic glycosuria was higher in the renal type and it is suggested that some hereditary predisposition may account for renal glycosuria.

The familial incidence of Diabetes was highest in the diabetics.

At this stage a short resumé of our findings in the individual types seems to be indicated.

Normal.

14.9% of the men had glycosuria when they were examined by the medical board but when a glucose tolerance test was done a few days later they had normal glucose tolerance to 50 gm. glucose and no glycosuria appeared throughout the

test. Possible explanations are:-

- a. nervousness at the first examination.
- b. inability to deal normally with amounts of carbohydrate larger than 50 gm.

Various workers have found that nervousness raises the blood sugar level and this has been confirmed by me (p 98). Emotional upset could hardly account for the variation in all these cases, especially when we take into account that emotional stress at the second examination must have been considerable. These men were being subjected to what was to them a most unusual form of examination and they were aware that this investigation was being carried out because some abnormality had been discovered. It may be that in spite of this there was less emotional upset but as likely an explanation for the occurrence of glycosuria at the first examination was that the patient had taken a meal of more than 50 gm. of carbohydrate a short time before. If the second explanation be the correct one these men could have storage defect glycosuria for carbohydrate above 50 gm. It has been shown that the normal individual has a very high glucose tolerance (p 3.).

Storage defect glycosuria.

Storage defect glycosuria was the commonest type at all age groups and the relative incidence increased with age. At all ages 36.6% had this type of curve. Under twenty five years the incidence was 25.5% and between twenty five and thirty years it had increased to 44.6%. The average height of the curve

tended to rise with age.

Nervousness was more common in this type than in any of the others and it has been suggested that this probably accounted for the high incidence of elevation of the fasting blood sugars and that it could explain the slight delay in the return to the base line which sometimes occurred in these cases.

Symptoms were not a feature but direct questioning revealed that some of the men had a slight degree of thirst or polyuria and that these were more frequent in this than in any other non-diabetic types (p 93). Thirst and polyuria can readily be associated with glycosuria since the excretion of sugar requires a larger quantity of water but it is not clear why it should be more common among the storage defect group of cases. The present investigation does not entitle me to offer any opinion with regard to the ultimate progress of those cases and a follow up after some years would be of great value. I have already expressed the opinion that one cannot expect absolute accuracy by colorimetric methods and this is especially important to remember when we come to differentiate between the storage defect type and the border line diabetic. The insidious type of Diabetes will in its early stages show a curve closely resembling that of the storage defect and especially the type with delayed return to the base line which I have described. There is no means at our disposal of deciding whether some of these men with storage defect curves

will ultimately become diabetic and certainly no means of deciding which. It has been suggested that the higher the curve, the more likely is the individual to develop Diabetes and also that a delay in the return to the base line seems to point to a predisposition. The repeated examinations made in my so-called potential diabetics showed that neither of these can be accepted as significant on a single glucose tolerance test.

Renal Glycosuria.

Renal glycosuria constituted 20.1% of the cases.

Mention was made of the difference of opinion amongst authorities as to what constitutes renal glycosuria, some accepting only persistent glycosuria with very low renal threshold and regarding the others as storage defect with low renal threshold.

In the present classification, the renal threshold for glucose has been placed at 0.18 gm.% and all cases showing glycosuria when the blood sugar was below that level have been regarded as renal glycosurias. In addition, the renal glycosurias have been subdivided into two types, A. where the blood sugar curve did not rise above 0.15 gm.% and B. where the peak of the curve was between 0.16 and 0.18 gm.% . 8.1% was of A.

and 12.0% of B. type. I have no facts to justify me in offering an opinion with regard to prognosis and as with the storage defect cases a follow up over a period of years would be of value.

The effect of age on the renal threshold of renal glycosuria has been considered. A comparison of the relative incidence of the types A. and B. at different ages seems to indicate that the renal threshold rises with increasing years.

The incidence of nervousness was 10.6% as compared with 14.6% in the storage defect type.

There was a higher incidence of symptoms of tiredness and weakness than in any other of the non-diabetic glycosurias, a finding which was in at least partial agreement with the suggestions of Joslin and Crawford, but in the incidence was not sufficiently high to warrant the conclusion that tiredness and weakness are a feature of renal glycosuria.

The incidence of familial symptomless glycosuria was highest in the renal type and it has been suggested that some familial predisposition may account for this.

Indeterminate renal or storage defect glycosuria.

19.9% were classified as indeterminate renal or storage defect glycosuria. The suggestion has been made that the three quarter hour specimen advised by Peel would have reduced the number of doubtful cases.

Diabetes.

1.3% of the men were diabetic. The figures are too small to draw conclusions. There seemed to be an increase in incidence with increasing years.

The older diabetics had less symptoms than the younger. The familial incidence of Diabetes was highest in this group.

Potential Diabetes.

Twenty four men had blood sugar curves of the potential Diabetic type. Thirteen of these were repeated and in all but one the classification was altered. It was suggested that nervousness might have disturbed the first blood sugar curve. In my opinion, Potential or Border Line Diabetes is not a diagnosis but an indication that diagnosis is incomplete and that further investigation is necessary. No one would think of dismissing a Potential Diabetic curve as unimportant and regarding the glycosuria as an innocent one but has one any more right on a single examination, the results of which may have been vitiated by emotional or climatic upset, to regard it as diabetic and of serious import? My experience with the repeated cases would suggest that there is probably more reason for regarding such cases as innocent glycosurias but in reality no reason whatsoever for making a diagnosis or tentative diagnosis on a single test.

Incidence of glycosuria in the section of the population
under consideration.

The incidence of glycosuria in 18443 men between the ages of seventeen and fifty four years was 1.9%. 0.37% had normal sugar tolerance and no sugar appeared in the course of the glucose tolerance test, 0.76% had glycosuria of the storage defect type, 0.33% of the renal type and 0.41% of the indeterminate storage defect or renal type. 0.02% were potential diabetic and 0.01% diabetic.

The incidence in 10,000 females was 0.04%, 0.03% non-diabetic and 0.01% diabetic. As the men and women were examined by different boards the figures are not comparable.

The incidence of all types of glycosuria was low in males below twenty years of age, rose gradually with age and showed a sharp rise at twenty two years of age.

2nd ed.

16. Cannon and Fiske, loc. cit., reference 10.

17. Hofmeister)

18. Bang) as quoted by Conn. Amer. Journ. Med.

19. Staub.) 1940, CXCIX, 355.

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CASE HISTORIES

SUMMARIES of CASE HISTORIES.

(1) "Normal".....	103
(2) Storage Defect.....	246
(3) Storage Defect with Delayed Absorption of glucose.....	38
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(1)	"Normal".....	103
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(8)	Repeated Cases.....	16

A complete examination was made of all our patients, the following procedure being adopted.

Interrogation with special reference to:

General well being - Weight - Thirst -
Polyuria - Nocturia - Pruritus - Sepsis -
Eyesight.

Past Illnesses.

Family History special reference being
made to family history of glycosuria.

Physical Examination

General Examination.

Examination of - Cardiovascular

Respiratory

Alimentary

Genito urinary and

Nervous systems.

In order to avoid overloading with unnecessary details, negative findings have been omitted and only relevant data included.

The summaries of case histories have been arranged in sections according to types of glycosuria. A separate section has been reserved for the repeated cases.

He felt well but was inclined to be shy of work as a bookkeeper.

He was fond of reading.

When 11 years of age he had an attack of tons

He was stout and healthy looking. His teeth

somewhat decayed. A small spot was present on

left upper eye. There had been spots on

and upper eye.

The Glucose Tolerance Test gave the following results:-

N O R M A L

	Fasting	1 hr.	1 1/2 hrs.	2 hrs.
Blood Sugar	100	115	100	100
Urinary Sugar	nil	nil	nil	nil

CASE E.

J.W. age 37 1/2 years, was examined on 5th January 1941

He felt well and had no complaints. When 11 years of age he had an abscess behind the left knee.

He was thin featured and had a mild glaucoma.

The Glucose Tolerance Test gave the following results:-

	Fasting	1 hr.	1 1/2 hrs.	2 hrs.
Blood Sugar	110	115	110	100 gm.%
Urinary Sugar	nil	nil	nil	nil

CASE 1. J.H.A. aet 18 years, was examined on 12th September 1940.

He felt well but was inclined to be thirsty when at work as a boilermaker.

He was fond of sweets

When 11 years of age he had an attack of Tonsillitis.

He was sturdy and healthy looking. His teeth were somewhat decayed. A small styne was present on the left upper eyelid and he had septic spots on left hand and upper arm.

The Glucose Tolerance Test gave the following result:-

	Fasting.	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs
Blood Sugar	.08	.16	.12	.09	.08 gm.%
Urinary Sugar.	nil	nil	nil	nil	nil

CASE 2. J.W. aet $17\frac{1}{2}$ years, was examined on 5th January 1941.

He felt well and had no complaints. When 11 years of age he had an abscess behind the left knee.

He was thin featured and had a mild blepharitis.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.17	.17	.13	.10 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 3.

L.W. aet 18 years was examined on 8th October 1940.

He felt well and had no complaints.

He had Measles, Mumps, Whooping Cough and Rickets in childhood and had an attack of German Measles in April 1940. He was slim featured, of slim to medium build. His teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting.	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hr.	2hrs.
Blood Sugar	.08	.13	.14	.14	.11 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 4.

T.E. aet 18 years, was examined on 29th March, 1940.

He felt well and had no complaints.

He had an attack of Scarlet Fever in childhood and Influenza in 1939. He was of smallish build but well nourished. His face was seborrhoeic and both face and forearms had a scanty papular eruption which was probably occupational in origin.

The Glucose Tolerance Test gave the following result:-

	Fasting.	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.17	.10	.09	.08 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 5.

F.H. aet 18 years, was examined on 26th November 1940.

He felt well and had no complaints. He was slim but healthy looking. There was some dental decay.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.16	.13	.08	.08 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 6.

W.K. aet 19 years, was examined on 28th December 1940.

He felt well and had no complaints but admitted to taking alcohol in excess. When 14 years of age he was in hospital for 6 weeks suffering from right sided pleurisy. X-ray examination of chest was negative for Tuberculosis. During 1938 he had a crop of about 8-9 boils. He was of average nutrition and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.14	.12	.115	.09 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 7.

J.C. aet 19 years, was examined on 23rd April, 1940.

He felt well and his weight was increasing slightly.

He had an attack of Tonsillitis when 10 years of age.

He was tall, slim, and pasty complexioned. His extremities were red and cold.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.16	.13	.12	.10 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 8.

D.R. aet 19 years, was examined on 15th June, 1940. He felt well and had no complaints. He was healthy and sunburnt. Several teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.16	.16	.13	.11 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 9.

D.G. aet $19\frac{1}{2}$ years, was examined on 24th January, 1941. He felt well. Two weeks before he had three boils on his right leg and prior to this he had an occasional boil on his neck. He was slim but muscular looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.14	.15	.14	.11 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 10.

J.D. aet. 20 years was examined on 1st June, 1940. He felt well but drank a fair amount of water. He had Measles in childhood and a slight sore throat some years ago. He was well nourished and of average build. He had several decayed teeth. The pulse rate was 108 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.135	.14	.11	.08 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 11.

P.McG. aet. 20 years, was examined on 1st July, 1940. He stated that he felt well. On direct questioning he said he drank a lot of water and had occasional nocturia. He had a boil on his neck several years before and a carbuncle in 1934. He was of slim to moderate build and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.095	.13	.14	.13	.12 gm.%
Urinary Sugar.	nil	nil	nil	nil	nil

CASE 12.

A.C. aet 20 years, was examined on 24th October 1939. He felt well and had no complaints. He had Whooping Cough in childhood and Tonsillitis some years before. He was of thin build but fit looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar.	.11	.15	.12	.12	.09 gm.%
Urinary Sugar.	nil	nil	nil	nil	nil

CASE 13.

W.D. aet 20 years, was examined on 30th August 1940. He felt well and his weight was increasing. He had a few boils on his neck about two months previously. He had an attack of Influenza complicated by Pneumonia in 1936. He was well built and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.19	.13	.12	.12 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 14.

D.McD. aet 20 years was examined on 30th July 1940.

He felt well but had lost weight following an operation for appendicitis 5 weeks previously. On direct questioning he said thirst was troublesome and he had to rise at night to drink water. He had polyuria and nocturia. He had an abscess on the front of his neck two weeks before, 9 months before he had had sickness, vomiting and abdominal pain for 6-7 weeks and 5 weeks before he collapsed with sudden abdominal pain and was taken to the Western Infirmary where appendicectomy was done. He was smallish and of good physique and healthy looking. His tongue was furred and the tonsils slightly enlarged. The abdominal scar was satisfactory.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.15	.14	.095	.10 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 15.

E.M. aet 20 years, was examined on 30th June 1940. He felt well but had had an occasional boil in the past month or so. His neck was burned in childhood. He had an attack of Tonsillitis yearly for the previous 4 years. His mother had a "touch of Diabetes" and was on a mild carbohydrate restriction diet. He was of average build and was slightly pale. His tongue was coated and the right tonsil foveated.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.095	.12	.10	.09	.095 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 16.

J.L. aet 20 years, was examined on 13th October 1939. He felt well and had no complaints. He had had a few boils one year previously. He was of smallish build and average physique. He had a slight "cold" in nose.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.14	.10	.08	.10 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 17.

J.M. aet 20 years, was examined on 28th September 1939. He felt well and had no complaints. He had an attack of Measles in childhood and Pneumonia in 1938. He was tall

and of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.11	.16	.14	.12 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 18.

W.G.M. aet 20 years, was examined on 6th December 1940.

He felt well and had no complaints. He was of good physique, and healthy looking. His teeth were badly decayed and his tongue slightly dry.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.14	.115	.11 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 19.

A.F. aet 20 years, was examined on 29th December 1939.

He felt well and had no complaints. He had an attack of Scarlet Fever, Whooping Cough and Chickenpox in childhood. He was smallish and of slim to medium build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.14	.12	.09 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 20.

T.D. aet 20 years, was examined on 21st December 1939. He felt well and had no complaints. He had an attack of Whooping Cough, Measles, and Mumps in childhood. In 1937 he fractured one bone of the left forearm when playing football. He was of spare build. His tonsils were enlarged. His chest was funnel shaped.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs	2 hrs.
Blood Sugar	.14	.18	.16	.15	.10 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 21.

A.G. aet 20 years, was examined on 23rd January 1940. He felt well apart from a recent "cold" in the chest. On direct questioning he said he might have lost a little weight since going to a new job 5 months before. He was subject to slight attacks of asthma since childhood, each being produced by cold or dust. He had a severe attack in 1937 which kept him in bed for 2 months. He had Measles in childhood and had a few boils on his neck in 1939. He was tall and sparely built. He had several badly decayed molars.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.13	.20	.13	.11 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 22.

G.T.M. aet 20 years, was examined on 13th November 1939. He felt fairly well but was recovering from a carbuncle which he had had on his back for 2 months. He was fairly tall and of good physique. He was pasty complexioned and had several decayed teeth. His extremities were cold and blae. A healed carbuncle was present in the right lumbar region of the back - the scar was still tender.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.16	.18	.15	.14	.12 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 23.

J.McK. aet 20 years, was examined on 13th January 1940. He felt well apart from a slight "cold". He had a healing boil above his left eye and was subject to small boils. When 13 years of age he was admitted to Mearns Kirk hospital for 1 year because of Tuberculosis - ? abdominal. He had Scarlet Fever when 10 years of age. He was thin and pasty complexioned.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.14	.15	.12	.10 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 24.

J.W.S.S. aet 20 years, was examined on 13th January 1940. He felt well and had no complaints. He was of good physique. His complexion was slightly pasty. He was edentulous. Both tonsils were slightly enlarged.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.15	.13	.10	.10 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 25.

W.C. aet 20 years, was examined on 6th February 1940. He felt well and had no complaints. He had an attack of Measles in childhood and a fractured skull when 5 years of age. He was of sturdy build and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.12	.18	.09	.12 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 26.

A.G. aet 21 years, was examined on 6th November 1939. He felt well and his weight was increasing a little. He had an attack of Measles in childhood. He was slim and young looking. His teeth were only fair and the gums slightly spongy.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.17	.19	.18	.10 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 27.

F.K. aet 21 years, was examined on 28th December 1939.

He felt well and had no complaints. He was of small build, thin featured but of average physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.	
Blood Sugar	.10	.15	.16	.13	.10	gm. %
Urinary Sugar	nil	nil	nil	nil	nil	

CASE 28.

H.R.H. aet 21 years, was examined on the 13th December 1939.

He felt well and had no complaints. He had an attack of "gastritis" in 1937 and was in bed for 2 weeks. It recurred at the beginning of 1940, the symptoms being pain and sickness before meals, eased by taking food. He was smallish and of slight to medium build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.	
Blood Sugar	.11	.175	.16	.165	.115	gm. %
Urinary Sugar	nil	nil	nil	nil	nil	

CASE 29.

A.C. aet 21 years, was examined on 12th December 1939.

He felt well and had no complaints. He had Scarlet Fever in childhood. He was small but well built. His teeth were badly decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
BLOOD Sugar	.12	.18	.12	.09	.10 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 30.

A.T. aet 21 years, was examined on 28th November 1939. He felt well. After direct questioning he said he occasionally had slight generalised pruritus. At 8 years of age he had Impetigo of his face and at 17 years of age Eczema of his face. He had acute Appendicitis and appendicectomy at 12 years of age. He had an attack of Scarlet Fever and Diphtheria in childhood. He was of heavy build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.13	.14	.14	.10 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 31.

P.B.C. aet 21 years, was examined on 30th November 1939. He felt well and had no complaints. He was smallish, of medium physique, and had slight chronic Blepharitis. His teeth were badly decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.15	.17	.185	.13	.12 gm. %
Urinary Sugar	no spec.	nil	nil	nil	nil

CASE 32.

F.S. aet 21 years, was examined in 11th December, 1939.

He felt well and his weight was increasing slightly.

He had Measles in childhood. He was of spare build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.15	.165	.10	.08 gm.%
Urinary Sugar	nil	nil	no spec.	nil	nil

CASE 33.

A.McN. aet 22 years, was examined on 13th January 1940.

He felt well and had no complaints. He was small and rather burly.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.17	.12	.11	.11 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 34.

A.S. aet 22 years, was examined on 2nd December 1939.

He felt well and had no complaints. He was of average build and physique, had two carious molars and appeared nervous.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.155	.12	.11 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 35.

J.A. aet 22 years, was examined on 1st December 1939. He felt well and had no complaints. He was well nourished and of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.08	.12	.14	.13	.10 gm.%
Urinary Sugar	No Spec.	nil	nil	nil	nil

CASE 36.

G.W. aet 22 years, was examined on 7th January 1940. He felt well. On questioning he gave a history of boils from time to time, the last occasion 6 months previously. His grandfather had Diabetes, he was on a diet but did not get insulin. He was healthy looking and of good physique. He was excited.

The Glucose Tolerance Test gave the following result:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.10	.16	.14	.11	.12 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 37.

T.M.T. aet 22 years, was examined on 18th January 1940. He felt well apart from chronic nasal catarrh. He had Mumps, Scarlet Fever and Measles in childhood and Tonsillectomy was done during his school days. He was stoutly built. His tongue was slightly furred and there was slight dental caries.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.13	.11	.09	.10 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 38.

G.B. aet 22 years, was examined on 7th September 1939.

He felt well and his weight was increasing slightly.

He had an attack of Measles and Diphtheria in childhood.

He was well built and of good colour. He had mild blepharitis of recent onset.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.14	.15	.12	.12 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 39.

A.D. aet 22 years, was examined on 21st January 1940.

He felt well and his weight was increasing. He drank a lot of water when at work due to the dusty atmosphere (pit drawer). He had Measles in childhood and boils on his neck in 1938. He was of stocky build and healthy complexioned.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.14	.12	.10	.09 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 40.

P.M. aet 22 years, was examined on 20th January 1940. He felt well but was troubled with slight indigestion - eructation of sour mouthfuls after food. He had frequent sore throats and had Scarlet Fever in 1938. 2 months before examination he had a boil on his neck. He was tall and of good physique. He had some carious molars, the throat was slightly red and the tonsils small and embedded. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.12	.11	.11 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 41.

W.H.B. aet 22 years, was examined on 13th December 1939. He felt well and his weight was increasing slightly. He had Chickenpox in childhood. He was smallish but healthy looking. His tongue was slightly furred.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.14	.15	.12	.095 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 42.

P.McK. aet 22 years, was examined on 13th December 1939. He felt well and his weight was increasing slightly. He was well built. He had a slight stammer.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.15	.14	.10	.10 gm.%
Urinary Sugar	nil	No.spec.	nil	nil	nil

CASE 43.

J.B. aet 22 years, was examined on 3rd January 1940.

He felt well and had no complaints. He had Mumps in childhood and Tonsillectomy at 3 years of age.

At 5 years of age he attended the Sick Children's Hospital because of gastric upset. From 12-20 years of age he had pain in the right iliae fossa relieved by appendicectomy in November 1938. He had a crop of boils in 1930. He was tall, lanky and pale complexioned.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.17	.08	.08	.09 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 44.

W.T. aet 22 years, was examined on 3rd January 1940.

He felt well but on questioning he gave a history of boils on and off for the past 3-4 years. At 5 years of age he had Diphtheria followed by Scarlet Fever. He had Pneumonia when 7 years of age and Measles in early childhood. He was of smallish build but healthy looking. He had several decaying teeth. A boil was present on the back of his neck.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.18	.16	.08	.08 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 45.

G.E. aet 22 years, was examined on the 4th January 1940. He felt well. On questioning he admitted nocturia 2-3 times per week. In 1939 he had an operation for right inguinal hernia. He was tall.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.14	.12	.10 gm.%
Urinary Sugar	No Spec.	nil	nil	nil	nil

CASE 46.

S.L. aet. 22 years, was examined on 3rd January 1940. He felt well and had no complaints. In 1936 he was in Hospital with Pneumonia. He was well built. He had several decayed teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.10	.12	.08	.08 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 47.

H.P. Aet 22 years, was examined on 27th January 1940. He gave a history of cough for 3 years, worst at night

and on wakening in the morning. He had copious white sputum and since 1937 had slight haemoptysis in winter. He had been off his food for 10 days and had nocturia once nightly. He had lost $\frac{1}{2}$ st. in weight since the summer of 1939. In 1936 he was in hospital for 4 days because of severe upper abdominal pain which was found to be Pulmonary in origin - he left of his own accord. In 1937 he was in hospital for one night because of doubtful haemoptysis and again he was dismissed irregularly. In 1937 he had dry pleurisy and was nursed at home. In 1938 he had several boils on face and neck. He appeared to be making the most of his symptoms and past history. He was of average build and nutrition. He had no clubbing of fingers and his temperature was normal. His teeth were dirty and the gums swollen and congested. The chest was clear.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.17	.12	.10	.10 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 48.

A.K. aet 23 years, was examined on 19th January 1940. He felt well and had no complaints. He was of good physique, pasty complexioned, and anxious looking. He had a string of enlarged discrete femoral glands on both sides which he knew had been present for a year or so.

The Glucose Tolerance Test gave the following result:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.11	.19	.10	.08	.10 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 49.

A.G. aet 23 years, was examined on 11th April 1940.

He was easily tired. One year before he consulted his panel doctor because of tiredness of his legs. This was attributed to nasal sepsis for which he underwent an operation, with no improvement. Then oral sepsis was considered to be the cause and all his teeth were extracted, still with no improvement. He was then treated for flat feet by arch supports. Glycosuria was discovered and he was put on a qualitative reduction diet and for 8 weeks he received an injection (? the exact nature) in the evenings. In addition to the fatigue, at times he had spells of mental detachment when he "felt he was not present in a room although bodily he was". He had Scarlet Fever in childhood. When 14 years of age he had appendectomy and when 17 years of age was in hospital for 6 months with Jaundice. He was small but well nourished. He had a slight stammer and now and again his face twitched nervously.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.115	.18	.13	.10	.105 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 50.

J.P. aet 23 years, was examined on 11th April 1940. He felt well. On direct questioning he said he had slight thirst. He had Pneumonia twice in early childhood. When 13 years of age he was 2 months in bed and had 4 months convalescence because of "rheumatics" in limbs. When 19 years of age he had Rheumatic Fever and a "chill in the kidneys" and was one year in bed. When 21 years of age he was 4 months ill with Rheumatism of joints and kidney trouble. He was of average physique. He was anxious looking. The heart was normal. The morning specimen of urine contained a trace of albumin, but had nothing of significance in the centrifuged deposit.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.18	.16	.14	.12 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 51.

D.K. aet 23 years, was examined on 30th January 1940. He felt well and had no complaints. He had Measles and Tonsillectomy in childhood. He was well built.

The Glucose Tolerance Test gave the following result.

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.13	.13	.12	.12 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 52.

A. McC. aet 23 years, was examined on 15th March 1940. For the past 2 years he had had attacks of pain in the right chest in front, coming once every 3 or 4 weeks and usually brought on by walking or running. The pain was stabbing in character and made him draw up and rest till it disappeared. On direct questioning he said he drank tea and water freely and had polyuria about 10 times by day and once or twice by night. In childhood he had an operation to the front of his chest, following a fall. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.12	.13	.13	.10 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 53.

J.B. aet 23 years, was examined on 17th April 1940.

He felt well and had no complaints. He was rather small but well nourished and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.17	.18	.12	.09 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 54.

J.C. aet 24 years, was examined on 4th April 1940.

He felt well and had no complaints. He had a boil on his right hand 6 weeks before. He was slimly built. He was rather nervous, his eyes were somewhat prominent, and he was perspiring fairly freely. His pulse rate was 100 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.16	.09	.09	No spec. gm.%
Urinary Sugar	nil	nil	nil	nil	no spec.

CASE 55.

A.H. aet 24 years, was examined on 15th June 1940.

He felt well and had no complaints. In 1938 he had Pneumonia and Pleurisy. When 8 years of age he had Bronchitis. He was of smallish build and short necked. He had a sebaceous cyst on his neck. Several teeth were decayed.

The Glucose Tolerance Test gave the following results:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.14	.12	.10	.10 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 56.

A.G. aet 24 years, was examined on 14th June 1940. He felt well and had no complaints. He had had an occasional boil but none for some time. He was of average build and nutrition and was healthy looking. Both tonsils were slightly enlarged.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.14	.14	.13	.12gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 57.

J.R. aet 24 years, was examined on 7th June 1940. He felt well and had no complaints. He had an attack of Scarlet Fever in childhood. In 1936 he had a crop of boils on his neck. He was tall and rather pale. He had four carious molars and his gums were swollen. There was slight deformity of auricles which he attributed to frost bite in youth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.13	.16	.11	.11gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 58.

T.P. aet 24 years, was examined on 2nd March 1940. He felt well and had no complaints. He had Measles and Mumps in childhood and when 17 years of age had a

few boils on his neck. He was of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.16	.13	.12	.11 gm. %
Urinary Sugar	nil	no spec.	nil	No spec.	nil

CASE 59.

R.M. Aet 25 years, was examined on 16th June 1940.

He felt well and had no complaints. His maternal grandfather had senile Diabetes. He was tall and of average nutrition. He looked rather anxious.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.16	.16	.14	.09 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 60.

J.T.R. aet 25 years, was examined on 3rd May 1940.

He felt well and had no complaints. Tonsillectomy was done in childhood. He was of small spare build. His teeth were badly decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.18	.16	.16	.10 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 61.

M.S. aet 25 years, was examined on 3rd May 1940.

He felt well and had no complaints. He had Diphtheria when 21 years of age and was in hospital for 7 weeks.

He was small and of slim build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.175	.13	.11	.12gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 62.

A.G. aet 25 years, was examined on 2nd April 1940.

He felt well and had no complaints. He had Measles in childhood. He was of average build and height.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs	2 hrs.
Blood Sugar	.12	.17	.11	.095	.08gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 63.

R.R. aet 25 years, was examined on 18th April 1940.

He felt well and his weight was increasing. On direct questioning he said he had occasional nocturia. He felt nervous. He was of average physique. His teeth were badly decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.14	.13	.13	.11gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 64.

A.D. aet 25 years, was examined in 4th January, 1941. He felt well but for 4 years had been troubled with boils on the back of his neck. He was small and of average physique. The back of his neck was seared by numerous healed boils.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.15	.11	.10	.08 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 65.

J.McA. aet 26 years, was examined on 17th February 1940. He felt well and had no complaints. He was subject to boils. He was of slim build. He had one active furuncle on left cheek and acne vulgaris of face.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.11	.14	.10	.08 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 66.

J.McK. aet 26 years, was examined on 21st May 1940. He felt well and had no complaints. He had Whooping Cough in childhood and Influenza in 1937 and at the beginning of 1940. He was smallish and of burly build. He had several decayed teeth.

CASE 66.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.16	.14	.10 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 67.

L. McC. aet 26 years, was examined on 14th June 1940. He felt well and had no complaints. He had Measles, Mumps, Scarlet Fever and Tonsillectomy in childhood. He was thin and rather pale but the mucous membranes were well coloured. His upper teeth were artificial and the lower badly decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.16	.14	.12	.12 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 68.

P. McC. aet 26 years, was examined on 10th May 1940. He felt well. On direct questioning he admitted very occasional nocturia. He had Pneumonia when he was 14 years of age. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.17	.14	.09	.09 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 69.

S.R. aet 27 years, was examined on 4th July 1940. He felt well and his weight was increasing a little. He had Measles in childhood and Influenza some years previously. He was tall and slim. The pulse rate was 112 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.14	.17	.13	.10 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 70.

C.L. aet 27 years, was examined on 4th July 1940. He felt well. When questioned he said he drank quite a lot of water. He had a crop of boils on his neck in 1935. Some years before he was in hospital for one month because of Pleurisy. He was tall and of average nutrition. He had several carious teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.18	.13	.12	.09 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 71.

W.W. aet 27 years, was examined on 4th July 1940. He felt well but on direct questioning said he had lost some weight in the previous four months. In 1936 he had Diphtheria and in 1939 his right mid

finger was amputated for sepsis. He was tall and well nourished. His tongue was heavily coated. The right middle finger was amputated at the proximal phalanx.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.15	.16	.15	.13 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 72.

M.R. aet 27 years, was examined on 16th June 1940. He felt well but had lost a little weight. In 1932 he had a septic arm and in 1934 sepsis of the right leg for which he was detained in hospital for 2 weeks. He was small and of average nutrition. He had some carious teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs
Blood Sugar	.09	.18	.16	.10	.10 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 73.

S.H. aet 27 years, was examined on 16th June, 1940. He felt well and had no complaints. He had Scarlet Fever, Diphtheria, Mumps and Tonsillectomy in childhood. He was of slim build. He had interdigital cheiro-pomphalyx of his hands (seasonal).

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.15	.16	.15	.10 gm. %
Urinary Sugar	nil	No spec.	nil	No spec.	nil

CASE 74.

S.M. aet 27 years, was examined on 19th June 1940.

For 6 months he had had pains in the feet, elbows and wrists, worse at night but not severe enough to confine him to bed. He had generalised itching of the skin. His weight was increasing slightly. He had Scarlet Fever in childhood. When 19 years of age he had Appendicitis and appendicectomy was done. When 20 years of age he had Rheumatic Fever. He was of heavy build and healthy looking. There was no deformity, tenderness or stiffness of the joints.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.14	.15	.12	.09 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 75.

G.B. aet 27 years, was examined on 5th June 1940.

He felt well and had no complaints. He had had psoriasis for 20 years. He was tall, thin and wiry looking. He had widespread psoriasis.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.18	.16	.16	.12 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 76.

R.R. aet 27 years, was examined on 11th June 1940. He felt well and had no complaints. He had Croup and Pleurisy in childhood. He was thin featured and of medium build. He had scars of old furunculosis on his neck.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.17	.11	.11	.08 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 77.

R.S. aet 28 years, was examined on 6th July, 1940. He felt well. When questioned he said he had slight polyuria and occasional nocturia. In 1937 he had perforation of a gastric ulcer following indigestion for several years. He was small and of stolid build. His throat was slightly congested.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.18	.15	.12	.11 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 78.

E.S. aet 28 years, was examined on 6th July, 1940.

He felt well but admitted to slight thirst and polyuria

after direct questioning. He had Measles, Mumps and Chickenpox in childhood.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.13	.16	.14	.12 gm. %
Urinary Sugar.	nil	nil	nil	nil	nil

CASE 79.

R.V. aet 28 years, was examined on 13th July 1940.

He said he felt well, but when questioned admitted thirst and polyuria of 2-3 months duration. He had Influenza some years previously. His mother had Diabetes but did not get insulin. He was tall and heavily built. His lower teeth were badly decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.15	.12	.11	.09 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 80.

R.T. aet 28 years, was examined on 24th May 1940.

He felt well and had no complaints. He had Measles and Whooping Cough in childhood. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.15	.135	.12	.10 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 81.

M.C. aet 28 years, was examined on 2nd March 1940. He felt well but had lost a few pounds in weight in the previous months. He had an operation for appendicitis in 1934, one for Gastric ulcer in 1937 and one for Duodenal Ulcer in 1939. He was of good physique and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.17	.12	.08	.08 gm. %
Urinary Sugar.	nil	nil	nil	nil,	nil

CASE 82.

R.E. aet 28 years, was examined on 15th August 1940. He felt well but had lost 10 lbs in weight in the previous 7-8 years. He had Chickenpox in childhood. In 1936 he had an operation for Haemorrhoids and in 1938 an operation to straighten septum of nose. He was tall and somewhat thin.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.19	.15	.14	.10 gm. %
Urinary Sugar		nil	nil	nil	nil

CASE 83.

J.McG. aet 28 years, was examined on 18th June 1940. He felt well and his weight was increasing slightly. He had very occasional nocturia. When 24 years he had an operation for hernia.

He was small and thin featured.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.18	.13	.11 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 84.

J.S. aet 28 years, was examined on 19th June, 1940.

He felt well but at times had some frequency of micturition and his weight was a little less. He had Tonsillectomy in childhood. When 13 years of age he was in bed for 3 months with Rheumatic Fever. He had occasional sore throats. He was of heavy build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.13	.11	.09 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 85.

T.Q. aet 28 years, was examined on 17th May 1940.

He felt well and had no complaints. He was tall and of thin to medium build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.13	.12	.12	.11 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 86.

A.S. aet 29 years, was examined on 20th December 1940. He felt well. He had had a few boils a few weeks before. He had Measles and Whooping Cough in childhood. He was of average physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.19	.16	.10	.09 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 87.

L.M. aet 29 years, was examined on 22nd June 1940.

He felt well but had lost a little weight in the past year. He has slight frequency of micturition by day and occasional nocturia. He had several boils on his neck some years before. He was well nourished and of good physique. He had a slight external strabismus of the right eye.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.17	.16	.13	.11 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 88.

E.McS. aet 30 years, was examined on 23rd April 1940. He felt well. He thought he might have lost a little weight in the past 2 years. He had 2 boils on his

neck one month before. He had Scarlet Fever and Measles in early childhood and an abscess in the right axilla when 10 years of age. He was of broad build. He had 2 scars of recent boils on his neck. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.15	.16	.14	.11	.09 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 89.

J.I.R. aet 30 years, was examined on 8th June 1940. He felt well and had no complaints. He had Scarlet Fever in childhood. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.15	.14	.11 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 90.

E.G. aet 30 years, was examined on 20th July 1940. He felt well. He had occasional nocturia. He was of slim build, pale and nervous looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.12	.14	.17	.10 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 91.

E.McN. aet 31 years, was examined on 5th January 1940. He felt well and had no complaints. He had appendectomy in 1929. He was smallish but of good physique. He looked anxious.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.15	.14	.10	.09 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 92.

T.W. aet 31 years, was examined on 27th November 1940. He felt fairly well but still had occasional pain on right side of abdomen following an operation for appendicitis and peritonitis 15 years previously. On direct questioning he said he was inclined to be thirsty, had polyuria and nocturia twice nightly for some years. He had Scarlet Fever in childhood. When 8 years of age he had an operation for Rectal Polypus. He was thin featured and of slim to medium build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.13	.11	.08	.08 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 93.

M. MacG. aet 31 years, was examined on 16th July 1940. He had had epigastric discomfort, flatulence, and gaseous eructations for one month. He had nausea but

no vomiting. Food had no effect on the pain. On direct questioning he said he drank quite a lot of water. He had Lumbago several years previously. In 1935 he had 4-5 boils on his neck. He was of good physique and healthy looking. There was slight tenderness in the right iliac fossa.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.18	.13	.09	.08 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 94.

J.McC. aet 31 years, was examined on 29th May 1940. He felt well and had no complaints. He had Mumps in childhood. When 15 years of age he had an operation for an anal fisula. He had a few small boils on his neck a few months before. He was tall and of slim build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.17	.15	.11	.10 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 95.

A.McG. aet 32 years, was examined on 29th August 1940. He felt well. In December 1939 (after the death of his son) he consulted his doctor because of loss of

weight and lack of energy and glycosuria was discovered in routine examination. After mild carbohydrate restriction for 2-3 months the glycosuria disappeared and in the previous 8 months his weight had increased. He had Measles in childhood. He looked anxious and had some tremor of the outstretched hands. He was of average build and nutrition. There was some caries of the remaining teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.13	.12	.10	.09 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 96.

W.K. aet 33 years, was examined on 2nd April 1940.

He felt well and had no complaints. He had Measles in childhood. He was heavily built and his remaining teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.18	.13	.10	.09 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 97.

D.S. aet 34 years, was examined on 23rd July 1940.

He felt well and had no complaints. He had eaten a large amount of sweets the day of his medical examination

at the board. He was of average physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.18	.13	.09	.08 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 98.

W.K. aet 34 years, was examined on 21st January 1940.

He felt well. On direct questioning he said he drank a fair amount of water. He had no frequency of micturition by day but usually had to rise twice at night. He was sparely built. His fingers were clubbed. The base of the right lung was flat to percussion and an occasional râle was heard over it.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.14	.10	.09 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 99.

W.R. aet 35 years, was examined on 10th May, 1940.

He felt well and had no complaints. He was of average build and nutrition. He had slight tremor of the outstretched hands. The pulse rate was 132 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.18	.12	.08	.08 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 100.

J.H. aet 36 years, was examined on 29th March 1940. He felt well and had no complaints. He had Measles in childhood. He was of spare build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.18	.17	.12	.11 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 101.

J.T. aet 40 years, was examined on 20th March 1940. He felt well. On direct questioning he said he had lost a little weight recently, had occasional frequency of micturition by day and usually had nocturia. He had Measles in childhood. When 16 years of age he had Pneumonia. He had an occasional sore throat. He was of slight build. There was some caries of the remaining teeth. He had a slight internal strabismus of the right eye.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.17	.15	.12	.10 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 102.

J.D. aet 40 years, was examined on 6th April 1940. He felt well and had no complaints. When 5 years of age he had an operation for a right inguinal hernia.

When 13 years of age he had the 2 distal phalanges of the middle finger of his right hand amputated because of sepsis following an accident. He was of average nutrition. He had one decayed stump in lower jaw.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.175	.13	.12	.09 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

CASE 103.

T.H. aet 41 years, was examined on 5th June.

He felt well and had no complaints. He had Malaria some years previously when he was in the regular army. He was of spare build. His teeth were badly decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.15	.17	.16	.09 gm.%
Urinary Sugar	nil	nil	nil	nil	nil

W.McC. aet 18 years, was examined on 12th August 1941.
 He felt well and had no complaints. He had had
 Chickenpox, Mumps and Tonsillectomy in childhood.
 In 1937 he had 2 boils on neck. He was of average
 build and nutrition. His hands were cold and red.
 The Glucose Tolerance Test gave the following results:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.08	.12	.18	.11	.12 gm. %
Urinary Sugar	nil	nil	nil	B.S.R.	nil

GLUCOSE STORAGE

DEFECT

E.H. aet 18 years, was examined on 7th February 1941

GLYCOSURIA

He felt well and had no complaints.

He was tall, thin, and pale but the mucous
 membranes were white and dry. Coarse superficial
 friction was audible in the left axilla.

The Glucose Tolerance Test gave the following result:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.08	.21	.23	.10	.08 gm. %
Urinary Sugar	nil	B.S.R.	+	++	B.S.R.

CASE 106.

J.M. aet 18 years, was examined on 20th February 1941

He felt well and his weight was increasing.

He was tall, thin, and pale but the mucous
 membranes were white and dry. Coarse superficial
 friction was audible in the left axilla.

CASE 104.

W.McC. aet 18 years, was examined on 12th August 1940. He felt well and had no complaints. He had Measles, Chickenpox, Mumps and Tonsillectomy in childhood. In 1937 he had 2 boils on neck. He was of average build and nutrition. His hands were cold and red. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.20	.15	.11	.12 gm. %
Urinary Sugar	nil	B.V.S.R.	B.R.	B.S.R.	nil

CASE 105.

E.H. aet 18 years, was examined on 7th February 1941. He felt well and had no complaints. He was tall, slim, and rather pale but the mucous membranes were quite well coloured. Coarse superficial friction was audible in the left axilla.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.21	.23	.10	.08 gm. %
Urinary Sugar	nil	B.S.R.	+	++	B.G.R.

CASE 106.

J.M. aet 18 years, was examined on 20th February 1940. He felt well and his weight was increasing. He had Measles in childhood, Pneumonia and Pleurisy when 7 years of age, Otitis Media when 11 years of age and Erythema Nodosum when 15 years of age. He had been

troubled with acne for 6 years. He was tall and of heavy build. He had acne vulgaris of the back.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.18	.20	.12	.12 gm. %
Urinary Sugar	nil	nil	B.R.	nil	nil

CASE 107. W.McD. aet 19 years, was examined on 30th October 1940. He felt well and had no complaints. He had Diphtheria twice in childhood. When about 17 years of age he had several boils. He was tall, slim and anxious looking. The pulse rate was 120 per minute. His Thyroid gland was slightly full when he was lying down.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.22	.17	.13	.11 gm. %
Urinary Sugar	B.S.R.	+	+	No Spec.	No Spec.

CASE 108. J.B. aet 19 years, was examined on 1st October 1940. He felt well and had no complaints. He had Measles, Chickenpox and Tonsillectomy in childhood. He was of average build and nutrition. He had a pigmented burn of the left lumbar region.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.21	.19	.16	.09 gm. %
Urinary Sugar	nil	B.V.S.R.	+	B.V.S.R.	nil

CASE 109.

G.M. aet 19 years, was examined on 13th January 1940. He felt well and had no complaints, He was of slim to medium build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.20	.13	.10	.09 gm.%
Urinary Sugar	nil	B.G.R.	B.R.	nil	nil

CASE 110.

W.Y. aet 19 years, was examined on 15th March 1940. He felt well and had no complaints. He had Scarlet Fever and Diphtheria in childhood. When 16 years of age he had several boils on his neck. He was of good physique and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.20	.19	.16	.11gm.%
Urinary Sugar	nil	+	++	+	+

CASE 111.

W.J. aet 19 years, was examined on 1st May, 1940.

He felt well and his weight was increasing. He had 2 boils on neck in the previous fortnight.

He had Measles and Bronchitis in childhood. He was of burly build. He had several decayed teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.185	.12	.10	.10 gm. %
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	nil	nil

CASE 112. J.N. aet 19 years, was examined on 1st May. 1940. He felt well and had no complaints. He had Measles, Whooping Cough and Mumps in childhood. He had an attack of Enteritis $\frac{1}{2}$ years before. He was of slim to medium build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.15	.18	.19	.12 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	B.V.S.R.	B.V.S.R.

CASE 113. W.C. aet 19 years, was examined on 12th June 1940. He felt well and had no complaints. He had Scarlet Fever when very young and in childhood had pains in his legs. He was of good build and nutrition. He had several decayed teeth and his tonsils were enlarged.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.22	.14	.12	.11 gm. %
Urinary Sugar	nil	B.G.R.	+ +	B.V.S.R.	nil

CASE 114. F.K. aet 20 years, was examined on 12th December 1939. He felt well and his weight was increasing slightly. He admitted slight thirst, on direct questioning.

In 1935 he had an operation for appendicitis. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.25	.13	.09	.11 gm.%
Urinary Sugar	nil	nil	B.R.	nil	nil

CASE 115.

D.W. aet 20 years, was examined on 29th April 1940.

He felt well. On direct questioning he said he was thirsty and had to pass urine 2 hourly during the day but did not require to rise at night. He had Diphtheria in childhood. In 1933 he had an abscess of his left arm. One of his brothers was found to have glycosuria when he was examined by the medical board. He had no symptoms and was passed fit for military service. He was of small build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.24	.19	.14	.10 gm.%
Urinary Sugar	nil	B.R.	++	+	B.V.S.R.

CASE 116.

C.R. aet 20 years, was examined on 28th September 1939.

He felt well. After direct questioning he said he drank a lot of water. He had Mumps in childhood. His Grandmother had Diabetes. He was of average physique.

His eyes were slightly prominent and there was slight fullness over the Thyroid region of the neck. The tonsils were enlarged.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2hrs.
Blood Sugar	.13	.20	.14	.14	.10 gm.%
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 117.

D.D. aet 20 years, was examined on 15th May 1940. He felt well and his weight was increasing. He had Scarlet Fever in childhood. He was of good physique and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2hrs.
Blood Sugar	.11	.20	.18	.17	.12 gm.%
Urinary Sugar	nil	nil	B.G.R.	B.R.	B.R.

CASE 118.

D.M. aet 20 years, was examined on 29th August 1940. He felt well and had no complaints. He had Pneumonia in childhood. He was healthy looking and of good physique. He had mild blepharitis.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2hrs.
Blood Sugar	.17	.20	.20	.17	.11 gm.%
Urinary Sugar	nil	B.R.	++	++	B.R.

CASE 119.

W.W.L. aet 20 years, was examined on 13th January 1940. He felt well and had no complaints. He was slim but healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.20	.20	.11	.09 gm.%
Urinary Sugar	nil	B.G.R.	++	B.G.R.	B.S.R.

CASE 120.

R.W. aet 20 years, was examined on 18th November 1939. He felt well and had no complaints. He had Measles, Whooping Cough and Chickenpox in childhood. He was of average build and nutrition. There was slight tremor of the outstretched hands.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.16	.20	.20	.15	.12 gm.%
Urinary Sugar	nil	nil	B.V.S.R.	B.R.	B.V.S.R.

CASE 121.

W.B. aet 20 years, was examined on 14th January 1940. He felt well and had no complaints. He was smallish and of broad build. His tonsils were enlarged.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.19	.17	.11	.10 gm.%
Urinary Sugar	nil	B.V.S.R.	+	B.R.	nil

CASE 122.

D.C. aet 20 years, was examined on 16th January 1940. He felt well and had no complaints. He had Tonsillec-
tomy done when 10 years of age. In 1938 he had
appendicectomy. In 1939 he was in hospital 10 weeks
with Diphtheria. He was tall and of thin to medium
build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.20	.12	.13	.07 gm.%
Urinary Sugar.	nil	nil	B.V.S.R.	nil	nil

CASE 123.

J.L. aet 20 years, was examined on 13th February 1940. He felt well apart from an occasional twinge of lumbar
pain which came about once a month and lasted a few
days. It did not radiate and was never severe enough
to confine him to bed. In 1939 he had Scarlet Fever
complicated by kidney disease. He was of average build
and nutrition. There was slight caries of teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.20	.22	.14	.09 gm.%
Urinary Sugar	B.S.R.	+	+	B.G.R.	B.S.R.

CASE 124.

A. McL. aet 20 years, was examined on 4th April 1940. He felt well and had no complaints. He was of average

build and well nourished. His hands were cold and blue.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.19	.14	.12	.08 gm.%
Urinary Sugar	nil	B.V.S.R.	B.S.R.	No Spec.	nil

CASE 125.

R.C.McK. aet 20 years, was examined on 6th April 1940.

He felt well and had no complaints. He had Chickenpox and Measles in childhood. He was of small build and rather short necked.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.16	.19	.15	.13	.11 gm.%
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	nil	nil

CASE 126.

P.McC.L. aet 20 years, was examined on 28th September

1939. He felt well. On direct questioning he said he drank a lot of water and was subject to boils. He had chickenpox in childhood. He was obese and had furuncles on the back of his neck and the right forearm.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.20	.16	.13	.11 gm.%
Urinary Sugar	nil	B.R.	B.R.	B.R.	B.V.S.R.

CASE 127.

W.McI, aet 20 years, was examined on 8th June 1940. He felt well and had no complaints. He had had an occasional boil from time to time. He was thin featured but of average build and good nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.21	.16	.12	.09gm.%
Urinary Sugar	nil	B.G.R.	+	No Spec.	nil

CASE 128.

J.MacG. aet 20 years, was examined on 10th June 1940. He felt well and had no complaints. He was of good physique and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs	2 hrs.
Blood Sugar .	.10	.18	.22	.17	.10gm.%
Urinary Sugar	nil	nil	B.R.	B.S.R.	nil

CASE 129.

J.S. aet 20 years, was examined on 25th July 1940. He felt well apart from a "cold" in his head and a slight sore throat of a few days' duration. He had Scarlet Fever in childhood. In January 1940 he had Laryngitis. He was of average build and physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.17	.19	.11	.09gm.%
Urinary Sugar	B.V.S.R.	B.V.S.R.	B.G.R.	B.V.S.R.	nil

CASE 130.

J.G. aet 20 years, was examined on 25th July 1940.

He felt well and had no complaints. He had Tonsillectomy when 8 years of age. He was of average build and physique.

The Glucose Tolerance Test gave the following results:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.21	.12	.11	.09gm.%
Urinary Sugar.	nil	B.R.	B.G.R.	nil	nil

CASE 131.

J.W.T. aet 20 years, was examined on 19th April 1940.

He felt well and had no complaints. When 14 years of age he had Pleurisy with Effusion and was in hospital for 3 months. He had Measles in childhood. He was of slim build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.15	.19	.12	.11gm.%
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 132.

R.D.R. aet 20 years, was examined on 17th October 1939.

He felt well and had no complaints. In 1933 he had an operation for Chronic Appendicitis. He was of spare build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.15	.22	.17	.15	.11gm.%
Urinary Sugar	nil	+	B.G.R.	nil	nil

CASE 133.

J. McK. aet 20 years, was examined on 27th December 1940. He felt well and had no complaints. When 12 years of age he had Scarlet Fever complicated by kidney disease and was in hospital for over 6 months. He was of average build and nutrition. He had several decayed teeth. There was a tendency to "cobbler chest".

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.20	.19	.12	.09 gm. %
Urinary Sugar	B.V.S.R.	No Spec	†	B.S.R.	nil

CASE 134.

J.F. aet 20 years, was examined on 13th January 1940. He felt well. On direct questioning he said he had slight thirst and nocturia 2 or 3 times weekly. He had Diphtheria when 10 years of age and Tonsillectomy when 11 years of age. His appendix was removed when he was 12, He was thin. His teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.21	.18	.15	.11 gm. %
Urinary Sugar	nil	B.V.S.R.	B.G.R.	B.R.	nil

CASE 135.

J.G. aet 20 years, was examined on 27th December 1940. He felt well and had no complaints. He had Pneumonia when 5 years of age. He was tall and of slim to medium build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.20	.19	.17	.09 gm.%
Urinary Sugar	nil	B.S.R.	+	B.R.	nil

CASE 136.

Wm. McQ. aet 21 years, was examined on 6th January 1940. He felt well and had no complaints. He was small but healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.20	.13	.10	.10 gm.%
Urinary Sugar	nil	B.V.S.R.	B.G.R.	nil	nil

CASE 137.

G.S. aet 21 years, was examined on 29th November 1939. He felt well and had no complaints. He had Pleurisy in childhood and had 2 boils on his neck 2 years previously. He was thin and anxious looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.16	.20	.15	.14	.12 gm.%
Urinary Sugar	No spec.	B.V.S.R	No spec.	nil	nil

CASE 138.

J.L. aet 21 years, was examined on 20th January 1940. He felt well and had no complaints. He had a few boils 6 years previously. He was of slim build. The pulse rate was 108 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.19	.14	.10	.09 gm.%
Urinary Sugar	nil	B.R.	+	B.V.S.R.	nil

CASE 139.

T.H. aet 21 years, was examined on 11th January, 1941.

He felt well and had no complaints. He had Scarlet Fever when 8 years of age and Tonsillectomy in childhood. He had facial acne for the past few years. His brother, aged 16 years, was found to have glycosuria in routine examination for a job. After some months on diet he was accepted.

He was of average physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.19	.15	.12	.10 gm.%
Urinary Sugar	B.S.R.	B.S.R.	B.G.R.	nil	nil

CASE 140.

E.C. aet 21 years, was examined on 29th November 1939.

He felt well and had no complaints. He had Influenza in 1935. He was thin featured and of small burly build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.26	.18	.13	.12 gm.%
Urinary Sugar	nil	B.V.S.R.	B.G.R.	B.V.S.R.	nil

CASE 141.

A.C. aet 21 years, was examined on 9th December 1939.

He felt well and had no complaints. He was of smallish build but healthy looking. He had Diphtheria in childhood.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.19	.25	.12	.09gm.%
Urinary Sugar	nil	B.R.	++	B.G.R.	nil

CASE 142.

A.B. aet 22 years, was examined on 18th December 1939.

He felt well and had no complaints. He had Measles, Whooping Cough and Diphtheria in childhood and in 1934 he had a few boils on his neck. He was well built and of average nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.15	.19	.14	.12gm.%
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 143.

R.Mc.W. K., aet 22 years, was examined on 30th November 1939

He felt well and had no complaints. He had Measles in childhood. Hewas tall and of medium physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.15	.17	.19	.13	.11gm.%
Urinary Sugar	nil	nil	B.S.R.	B.S.R.	nil

CASE 144.

W.B.R. aet 22 years, was examined on 9th February 1940. For 3 months he had been slightly short of breath on exertion. On direct questioning he said he had slight thirst. He had Scarlet Fever in childhood. Tonsillectomy was done in 1939 He had Bronchitis during January 1940. He was of average build and physique. The pulse rate was 102 per minute. An occasional rhonchus was heard at the base of the left lung.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.22	.13	.11 gm. %
Urinary Sugar	B.S.R.	B.R.	B.G.R.	B.S.R	nil

CASE 145.

J.M. aet 22 years, was examined on 4th January, 1940. He felt well and had no complaints. He had Measles and Diphtheria in childhood. He was of slim build and anxious looking. The pulse rate was 120 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.20	.19	.16	.10gm. %
Urinary Sugar.	No spec.	nil	B.R.	B.V.S.R.	nil.

CASE 146.

A.B. aet 22 years, was examined on 20th January 1940. He felt well. On direct questioning he said he drank a lot of water but ascribed the thirst to his work as a stoker and engine man. He had one boil on his neck a year

previously. He was tall and well built. He had slight dental caries.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
BLOOD SUGAR	.09	.19	.12	.12	.10gm.%
Urinary Sugar	nil	B.V.S.R.	B.R.	B.R.	B.V.S.R.

CASE 147.

D.R. aet 22 years, was examined on 6th January 1940. He felt well but after direct questioning said he had slight polyuria and usually required to rise at night to micturate. He was of small build and good nutrition. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.16	.21	.13	.11	.10gm.%
Urinary Sugar	nil	B.R.	B.R.	nil	nil

CASE 148.

J.F. aet 22 years, was examined on 3rd February 1940. He felt well but had had a cough and spit for about 10 years. He had Pneumonia 4 times during 1932 and 1933. He looked seedy and was below average physique and nutrition. His lower teeth were decayed. His chest was flat, and the base of the right lung was a little flat to percussion. Rhonchi were heard throughout both lungs.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar.	.15	.17	.19	.16	.12 gm.%
Urinary Sugar.	No Spec.	nil	B.V.S.R.	nil	nil

CASE 149.

T.B. aet 22 years, was examined on 30th January, 1940. He felt well and had no complaints. He had Measles and chickenpox in childhood. He was thin and of medium height.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.13	.20	.12	.10gm.%
Urinary Sugar.	B.V.S.R.	B.G.R.	+	B.G.R.	B.V.S.R

CASE 150.

J.S.C. aet 22 years, was examined on 30th November 1939. He felt well and had no complaints. He had Scarlet Fever in childhood and Eczema in 1935. He was smallish but of good physique. The molar teeth were badly decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.23	.18	.16	.11 gm.%
Urinary Sugar,	nil	B.R.	B.G.R.	B.V.S.R.	nil

CASE 151.

R.J. aet 22 years, was examined on 30th November 1939. He had been troubled with abdominal pain after food for some years. He drank 12 bottles of beer at the week-ends.

He was smallish but of average physique. He had acne vulgaris of the chest and the back of his neck.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.17	.19	.13	.09 gm. %
Urinary Sugar.	nil	nil	B.R.	B.S.R.	nil

CASE 152.

E.H. aet 22 years, was examined on 3rd February 1940.

He felt well and had no complaints. He was smallish but of good physique. His teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.20	.15	.12	.10 gm. %
Urinary Sugar.	nil	nil	B.G.R.	nil	nil

CASE 153.

J.W. aet 22 years, was examined on 20th February 1940.

He felt well and had no complaints. He had Chickenpox and Scarlet Fever in childhood. In 1934 he had the 2 distal phalanges of the forefinger of his right hand amputated as the result of an accident at work. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.19	.17	.13	.12 gm. %
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	nil	nil.

CASE 154.

B.McK. aet 22 years, was examined on 20th February 1940. He felt well and had no complaints. He had one boil on his neck about 5 years previously. He was of spare build. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.19	.21	.16	.10 gm.%
Urinary Sugar.	nil	nil	B.G.R.	B.V.S.R.	nil

CASE 155.

R.J. aet 22 years, was examined on 29th February 1940. He felt well and had no complaints. He had Mumps and Chickenpox in childhood. He was thin and rather gaunt looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.20	.14	.13	.12 gm.%
Urinary Sugar	nil	†	B.G.R.	nil	nil

CASE 156.

T.O'B. aet 22 years, was examined on 22nd May 1940.

He felt well apart from occasional ache in his back when he stooped and an occasional attack of giddiness. He was subject to "colds". He was of slim build. There was some caries of the teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.14	.19	.14	.12gm.%
Urinary Sugar	nil	nil	†	†	B.V.S.R.

CASE 157.

A.F. aet 22 years, was examined on 15th December 1940. He felt well and had no complaints. He had Rheumatic Fever in 1937, and his appendix removed in 1933. He was of slim build but healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.12	.20	.20	.12	.11 gm.%
Urinary Sugar	No spec.	B.G.R.	B.G.R.	nil	nil

CASE 158.

R.M. aet 22 years, was examined on 19th January 1940. He felt well and had no complaints. His mother had diabetes. He was smallish but of good physique. He had several decayed teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.09	.22	.10	.08	.08 gm.%
Urinary Sugar	nil	nil	B.G.R.	nil	nil

CASE 159.

R.C.M. aet 23 years, was examined on 10th May 1940. He felt well and his weight was increasing. He was myopic since childhood. He had Scarlet Fever when 11 years of age and had boils on his arm when 16 years of age. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.08	.18	.19	.08	.08 gm.%
Urinary Sugar.	nil	nil	B.G.R.	B.S.R.	nil

CASE 160.

T.S. aet 23 years, was examined on 20th March, 1940.

He felt well and had no complaints. He had Scarlet Fever Mumps and cervical adenitis when very young. At 8 years of age he had Pneumonia and in 1938 he had an operation for chronic appendicitis. He was of average build and nutrition and had some scarring of both sides of his neck.

The Glucose Tolerance Test gave the following results:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.19	.16	.12	.10 gm.%
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 161.

W.A.W. aet 23 years, was examined on 16th January 1940.

He felt well and had no complaints. He was tall and inclined to heaviness. He had a stammer.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.20	.16	.11	.10 gm.%
Urinary Sugar.	nil	B.S.R.	B.S.R.	BS.R.	B.V.S.R.

CASE 162.

J.McC. aet 23 years, was examined on 4th February 1940.

He felt well. On direct questioning he said he had lost a little weight in the previous 2 months. He had Pneumonia and Measles in childhood.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.24	.19	.12	.09 gm.%
Urinary Sugar	nil	nil	B.R.	B.S.R.	B.V.S.R.

CASE 163.

A.C. aet 23 years, was examined on 2nd February 1940.

He felt well and had no complaints. He was subject to asthma from early childhood till he was 18 years of age.

He had 2 boils on his arms in 1939. He was of average height and slim build. His skin was dry and scaly.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.19	.17	.12	.10 gm.%
Urinary Sugar.	B.R.	B.G.R.	+	B.R.	B.R.

CASE 164.

E.S.B. aet 23 years, was examined on 24th February 1940.

He felt well and had no complaints. He had a few boils at 14 years of age. He was of small burly build. He had a

scanty papular eruption of his face. The pulse rate was 100 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.19	.13	.10	.09 gm.%
Urinary Sugar	nil	B.R.	B.G.R.	B.V.S.R.	nil

CASE 165.

N.H. aet 23 years, was examined on 9th February 1940. He felt well and had no complaints. In 1938 glycosuria was discovered in routine examination for Life Insurance. A Blood Sugar Curve was done and the insurance was postponed. He had Measles, Scarlet Fever and Whooping Cough in childhood. He was of small build but well nourished. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.18	.30	.20	.11 gm.%
Urinary Sugar.	nil	B.G.R.	++	B.G.R.	B.S.R.

CASE 166.

A.McL. aet 23 years, was examined on 25th February 1940. He felt well. On direct questioning he said he had had thirst for years, but had no polyuria. He was troubled with headaches since he was 11 years of age when he had an accident with resulting concussion. He had Chickenpox and Pneumonia in childhood. He was tall, thin and flat chested.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs	2 hrs.
Blood Sugar	.16	.26	.21	.14	.12 gm.%
Urinary Sugar.	nil	B.R.	++	B.G.R.	nil

CASE 167.

J.D. aet 24 years, was examined on 16th March 1940.

He had been troubled with nausea, sour taste in his mouth

and flatulence, coming on shortly after food and of 9 months duration. He had a few boils on his neck and arms in the previous month or so. He had Measles in early childhood and Pneumonia when 10 years of age. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.16	.19	.14	.11 gm.%
Urinary Sugar	nil	nil,	+	B.R.	nil.

CASE 168.

B.U. aet 24 years, was examined on 3rd June 1940.

He felt well and had no complaints. He had a few boils some years previously. He was of good build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.20	.12	.12	.06 gm.%
Urinary Sugar	nil	nil	B.V.S.R	nil	nil

CASE 169.

R.J.S. aet 24 years, was examined on 16th March 1940.

He felt well and had no complaints. He had Scarlet Fever at 4 and Diphtheria at 12 years of age. He was thin. His expression was anxious and he had fine tremor of the outstretched hands.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar.	.12	.18	.19	.15	.12 gm.%
Urinary Sugar	nil	B.S.R.	B.G.R.	B.V.S.R.	nil

CASE 170.

W.A. aet 24 years, was examined on 20th February 1940.

He felt well and had no complaints. He had Measles, Mumps and Whooping Cough in childhood. When 18 years of age he had an operation of a displaced cartilage in the right knee joint. When 21 years of age he was in bed for 5 weeks with Pleurisy.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.21	.16	.15	.11 gm.%
Urinary Sugar	nil	nil	B.R.	nil	nil

CASE 171.

R.S. aet 24 years, was examined on 31st July 1940.

He felt well and had no complaints. He had Measles and Mumps in childhood. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.22	.15	.11	.09 gm.%
Urinary Sugar.	nil	B.S.R.	++	B.S.R.	nil.

CASE 172.

W.D. aet 24 years, was examined on 12th April 1940.

He felt well and his weight was increasing. He had

Diphtheria and Tonsillectomy in childhood. In schooldays he had "Fluid in one lung". He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.20	.20	.14	.12 gm.%
Urinary Sugar	nil	B.S.R.	++	B.G.R.	nil

CASE 173.

W.R. aet 24 years, was examined on 23rd June 1940.

He felt well and had no complaints. He had Tonsillectomy done in childhood. He was below average height but of average nutrition. He had several carious molars.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.21	.20	.14	.11 gm.%
Urinary Sugar.	nil	B.V.S.R.	++	++	nil

CASE 174.

W.C. aet 24 years, was examined in 8th April 1940.

He felt well. On direct questioning he said he had slight polyuria and occasional nocturia. He had Tonsillitis in 1937, and Influenza in 1938. His father had had glycosuria for a few months but was not on diet and his symptoms were rather vague. He was slim build but healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar.	.13	.22	.15	.14	.11 gm.%
Urinary Sugar.	B.V.S.R.	+	++	B.S.R.	B.V.S.R.

CASE 175.

R.B. aet 24 years was examined on 16th April 1940.

He felt well and had no complaints. He had Measles and Diphtheria in childhood. He was of burly build and rather nervous. Both tonsils were enlarged.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.26	.32	.19	.11 gm.%
Urinary Sugar	nil	B.G.R.	B.G.R.	B.G.R.	B.S.R.

CASE 176.

P.T. aet 25 years, was examined on 20th February 1940.

He felt well and had no complaints. He had Measles and Whooping Cough in childhood. He was of small build and average nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.19	.14	.10 gm.%
Urinary Sugar.	nil	nil	No Spec.	B.V.S.R.	nil.

CASE 177.

J.P. aet 25 years, was examined on 17th April 1940.

He felt well and had no complaints apart from acne of his back for the previous 7 years. He was tall and well nourished. He was anxious looking. There was widespread acne on his back.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.19	.19	.13	.12 gm.%
Urinary Sugar	nil	B.G.R.	B.R.	nil	nil

CASE 178.

R.M. aet 25 years, was examined on 12th April 1940. He felt well and had no complaints. In the previous week or so he had had a few small boils. He had Scarlet Fever and Measles in childhood. He had an appendicectomy when 12 years of age, followed 2 months later by an operation for right inguinal hernia and bilateral undescended testicle. He was of average build and physique.

The Glucose Tolerance Test gave the following result.

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.19	.15	.12	.12 gm.%
Urinary Sugar	nil	B.R.	+	B.S.R.	B.V.S.R.

CASE 179.

J.P. aet 25 years, was examined on 14th April 1940. He felt well and had no complaints. He had Scarlet Fever in childhood. In 1937 he had sycosis barbae and in 1939 he had Diphtheria. He was of good nutrition and physique. There was some pitting of beard region and some indolent acneiform papules on shoulders and back.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.19	.12	.10	.10 gm.%
Urinary Sugar	nil	B.V.S.R.	B.R.	nil	nil

CASE 180.

D.L. aet 25 years, was examined on 19th June 1940. He felt well. On direct questioning he said he was thirsty at times. He was subject to Tonsillitis. He was smallish, thin featured, but of good physique. There was some decay of teeth. The pulse rate was 100 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.21	.17	.15	.12 gm.%
Urinary Sugar	No spec.	++	++	B.R.	nil

CASE 181.

R.C. aet 25 years, was examined on 3rd February, 1940. He felt well and had no complaints. He had Measles in childhood. He was well built and well nourished. He had many carious molars. The pulse rate was 150 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.20	.18	.13	.09 gm.%
Urinary Sugar.	nil	nil	B.V.S.R.	nil	nil

CASE 182.

N.M. aet 25 years, was examined on 11th January, 1941. He felt well and had no complaints. He was of the thin anxious type.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2hrs.
Blood Sugar	.12	.24	.16	.11	.11 gm.%
Urinary Sugar	B.G.R.	B.G.R.	+	B.R.	B.S.R.

CASE 183.

J.A. aet 25 years, was examined on 8th June, 1940.

He felt well and had no complaints. He had Scarlet Fever in childhood and Influenza in 1939. He was tall and slim.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs	2 hrs.
Blood Sugar	.14	.20	.14	.10	.09 gm.%
Urinary Sugar.	nil	B.S.R.	+	B.R.	nil

CASE 184.

W.W. aet 25 years, was examined on 4th July, 1940.

He felt well and had no complaints. He had Measles and Mumps in childhood and Appendicectomy when 13 years of age. He was of average height and nutrition. Some of the molar teeth were carious.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.20	.18	.13	.09 gm.%
Urinary Sugar.	nil	B.S.R.	+	B.G.R.	B.G.R.

CASE 185.

W.J.C. aet 25 years, was examined on 17th June 1940. He felt well. On direct questioning he said he was sometimes troubled with thirst. He had Measles in childhood. He was small and below average physique. He had several decayed teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.	
Blood Sugar	.13	.19	.11	.11		gm.%
Urinary Sugar	nil	B.R.	B.G.R.	nil		

CASE 186.

A.McD.K. aet 25 years, was examined on 11th May 1940. He said he felt fairly well apart from attacks of weakness which he had had for about 10 years. They always came on in the morning and were associated with cold sweat and a feeling of his legs "going from under him". They came at intervals of a few weeks and he had not lost consciousness in any of them. On direct questioning he said he has lost a stone in weight in the previous year, drank quite a lot of water, had slight polyuria and occasional nocturia. He occasionally had generalised skin irritation. He had Measles and Scarlet Fever in childhood. He was of average physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.	
Blood Sugar	.11	.19	.18	.15	.10	gm.%
Urinary Sugar.	nil	B.V.S.R.	B.V.S.R.	nil	nil	

CASE 187.

C.McC. aet 25 years, was examined on 8th May 1940.

He felt well. On direct questioning he said he had occasional nocturia. He had Measles and Tonsillectomy in childhood. He had a few boils on his legs about 2 years before. He was well built and healthy looking. The Glucose Tolerance Test gave the following result.

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.22	.15	.09	.09 gm.%
Urinary Sugar	nil	B.V.S.R.	+	nil	nil

CASE 188.

R.C. aet 25 years, was examined on 12th June 1940. He felt well and had no complaints. He had Pneumonia when 12 years of age. He was of stocky build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.21	.15	.15	.11 gm.%
Urinary Sugar	B.V.S.R.	B.S.R.	++	B.V.S.R.	nil

CASE 189.

R.C. aet 25 years, was examined on 20th April, 1940.

He felt well and had no complaints. He had Measles and Scarlet Fever in childhood. He was tall and of slim to medium build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.20	.17	.15	.09 gm.%
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 190.

T.I. aet 25 years, was examined on 5th June 1940. He felt well and had no complaints. He had some boils about a year before. He was smallish and of average nutrition. He had several decayed teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.20	.14	.12	.10 gm.%
Urinary Sugar.	nil	nil	B.V.S.R.	nil	nil

CASE 191.

A.S. aet 25 years, was examined on 12th June 1940. He felt well but thought he might have slight thirst. When 21 years of age he had a "poisoned" foot and when 22 years of age he had a crop of boils. His mother was found to have glycosuria 3 years before but she had no symptoms and was not on diet. His brother had symptomless glycosuria. He was sturdy and of healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.20	.14	.13	.12 gm.%
Urinary Sugar	B.R.	++	++	++	B.S.R.

CASE 192.

A.H. aet 25 years, was examined on 30th April 1940. He felt well and his weight was increasing. He had an occasional boil on his neck. He had Pneumonia when

7 years of age and Diphtheria in 1939.

He was of average build and nutrition. He had several decayed teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.26	.16	.12	.12 gm.%
Urinary Sugar	nil	B.S.R.	B.R.	B.S.R.	nil

CASE 193.

T.H. aet 26 years, was examined on 23rd February 1940.

He felt well and had no complaints. He had Measles and Mumps in childhood and an attack of Influenza some years before. He was tall and slimly built.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	,20	.14	.12	.11 gm.%
Urinary Sugar	nil	+	++	*	B.R.

CASE 194.

G.J. aet 26 years, was examined on 30th September 1940.

He felt well. On direct questioning he said he had lost some weight and at times had thirst. He was well nourished and of average physique. The lower right face was diffusely swollen - this had been so for 16 years, resulting from a dental extraction. There was much caries of teeth and many embedded stumps.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.17	.24	.19	.10 gm.%
Urinary Sugar	nil	nil	+	++	B.S.R.

CASE 195.

J.G. aet 26 years, was examined on 30th September 1940. He felt well. On direct questioning he said he might be losing a little weight, and that he drank quite a lot of water and beer. He had occasional nocturia. He had been troubled with bleeding piles for some time and had psoriasis for 5 years. 5 years previously he had a crop of boils on his neck and thighs. He was well nourished and of average physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.19	.18	.09	.08 gm.%
Urinary Sugar	B.V.S.R.	+	+	nil	nil

CASE 196.

J.McL. aet 26 years, was examined on 16th June 1940. He felt well and had no complaints. He had double herni-
 omy in infancy. In 1937 he had an attack of Influenza and in 1938 he had a few boils. He was of good physique and well nourished. He was anxious looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.19	.17	.12	.10 gm.%
Urinary Sugar	nil	No spec.	B.V.S.R.	B.V.S.R.	nil.

CASE 197.

H.D. aet 29 years, was examined on 26th September 1940. He felt well. On direct questioning he said he had lost a little weight. He had Measles in childhood and Tonsillitis in 1939. A paternal uncle had Diabetes. He was of average nutrition and physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.22	.24	.17	.10 gm.%
Urinary Sugar	nil	B.V.S.R. + +	B.G.R.	B.S.R.	

CASE 198.

R.C. aet 29 years, was examined on 8th July, 1940.

He felt well and had no complaints. He had Chickenpox and Measles in childhood. He had a crop of boils during the previous winter and had Influenza in March 1940. A paternal uncle, aged 70 years had Diabetes. He was slim and anxious looking. His eyes were prominent.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.20	.17	.13	.12 gm.%
Urinary Sugar	nil	B.V.S.R.	B.R.	nil	nil

CASE 199.

J.McF. aet 30 years, was examined on 23rd February 1940.

He felt well but on direct questioning said he had occasional nocturia. In childhood he had Bronchitis, Diphtheria, Measles, Chickenpox. In 1932 he had a crop

of boils. He was tall and looked younger than his years. His eyes were rather prominent and the isthmus of the Thyroid gland could just be felt.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.22	.13	.10	.10 gm.%
Urinary Sugar	nil	B.G.R.	B.G.R.	nil	nil

CASE 200.

J.A. aet 30 years, was examined on 7th June 1940.

He felt well and had no complaints. He had Measles, Chickenpox, and Whooping Cough. He had a few boils on his neck one year previously. He was of small build but healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.19	.15	.11	.09 gm.%
Urinary Sugar	nil	B.S.R.	+	B.R.	nil

CASE 201.

T.B. aet 30 years, was examined on 18th July 1940.

He felt well. On direct questioning he said he had nocturia once nightly and probably slight polyuria. He had Appendicectomy done in 1931. In 1935 he had an attack of right renal colic and at times still had slight lumbar pain. He was of obese build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.20	.17	.15	.10 gm.%
Urinary Sugar.	nil	+	++	+	B.V.S.R.

CASE 202.

J.C. aet 30 years, was examined on 27th July, 1940.

He felt well and his weight was increasing. He had Measles, Whooping Cough and Cervical adenitis in childhood. He was of average build and nutrition and had a scar on the left side of his neck due to old adenitis.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.20	.18	.13	.10 gm.%
Urinary Sugar	B.G.R.	B.G.R.	+	B.R.	B.V.S.R.

CASE 203.

F.C. aet 30 years, was examined on 12th July, 1940.

He felt well. On direct questioning he said he was troubled with thirst, polyuria and had nocturia 2 or 3 times nightly. He had a motor accident when about 9 years of age and was in hospital for 17 weeks with spinal paralysis. When 10 years of age he had Influenza. His appendix was removed when he was 23 years of age and he had "inflammation" of his left eye when he was 20 years of age. He was of average physique. He had a left internal strabismus.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.16	.22	.14	.10	.10 gm.%
Urinary Sugar	nil	B.V.S.R.	B.R.	nil	nil

CASE 204.

J.T. aet 30 years, was examined on 23rd July 1940.

He felt well. On direct questioning he said he drank a lot of water, had occasional nocturia and occasional itching of the trunk. He had Measles and Whooping Cough in childhood. He was of small stature and average nutrition. He had some caries of the remaining lower teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.20	.18	.15	.11 gm.%
Urinary Sugar.	nil	nil	+	B.V.S.R.	B.V.S.R.

CASE 205.

J.A. aet 30 years, was examined on 25th July, 1940.

He felt well and had no complaints. When 13 years of age he had tuberculous adenitis of his neck and when 25 years of age he had a Rectal abscess. He was well nourished but of small build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.20	.18	.14	.11 gm.%
Urinary Sugar.	B.V.S.R.	++	+	B.G.R.	B.V.S.R.

CASE 206.

M.A. aet 30 years, was examined on 12th July 1940

He felt well. On direct questioning he said he had lost some weight in the previous 6 months, had occasional nocturia and at times his wrists were itchy. He had Scarlet Fever when 11 years of age. From October 1939 till January 1940 he had several boils and a whitlow of his left middle finger. He was of slim build. His eyes were prominent and he had some tremor of the outstretched hands.

The Glucose Tolerance Test gave the following result:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.16	.22	.19	.14	.12 gm.%
Urinary Sugar	B.G.R.	+	++	++	B.V.S.R.

CASE 207.

J.M. aet 30 years, was examined on 29th July 1940.

He felt well. On direct questioning he said he had nocturia almost every night and sometimes 2 or 3 times per night. He had Pneumonia in infancy. He had had sycosis barbae for the previous 2 years. He was of small build but average nutrition. He had sycosis barbae of his chin and upper lip. There was some caries of his teeth. The pulse rate was 120 per minute. He had some tremor of the outstretched hands.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.18	.19	.12	.09 gm. %
Urinary Sugar	B.V.S.R.	B.V.S.R.	++	+	B.V.S.R.

CASE 208.

J.W. aet 30 years, was examined on 27th July 1940.

He felt well and had no complaints. When 10 years of age he had "nervous debility". He was of slim build but average nutrition. His teeth were badly decayed. The pulse rate was 120 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.20	.19	.15	.09 gm. %
Urinary Sugar	nil	+	++	++	B.R.

CASE 209.

J.M. aet 30 years, was examined on 17th July 1940.

He felt well and had no complaints. He had measles in childhood and took an occasional sore throat. He was of small build and average nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.23	.18	.12	.10 gm. %
Urinary Sugar	nil	++	++	B.G.R.	B.V.S.R.

CASE 210.

A.L. aet 30 years, was examined on 17th July 1940.

He felt well and had no complaints but on direct questioning he said he drank a lot of water. In 1937 had had an attack of nausea and pain in the right flank. X-ray examination revealed a renal calculus. He was of good physique and nutrition. He looked anxious. The urine contained a moderate amount of albumin but there was nothing of significance in the centrifuged deposit.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.24	.20	.12	.09 gm. %
Urinary Sugar	B.V.S.R.	+	++	+	B.R.

CASE 211

D.Y. aet 30 years, was examined on 9th July 1940.

He felt well and his weight was increasing. On direct questioning he said he was sometimes troubled with thirst, polyuria and had occasional nocturia. He was subject to head "bolds". He had been deaf for years (His father and brother were similarly affected). He was obese and pasty complexioned. His teeth were decayed. Both ear drums were slightly indrawn and there was a small pin point perforation of the left. The pulse rate was 110 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hr.	2 hrs.
Blood Sugar	.15	.20	.23	.13	.11 gm. %
Urinary Sugar	nil	nil	+	B.R.	nil

CASE 212.

W.S. aet 30 years, was examined on 29th July 1940.

He felt well but was subject to Lumbago. He was small and wiry. The left tonsil was enlarged. There was slight right lumbar tenderness.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.22	.23	.12	.11 gm. %
Urinary Sugar	nil	B.G.R.	+ +	B.R.	nil

CASE 213.

H.C.B. aet 30 years, was examined on 1st. November 1940.

He felt well and had no complaints. He had Diphtheria and Mumps in childhood. He was small but of average physique. There was some dental decay.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.24	.24	.17	.09 gm. %
Urinary Sugar	nil	+	+++	++	B.R.

CASE 214.

A.K. aet 30 years, was examined on 9th August 1940.

He felt well but said he drank a lot of water. He had Measles and Mumps in childhood and some boils a few years previously. His mother was a Diabetic and died of cardiac disease. He was of slim build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
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Blood Sugar	.10	.24	.22	.16	.12 gm. %
Urinary Sugar	nil	B.R.	++	++	B.G.R.

CASE 215. T.C. aet 31 years, was examined on 4th May 1940.

He felt well. On direct questioning he said he had lost a little weight. When 1 year old he had an operation for Empyema. He had Measles in childhood. In 1938 he was off work for 3 months with muscular atrophy. He was of small build and rather nervous. There was some atrophy of both deltoids and the right upper arm was thinner than the left. There was fibrillary twitching of deltoid and triceps muscles of both arms. The right thenar eminence was somewhat flat. The muscular power of both arms and hands was satisfactory. There was no atrophy or loss of power in the legs. The reflexes were normal. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.19	.12	.10	.10 gm. %
Urinary Sugar	nil	B.G.R.	+	nil	nil

CASE 216. M.McI. aet 31 years, was examined on 29th August 1940.

He felt well and had no complaints. He had Measles in childhood. In 1930 he had Tonsillectomy done and in 1935 he had an operation for appendicitis. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.19	.15	.13	.11 gm. %
Urinary Sugar	nil	B.R.	+ +	B.R.	nil

CASE 217. I.B. aet 31 years, was examined on 20th August 1940.

He felt well and had no complaints. He had Measles in childhood. He was tall and nervous. The isthmus of his Thyroid gland was palpable.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.22	.18	.11	.09 gm. %
Urinary Sugar.	nil	B.S.R.	+	+	B.R.

CASE 218. A.E. aet 31 years, was examined on 30th August 1940.

He felt well and had no complaints. He had Measles and Whooping Cough in childhood and Malaria in 1932. He was of slim build. His teeth were deficient and decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.19	.16	.13	.12 gm. %
Urinary Sugar	nil	nil	B.R.	nil	nil

CASE 219. G.W. aet 31 years, was examined on 6th August 1940.

He felt well apart from occasional tiredness of his legs.

His weight was increasing. He had Measles in childhood and Tonsillitis on 4 occasions prior to 1936. He was of average build and physique. His teeth were badly decayed and his tongue moderately coated.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.23	.17	.10	.08 gm. %
Urinary Sugar	nil	B.G.R.	++	+	nil

CASE 220.

H.F.F. aet 31 years, was examined on 14th July 1940.

He felt well and had no complaints. He had perforation of a gastric ulcer in 1931 and since then had been well so long as he adhered to a light diet. He was smallish but healthy looking. The lower teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.19	.12	.10	.08 gm. %
Urinary Sugar	nil	no spec.	no spec.	B.R.	B.R.

CASE 221.

G.W. aet 31 years, was examined on 5th May 1940.

He felt well and had no complaints. He had a boil on his neck but had not been subject to skin sepsis. He had Measles and Tonsillitis in childhood. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.19	.16	.14	.11 gm. %
Urinary Sugar	nil	B.V.S.R.	B.R.	B.V.S.R.	nil

CASE 222.

W. McF. aet 31 years, was examined on 27th August 1940. He said he felt well but on direct questioning he gave a history of thirst which had been troublesome for about a year and slight polyuria for the same time. He had a "chill in his stomach" in May 1939, when his symptoms were epigastric pain and flatulence. He was of average build and nutrition. His face was diffusely flushed and his eyes were slightly prominent.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.23	.20	.09	.10 gm. %
Urinary Sugar	B.R.	B.G.R.	++	B.G.R.	B.V.S.R.

CASE 223.

A.P. aet 31 years, was examined on 16th August 1940. He complained of feeling easily tired, especially in the afternoons. On direct questioning he said his weight was decreasing slightly and he had very occasional nocturia. He had Chickenpox in childhood and a few small boils on his neck one year before. He was of average build and nutrition. His eyes were slightly prominent.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.22	.20	.12	.09 gm. %
Urinary Sugar	nil	B.G.R.	++	+	nil

CASE 224

A. McC. aet 31 years, was examined on 12th July 1940. He felt well and had no complaints. He had Pneumonia when he was 14 years of age. He was small but of average physique. His teeth were badly decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.22	.22	.12	.10 gm. %
Urinary Sugar	nil	B.G.R.	+	B.G.R.	nil

CASE 225.

D.G. aet 31 years, was examined on 1st. August 1940. He felt well and had no complaints apart from palpitation when he was excited. He had fits in infancy and had boils on his neck during his late teens. He was of average build and nutrition. His eyes were rather prominent and he had fine tremor of the outstretched hands. The pulse rate was 100 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.22	.27	.17	.09 gm. %
Urinary Sugar	nil	No spec.	++	++	B.S.R.

CASE 226.

A.B. aet 31 years, was examined on 20th December 1940. He complained of a sensation of tightness of the crown of his head, which usually came on in the afternoon and was made worse by excitement. He said he had been feeling very nervous for some time. He sometimes had a feeling of abdominal fullness after food. He had Pneumonia when he was 10 years of age. His mother was hyperthyroid. He was thin featured and anxious looking. There was fine tremor of the outstretched hands. He spoke with a slight stammer and there was slight fullness over the thyroid region of the neck.

The Glucose Tolerance Test gave the following result:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.12	.22	.18	.11	.10 gm. %
Urinary Sugar	nil	B.R.	B.G.R.	B.V.S.R.	nil

CASE 227.

C.P. aet 32 Years, was examined on 20th August 1940. He felt well but on direct questioning said he had been losing weight for the previous few months. He was subject to Bronchitis. In 1928 he had left sided Pleurisy. In 1939 he had abscesses of fingers and arms. Some years previously he had neuritis in his legs. He was small and looked older than his years. His hair was prematurely grey.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.18	.19	.12	.08 gm. %
Urinary Sugar	nil	B.V.S.R.	B.R.	B.S.R.	B.V.S.R.

CASE 228.

R.J.A. aet 32 years, was examined on 27th August 1940. He felt fairly well but had had slight breathlessness on exertion for more than a year. In April 1939 he was told he had a murmur at his heart and was off work for 3 months. On direct questioning he said he sometimes had slight polyuria. He had Measles and Scarlet Fever, complicated by kidney disease, in childhood. He was of slim build and looked fully his years. His skin was dry and ichthiotic. The lower incisions were badly decayed at the roots. The heart sounds were soft but pure.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.19	.16	.10	.09 gm. %
Urinary Sugar	nil	B.R.	*	B.V.S.R.	B.V.S.R.

CASE 229.

R.L. aet 32 years, was examined on 23rd. September 1940. He felt well apart from frequent twinges of right sided lumbar pain which radiated down and round to the front. This dated from a more severe attack in March 1940 which persisted, with intermissions, for a fortnight and was associated with frequency of micturition. On direct questioning he said he had lost some weight in the previous

year and thirst had been troublesome for about the same time. He had Measles and Mumps in childhood and Erysipelas of both feet in 1930. He was of squat build and pasty complexion. He had a port wine naevus of the left temple. There was no lumbar tenderness. The urine contained abundant calcium oxalate crystals.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.20	.12	.10	.08 gm. %
Urinary Sugar	B.R.	+	+	B.G.R.	nil

CASE 230.

R.S.McL. aet 32 years, was examined on 30th August 1940. He felt well and had no complaints. He was of burly build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hr.	2 hrs.
Blood Sugar	.10	.20	.12	.10	.10 gm. %
Urinary Sugar	No spec.	B.V.S.R.	B.V.S.R.	nil	nil

CASE 231.

A.F. aet 32 years, was examined on 6th August 1940. He felt well but said he drank a lot of water. He had a few boils several years before. He had "double Pleurisy" in 1920 and a left sided Empyema some years after that. He was of good nutrition and build. There was an old "empyema scar" on left chest and the

left side of chest was retracted.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.20	.18	.10	.09 gm. %
Urinary Sugar	++	++	++	B.G.R.	nil.

(had breakfast 3 hours previously).

CASE 232.

J.M. aet 32 years, was examined on 26th. August 1940.

He felt well and had no complaints apart from occasional headaches and slight swelling of feet at times. He had boils on his neck about 8 years previously. He was of average height and well nourished.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.19	.15	.12	-- gm. %
Urinary Sugar	B.S.R.	+	++	B.G.R.	B.R.

CASE 233.

W.M. aet 32 years, was examined on 20th. March 1940.

He felt well and had no complaints. He had boils when he was about 16 years of age. He was tall and of average nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hr.	2 hrs.
Blood Sugar	.12	.20	.17	.14	.11 gm. %
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	nil	nil

CASE 234.

M.H. aet 32 years was examined on 24th July 1940.

He felt well and had no complaints. Until a few months before he had been troubled with boils on his neck. He had Measles in childhood and a Quinsy throat in 1934.

He was thin featured and of slim but wiry build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.20	.24	.17	.12 gm. %
Urinary Sugar	B.V.S.R.	B.G.R.	++	+++	B.R.

CASE 235.

W.B. aet 32 years, was examined on 21st August 1940.

He said he felt well and his weight was increasing but on direct questioning he admitted to being troubled with thirst at times and said he had nocturia once nightly.

He had Scarlet Fever in childhood. When 20 years of age he had Tonsillitis. In 1933 he had a cyst in the right lumbar region which was lanced. His brother was on a weighed diet and Insulin for Diabetes. He was of heavy build and inclined to obesity.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hr.	2 hrs.
Blood Sugar	.10	.20	.16	.12	.09 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	B.V.S.R.	nil

CASE 236.

I. McI. aet 33 years, was examined on 29th July 1940.

He felt well and his weight was increasing. On direct questioning he said he drank a lot of water. He had Measles, Scarlet Fever and Mumps in childhood. He had Typhoid Fever in 1925. He was of tall heavy build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.20	.15	.10	.08 gm.%
Urinary Sugar	nil	B.R.	+	B.V.S.R.	nil

CASE 237.

J.F. aet 33 years, was examined on 31st July 1940.

He felt well and had no complaints. He had Measles in childhood, Cervical adenitis when 20 years of age and Tonsillectomy when 28 years of age. He had an operation for inguinal hernia several years before. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.20	.16	.13	.10 gm.%
Urinary Sugar	nil	B.G.R.	+	B.R.	nil

CASE 238.

J.B. aet 33 years, was examined on 29th August 1940.

He felt well but on direct questioning said he drank a fair amount of water and gave a history of nocturia twice nightly. He had several boils when he was 20 years of age. In 1928 he had an operation for acute Appendicitis and in

1934 he had an antral operation. He was tall and of heavy build. He looked anxious.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.20	.22	.14	.12 gm. %
Urinary Sugar	nil	nil	++	B.G.R.	B.S.R.

CASE 239.

N.B. aet 33 years, was examined on 26th September 1940.

He felt well but on direct questioning said his weight was decreasing slightly and he had occasional nocturia.

He had some boils several years before. He was of good physique and nutrition. Both tonsils were enlarged.

The pulse rate was 100 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.21	.23	.15	.10 gm. %
Urinary Sugar	nil	++	++	+	B.R.

CASE 240.

S.G. aet 33 years, was examined on 27th July 1940.

He felt well but on direct questioning said his weight was a little less. He had iritis of the left eye when 23 years of age. He was well nourished and of good physique.

The Glucose Tolerance Test gave the following result:-

Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
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Blood Sugar	.11	.26	.20	.17	.12 gm. %
Urinary Sugar	nil	++	+	+	B.V.S.R.

CASE 241.

P.M. aet 33 years, was examined on 30th July 1940.

He felt well and had no complaints. He had Pleurisy some years previously. His brother had doubtful Diabetes - he was on a mild carbohydrate restriction diet but his symptoms were vague and he did not require insulin. He was thin featured but of average build and nutrition. His lower teeth were deficient and his throat slightly congested.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.19	.16	.11	.10 gm. %
Urinary Sugar	B.G.R.	++	+	B.R.	B.V.S.R.

CASE 242.

A.S. aet 33 years, was examined on 30th August 1940.

He felt well and had no complaints. He had Scarlet Fever in 1932. His mother died of Diabetes (she had been on a diet and insulin for 6 months). He was of slim build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.20	.17	.12	.08 gm. %
Urinary Sugar	nil	B.R.	++	B.G.R.	B.V.S.R.

CASE 243.

A.C. aet 34 years, was examined on 11th May 1940.

He felt well and had no complaints. He was of average build and physique. His eyes were rather prominent. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.21	.19	.10	.09 gm. %
Urinary Sugar	nil	B.V.S.R. ++	+	B.V.S.R.	

CASE 244.

P.G. aet 34 years, was examined on 20th August 1940.

He felt well apart from frequent headaches in the past 10 years. He had no visual upset and no associated symptoms.

In 1937 he had an operation for the removal of a stone from one of the ureters. In 1938 he passed 2 small stones per urethrum. In 1930 he had a nasal operation and in

1926 he had injections for boils. He was pale and of the asthenic type. He was of average build. X - ray of

Kidneys showed a doubtful calculus in the left renal region.

The urine contained a very faint trace of albumin.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.20	.16	.10	.10 gm. %
Urinary Sugar.	nil	B.G.R.	+	B.G.R.	nil

CASE 245.

J.B. aet 34 years, was examined on 26th December 1940.

He felt well and had no complaints. He had Pneumonia and Empyema in 1923. He was of average build and nutrition

and had an old empyema scar on right lower chest.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.19	.16	.12	.10 gm. %
Urinary Sugar	nil	B.R.	+	B.G.R.	B.G.R.

CASE 246.

G.H. aet 34 years, was examined on 28th January 1941.

He felt well and had no complaints. He was of average build and nutrition. His teeth were decaying.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.19	.17	.15	.10 gm. %
Urinary Sugar	nil	nil	B.S.R.	nil	nil

CASE 247.

W. McC. aet 34 years, was examined on 5th August 1940.

He had been subject to Bronchitis for 20 years and had a cough constantly with a moderate amount of purulent sputum in the morning. He had Measles and Scarlet Fever in childhood and Erysipelas in 1938. He was of squat build. No abnormality was detected in the chest.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.20	.19	.12	.11 gm. %
Urinary Sugar	B.V.S.R.	B.R.	B.R.	B.G.R.	nil

CASE 248.

G.D. aet 34 years, was examined on 3rd September 1940. He felt well but on direct questioning said he had slight polyuria. He had Measles, Scarlet Fever and Chickenpox in childhood. He had a crop of boils on his neck and face when 18 years of age. He was of average nutrition and build. His teeth were badly decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.21	.14	.12	.12 gm. %
Urinary Sugar	++	++	+++	++	B.G.R.

(He had a breakfast roll 1 hour before the test began).

CASE 249.

J.B. aet 34 years, was examined on 16th August 1940. He stated that he felt well but after direct questioning he gave a history of thirst, polyuria and nocturia. He had a greenstick fracture of his right wrist when 16 years of age. He was of small stature but of average nutrition. He was prematurely grey.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.19	.14	.12	.10 gm. %
Urinary Sugar	B.S.R.	+	+	nil	nil

CASE 250.

F.S. aet 34 years, was examined on 25th September 1940.

He felt well and had no complaints. He had an operation for appendicitis in 1933. He was of spare build. His remaining natural teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.19	.16	.10	.10 gm.%
Urinary Sugar	B.V.S.R.	No spec.	+	+	+

CASE 251.

J.L. aet 34 years, was examined on 5th August 1940.

He felt well and had no complaints. He was of average build and nutrition. His teeth were very septic.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.21	.14	.11	.10 gm.%
Urinary Sugar	B.V.S.R.	+	++	+	nil

CASE 252.

J.C. aet 34 years, was examined on 25th September 1940.

He complained of left lumbar pain and pain under left costal margin in front. On direct questioning he said he had polyuria. He had Nephritis in 1937. He was of sturdy build and average nutrition. He had no lumbar tenderness and the urine contained no albumin.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.20	.20	.14	.10 gm.%
Urinary Sugar	nil	B.V.S.R.	+	B.V.S.R.	nil

CASE 253.

J.E.D. aet 34 years, was examined on 9th September 1940. He felt well and had no complaints. He had a boil on his neck at the time of examination but he was not subject to them. He fractured his right wrist and right leg in school days. In 1923 he had double Pneumonia and in 1925 he had an operation for perforation of a gastric ulcer and during his convalescence he "caught a chill" and had to have fluid drained from his chest. He was of average build and physique. There was an active boil on his neck. There was an old drainage scar on the lower left chest.

The Glucose Tolerance Test gave the following result:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.12	.24	.22	.11	.08 gm. %
Urinary Sugar	nil	B.R.	++	+	nil

CASE 254.

H.A. aet 34 years, was examined on 19th January 1940. He felt well and had no complaints. In 1938 he had a gastroenterostomy done. Previous to that he had dyspepsia for several years. He was of slim to medium build.

The Glucose Tolerance Test gave the following result:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.11	.30	.10	.08	.08 gm. %
Urinary Sugar	nil	B.G.R.	B.G.R.	B.S.R.	nil

CASE 255.

J.C. aet 34 years, was examined on 20th September 1940. He felt well and had no complaints. In 1930 he had left sided Pleurisy. His mother was a Diabetic and was on a diet and received insulin. He was of burly build. His teeth were defective and his left tonsil enlarged. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.23	.20	.17	.11 gm.%
Urinary Sugar	nil	nil	+	B.R.	B.V.S.R.

CASE 256.

E.D. aet 35 years, was examined on 14th August 1940. He felt well and his weight was increasing. He was of good physique and nutrition. The lower teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.19	.15	.11	.10 gm.%
Urinary Sugar	nil	B.G.R.	++	++	B.V.S.R.

CASE 257.

P.McK. aet 35 years, was examined on the 6th December 1940. He felt well and had no complaints. In 1926 he had a motor car accident and had his mouth injured. He was small, slim and anxious looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
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Blood Sugar	.10	.20	.22	.11	.10 gm. %
Urinary Sugar	nil	B.V.S.R.	+	+	B.S.R.

CASE 258. R.C. aet 35 years, was examined on 18th January 1941. He felt well and his weight was increasing. He was of heavy build.

The Glucose Tolerance Test gave the following results:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.24	.23	.16	.10 gm. %
Urinary Sugar	nil	B.G.R.	+++	++	B.R.

CASE 259. B.N. aet 36 years, was examined on 24th April 1940. He felt well and had no complaints. He had Measles and Whooping Cough in childhood and a appendicectomy operation in 1918. He was small but of good physique. His teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.16	.21	.17	.12 gm. %
Urinary Sugar	nil	nil	B.G.R.	B.V.S.R.	nil

CASE 260. G.C. aet 36 years, was examined on 11th April 1940. He felt well but on direct questioning he said he had slight thirst. He had a right sided otitis media since childhood. He had tonsillectomy in childhood.

He was tall and of slim build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.18	.21	.15	.10 gm. %
Urinary Sugar	nil	nil	nil	B.V.S.R.	nil

CASE 261.

W.B. aet 36 years, was examined on 1st February 1941.

He said he felt fairly well but often was disinclined for exertion. He was of slim build. His eyes were slightly prominent. There was some decay of his teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.19	.17	.11	.10 gm. %
Urinary Sugar	nil	nil	B.S.R.	nil	nil

CASE 262.

J.M. aet 38 years, was examined on 13th January 1940.

He felt well and had no complaints. He had occipital neuralgia in 1933. He was of burly build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.20	.18	.16	.10 gm. %
Urinary Sugar	nil	B.S.R.	B.G.R.	B.R.	nil

CASE 263.

J.J. aet 38 years, was examined on 24th July 1940.

He felt well but on direct questioning he said he had lost a stone in weight in the past year and he was inclined to be thirsty. He was of small slim build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.20	.23	.15	.08 gm. %
Urinary Sugar	nil	B.S.R.	+	++	B.V.S.R.

CASE 264.

M.C. aet 38 years, was examined on 3rd December 1940.

He felt well and had no complaints. He had Scarlet Fever and Whooping Cough in childhood. He had Pneumonia when he was 7 years of age and was subject to asthma till the age of 28 years. He was small and of slim to medium build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.24	.30	.11	.08 gm. %
Urinary Sugar	nil	B.R.	B.G.R.	B.V.S.R.	nil

CASE 265.

A.B. aet 39 years, was examined on 16th July 1940.

He felt well but on direct questioning he admitted nocturia once or twice nightly. He was of average build and physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.12	.19	.15	.08 gm. %
Urinary Sugar	nil	nil	B.R.	+	B.V.S.R.

CASE 266.

A.A. aet 39 years, was examined on 24th April 1940.

He felt well and had no complaints. He was of average build and nutrition. His remaining teeth were very septic.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.20	.14	.10	.10 gm. %
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	nil	nil

CASE 267.

B.B. aet 40 years, was examined on 7th August 1940.

He felt well and had no complaints. He had Influenza in 1930. He was smallish and squat and looked older than his years. He had a sty on his right eye.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.19	.15	.11	.08 gm. %
Urinary Sugar	nil	B.G.R.	++	B.R.	nil

CASE 268.

J.H. aet 40 years, was examined on 21st March 1940.

He felt well and had no complaints. He had an attack of Influenza in January 1940. He was thin featured but of

average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.19	.12	.09	.09 gm.%
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 269.

J.M. aet 45 years, was examined on 14th November 1939.

He felt well and had no complaints. He was of heavy build and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hr.	2 hrs.
Blood Sugar	.14	.20	.16	.12	.08 gm.%
Urinary Sugar	B.S.R.	B.G.R.	+	++	B.S.R.

CASE 270

W.K. aet 47 years, was examined on 15th May 1940.

He felt well and had no complaints. He had Rheumatic Fever in childhood and an operation for Appendicitis in 1936. He was of good physique and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.20	.20	.17	.11 gm.%
Urinary Sugar	nil	B.V.S.R.	++	+	+

CASE 271.

W.T.B. aet 26 years, was examined on 14th August 1940. He felt well and had no complaints. He had Measles, Mumps, Whooping Cough and Tonsillectomy in childhood. When 12 years of age he had a few boils on his neck. He was of good physique and average nutrition. He looked anxious.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2hrs.
Blood Sugar	.11	.21	.14	.11	.12 gm.
Urinary Sugar	B.V.S.R.	B.G.R.	B.R.	B.V.S.R.	nil

CASE 272.

W.S. aet 26 years, was examined on 3rd June 1940. He felt well and his weight was increasing slightly. He had Diphtheria, Scarlet Fever, Measles and Tonsillectomy in childhood. He was of average build and nutrition. He was rather nervous, at times he had a slight stammer, and had tremor of the outstretched hands. The pulse rate was 100 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.18	.20	.15	.08gm.%
Urinary Sugar	nil	B.V.S.R.	+	B.V.S.R.	nil

CASE 273.

A.H. aet 26 years, was examined on 9th June 1940. He felt well and had no complaints. He was tall and

CASE 271.

W.T.B. aet 26 years, was examined on 14th August 1940. He felt well and had no complaints. He had Measles, Mumps, Whooping Cough and Tonsillectomy in childhood. When 12 years of age he had a few boils on his neck. He was of good physique and average nutrition. He looked anxious.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2hrs.
Blood Sugar	.11	.21	.14	.11	.12 gm.%
Urinary Sugar	B.V.S.R.	B.G.R.	B.R.	B.V.S.R.	nil

CASE 272.

W.S. aet 26 years, was examined on 3rd June 1940. He felt well and his weight was increasing slightly. He had Diphtheria, Scarlet Fever, Measles and Tonsillectomy in childhood. He was of average build and nutrition. He was rather nervous, at times he had a slight stammer, and had tremor of the outstretched hands. The pulse rate was 100 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.18	.20	.15	.08gm.%
Urinary Sugar	nil	B.V.S.R.	+	B.V.S.R.	nil

CASE 273.

A.H. aet 26 years, was examined on 9th June 1940. He felt well and had no complaints. He was tall and

healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.20	.20	.13	.09 gm.%
Urinary Sugar.	nil	No spec.	B.G.R.	B.V.S.R.	nil

CASE 274. R.McL. aet 26 years, was examined on 29th May 1940.

He felt well and had no complaints. In 1935 he had an operation for perforation of a gastric ulcer. In 1936 he had Influenza. He was of average physique and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.21	.12	.11 gm.%
Urinary Sugar	nil	nil	++	++	B.V.S.R.

CASE 275. C.A. aet 26 years, was examined on 23rd June, 1940.

He felt well. On direct questioning he said his weight was a little less recently. He was well nourished and of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.18	.19	.18	.10 gm.%
Urinary Sugar	nil	B.V.S.R.	++	++	B.G.R.

CASE 276.

J.A. aet 26 years, was examined on 26th April 1940. He felt well and his weight was increasing. He had Tonsillectomy in childhood and Scarlet Fever when 12 years of age. He was of average height and well nourished. Several teeth were carious and the right tonsil was rather large.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.19	.19	.12	.08 gm.%
Urinary Sugar	nil	B.V.S.R.	+	B.S.R.	nil

CASE 277.

T.T. aet 26 years, was examined on 20th September 1939. He felt well and had no complaints. He was of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.21	.14	.10 gm.%
Urinary Sugar	nil	nil	B.G.R.	B.V.S.R.	nil

CASE 278.

L.M. aet 26 years, was examined on 23rd May 1940. He felt well and had no complaints. He had an operation for appendicitis in 1929. He was of average build and physique. Both tonsils were enlarged.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	
Blood Sugar	.14	.22	.15	.10	gm. %
Urinary Sugar	nil	B.R.	++	B.G.R.	

CASE 279. C. McG. aet 26 years, was examined on 21st May 1940.

He felt well and had no complaints. When 14 years of age he attended a hospital out-patient department for 4 months because of swelling and stiffness of both ankle joints. He had a cyst removed off left cheek in 1936. He was of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.	
Blood Sugar	.12	.20	.14	.14	.12	gm. %
Urinary Sugar	B.V.S.R.	B.R.	B.R.	B.V.S.R.	nil	

CASE 280. J.G. aet 26 years, was examined on 20th April 1940.

He felt well and had no complaints. He was of average build and nutrition. There were a few palpable glands in both axillae and both groins. Blood examination was negative.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.	
Blood Sugar	.10	.20	.15	.09	.07	gm. %
Urinary Sugar	nil	B.V.S.R.	+	B.R.	nil	

CASE 281. R.B. aet 26 years, was examined on 17th April 1940.

He felt well and had no complaints. He had his tonsils removed in 1938. He was of average build and nutrition, a little pale and rather anxious looking. The pulse rate was 110 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.22	.23	.16	.11 gm%
Urinary Sugar	nil	B.R.	B.G.R.	B.R.	B.V.S.R.

CASE 282.

D.A. aet 26 years, was examined on 15th May 1940.

He complained of feeling easily tired. On direct questioning he said he had lost a little weight and had occasional pruritus ani. About 4 years previously glycosuria had been discovered in the investigation of a crop of pre anal boils. He was given a reduction diet at that time but had not adhered to it strictly. His father died of Diabetic gangrene when he was 70 years of age. His mother died of Diabetes at 59 years of age. His maternal aunt was a diabetic for 30 years and had cataract and gangrene. He was small and burly.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs	2 hrs.
Blood Sugar	.09	.22	.21	.14	.12 gm. %
Urinary Sugar	nil	+	+++	++	B.G.R.

CASE 283.

E.M. aet 26 years was examined on 8th June, 1940.

He felt well and had no complaints. His grandfather had Diabetes. He was well nourished and of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs	2 hrs.
Blood Sugar	.11	.23	.18	.14	.09 gm %
Urinary Sugar.	B.S.R.	B.G.R.	++	++	++

CASE 284.

M.S. aet 26 years, was examined on 1st June 1940.

He felt well. On direct questioning he said he had lost a little weight recently. He had Tonsillitis a few months before. His father was said to have Diabetes but his symptoms were vague and he was not on insulin or a strict diet. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.19	.15	.12	.10 gm %
Urinary Sugar	nil	B.V.S.R.	B.S.R.	nil	nil

CASE 285.

S.McC. aet 27 years, was examined on 17th June, 1940.

For over a year he had been out of sorts, easily tired and depressed. On direct questioning he said he was losing weight. One year previously he had received injections for bleeding haemorrhoids. He was of average build and physique. He looked anxious and the pulse rate

was 110 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.
Blood Sugar	.12	.19	.12	.10 gm. %
Urinary Sugar	nil	B.R.	B.R.	B.R.

CASE 286.

J.S. aet 27 years, was examined on 29th June 1940.

He felt well apart from pains in his feet since he was 13 years of age. He had Pneumonia in childhood. He was small but of good physique. The teeth were badly decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs	2hrs.
Blood Sugar	.13	.20	.13	.11	.10 gm. %
Urinary Sugar	B.V.S.R.	B.G.R. + +	+ +	B.V.S.R.	

CASE 287.

J.M. aet 27 years, was examined on 26th June 1940.

He felt well and his weight was increasing. He had measles and chickenpox in childhood. He was of slim build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.15	.19	.10	.10 gm. %
Urinary Sugar	nil	nil	B.G.R.	B.R.	nil

CASE 288.

D.B. aet 27 years, was examined on 17th February 1940. He felt well. On direct questioning he said he had slight polyuria in the previous year. He had Measles, Whooping Cough and Mumps in childhood. When 19 years of age he had a crop of boils on his neck and his face. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.18	.20	.13	.10 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	B.G.R.	nil

CASE 289.

P.O'N. aet 27 years, was examined on 20th July 1940. He felt well. On direct questioning he said he had nocturia, three times every night but later he gave a history of taking a moderate amount of alcohol. He was of small build. His face was congested. The teeth were very bad and his tongue furred.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.20	.19	.09	.08 gm.%
Urinary Sugar	B.R.	†	† †	† -	B.V.S.R.

CASE 290.

O.D. aet 27 years, was examined on 31st April 1940. He felt well and had no complaints. He had Scarlet

Fever when 16 years of age and Rheumatism when 19 years of age. He had one boil about a year previously. He was of slim build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.19	.17	.12	.09 gm %
Urinary Sugar	nil	+	++	+	B.V.S.R.

CASE 291.

A.McA. aet 27 years, was examined on 21st May 1940.

He felt well. On direct questioning he said he was probably a little thinner and had nocturia about twice per week. When 16 years of age he had a carbuncle in the anal region. He was of burly build. The teeth were rather carious and the left tonsil slightly enlarged.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs	2 hrs.
Blood Sugar	.12	.19	.17	.13	.11 gm.%
Urinary Sugar	B.V.S.R.	B.R.	+	B.R.	nil

CASE 292.

P.P. aet 27 years, was examined on 18th May 1940.

He felt well and had no complaints. He was small, pale and of slightly below average physique. His teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.19	.12	.11	.11 gm %
Urinary Sugar	B.V.S.R.	No spec.	+	B.V.S.R.	B.V.S.R.

CASE 293.

D.L. aet 27 years, was examined on 16th May 1940.

He felt well and had no complaints. He had several boils about a year previously. He was of small stature. His teeth were badly decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.12	.20	.13	.11	.10 gm. %
Urinary Sugar	B.V.S.R.	B.G.R.	++	B.R.	nil

CASE 294.

J.M. aet 27 years, was examined on 17th May 1940.

He felt well and had no complaints. He was of small burly build and had scars on his face resulting from a cycle accident some years ago.

The Glucose Tolerance Test gave the following result:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Boood Sugar	.10	.17	.21	.13	.10 gm %
Urinary Sugar	nil	nil	B.G.R.	B.V.S.R.	nil

CASE 295.

J.McH. aet 27 years, was examined on 11th May 1940.

He felt well and his weight was increasing. He had chickenpox and Measles in childhood. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.09	.22	.16	.10	.11 gm %
Urinary Sugar	B.V.S.R.	B.R.	++	B.V.S.R.	nil

CASE 296.

D.B. aet 27 years was examined on 4th May 1940. He felt well and had no complaints. In 1933 he had an operation for appendicitis and peritonitis. He was of good nutrition and well built.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.13	.19	.17	.11 gm. %
Urinary Sugar	nil	nil	B.S.R.	B.R.	B.V.S.R.

CASE 297.

J.C. aet 27 years, was examined on 9th July 1940. He felt well apart from an occasional pain in small of back. On direct questioning he said he passed more urine than he normally should. In 1933 he had Rheumatic Fever. He was smallish and of squat build. His teeth were badly decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.19	.16	.11	.10 gm %
Urinary Sugar	B.G.R.	+	++	+	B.V.S.R.

CASE 298.

D.M. aet 27 years, was examined on 25th June 1940. He felt well. On direct questioning he said he had slight thirst. He had Measles in childhood and had an occasional sore throat. He was tall and well nourished.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.
Blood Sugar	.08	.19	.19	.12 gm. %
Urinary Sugar	nil	nil	B.G.R.	B.R.

CASE 299.

R.McG. aet 27 years, was examined on 29th June 1940.

He felt well and had no complaints. He was tall, thin and muscular.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.15	.20	.13	.11	.08 gm %
Urinary Sugar	nil	B.R.	B.G.R.	B.V.S.R.	nil

CASE 300.

A.Y.M. aet 27 years, was examined on 3rd July 1940.

He felt well. On direct questioning he said he drank a lot of water. He had Measles in childhood. He was of sturdy build. His hair was prematurely sparse.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.19	.17	.14	.12 gm %
Urinary Sugar	nil	nil	B.G.R.	B.V.S.R.	B.V.S.R.

CASE 301.

D.S. aet 27 years was examined on 3rd July 1940. He

felt well and had no complaints. He was of small build but average physique. He had several decayed teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.19	.12	.10	.08 gm. %
Urinary Sugar.	No spec.	B.G.R.	No spec.	B.G.R.	B.V.S.R.

CASE 302. J.B. aet 27 years, was examined on 4th June 1940.

He felt well. On direct questioning he said he had lost a little weight. He was of average nutrition and good physique. Several molars were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.19	.17	.15	.11 gm %
Urinary Sugar	B.V.S.R.	+	+	B.G.R.	nil

CASE 303. R.H. aet 27 years, was examined on 8th June 1940.

He felt well. On direct questioning he said he had lost a little weight. He had Mumps and Measles in childhood. In 1936 he had a crop of boils on his neck, arms and face. He was of average build and nutrition. He had several decayed molars and the right tonsil was very large. There were several superficial scars of boils on his neck and right arm.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.18	.19	.12	.12 gm. %
Urinary Sugar	nil	nil	+	B.R.	B.S.R.

CASE 304.

J.B. aet 27 years, was examined on 2nd July 1940. He felt well and had no complaints. He had Measles in childhood. In 1932 he had a right sided Bell's Palsy. In 1929 he had a cold abscess of his chest which was opened and scraped. He was tall and thin. There was facial asymmetry with narrowing of the right palpebral fissure due to contraction following a right sided Bell's Palsy. He had slight exophthalmos.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.15	.22	.16	.11	.11 gm %
Urinary Sugar	nil	B.G.R.	†	†	B.V.S.R.

CASE 305.

J.McP. aet 27 years, was examined on 18th March 1940. He felt well and had no complaints. He had Rheumatic Fever when 16 years of age. He was of average build and nutrition. His teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.19	.12	.09 gm %
Urinary Sugar	B.V.S.R.	B.V.S.R.	B.R.	B.V.S.R.	B.V.S.R.

CASE 306.

R.H. aet 27 years, was examined on 23rd April 1940. He felt well and had no complaints. He was of good physique and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.20	.14	.12 gm %
Urinary Sugar	nil	B.R.	+	B.S.R.	nil

CASE 307.

W.H. aet 27 years, was examined on 23rd June 1940.

He felt well. On direct questioning he said he drank a lot of water. He had Measles and Whooping Cough in childhood. He was of small build and average nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.15	.22	.22	.15	.12 gm %
Urinary Sugar	nil	B.R.	++	++	B.G.R.

CASE 308.

J.T. aet 27 years, was examined on 23rd May 1940.

He felt well. On direct questioning he said he had lost a little weight. He had Scarlet Fever and Tonsillectomy in childhood. His father had Diabetes and his paternal aunt had died of Diabetes. He was tall and of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.20	.16	.10	.11 gm %
Urinary Sugar	No spec.	No spec.	No spec	B.G.R.	B.S.R.

CASE 309

W.H. aet 27 years, was examined on 13th April 1940. He felt well and had no complaints. In childhood he had Measles, Mumps, Scarlet Fever, Chickenpox, Whooping Cough and Pneumonia. In 1935 he had his appendix removed and in 1939 he had an accident when his back was struck by the mud guard of a motor lorry. He was X-rayed and no bony injury was detected. His mother was Diabetic and had been on a diet for 5 years. He was well built and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.22	.16	.09	.08 gm. %
Urinary Sugar	nil	B.R.	+	B.V.S.R.	nil

CASE 310.

F.R. aet 28 years, was examined on 8th July 1940. He felt well and had no complaints. He was small but of good physique. His eyes were slightly prominent.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.19	.18	.11	.11 gm. %
Urinary Sugar	B.R.	No spec.	+	B.R.	B.V.S.R.

CASE 311.

J.L. aet 28 years, was examined on 18th June 1940. He felt well and had no complaints. He had Scarlet

Fever in childhood. He was of average build and nutrition. His tonsils were rather large.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.16	.20	.17	.14	.11 gm. %
Urinary Sugar	nil	B.S.R.	B.R.	nil	nil

CASE 312.

A.Y. aet 28 years, was examined on 22nd June 1940.

He felt well. On direct questioning he said he had lost one stone in weight in the previous 6 months.

He had Diphtheria, Scarlet Fever and Measles in childhood. He was of average build but rather slim.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.19	.20	.12	.12 gm. %
Urinary Sugar	B.S.R.	+	++	+	B.R.

CASE 313.

J.A. aet 28 years, was examined on 3rd August 1940.

He had not been fit for 5 years when he had an attack of giddiness and vomiting which kept him off work for 6 weeks.

He had similar but less severe attacks after that, about every 6 months, and they were usually associated with lumbar discomfort and by frequency of micturition. He had lost a stone in weight in the previous 5 years. He had Measles in childhood.

He was of average build and nutrition and rather

introspective. He had a large patch of psoriasis on the right leg.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.20	.17	.13	.10 gm.%
Urinary Sugar	B.V.S.R.	B.R.	++	B.R.	B.V.S.R.

CASE 314.

T.G. aet 28 years, was examined on 8th June 1940.

He felt well and had no complaints. He was of small sturdy build. His teeth were badly decayed. He had the scar of an old burn, which he received in childhood, on the epigastrium.

The glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.20	.13	.12	.09 gm.%
Urinary Sugar	nil	nil	B.V.S.R.	B.V.S.R.	nil

CASE 315.

G. McQ. aet 28 years, was examined on 17th August 1940.

He said he felt well but on direct questioning he admitted slight loss of weight in the previous 3 months, occasional nocturia and sometimes thirst. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hr.	2 hrs.
Blood Sugar	.10	.16	.19	.12	.11 gm.%
Urinary Sugar	nil	nil	B.G.R.	B.S.R.	nil

CASE 316.

J.P. aet 28 years, was examined on 29th May 1940.

He felt well and had no complaints. He had Measles in childhood. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.19	.16	.14	.12 gm. %
Urinary Sugar	nil	nil	B.S.R.	B.S.R.	nil

CASE 317.

J.C. aet 28 years, was examined on 16th May 1940.

He felt well and had no complaints. He had Measles in childhood. He was tall and thin.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.19	.20	.14	.09 gm. %
Urinary Sugar	nil	nil	+	B.S.R.	nil

CASE 318.

P. McD. aet 28 years, was examined on 23rd June 1940.

He felt well. On direct questioning he said he drank a lot of water and beer. He had abscesses on his neck in childhood and had Pneumonia in 1939. He was well built and of good nutrition. The left side of his neck was scarred.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.17	.22	.14	.12 gm. %
Urinary Sugar	nil	nil	+	+	nil.

CASE 319.

J.R. aet 28 years, was examined on 6th July 1940.

He felt well and had no complaints. He was of small squat build and his teeth were badly decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.19	.13	.12	.10 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 320.

C.D. aet 28 years, was examined on 3rd. July 1940.

He felt well and had no complaints. He was small and of slim to medium build. There was a small septic spot on his forehead. He was prematurely bald. The teeth were badly decayed and the throat slightly congested.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.19	.14	.13	.09 gm. %
Urinary Sugar	No spec.	B.S.R.	+	B.G.R.	B.R.

CASE 321.

J.H. aet 28 years, was examined on 2nd July 1940.

He felt well and his weight was increasing. He had an operation for appendicitis in 1930. He was small and stout. There was some deformity of the left arm, resulting from an injury in childhood. There was some decay of the lower teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.12	.21	.14	.07 gm. %
Urinary Sugar	nil	nil	B.G.R.	B.G.R.	B.V.S.R.

CASE 322.

R.M. aet 28 years, was examined on 24th June 1940.

He felt well. On direct questioning he said he drank a fair amount of water and beer. He had Measles in childhood, and a burn on his back 3 months previously. He was of average build and nutrition. His teeth were very badly decayed. There was a recent congested, keloid scar of the left back.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	
Blood Sugar	.11	.20	.15	.11	gm. %
Urinary Sugar	nil	B.R.	+	B.R.	

CASE 323.

T.C. aet 28 years, was examined on 4th June 1940.

He had been troubled with pain in both iliae fossae and bowel movements about 3 times per day for some years. On direct questioning he said he had lost a little weight. He was thin featured but of average build and nutrition. He looked anxious and was perspiring profusely. There was some decay of his teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.20	.20	.15	.10 gm. %
Urinary Sugar	nil	B.R.	+	+	nil

CASE 324.

H.C. aet 28 years, was examined on 18th June 1940. He felt well and had no complaints. He had scarlet Fever in childhood. His father was found to have glycosuria in routine examination for life insurance but after dieting for some months he was accepted. He was of heavy build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.16	.19	.16	.11 gm. %
Urinary Sugar	nil	nil	++	++	B.R.

CASE 325.

G.B. aet 28 years, was examined on 1st July 1940. He felt well and had no complaints. His father was a doubtful diabetic - he was on a mild diet and had had a few "injections" on and off. He was tall and of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.19	.21	.13	.10 gm. %
Urinary Sugar	nil	B.S.R.	++	+	B.S.R.

CASE 326.

A.W. aet 28 years, was examined on 17th July 1940. He felt well and had no complaints. He was well nourished and of good physique. He was excited. His teeth were neglected.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.25	.18	.12	.12 gm. %
Urinary Sugar	nil	+	++	*	B.V.S.R.

CASE 327.

D.L. aet 29 years, was examined on 21st August 1940. He felt well. On direct questioning he said he had lost 8 lbs. weight in 4 months. He had Measles in childhood. He was small but of average physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hr.	2 hrs.
Blood Sugar	.08	.19	.12	.10	.10 gm. %
Urinary Sugar	nil	B.V.S.R.	++	B.V.S.R.	nil.

CASE 328.

A.McK. aet 29 years, was examined on 25th July 1940. He felt well. On direct questioning he said he had lost a little weight recently. He had Measles and Tonsillectomy in childhood and in 1932 had several boils on his neck. He was of spare build but average physique. He was rather nervous and the Thyroid isthmus was palpable. His hands were red and cold.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.19	.16	.12	.12 gm. %
Urinary Sugar	nil	B.S.R.	+	B.R.	B.V.S.R.

CASE 329.

J.C. aet 29 years, was examined on 24th June 1940. He felt well. On direct questioning he said his weight was a little less. He had Scarlet Fever and Diphtheria in childhood. For some time he had been subject to attacks of migrain about every 2 months. Between December 1939 and May 1940 he had several attacks of right renal colic with haematuria in the early attacks. He passed a stone in May 1940. He was tall, rather nervous, but of healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.17	.19	.16	.12 gm. %
Urinary Sugar	nil	nil	+	B.G.R.	B.R.

CASE 330.

D.McG. aet 29 years, was examined on 23rd June 1940. He complained of being easily tired and subject to vertical headaches. He had an attack of Scarlet Fever when about 4 years of age. During the winter time he was often troubled with a "strained" feeling over and above the right renal region. He was of average

physique, looked anxious and his armpits were moist with perspiration. His complexion was pasty and his mucous membranes were pale. Pulse rate was 90 per minute. The Blood Count showed evidence of an iron deficiency anaemia

- Hb 58%
 R.B.C. 4,040,000
 W.B.C. 5,000

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	
Blood Sugar	.11	.19	.13	.10	gm. %
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	B.V.S.R.	

CASE 331.

A.S. aet years, was examined on 29th June 1940. He felt well but admitted to having been troubled with boils for years. He was of good physique and healthy appearance. A widespread acne vulgaris was present on chest and back.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.	
Blood Sugar	.12	.20	.19	.13	.10	gm. %
Urinary Sugar	nil	B.S.R.	++	B.S.R.	B.S.R.	

CASE 332.

J. McA. aet 29 years, was examined on 1st July 1940. He stated that he had been subject to occasional head colds and headaches but otherwise felt well.

On direct questioning he admitted that thirst had been troublesome for some time and that he had occasional nocturia. He had Pneumonia 3 times in childhood. He was small but of average physique. His teeth were deficient and decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.20	.17	.15	.12 gm. %
Urinary Sugar	nil	nil	+	B.G.R.	nil

CASE 333.

J.L. aet 29 years, was examined on 30th June 1940.

He complained of feeling weak and stated that he often had pain in his lumbar regions and across the epigastrium when he awoke. He thought he had lost some weight and had a few boils the week before examination. He had had 2 attacks of Pneumonia, the first when aged 21 years and the second when 27 years. He was of average physique but presented the typical features of a facio - scapulo - humeral dystrophy.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	
Blood Sugar	.11	.20	.11	.10	gm. %
Urinary Sugar	B.V.S.R.	B.G.R.	B.G.R.	B.G.R.	

CASE 334.

L.T. aet 29 years, was examined on 11th July 1940.

He felt well and had no complaints. He was smallish but of good physique and healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.20	.20	.14	.09 gm. %
Urinary Sugar	nil	B.G.R.	+	B.S.R.	nil

CASE 335.

R.H. aet 29 years, was examined on 2nd July 1940.

He complained of lumbar pain made worse by bending and of pains in his right wrist following a lacerated wound of the wrist 4 years before. On direct questioning he said he had thirst and polyuria. He had Measles in childhood. He was smallish but of good physique. His teeth were decayed and there was a scar on his right wrist.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	1 hr.	2 hrs.
Blood Sugar	.15	.22	.16	.12	.09 gm. %
Urinary Sugar	nil	B.R.	++	B.G.R.	nil

CASE 336.

J.G. aet 29 years, was examined on 19th July 1940.

He complained of attacks of occipital headache on and off for about a year and probably brought on by stooping.

On direct questioning he said he was occasionally thirsty. He had Measles and Whooping Cough in childhood. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.20	.12	.13	.11 gm. %
Urinary Sugar	nil	nil	B.R.	B.V.S.R.	nil

CASE 337.

W.P. aet 29 years, was examined on 19th July 1940.

He had been troubled with gastric upset for 6 years.

He had attacks of epigastric pain, each lasting about a week, and they were either precipitated by hunger or appeared about $1\frac{1}{2}$ hours after food. He was troubled with flatulence and sour mouthfuls. On direct questioning he said he had nocturia about 4 times weekly. He had Influenza some years before. He was fairly stout and of placid temperament. There was slight tenderness in the mid epigastrium.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.19	.14	.12	.08 gm. %
Urinary Sugar	nil	nil	+	nil	nil

CASE 338.

N.T.B. aet 29 years, was examined on 23rd July 1940.

He felt well and had no complaints. He had Scarlet

Fever in childhood and left otitis media since childhood. His appendix was removed in 1936. He was somewhat thin and pale but the haemoglobin was 90%. The upper part of the left ear drum was obscured by blood clot and the lower part was thickened. The right drum was slightly indrawn but otherwise it was normal.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.19	.13	.13	.07 gm. %
Urinary Sugar	B.V.S.R.	++	+	No spec.	B.V.S.R.

CASE 339.

G.B. aet 29 years, was examined on 12th June 1940.

He felt well and had no complaints. He was of average physique and was well nourished.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.19	.17	.14	.09 gm. %
Urinary Sugar	nil	B.R.	++	+	nil

CASE 340.

T.C. aet 29 years, was examined on 13th June 1940.

He felt well and had no complaints. He had been myopic since childhood. He was of good physique and was well nourished.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.19	.19	.16	.11 gm. %
Urinary Sugar	nil	B.G.R.	B.G.R.	B.S.R.	nil

CASE 341.

A.J. aet 29 years, was examined on 7th June 1940.

He felt well and had no complaints. When 7 years of age he had Scarlet Fever and when 9 years of age he was in bed 8 weeks with Rheumatic Fever. He was of stocky build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.18	.22	.12	.11 gm. %
Urinary Sugar	nil	nil	++	++	B.G.R.

CASE 342.

G.C. aet 29 years, was examined on 13th July 1940.

He felt well and had no complaints. He had Measles in childhood. He was tall, thin and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.19	.16	.10	.08 gm. %
Urinary Sugar	nil	+	++	B.S.R.	nil.

CASE 343.

J.D. aet 29 years, was examined on 25th September 1940.

He felt well and had no complaints. He was of sturdy build. His tonsils were slightly enlarged.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.21	.21	.09	.09 gm. %
Urinary Sugar	B.V.S.R.	++	++	+	B.V.S.R.

CASE 344.

D. McM. aet 29 years, was examined on 30th November 1940. He felt well and had no complaints. When 8 years of age he had Scarlet Fever followed by Rheumatism. He was subject to "neuralgic" pains across his chest. He was smallish but of average physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.21	.22	.12	.10 gm. %
Urinary Sugar	nil	B.V.S.R.	+	+	nil

CASE 345.

T.M. aet 29 years, was examined on 25th July 1940. He felt well. On direct questioning he said he had occasional nocturia. In the summer of 1939 he had several boils on his arms, and in the winter of 1939 he had Tonsillitis. He was well built and of average nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.20	.22	.15	.12 gm. %
Urinary Sugar	nil	B.S.R.	++	B.G.R.	nil

CASE 346.

A.W. aet 47 years, was examined on 28th November 1939. He felt well. Glycosuria had been discovered one year previously when undergoing examination before going to America. He had Scarlet Fever, Measles, Mumps and Whooping Cough in childhood. He had Dysentery in 1915. In 1937 he had a boil on his arm. He was of average nutrition and looked younger than his years.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.19	.12	.11 gm. %
Urinary Sugar	nil	nil	B.R.	nil	nil

CASE 347.

J.B. aet 49 years, was examined on 10th April 1940. He felt well and had no complaints. He had Measles in childhood. He was small but healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.19	.17	.16	.11 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	B.V.S.R.	nil

CASE 348.

A.D.M. aet 52 years, was examined on 30th July 1940. He felt well but on direct questioning he said he drank a lot of water and even had to rise at night to drink. He had Measles and Whooping Cough in childhood. 9 months previously he was off work 3 weeks because of

nervous debility. He was of small slim build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.19	.18	.17	.12 gm. %
Urinary Sugar	nil	B.V.S.R.	+ +	+	B.V.S.R.

CASE 349.

T.M. aet 54 years, was examined on 19th September 1940.

He felt well and had no complaints. He had measles

in childhood. In 1916 he had Malaria in Salonica,

his last attack being in 1920 when he returned home.

He was white haired, of average build and nutrition.

There was some caries of his remaining teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.20	.17	.10	.09 gm. %
Urinary Sugar	nil	B.R.	+	B.G.R.	nil

... set 19 years, was examined on 18th December 1934. He felt well and had no complaints. He had diabetes in childhood. He was healthy looking and of good build and nutrition.

The Glucose Tolerance Test gave the following results:-
 Fasting Blood Sugar 147 mg. per 100 c.c. of blood. 1 hr. 140 mg. 2 hrs. 130 mg.
 Urinary Sugar Nil B.V.S.R. B.R. B.R. B.R.

GLUCOSE STORAGE DEFECT GLYCOSURIA

CASE 1002

with DELAY in the ABSORPTION of GLUCOSE.

... of GLUCOSE. ... weight ... He had diabetes, ... He had ... He was tall and of good physique. His eyes were slightly prominent. There were several shotty glands palpable in the cervical region of the neck.

The Glucose Tolerance Test gave the following result:-
 Fasting Blood Sugar 147 mg. per 100 c.c. of blood. 1 hr. 140 mg. 1½ hrs. 130 mg. 2 hrs. 120 mg.
 Urinary Sugar Nil B.V.S.R. B.R. B.R. B.R.

... 20 years, ...

CASE 350.

R.E.J. aet 19 years, was examined on 18th December 1939. He felt well and had no complaints. He had Measles in childhood. He was healthy looking and of good build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.15	.20	.17	.14	.14 gm %
Urinary Sugar	nil	+	B.G.R.	nil	nil

CASE 351.

K.N.M. aet 20 years, was examined on 19th October 1939. He felt well but on direct questioning said he had had thirst for several years and was losing weight recently. He had Scarlet Fever and Measles in childhood. He had cervical adenitis in 1937 and a crop of boils in 1936. He was tall and of good physique. His eyes were slightly prominent. There were several shotty glands palpable in the cervical region of the neck.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs	2 hrs.
Blood Sugar	.14	.22	.19	.17	.13 gm %
Urinary Sugar	nil	B.V.S.R.	B.R.	B.R.	B.R.

CASE 352.

E.G. aet 20 years, was examined on 12th October, 1939. He felt well and had no complaints. He had Measles, Mumps and Whooping Cough in childhood. He was of good build

and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs	2 hrs.
Blood Sugar	.14	.20	.18	.14	.13 gm %
Urinary Sugar	nil	nil	B.R.	nil	nil

CASE 353.

R.S. aet 20 years, was examined on 20th November 1939.

He stated that he felt well apart from nervousness and when worried he took "weak turns" and perspired profusely.

He had Measles and Whooping Cough in childhood. He had boils $1\frac{1}{2}$ years and again 3 months previously. His paternal grandfather was "threatened" with Diabetes.

He was of small build but average nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.16	.23	.20	.17	.14 gm %
Urinary Sugar	nil	B.V.S.R.	B.G.R.	B.V.S.R.	nil

CASE 354.

G.T. aet 20 years, was examined on 16th February 1940.

He felt well and had no complaints. He had Bronchitis in childhood and an injury to his left eye in 1939.

He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.15	.22	.18	.14 gm %
Urinary Sugar	nil	nil	B.S.R.	B.G.R.	nil

CASE 355.

E. McD. aet 20 years, was examined on 14th October 1939. He felt well and had no complaints. He was subject to boils on his face from the age of 16 years.

He had Measles and Whooping Cough in childhood. When 18 he had left sided pleurisy. When 13 he had an operation for a left sided inguinal hernia. He was of thin build and had numerous small sebaceous cysts and black-heads all over his chin with signs of past suppuration. He had a large right inguinal hernia.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.17	.20	.19	.13 gm %
Urinary Sugar	nil	nil	B.G.R.	B.G.R.	nil

CASE 356.

J.T.M. aet 21 years, was examined on 25th November 1939. He felt well and had no complaints. He had Measles and Mumps in childhood and an occasional attack of Influenza. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.15	.17	.19	.13 gm %
Urinary Sugar	nil	nil	nil	B.V.S.R.	nil

CASE 357.

W.G. aet 21 years, was examined on 16th November 1939. He felt well and had no complaints. He had Measles,

Mumps and Chickenpox in childhood. He was small but of fairly good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.16	.19	.21	.16	.13 gm %
Urinary Sugar	nil	nil	B.G.R.	B.R.	nil

CASE 358.

I.S. aet 22 years, was examined on 12th January 1940.

He felt well and had no complaints. He had Measles and Mumps in childhood. He was of average build and nutrition. Several of his teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.16	.20	.19	.19	.13 gm %
Urinary Sugar.	nil	B.R.	B.R.	B.V.S.R.	nil

CASE 359.

W.J. aet 22 years, was examined on 26th January 1940.

He felt well and had no complaints. He stated that he was subject to colds. He had Chickenpox and Measles in childhood. He was of slight build and small.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.22	.18	.15	.14 gm %
Urinary Sugar.	B.S.R.	B.R.	B.G.R.	+	B.R.

CASE 360.

D.R. aet 22 years, was examined on 9th January 1940. He felt well and had no complaints. He had Measles and Mumps in childhood. His father was on a diet for glycosuria. He was thin featured but of good physique. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.16	.19	.15	.14 gm %
Urinary Sugar	nil	nil	+	B.R.	B.S.R.

CASE 361.

J.McB. aet 23 years, was examined on 14th September 1939. He felt well and had no complaints. He had Measles in childhood and several boils when he was about 14 years of age. He was thin but healthy looking. There was a septic spot on his right forearm.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs	2 hrs.
Blood Sugar	.12	.22	.20	.15	.13 gm %
Urinary Sugar	nil	B.G.R.	++	+	nil

CASE 362.

R.D. aet 23 years, was examined on 28th September 1940. He complained of feeling squeamish after his mid-day meal at times and he was subject to epigastric pain after foods like potato and cabbage. He drank quite a lot of water. For 6 years he had been off his work each

winter with right basal pleurisy. He had Diphtheria and Scarlet Fever in childhood and double pneumonia at 5 years of age. He was of spare build and pasty complexion. He was apprehensive.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.20	.16	.15	.13 gm%
Urinary Sugar	nil	B.V.S.R.	B.R.	B.R.	B.V.S.R.

CASE 363.

J.J.M. aet 24 years, was examined on 24th February 1940. He felt well. On direct questioning he said he had some pruritus of genitalia. He had Measles in childhood and a few boils on his face in 1939. He was tall and anxious looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.15	.20	.15	.13 gm%
Urinary Sugar	nil	nil	B.V.S.R.	B.V.S.R.	nil

CASE 364.

B.McK. aet 24 years, was examined on 9th August 1940. He felt well and had no complaints. At 14 years of age he had an attack of Pneumonia. In August 1939 he was "run down" and given an iron tonic and in November 1939 he had one boil. He was small and below average physique His complexion was pallid but the mucous membranes were

well coloured and the blood count was normal.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.17	.23	.19	.14 gm %
Urinary Sugar	nil	nil	B.G.R.	+	B.R.

CASE 365.

J.McB. aet 24 years, was examined on 21st January 1940. He felt well and had no complaints. Measles in childhood and a boil on the back of his neck 10 years before were his only illnesses. He was tall, of spare build but of healthy appearance. He looked anxious.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.07	.11	.25	.18	.13 gm %
Urinary Sugar	nil	nil	nil	+	B.G.R.

CASE 366.

J.G. aet 25 years, was examined on 26th September 1940. He felt well and had no complaints. Measles and chickenpox in childhood were his only illnesses. He was of good physique and healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.	
Blood Sugar	.14	.20	.21	.14	.14 gm %	
Urinary Sugar	nil	B.V.S.R.	+	+	+	B.R.

CASE 367.

G.M. aet 25 years, was examined on 8th May, 1940.

He felt well but for some time had been troubled with headaches. When 14 years of age he had an attack of Scarlet Fever complicated by an acute mastoid. He had 2 attacks of Tonsillitis, one in 1938 and the other in 1939. He was of small, burly build. The pulse rate was 96 per minute, regular. B.P. $\frac{190}{96}$. He had an acne vulgaris of neck and back. The heart area was slightly increased to the left.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.	
Blood Sugar	.14	.26	.16	.15	.14	gm. %
Urinary Sugar	B.V.S.R.	B.V.S.R.	+	B.S.R.	B.V.S.R.	

CASE 368.

W.A.M. aet 25 years, was examined on 28th June 1940.

He felt well and had no complaints. He had attacks of Measles, Chickenpox and German Measles in childhood and had a mild bout of Influenza in 1939. He was of medium build and healthy appearance. His lower teeth were badly decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.	
Blood Sugar	.08	.20	.19	.17	.13	gm. %
Urinary Sugar	nil	nil	+	+	B.R.	

CASE 369.

J.C. aet 26 years, was examined on 18th May 1940.

He felt well but on direct questioning he admitted to

occasional pruritus. Bronchitis in childhood was his only illness. He was of average physique, looked pale, but his mucous membranes were well coloured.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.12	.20	.20	.14 gm. %
Urinary Sugar	nil	nil	B.R.	+ +	B.G.R.

CASE 370.

J.H. aet 26 years, was examined on 15th May 1940.

He felt well and had no complaints. He had an attack of Scarlet Fever in childhood. He was small and thin featured and of pasty complexion.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.19	.19	.17	.13 gm %
Urinary Sugar	nil	nil	B.V.S.R.	B.V.S.R.	B.V.S.R.

CASE 371.

J.T. aet 27 years, was examined on 19th June, 1940.

He felt well, but stated that he had a boil on his right wrist which began 4 weeks before and was only healing now. He was tall, of average physique and healthy appearance. The scar of a healed boil was present on the dorsum of the right wrist.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.19	.20	.16	.13 gm %
Urinary Sugar.	No Spec.	B.S.R.	+	No Spec.	+

CASE 372.

W.McC. aet 28 years, was examined on 23rd June 1940.

For fully 2 years he had been troubled with a sense of fullness in his epigastrium usually relieved by complete bowel evacuation. At times he had an attack of diarrhoea lasting for a day the motions being soft and containing a little mucous but no blood. He had Measles in childhood and "Gastric Influenza" some years before. He was nervous, of average physique and healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.21	.18	.17	.14 gm %
Urinary Sugar	nil	No spec.	+	B.G.R.	B.G.R.

CASE 373.

C.McD. aet 28 years, was examined on 9th July 1940.

He felt well and had no complaints. His father died of Diabetes at the age of 63 years. He was tall, of good physique and healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.12	.21	.15	.13 gm %
Urinary Sugar	nil	nil	B.G.R.	+ +	B.G.R.

CASE 374.

J.D. aet 28 years, was examined on 1st July 1940.

He felt well and had no complaints. In 1935 he had one boil on his neck. He had an attack of Influenza in June

1936. He was tall and healthy looking. Several of his teeth were slightly carious.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.20	.22	.18	.13 gm %
Urinary Sugar	nil	B.G.R.	+	+	B.G.R.

CASE 375.

R.R. aet 29 years, was examined on 31st July 1940.

He felt well and had no complaints but admitted to drinking "a fair amount" of water. Some years before he had several boils on his neck. His mother had Diabetes and was on diet but received no insulin - she died of Pneumonia. He was of small build and average nutrition. A few of his teeth were carious.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.19	.16	.15	.13 gm %
Urinary Sugar	nil	nil	B.R.	nil	nil

CASE 376.

J.MacD. aet 31 years, was examined on 2nd August 1940.

He felt well and had no complaints. He drank one bottle of whisky per week. He had Mumps in childhood and when 29 years of age he had attacks of both Measles and Chickenpox. He was tall, of good physique and healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.20	.22	.17	.14 gm %
Urinary Sugar	B.V.S.R.	B.V.S.R.	+	+	B.V.S.R.

CASE 377.

J.C. aet 31 years, was examined on 28th August 1940.

His only complaint was of recurrent attacks of lumbago since 1933. Measles in childhood was his only previous illness. He was stoutly built, but healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.20	.19	.16	.14 gm %
Urinary Sugar	B.R.	B.G.R.	+	+	+

CASE 378.

S.W. aet 32 years, was examined on 24th September 1940.

He felt well and had no complaints. He stated that he had a Duodenal ulcer 7 years before but his symptoms disappeared after some months on diet. He was of heavy build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.13	.22	.20	.14 gm %
Urinary Sugar	nil	nil	+	+	B.G.R.

CASE 379.

T.W. aet 32 years, was examined on 30th August 1940. He felt well and had no complaints. He was small and of slim build. He had a right internal strabismus. His teeth were defective and decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs	2 hrs.
Blood Sugar	.11	.26	.24	.16	.14 gm %
Urinary Sugar	B.V.S.R.	+ +	+ + +	+ + +	+ +

CASE 380.

W.McD. aet 33 years, was examined in 30th November 1940. He felt well and had no complaints. He had Diphtheria in his school days and had Pneumonia on 2 occasions in childhood. 4 years previously he gave up his work as a red leader because of dyspepsia. He was of small slim build. His teeth were decayed but there was no softness and no blue line of the gums. He had a slight lumbar lordosis.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.20	.21	.20	.14 gm %
Urinary Sugar	nil	nil	B.R.	B.G.R.	B.V.S.R.

CASE 381.

D.L. aet 33 years, was examined on 24th September 1940. He felt well and his weight was increasing slightly. In 1937 he had a Quinsy which was followed by Rheumatism.

In 1939 he had an attack of left lumbar pain - X-ray of the renal tract showed no abnormality. He had Measles in childhood. He was of average build and nutrition. His tonsils were slightly ragged. There was a seborrhoeic eruption on his back.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.18	.20	.17	.13 gm %
Urinary Sugar	nil	B.G.R.	+ +	+ +	B.R.

CASE 382. M.McS. aet 33 years, was examined on 25th September 1940. He felt well and his weight was increasing. He had Rheumatism in 1933. He was small, sturdy and fresh complexioned.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.15	.20	.16	.13 gm %
Urinary Sugar	B.V.S.R.	B.V.S.R.	No spec.	+	B.V.S.R.

CASE 383. T.H.A. aet 34 years, was examined on 5th November 1940. He felt well and had no complaints. He had Measles in childhood, Pleurisy when he was 20 years of age and a few boils in June 1940. He was of good physique and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.21	.22	.18	.14 gm %
Urinary Sugar	nil	nil	+	B.G.R.	nil

CASE 384.

H.C. aet 35 years, was examined in 17th November 1940.

He felt well and had no complaints. He had Scarlet Fever when 16 years of age and had had several boils on his neck some years previously. He was of good physique and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs	2 hrs.
Blood Sugar	.14	.26	.20	.15	.14 gm %
Urinary Sugar	nil	B.S.R.	+	nil	nil

CASE 385.

W.B. aet 38 years, was examined on 6th August 1940.

He felt well but said he had an "Influenza Cold" 3 weeks previously and since then he had lost a little weight.

He had an operation for Appendicitis when he was 14 years of age. He was of slim build and anxious looking. His eyes were prominent and his skin somewhat moist. The isthmus of the Thyroid gland was just palpable. The pulse rate was 104 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.19	.20	.18	.13 gm %
Urinary Sugar	B,V.S.R.	nil	B.V.S.R.	B.V.S.R.	E.V.S.R.

CASE 386.

J.M. 42 years, was examined on 14th August 1940.

He felt well but on direct questioning he said his weight was a little less in the previous year. When 18 years of age he had a crop of boils. He was of average build and looked his years. He had an early arcus senilis in both eyes. The liver edge was palpable in the epigastrium. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.18	.21	.15	.13 gm %
Urinary Sugar	nil	B.V.S.R. +		B.G.R.	B.V.S.R.

CASE 387.

D.S. aet 45 years, was examined on 12th June 1940.

He felt well apart from some abdominal pain which troubled him if he had eaten a heavy mid-day meal. Flatulence was troublesome, especially at night and at times he was very constipated. He was of average nutrition and his face was slightly flushed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.20	.19	.14	.13 gm %
Urinary Sugar	B.R.	+ +	+ +	B.G.R.	B.V.S.R.

CASE 388.

A.B. aet 19 years, was examined on 26th July, 1940.

He felt well and his weight was increasing slightly.

He had a mild attack of Influenza in 1939. He was of average build and nutrition and had some caries of his teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.14	.15	.10	.10 gm %
Urinary Sugar	nil	B.G.R.	+	B.G.R.	B.V.S.R.

CASE 389.

M.H. aet 19 years, was examined on 18th September 1940.

He felt well and his weight was increasing. When 6 months old he had an Intussusception. When 11 years of age he had Diphtheria, when 14 he received a head wound, in an accident, which required stitching and when 15 he had concussion which resulted from an accident at work and for which he was detained in hospital for 9 days. He was tall and pasty complexioned. There was some decay of his teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs	2 hrs.
Blood Sugar	.10	.15	.13	.11	.09 gm %
Urinary Sugar	nil	B.S.R.	+	B.S.R.	nil

CASE 390.

J.A.C. aet 19 years, was examined on 14th July 1940.

He felt well and had no complaints. Measles and Whooping Cough in childhood were his only illnesses. He was tall, of good physique and healthy looking. A squeaking musical systolic murmur was audible at the left sternal margin at the level of the 3rd rib: it just followed the first sound and was maximum when he was recumbent.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.12	.11	.09	.08 gm %
Urinary Sugar	B.R.	No spec.	+	B.S.R.	nil

CASE 391.

W.W. aet 20 years, was examined on 25th September 1940. He felt well and had no complaints. When about 14 years of age he had a crop of boils. He was tall and of medium build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs	2 hrs.
Blood Sugar	.09	.13	.13	.08	.07 gm %
Urinary Sugar	nil	B.G.R.	B.R.	B.V.S.R.	B.V.S.R.

CASE 392.

A.M. aet 20 years, was examined on 22nd June 1940. He felt well and had no complaints. He had Measles in childhood and Influenza some years previously. He was well nourished and of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.15	.12	.12	.11 gm %
Urinary Sugar	nil	B.G.R	+ +	+	B.R.

CASE 393.

A.R.McG. aet 20 years, was examined on 6th June 1939. He felt well and had no complaints. He had Pneumonia 4 times before he was 6 years of age and he had a 5th and 6th attack when he was 12 and 15 years of age respectively. He had Mumps and Chickenpox in childhood. He was thin and pasty complexioned.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.13	.09	.07	.08 gm. %
Urinary Sugar	B.V.S.R.	B.G.R.	+	B.R.	nil

CASE 394.

A.S. aet 20 years, was examined on 12th February 1940. He felt well. On direct questioning he said he drank 3 or 4 pints of water per day. He had several boils in the previous year. His mother was said to have had a slight "attack of Diabetes" 3 years previously. He was of sturdy build and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.13	.12	.10	.10 gm. %
Urinary Sugar	B.G.R.	++	+	B.G.R.	B.R.

CASE 395

T.T. aet 20 years, was examined on 3rd December 1940. He felt well and had no complaints. His only illness was Pneumonia when he was 7 years of age. He was smallish but of average nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.12	.12	.14	.12 gm.%
Urinary Sugar	No spec.	B.V.S.R.	++	B.G.R.	B.S.R.

CASE 396.

R.A. aet 20 years, was examined on 17th December 1940.

He felt well and had no complaints. He had Whooping Cough in childhood. He was of slim build but healthy looking

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.14	.10	.10	.09 gm.%
Urinary Sugar	B.S.R.	+	B.G.R.	B.G.R.	B.V.S.R.

CASE 397.

J. McG. aet 20 years, was examined on 1st June 1940.

He complained of stiffness of his ankles and knees

for some months. On direct questioning he said he

drank a lot of water. He had Rheumatism when 10 years

of age and 2 boils on his neck 2 months previously.

He was small and slim, below average physique and looked

younger than his years. There was no abnormality of

knee or ankle joints.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.13	.13	.12	.12 gm.%
Urinary Sugar	No spec.	B.V.S.R.	B.V.S.R.	B.V.S.R.	nil

CASE 398.

J. McD. aet 21 years, was examined on 23rd July 1940. He felt well and had no complaints. He had Measles in childhood. His mother had Glycosuria for some years but had no symptoms and had never had any treatment. He was tall and well nourished.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.14	.10	.08	.07 gm. %
Urinary Sugar B.G.R.		+	No spec.	++	+

CASE 399.

I.R.R. aet 21 years, was examined on 11th November 1939. He felt well and had no complaints. He had Measles in childhood and in 1937 was "threatened" with Pleurisy. He was of slim to medium build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.14	.15	.14	.10 gm. %
Urinary Sugar B.G.R.	B.G.R.	B.G.R.	+	++	B.G.R.

CASE 400.

J.W. aet 22 years, was examined on 30th January 1940. He felt well and had no complaints. He had Measles in childhood and Tonsillitis and Tonsillectomy when 13 years of age. He was well nourished and of average height.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.13	.15	.13	.13 gm. %
Urinary Sugar	B.A.	B.G.R.	+	B.G.R.	B.V.S.R.

CASE 401.

A.G. aet 22 years, was examined on 26th January 1940. He felt well and had no complaints. He had Scarlet Fever when 10 years of age. He was tall and pasty complexioned.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.14	.12	.08	.08 gm. %
Urinary Sugar	B.V.S.R.	B.R.	B.G.R.	B.V.S.R.	B.V.S.R.

CASE 402.

D. McL. aet 22 years, was examined on 19th April 1940. He complained of feeling giddy after greasy foods for several years. He said he was always hungry. He had Measles in childhood and Rheumatic Fever when 16 years of age. He had a few boils several years previously. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.15	.12	.10	.09 gm. %
Urinary Sugar	B.V.S.R.	B.G.R.	+	B.G.R.	B.R.

CASE 403.

J.B. aet 22 years, was examined on 27th February 1940.

He felt well but on direct questioning he said he was always thirsty and passed more than a normal amount of urine. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.13	.13	.11	.11 gm. %
Urinary Sugar	B.S.R.	*	*	B.V.S.R.	B.V.S.R.

CASE 404.

J. McL. aet 22 years, was examined on 8th January 1940. He felt well. On direct questioning he said he had slight itching of the left shin and both forearms for 3 weeks but it had almost disappeared. He was of good physique and healthy looking. There was a healed skin eruption on both legs.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.14	.14	.14	.13 gm. %
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	B.V.S.R.	B.V.S.R.

CASE 405.

R. McC. aet 22 years, was examined on 7th January 1940. He felt well. On direct questioning he said he had lost $\frac{1}{2}$ stone in weight in the previous 6 months. In childhood he had an operation for a squint. He had had an occasional boil in the previous 5 years. He was smallish but of average nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.13	.13	.11	.09 gm. %
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	B.V.S.R.	nil

CASE 406.

G.B. aet 22 years, was examined on 21st January 1940.

He felt well and had no complaints. 2 years previously he had a crop of boils on neck, trunk and limbs, lasting for about a year. He had Measles, Mumps and Tonsillectomy in childhood. He was of broad build and rather pale complexion.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.14	.13	.12	.10 gm. %
Urinary Sugar	nil	B.V.S.R.	B.G.R.	nil	nil

CASE 407.

F.M.C. aet 22 years, was examined on 14th December 1939.

He felt well and had no complaints. He had always been well apart from a bout of sickness, lasting 10 days, which he had 3 years previously and was ascribed to his working with paint. He was of good nutrition and physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.14	.12	.12	.12 gm. %
Urinary Sugar	nil	B.R.	+	nil	nil

CASE 408.

J.W. aet 23 years, was examined on 7th January 1940. He felt well and had no complaints. He had had a sore throat from time to time, had a few small boils on his neck about a month before and had his appendix removed in 1936. He was well nourished, of average height and of the muscular type.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.14	.11	.08	.08 gm. %
Urinary Sugar	No spec.	B.R.	B.G.R.	No spec.	B.V.S.R.

CASE 409.

R.C. aet 23 years, was examined on 15th March 1940. He felt well and had no complaints. He had Bronchitis several years before and had had an occasional boil on his face and neck. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.14	.14	.13	.09 gm. %
Urinary Sugar	B.G.R.	B.G.R.	+	B.G.R.	B.G.R.

CASE 410.

G.C. aet 28 years, was examined on 30th June 1940. He felt well and had no complaints. He was of average physique and well nourished.

The Glucose Tolerance Test gave the following result:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.11	.14	.12	.12	.09 gm. %
Urinary Sugar	nil	B.V.S.R.	++	B.S.R.	B.S.R.

CASE 411.

W.R. aet 24 years, was examined on 2nd April 1940.

He felt well but was subject to frontal headaches if he ate fat foods. He had Measles in childhood and had an attack of Influenza every winter. He was of slim build. His expression was anxious, the isthmus of his Thyroid gland was just palpable and there was slight tremor of the outstretched hands.

The Glucose Tolerance Test gave the following result:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.11	.13	.11	.09	.09 gm. %
Urinary Sugar	B.V.S.R.	B.G.R.	B.R.	B.V.S.R.	B.V.S.R.

CASE 412.

N.C. aet 24 years, was examined on 25th July 1940.

He felt well but on direct questioning he said he had lost three pounds weight in the previous three months and that he passed more than the normal amount of urine. He had Whooping Cough in childhood, Measles when he was 20 and Mumps when he was 18 years of age. His father was a known Diabetic and was treated with diet and insulin. His brother had glycosuria associated with

boils. He was thin featured and healthy looking. There was some decay of his upper teeth. The pulse rate was 120 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.15	.14	.14	.12 gm. %
Urinary Sugar	B.S.R.	+	++	++	+

CASE 413.

H. McE. aet 24 years, was examined on 16th June 1940. He felt well and had no complaints. He had Tonsillectomy and Appendicectomy when 14 years of age. Since he was 14 or 15 years of age he had acne vulgaris. He was thin featured but of average physique. He had acne vulgaris of his face and back.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.14	.12	.11	.09 gm. %
Urinary Sugar	nil	B.G.R.	++	+	B.V.S.R.

CASE 414.

D. McD. aet 25 years, was examined on 7th June 1940. He felt well and his weight was increasing. He had Measles and Scarlet Fever in childhood. He was of average build and nutrition. The pulse rate was 100 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.14	.15	.13	.13 gm. %
Urinary Sugar	B.V.S.R.	++	++	+	B.R.

CASE 415.

J.G. aet 25 years, was examined on 29th June 1940.

He felt well. On direct questioning he said he had lost 2 or 3 stones in weight in the previous year and had thirst and nocturia. He was of good physique. His eyes were prominent. The pulse rate was 120 per minute. His breath smelled of acetone but none could be detected in the urine.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.14	.14	.12	.10 gm. %
Urinary Sugar	nil	nil	+	++	B.G.R.

CASE 416.

C.J.N. aet 25 years, was examined on 16th January 1940.

He felt well and had no complaints. He had Measles, Scarlet Fever and Mumps in childhood. He was of good physique and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.11	.14	.11	.11 gm. %
Urinary Sugar	nil	B.S.R.	B.S.R.	B.S.R.	nil

CASE 417.

A.D. aet 25 years, was examined on 21st September 1940. He felt well and his weight was increasing. Chickenpox in childhood was his only illness. He was bespectacled, of good physique and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.15	.13	.12	.08 gm. %
Urinary Sugar	B.R.	B.G.R.	B.R.	B.R.	B.V.S.R.

CASE 418.

D.K. aet 26 years, was examined on 1st June 1940.

He felt well but complained of occasional pain in the right side of abdomen and across the lower abdomen.

He was of good physique. His teeth were decayed.

There was slight tenderness in the right iliae fossa.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.14	.14	.11	.09 gm. %
Urinary Sugar	B.S.R.	B.G.R.	+	B.R.	nil

CASE 419.

J.F. aet 26 years, was examined on 22nd May 1940.

He felt well. On direct questioning he said his weight had decreased since his return from India in 1938.

In 1937 he had an attack of Malaria when in India. He had a second attack on his way home in 1938 and had 4 attacks since returning home, the last in June 1939.

When 16 years of age he had several boils. He was

of good physique. His face showed some pitting due to old acne. The pulse rate was 120 per minute. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.15	.12	.10	.10 gm. %
Urinary Sugar	nil	B.V.S.R.	B.R.	nil	nil

CASE 420.

I.B.R. aet 26 years, was examined on 29th April 1940. He felt well and had no complaints. He had Measles, Chickenpox and Whooping Cough in childhood. His father had had glycosuria for 20 years without symptoms and without necessitating treatment. He was tall and well built.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.13	.13	.11	.12 gm. %
Urinary Sugar	nil	B.R.	+	B.S.R.	B.V.S.R.

CASE 421.

T.B. aet 27 years, was examined on 15th June 1940. He felt well and had no complaints. He was tall, thin and muscular. His lower teeth were deficient.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.14	.14	.10	.10 gm. %
Urinary Sugar	B.V.S.R.	No spec.	++	++	B.R.

CASE 422.

A.L. aet 27 years, was examined on 4th June 1940.

He felt well and had no complaints except for a small boil on his thigh. He was of good physique and healthy looking. There was a pustule on his left thigh.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.15	.13	.10	.09 gm.%
Urinary Sugar	B.R.	B.G.R.	++	B.V.S.R.	nil

CASE 423.

J.M. aet 27 years, was examined on 7th June 1940.

He felt well and had no complaints. He had Scarlet Fever in childhood. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.13	.15	.13	.12 gm.%
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	B.V.S.R.	B.V.S.R.

CASE 424.

J.K. aet 27 years, was examined on 31st May 1940.

He felt well and had no complaints. He had one boil on his arm a year before. He was of slim build but average nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.12	.12	.11	.10 gm.%
Urinary Sugar	nil	+	B.R.	B.R.	B.R.

CASE 425.

T.S. aet 28 years, was examined on 16th July 1940.
 He felt well and had no complaints. Measles and
 Chickenpox in childhood were his only illnesses.
 He was of average physique and healthy looking.
 The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.12	.14	.12	.09 gm. %
Urinary Sugar	B.V.S.R.	B.R.	++	B.G.R.	B.V.S.R.

CASE 426.

T.A. aet 28 years, was examined on 1st August 1940.
 He complained of attacks of epigastric pain, associated
 with anorexia and diarrhoea, occurring about once in
 the month and necessitating 2 days off work. Between
 attacks he felt well. On direct questioning he said
 he was often thirsty. He was subject to Influenza.
 He was of slim build. His teeth were dirty and carious.
 The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.14	.11	.09	.09 gm. %
Urinary Sugar	No.spec.	B.V.S.R.	B.G.R.	B.V.S.R.	nil

CASE 427.

F.C. aet 28 years, was examined on 23rd April 1940.
 He felt well and had no complaints. He was of good
 physique and healthy looking. Several of his teeth
 were decayed and he had a mild marginal blepharitis.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.06	.15	.12	.09	.10 gm. %
Urinary Sugar	nil	B.V.S.R.	B.R.	nil	nil

CASE 428.

F.L. aet 28 years, was examined on 9th July 1940.

He felt well and had no complaints. He had Measles in childhood and had recurrent boils on the back of his neck. He was thin featured but of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.14	.15	.10	.09 gm. %
Urinary Sugar	nil	B.R.	B.G.R.	B.V.S.R.	nil

CASE 429.

J.M. aet 29 years, was examined on 15th August 1940.

He felt well and had no complaints. In 1930 he was off work 5 weeks with "congestion of the liver and bowels" (severe abdominal pain, constipation and sickness). He was of average build and nutrition.

He was prematurely bald.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.15	.14	.13	.13 gm. %
Urinary Sugar	B.V.S.R.	B.G.R.	+	B.R.	B.V.S.R.

CASE 430.

P.C. aet 29 years, was examined on 17th August 1940. He felt well and had no complaints but 5 years previously he failed to pass his medical examination for a Corporation job because of Glycosuria. He had Measles in childhood, Scarlet Fever when 7 years of age and Diphtheria when 26 years of age. He was smallish but of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.15	.11	.12	.10 gm. %
Urinary Sugar	B.V.S.R.	B.G.R.	+	B.R.	B.S.R.

CASE 431.

E.B. aet 29 years, was examined on 20th July 1940. He felt well and had no complaints. He had a few pustules on his neck some weeks previously. One brother had Glycosuria which was discovered under military regulations. He was passed fit. He was of slim build but average nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.15	.15	.14	.13 gm. %
Urinary Sugar	B.G.R.	++	++	+++	+++

CASE 432.

P.R. aet 29 years, was examined on 30th June 1940. He felt well and had no complaints. He had Measles

in childhood. He was of small build and somewhat florid complexion. There was some acne vulgaris of his back.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.13	.13	.12	.10 gm. %
Urinary Sugar	B.R.	B.R.	B.R.	+	B.R.

CASE 433.

I.M. aet 29 years, was examined on 28th August 1940. He had felt easily tired for the previous year. He had Scarlet Fever in childhood. He was subject to Bronchitis in the winter and had some boils on his neck one year previously. In 1939 he had an operation for inguinal hernia. He was tall and of stout build. The groin glands were palpable on both sides.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.13	.10	.09	.10 gm. %
Urinary Sugar	B.V.S.R.	B.R.	+	+	B.V.S.R.

CASE 434.

R.B. aet 30 years, was examined on 25th July 1940. He complained of attacks of mucoid diarrhoea if he took heavy or greasy food. This manifested itself when he was about 5 years of age. He had Broncho Pneumonia in 1916, again in 1920 and in 1934 when it

was a complication of Whooping Cough. His father was on a carbohydrate restriction diet for glycosuria. He was thin, sallow and delicate looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.14	.09	.08	.09 gm. %
Urinary Sugar	B.V.S.R.	B.V.S.R.	B.V.S.R.	B.V.S.R.	B.S.R.

CASE 435.

P.W. aet 30 years, was examined on 6th August 1940. He felt well and had no complaints. When 10 years of age he had a few boils on his face. 1936 he had an attack of Whooping Cough. Some years before he had Influenza and Tonsillitis complicated by "kidney upset" for which he was advised to drink water freely. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.14	.14	.14	.12 gm. %
Urinary Sugar	nil	B.V.S.R.	B.G.R.	B.R.	B.R.

CASE 436.

G.B. aet 30 years, was examined on 23rd July 1940. He felt well but on direct questioning admitted to slight polyuria and occasional nocturia. He had Measles in childhood, Tonsillitis in 1937 and mild Influenza in January 1940. He was of smallish sturdy build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.13	.12	.12	.12 gm. %
Urinary Sugar B.V.S.R.	No spec.	B.R.	B.R.	+	

CASE 437.

C.H. aet 31 years, was examined on 10th August 1940. He felt well and had no complaints. He had Measles in childhood. He was of slim build and of the energetic type. There was slight tremor of the outstretched hands.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.15	.10	.10	.08 gm. %
Urinary Sugar B.S.R.	++	++	++	B.G.R.	

CASE 438.

W.I. aet 31 years, was examined on 6th August 1940. He felt well and had no complaints. He had Measles and Scarlet Fever in childhood. In 1939 he had a mild attack of Influenza and several years ago he had some boils on his neck. He was tall and of average nutrition. The right tonsil was enlarged.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.14	.13	.14	.09 gm. %
Urinary Sugar	nil	B.G.R.	B.G.R.	B.G.R.	B.R.

CASE 439.

F.H. aet 33 years, was examined on 23rd September 1940. Three weeks before he began to have very severe attacks of frontal headache, lasting about half an hour and occurring once daily. He could not ascribe them to anything and they were not related to diet. He had Pneumonia when he was very young and had his ribs bruised in an accident at work one year previously. He was subject to boils and had the last one a week before. He was squat, grey haired and of average physique. His teeth were only fair.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.14	.13	.09	.08 gm. %
Urinary Sugar	B.V.S.R.	B.R.	++	B.V.S.R.	B.V.S.R.

CASE 440.

CASE 440.

J.H. aet 33 years, was examined on 17th August 1940. He complained of being very easily tired and inclined to sleep during the day. On direct questioning he said he had lost a stone in weight in the past year or so. He had Measles in childhood. His left ear had been "running" since he was 10 years of age. He was of average nutrition. His teeth were carious. The right apex was slightly flat to percussion and medium râles were heard at both apices.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.14	.15	.10	.09 gm.%
Urinary Sugar	B.V.S.R.	+	+	B.S.R	nil

CASE 441.

H.H. aet 33 years, was examined on 29th July 1940. He felt well and had no complaints. He had Scarlet Fever when he was 3 years of age and Rheumatic Fever when he was 9 years of age. He was of smallish build but good physique. His eyes were slightly prominent. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.13	.13	.12	.09 gm.%
Urinary Sugar	nil	B.V.S.R.	B.G.R.	B.R.	B.V.S.R.

CASE 442.

A.S. aet 34 years, was examined on 5th September 1940. He felt fairly well but on direct questioning he gave a history of slight thirst and polyuria. For 2 years he had stiffness in his knees and tightness of his legs, coming on only after he had been standing for some time. He had Measles, Whooping Cough, Diphtheria and Pneumonia in childhood. He was of stout build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.14	.12	.10	.10 gm.%
Urinary Sugar	nil	B.S.R.	B.R.	nil	nil

CASE 443.

T.D. aet 35 years, was examined on 17th September 1940
He felt well and had no complaints except a slight
morning cough for the previous year. He had Measles,
Chickenpox and Pleurisy in childhood. When 18 he had
Nephritis and was off work for 6 months. When 25 he
had a nervous breakdown brought on by overwork and was
again off for 6 months. He was of heavy build and
almost florid appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.14	.13	.12	.08 gm. %
Urinary Sugar	nil	B.R.	++	+	nil

CASE 444.

A.M. aet 50 years, was examined on 31st May 1940.
He felt well and had no complaints. He was of stout
build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.14	.15	.14	.14 gm. %
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	B.R.	B.R.

CASE 445. J.P. aet 19 years, was examined on 3rd September 1940. He felt well and had no complaints. He had Mumps in childhood and Acute Appendicitis in 1931. He was of average build and healthy appearance. Some of his teeth were carious and his throat slightly congested. The Glucose Tolerance Test gave the following result:

	Fasting	$\frac{1}{2}$ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.09	.12	.12	.10	.11
Urinary Sugar	B.V.S.R.				B.V.

CASE 446.

H.L. aet 19 years, was examined on 24th April 1940.

RENAL GLYCOSURIA.

He felt well and had no complaints. Measles and Scarlet fever in childhood were his only previous illnesses.

GROUP B.

His mother had a transient glycosuria 6 months before. He was tall, of good physique and healthy appearance.

The Glucose Tolerance Test gave the following result:

	Fasting	$\frac{1}{2}$ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.10	.14	.10	.14	.11 g
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	nil	ni

CASE 447.

H.G. aet 20 years, was examined on 25th January 1941.

He felt well and his weight was increasing. He had Scarlet Fever with 10 years of age and measles with 18 years.

CASE 445.

J.F. aet 19 years, was examined on 3rd September 1940. He felt well and had no complaints. He had Mumps in childhood and Acute Appendicitis in 1931. He was of average build and healthy appearance. Some of his teeth were carious and his throat slightly congested. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.18	.13	.10	.11 gm. %
Urinary Sugar	B.S.R.	+	++	+	B.V.S.R.

CASE 446.

T.L. aet 19 years, was examined on 24th April 1940. He felt well and had no complaints. Measles and Scarlet Fever in childhood were his only previous illnesses. His mother had a transient glycosuria 6 months before. He was tall, of good physique and healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.14	.16	.14	.11 gm. %
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	nil	nil

CASE 447.

W.G. aet 20 years, was examined on 28th January 1941. He felt well and his weight was increasing. He had Scarlet Fever when 10 years of age and Tonsillectomy when 15 years of age. He was of heavy build and

slightly pasty complexion.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.15	.17	.16	.13 gm. %
Urinary Sugar	nil	B.R.	B.G.R.	B.S.R.	B.S.R.

CASE 448.

J.B. aet 20 years, was examined on 30th October 1939.

He felt well and had no complaints. Chickenpox in childhood and eczema 2 years before were his only illnesses. He was small and thin.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.17	.16	.11	.08 gm. %
Urinary Sugar	nil	†	††	B.G.R.	nil

CASE 449.

H.R.W. aet 20 years, was examined on 24th October 1939.

He felt well and had no complaints. He had Measles, Chickenpox, Mumps and Pneumonia in childhood. He was of smallish build but fairly good physique. His teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.12	.16	.12	.08 gm. %
Urinary Sugar	nil	B.S.R.	B.S.R.	B.S.R.	nil

CASE 450.

W.H. aet 20 years, was examined on 13th October 1939. He felt well. On direct questioning he thought he might have slight polyuria and admitted to occasional nocturia. He had Diphtheria, left otitis media and adenitis of neck in childhood. In 1936 he had a boil on his neck. When 12 years of age sugar was discovered in his urine. He was of good general condition and anxious looking. Left ear drum was congested and the left tonsil slightly enlarged.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.16	.10	.08 gm. %
Urinary Sugar	nil	B.V.S.R.	B.G.R.	nil	nil

CASE 451.

J.B. aet 20 years, was examined on 19th December 1939. He felt well and had no complaints. When 5 years of age he had occasional bouts of pyrexia lasting one day. In 1938 he had an attack of gastric Influenza. He was tall, of good physique and healthy appearance but rather nervous.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.180	.15	.10	.09 gm. %
Urinary Sugar	nil	B.G.R.	++	B.V.S.R.	nil

CASE 452.

T.O. aet 20 years, was examined on 16th March 1940. He felt well. On direct questioning he said he had slight increased frequency of micturition. He had Tonsillectomy in childhood. He was of average build and nutrition and spoke with a slight impediment. His teeth were dirty.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.170	.180	.14	.10 gm. %
Urinary Sugar	B.R.	+	++	B.R.	B.V.S.R.

CASE 453.

E.C. aet 20 years, was examined on 30th September 1939. He stated that he had lost 2 stones in weight in the 6 months previous to examination. He was subject to "sick turns" when he entered a strange house, car or picture house. He felt nauseated and perspired freely but did not vomit. A pustular eruption had been present on his back and face for some time. He had an attack of Scarlet Fever when 7 years of age and a few years before had boils on his face and neck. He was of good physique, pasty complexioned but otherwise healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.14	.15	.16	.12 gm. %
Urinary Sugar	B.S.R.	B.R.	B.G.R.	B.R.	B.S.R.

CASE 454.

A. McG. aet 20 years, was examined on 1st June 1940. He felt well except for occasional pains in his feet when the weather was wet. He was in bed for 4 weeks in the autumn of 1939 suffering from Rheumatism of the feet and in early 1939 he had a crop of boils. He was of small slim build and below average physique. His tonsils were enlarged. An auriculo systolic murmur preceded the first heart sound at the apex.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.18	.15	.14	.10 gm. %
Urinary Sugar	B.S.R.	B.R.	†	B.G.R.	B.R.

CASE 455.

D.F. aet 20 years, was examined on 14th January 1940. He felt well and had no complaints except for admitting to occasional thirst on direct questioning. He had an Intussusception when 7 months old and suffered from Erythema Nodosum at 12 years of age. He was smallish but of average physique and healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.14	.12	.10 gm. %
Urinary Sugar	nil	B.V.S.R.	B.G.R.	B.V.S.R.	B.V.S.R.

CASE 456.

W.C. aet 20 years, was examined on 6th February 1940. He felt well and had no complaints. Measles and Mumps in childhood were his only previous illnesses. He was of spare build but healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.16	.13	.128	.10 gm. %
Urinary Sugar	nil	B.R.	+	+	B.R.

CASE 457.

J.McC. aet 20 years, was examined on 4th April 1940. He felt well and had no complaints. He had an attack of Whooping Cough in childhood and in 1935 had a crop of boils. He was of good physique and healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.15	.160	.14	.08 gm. %
Urinary Sugar	nil	B.S.R.	B.R.	B.V.S.R.	nil

CASE 458.

J. McL. aet 21 years, was examined on 26th December 1939. He felt well and had no complaints. About 5 years previously he had some boils on his back. In June 1939 he underwent an operation for a right sided Inguinal Hernia. He was of small build, good physique and healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.14	.09	.10 gm. %
Urinary Sugar	nil	B.R.	B.G.R.	B.V.S.R.	nil

CASE 459.

M.S. aet 21 years, was examined on 14th November 1939. He felt well and had no complaints. He was strongly built and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.15	.16	.16	.11	.09 gm. %
Urinary Sugar	nil	B.S.R.	B.G.R.	nil	nil

CASE 460.

A.A. aet 21 years, was examined on 25th October 1940. He complained of feeling tired on and off and stated that he had lost some weight in the past few months. For about 10 months he had been troubled with recurrent itching round his waist. Sugar had been discovered in his urine 2 months before in the course of a routine examination and he had avoided excess of starchy foods since then. He had an attack of Measles when 4 years of age and in 1937 he was off work for one month because of Pleurodynia. He was thin featured but of average physique and rather pale and seedy looking. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.16	.18	.12	.10 gm. %
Urinary Sugar	B.V.S.R.	B.R.	++	++	B.R.

CASE 461.

B.P. aet 22 years, was examined on 29th December 1939. He felt well and had no complaints. He was of average build and healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.12	.10	.10 gm. %
Urinary Sugar	nil	B.V.S.R.	B.R.	B.V.S.R.	nil

CASE 462.

J.N. aet 22 years, was examined on 6th January 1940. He felt well but stated that he had had six boils on the back of his neck during the previous month and was receiving injection treatment for that. Measles in childhood was his only previous illness. He was of good physique and healthy appearance but over anxious. His eyes were slightly prominent. The pulse rate was 102 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.17	.14	.11	.10 gm. %
Urinary Sugar	nil	B.V.S.R.	B.R.	B.V.S.R.	nil

CASE 463.

S.S. aet 22 years, was examined on 20th September 1939. He felt well and had no complaints. Measles in childhood was his only illness. He was of good physique. His tonsils were enlarged.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.16	.18	.12	.10 gm.%
Urinary Sugar	nil	B.R.	B.G.R.	B.V.S.R.	B.V.S.R.

CASE 464.

G.G. aet 22 years, was examined on 21st January 1940. He felt well but on questioning stated that he drank a fair amount of fluid. Mumps and Measles in childhood were his only previous illnesses. He was of good physique and healthy appearance. A few dilated capillaries were present on both cheeks. The Blood Pressure was 150/90.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.16	.16	.15	.12 gm.%
Urinary Sugar	nil	B.R.	+	B.G.R.	B.V.S.R.

CASE 465.

G.C. aet 22 years, was examined on 17th February 1940. He felt well and had no complaints. He had Measles in childhood and his tonsils had been removed some years before. He was of average physique and healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.15	.17	.12	.09 gm. %
Urinary Sugar	nil	B.R.	+ +	B.S.R.	nil

CASE 466.

R.C. aet 22 years, was examined on 2nd March 1940.

He felt well, his only complaint being of recurrent attacks of nasal catarrh. In 1932 he had an attack of Scarlet Fever complicated by slight albuminuria. He was of slim build but healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.17	.12	.10	.09 gm. %
Urinary Sugar	nil	B.S.R.	B.R.	B.V.S.R.	nil

CASE 467.

J.G. aet 22 years, was examined on 21st January 1940.

He felt well but had occasional attacks of right supraorbital neuralgia and stated that his work as a powerloom Tenter caused him to be thirsty at times. He had frequent boils for some years, the last being on the back of his neck in December 1939. He was of good physique and healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.14	.16	.10	.08 gm. %
Urinary Sugar	nil	B.G.R.	B.G.R.	nil	nil

CASE 468.

W.R. aet 22 years, was examined on 10th November 1939. He felt well and had no complaints. When 15 years of age he was involved in a cycle accident. His head was lacerated and his right ankle fractured. At 17 years of age he had an attack of rapid action of the heart which lasted for 3 to 4 weeks. His father died of Diabetes. He was of small build but good physique. His skin was blotchy.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.16	.14	.08	.10 gm. %
Urinary Sugar	nil	B.R.	B.G.R.	nil	nil

CASE 469.

J.O. aet 22 years, was examined on 6th January 1940. He felt well and had no complaints. Measles in childhood was his only illness. He was tall and of slim build. His mucous membranes were slightly pale and there was slight dental caries.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.18	.14	.11	.09 gm. %
Urinary Sugar	nil	B.V.S.R.	++	B.V.S.R.	nil

CASE 470.

T.N.G. aet 23 years, was examined on 27th March 1940. He felt well and had no complaints except of some

pruritus during the previous 6 months. He had Measles, Chickenpox and Whooping Cough in childhood and in January 1940 had an attack of Influenza. He was small and of average physique and rather pale looking. There was slight asymmetry of his chest due to flattening of the lower left ribs.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.18	.15	.09	.10 gm.%
Urinary Sugar	B.V.S.R.	+	++	B.G.R.	B.V.S.R.

CASE 471.

G.B. aet 23 years, was examined on 15th March 1940.

He felt well and had no complaints. He had Measles in childhood and when 5 years of age had an attack of Scarlet Fever. His tonsils were removed when he was 7 years of age. He was of average physique and healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.17	.13	.11	.09 gm.%
Urinary Sugar	nil	B.G.R.	+	nil	nil

CASE 472.

W.C. aet 23 years, was examined on 12th March 1940.

He felt well and had no complaints. He was subject to Bronchitis in childhood and his tonsils had been

removed some years previously. He was of average physique and healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.15	.17	.12	.12 gm. %
Urinary Sugar	nil	B.S.R.	B.G.R.	B.S.R.	No spec.

CASE 473.

G.H. aet 23 years, was examined on 12th March 1940. He felt well and had no complaints. In childhood he had attacks of German Measles and Scarlet Fever. His tonsils were removed some years previously and he underwent an operation for acute appendicitis when 17 years of age. He was of average physique and healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.17	.13	-	.14 gm. %
Urinary Sugar	nil	B.G.R.	++	-	B.V.S.R.

CASE 474.

H.W. aet 23 years, was examined on 3rd February 1940. He felt well and had no complaints. He had an attack of Diphtheria in childhood and his tonsils were removed some years previously. He was tall, of average physique and healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.18	.13	.10	.08 gm. %
Urinary Sugar	nil	B.V.S.R.	B.G.R.	B.V.S.R.	nil

CASE 475.

T.M. aet 23 years, was examined on 27th February 1940. He felt well and had no complaints apart from itching of his neck. He had 2 boils 2 years previously. His mother was a known diabetic of 3 years and his sister for 1 year. He was of small build but average physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.18	.18	.12	.11 gm. %
Urinary Sugar	nil	B.S.R.	B.R.	nil	nil

CASE 476.

J.R.G. aet 23 years, was examined on 13th January 1940. He felt well and had no complaints. In his mid teens he had haemoptysis and his chest was X-rayed. He was told he had Tuberculosis. He was off work for 10 months and had been well since. His brother was a known Diabetic. He was of average build and nutrition. There was slight flattening of the percussion note at the base of the right lung but otherwise the chest was clear.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.18	.18	.16	.13 gm. %
Urinary Sugar	B.V.S.R.	B.G.R.	++	++	B.G.R.

CASE 477.

G.F. aet 24 years, was examined on 23rd April 1940. He felt well and had no complaints. In the previous year or so he had a few boils on his neck. He was of average physique. His teeth were badly decayed. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.16	.12	.11	.11 gm. %
Urinary Sugar	B.V.S.R.	B.S.R.	B.G.R.	B.R.	B.V.S.R.

CASE 478.

W.McF. aet 24 years, was examined on 11th June 1940. He felt fairly well apart from occasional bouts of palpitation, usually associated with indigestion. In January 1936 he had gastric upset, his symptoms being heaviness in the abdomen after food, heartburn and palpitation. He was tall, slim, and of good colour. His pulse rate was 96 per minute and irregular due to frequent extrasystoles.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.16	.12	.11	.11 gm. %
Urinary Sugar	No spec.	B.R.	B.G.R.	B.V.S.R.	B.V.S.R.

CASE 479.

G.C. aet 24 years, was examined on 16th March 1940. He felt well and had no complaints. He had Measles in childhood. His great grandfather had Diabetes. He was tall, thin, and underweight.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.18	.15	.12	.09 gm.%
Urinary Sugar	B.S.R.	+	++	B.S.R.	nil

CASE 480.

M.E. aet 24 years, was examined on 2nd March 1940. He had no complaints apart from nervousness. His appendix was removed some years previously and he had a recent attack of Bronchial catarrh. His father died of Diabetes. He was of slim build and pasty complexion.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.15	.17	.12	.09 gm.%
Urinary Sugar	nil	B.V.S.R.	++	B.R.	nil

CASE 481.

J.L. aet 26 years, was examined on 21st May 1940. He felt well and his weight was increasing. Measles in childhood was his only illness. He was of burly build and good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.17	.18	.17	.11 gm. %
Urinary Sugar	nil	no spec.	B.V.S.R.	+	nil

CASE 482.

T.I. aet 26 years, was examined on 22nd May 1940. He felt well. On direct questioning he said he was probably a little thinner recently. He had a few boils some years before. He was of short stature but healthy looking. There was a papular eruption on his chest.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.17	.16	.12	.08 gm. %
Urinary Sugar	nil	B.V.S.R.	+	B.G.R.	B.V.S.R.

CASE 483.

W.C. aet 26 years, was examined on 15th June 1940. He felt well and had no complaints except that his appetite had been less good for the past week. He had Scarlet Fever when he was 10 years of age. He was well nourished and of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.17	.13	.12	.10 gm. %
Urinary Sugar	nil	B.V.S.R.	B.R.	nil	nil

CASE 484. J.B. aet 26 years, was examined on 22nd December 1939. He felt well and had no complaints. In 1929 he was 2 weeks ill with Pleurisy. In 1937 he had an impetiginous eczema and in 1938 he had a crop of boils. He was of good physique. The back of his neck was scarred as the result of numerous boils.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.18	.15	.10	.08 gm. %
Urinary Sugar	nil	B.V.S.R.	+	B.V.S.R.	nil

CASE 485. P.McG. aet 27 years, was examined on 30th June 1940. He felt well and had no complaints. He had Measles, chickenpox, Tonsillitis and Tonsillectomy in childhood. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.16	.13	.09	.09 gm. %
Urinary Sugar	nil	B.G.R.	+	B.R.	nil

CASE 486. T.B. aet 27 years, was examined on 4th July 1940. He felt well and had no complaints but said he always drank a lot of water. He had Measles, Pneumonia and Scarlet Fever in childhood.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.17	.12	.09	.08 gm.%
Urinary Sugar	B.R.	B.G.R.	+	B.V.S.R.	nil

CASE 487.

R.R. aet 27 years, was examined on 12th June 1940.

He felt well. On direct questioning he said he had lost a little weight. He had Measles and Tonsillitis in childhood. His father died of Diabetes. He was of good physique and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.18	.15	.11	.08 gm.%
Urinary Sugar	nil	B.G.R.	+	B.R.	B.V.S.R.

CASE 488.

N.P. aet 27 years, was examined on 21st June 1940.

He felt well but on questioning said he drank a lot of water. He thought his mother had mild Diabetes.

She died of carcinoma. He was smallish and of average physique. There was acne marking on his back.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.14	.17	.11	.12 gm.%
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	B.V.S.R.	nil

CASE 489.

P.M. aet 27 years, was examined on 23rd May 1940.

He felt well and had no complaints. He had Cervical

Adenitis when he was 11 years of age. He was of average nutrition. There was the scar of an old abscess on the left side of his neck and a scanty papular eruption on his chin.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.17	.16	.14	.12 gm. %
Urinary Sugar	B.S.R.	B.G.R.	++	B.G.R.	B.V.S.R.

CASE 490.

G.M. aet 27 years, was examined on 30th June 1940. He stated that he felt well and his weight was increasing. On direct questioning he said he suffered from thirst and admitted to breathlessness on exertion. At 19 years of age he had double Pneumonia. When 14 he had Rheumatic Fever and since then he was subject to pains in his wrists and shoulders. He was of average build and nutrition. His face was diffusely flushed and he looked anxious. The pulse rate was 110 per minute and the blood pressure $154/90$. The heart sounds were pure and of good quality.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.15	.17	.14	.11	.10 gm. %
Urinary Sugar	No spec.	B.S.R.	++	++	B.G.R.

CASE 491.

W.C. aet 27 years, was examined on 25th September 1940. He felt well and had no complaints. He had Measles, German Measles and Scarlet Fever in childhood and Dermatitis at 18 years of age. He was of slim build but healthy looking. There was slight interdigital pompholyx.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.13	.11	.10 gm. %
Urinary Sugar	B.V.S.R.	+	+	B.R.	B.G.R.

CASE 492.

T.J. aet 28 years, was examined on 10th July 1940. He complained of an occasional morning cough and spit and of slight tightness in his chest when he rose in the mornings. He was subject to Asthma between the ages of 15 and 21 years of age, after when it became very slight and his last attack was in 1938. When 14 years of age he had an operation for squint of the right eye. He was smallish and of good physique. His chest tended to be barrel shaped and its movement was diminished. The percussion note was hyperresonant throughout, the respiratory murmur was harsh with prolongation of expiration and rhonchi were heard throughout the chest. The area of cardiac dullness was diminished and the heart sounds were soft.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.15	.16	.14	.11 gm. %
Urinary Sugar	nil	nil	B.R.	B.G.R.	nil

CASE 493.

R.R. aet 28 years, was examined on 4th July 1940.

He felt well and had no complaints. Measles in childhood was his only illness. He was of average physique and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.18	.14	.14	.10 gm. %
Urinary Sugar	B.V.S.R.	B.S.R.	++	++	B.R.

CASE 494.

W.L. aet 28 years, was examined on 19th July 1940.

He felt well and had no complaints. He was smallish but of average physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.18	.17	.13	.11 gm. %
Urinary Sugar	nil	+	++	++	B.V.S.R.

CASE 495.

J. McF. aet 28 years, was examined on 8th June 1940.

He complained of palpitation when he ran or was excited for 10 years. He had dyspnoea on exertion. He had Rheumatic Fever when 17 and again when 19 years of age. He was of heavy build and inclined to obesity.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.18	.16	.10	.10 gm. %
Urinary Sugar	nil	B.S.R.	++	B.R.	nil

CASE 496.

H.McG. aet 28 years, was examined on 12th July 1940. He felt well and had no complaints. He was of squat build and good physique. His teeth were dirty and decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.16	.15	.12	.10 gm. %
Urinary Sugar	nil	B.S.R.	+	B.G.R.	B.V.S.R.

CASE 497.

T.T. aet 28 years, was examined on 18th July 1940. He felt well and had no complaints. He had Concussion in childhood. He was of average physique and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.16	.14	.14	.13 gm. %
Urinary Sugar	nil	B.R.	++	B.R.	B.S.R.

CASE 498.

W.S. aet 28 years, was examined on 3rd July 1940. He felt well. On direct questioning he said he was

often thirsty at work as a carriage cleaner and passed more urine than was normal. When 20 years of age he had Pneumonia. He was tall and thin featured. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.15	.16	.14	.13 gm. %
Urinary Sugar	nil	B.R.	+	+	B.R.

CASE 499.

E.R. aet 28 years, was examined on 13th July 1940. He felt well and had no complaints. Measles in childhood was his only illness. He was smallish, sturdy and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.12	.16	.13	.12 gm. %
Urinary Sugar	nil	B.R.	++	++	B.S.R.

CASE 500.

W.B. aet 28 years, was examined on 19th November 1940. He felt well but became short of breath readily on exertion. He had Measles and Whooping Cough in childhood and Bronchitis in his later school days. He was smallish, short necked and had a malar cyanotic flush. His teeth were decayed. His chest looked emphysematous but no other abnormality was detected. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.16	.14	.12	.12 gm. %
Urinary Sugar	B.R.	B.R.	+	B.G.R.	B.S.R.

CASE 501.

W.B. aet 28 years, was examined on 8th August 1940.

He stated that he felt well but his heart palpitated when he was excited. He sometimes had a winter cough.

He had Diphtheria and Tonsillectomy when he was 15 years of age and one boil 2 years before. One brother had symptomless glycosuria. He was of average

nutrition. His spine showed a moderately severe kyphosis in the dorsal region. The pulse rate was 120 per minute with some extrasystoles. There was some fine tremor of the outstretched hands.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.16	.11	.10	.08 gm. %
Urinary Sugar	B.R.	++	++	B.R.	B.S.R.

CASE 502.

J.B. aet 28 years, was examined on 18th January 1940.

He felt well and his weight was increasing. He was tall and sparely built. He had slight dental caries.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.17	.14	.12	.11 gm. %
Urinary Sugar	B.R.	B.R.	B.G.R.	B.R.	B.R.

CASE 503.

P.F. aet 28 years, was examined on 28th June 1940.

He felt well but on direct questioning he said he

had lost a little weight in the past year, he was

troubled with thirst, and had slight polyuria.

He had Measles, Mumps and Whooping Cough in child-

hood. He had had successive crops of boils for

some considerable time. He was of small build.

His hair was sparse. There was some dental decay.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.15	.16	.13	.08 gm.%
Urinary Sugar	B.R.	B.R.	B.G.R.	B.G.R.	B.V.S.R.

CASE 504.

J.D. aet 29 years, was examined on 30th June 1940.

He felt well. He stated that he drank a lot of

water. He was of slim build. His teeth were carious.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.17	.14	.13	.09 gm.%
Urinary Sugar	B.R.	+	++	++	B.V.S.R.

CASE 505.

R.M. aet 29 years, was examined on 9th July 1940.

He felt well and had no complaints. He had an

attack of Tonsillitis in 1935. He was of small to

medium height and of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.15	.16	.12	.10 gm.%
Urinary Sugar	B.V.S.R.	++	++	++	++

CASE 506.

R.M. aet 30 years, was examined on 31st May 1940.

He felt well and had no complaints. He was of short broad build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.14	.16	.13	.08 gm.%
Urinary Sugar	nil	B.R.	B.G.R.	B.V.S.R.	nil

CASE 507.

S.H. aet 30 years, was examined on 4th May 1940.

He felt well and had no complaints. Measles and Scarlet Fever in childhood were his only illnesses.

He was well built and of good nutrition. The pulse rate was 106 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.14	.13	.10 gm.%
Urinary Sugar	B.V.S.R.	B.V.S.R.	B.G.R.	B.V.S.R.	nil

CASE 508.

J.McB. aet 30 years, was examined on 14th July 1940.

He felt well and had no complaints. In the

investigation of an attack of Influenza his Doctor had noted glycosuria 2 months before. In 1934 he had a crop of boils. He was of stocky build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.16	.18	.08	.08 gm. %
Urinary Sugar	nil	B.V.S.R.	B.G.R.	B.V.S.R.	nil

CASE 509.

R.B. aet 30 years, was examined on 8th May 1940. He felt well and had no complaints. Measles in childhood was his only illness. He was of average build and nutrition. Several of his teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.14	.16	.12	.10 gm. %
Urinary Sugar	B.R.	B.G.R.	†	B.R.	B.V.S.R.

CASE 510.

F.C. aet 31 years, was examined on 18th September 1940. For 2 years he had been subject to attacks of epigastric pain coming on about an hour after food. The pain was associated with hunger. He was troubled with nausea, flatulence and sour mouthfuls. On direct questioning he said he had probably lost a little weight and that thirst had always been

troublesome. In school days he had an abscess on his neck. When 15 years of age he had a fracture of the right shoulder and when this was healing he developed an abscess in the right axilla.

4 years previously he had a boil above his right ear and several years before he had an itching eruption of his wrists and buttocks. He was of average build and nutrition. The Thyroid gland was enlarged and of soft consistence. There was slight tenderness above and to right of the umbilicus.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.17	.14	.09 gm. %
Urinary Sugar	nil	B.R.	++	+	B.V.S.R.

CASE 511.

R.M. aet 31 years, was examined on 22nd January 1941. He felt well and had no complaints. In 1927 he was in hospital with a bruised leg resulting from an accident and at that time glycosuria was discovered. In 1930 glycosuria was again discovered when he had an attack of Influenza and in 1931 he had a glucose tolerance test done when he was told the glycosuria was of no significance. He was of spare build and somewhat facile expression.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.14	.14	.13 gm.%
Urinary Sugar	B.S.R.	B.G.R.	++	++	B.R.

CASE 512.

H.W. aet 31 years, was examined on 16th August 1940. He complained of being easily tired. He said he had a "jaggy" pain in the lower abdomen about twice a week and coming on after food. On direct questioning he said he passed more than a normal amount of urine. He had eczema from childhood until 8 years before. He was tall and well nourished. He was introspective and somewhat diffident. There was slight tenderness in the mid hypogastrium.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.17	.15	.12	.08 gm.%
Urinary Sugar	B.V.S.R.	B.R.	B.G.R.	B.R.	B.R.

CASE 513.

G.T.C. aet 31 years, was examined on 14th August 1940. He felt well. On direct questioning he said he had lost some weight recently. For the previous 2 weeks he had been troubled with nausea and he ascribed this to the odour of red lead which he worked with. In 1939 he fell 35 feet and fractured his left femur,

left elbow, left middle finger and right clavicle and pelvis. Also in 1939 he had right sided Pleurisy. One month before he had a boil on the back of his neck. He was of average build and nutrition. His teeth were dirty and decayed. There was thickening of the right clavicle, the left elbow fell just short of full extension and there was slight irregularity of the left pubis. The left middle finger was much deformed and "useless".

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.16	.14	.11	.09 gm. %
Urinary Sugar	B.V.S.R.	B.R.	B.G.R.	B.S.R.	B.V.S.R.

CASE 514.

G.H. aet 31 years, was examined on 25th June 1940.

He felt well and had no complaints. He was smallish and of slim build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	
Blood Sugar	.12	.18	.14	.08	gm. %
Urinary Sugar	nil	B.R.	B.G.R.	nil	

CASE 515.

L.M. aet 31 years, was examined on 30th June 1940.

He felt well and had no complaints. When 15 years of age he had a Gastric Ulcer and haematemesis but had had no gastric disturbance since.

In 1920 his appendix was removed. He was tall and thin.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.18	.14	.12	.10 gm. %
Urinary Sugar	nil	B.S.R.	+	B.V.S.R.	nil

CASE 516. D.M.T. aet 32 years, was examined on 22nd August 1940. He complained of feeling easily tired in the past year. He had Measles and Bronchitis in childhood and Influenza on 3 occasions in later years. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.17	.08	.09 gm. %
Urinary Sugar	nil	B.V.S.R.	+	B.G.R.	nil

CASE 517. W.McG. aet 32 years, was examined on 16th August 1940. He complained of tiredness for 2 months. On direct questioning he said he had lost some weight, and passed more than a normal amount of urine. He had one boil every week or so for the previous 6 months. His appendix was removed in 1928. He was of average build and nutrition. He had one or two carious teeth. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.16	.14	.12	.12 gm. %
Urinary Sugar	nil	B.V.S.R.	†	No spec.	nil

CASE 518.

C.D. aet 33 years, was examined on 1st August 1940. He felt fairly well but complained of stomach upset for the past 3 weeks. He had vomited twice after breakfast and had some nausea. He gave a history of occasional gastric upset with vomiting in the past few years. He was of average build and nutrition. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.16	.14	.13	.11 gm. %
Urinary Sugar	nil	B.R.	†	nil	nil

CASE 519.

H.P. aet 33 years, was examined on 25th September 1940. He felt well but stated that he drank a lot of water. At 13 years of age he had left sided Pleurisy. He had a Quinsy in 1939. He was smallish, thin featured and rather grey looking. His throat was raw looking and the left tonsil enlarged. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.13	.16	.13	.10 gm. %
Urinary Sugar	B.V.S.R.	†	††	††	B.V.S.R.

CASE 520.

J.W. aet 33 years, was examined on 16th August 1940. He felt well and his weight was increasing. He had Measles and Whooping Cough in childhood. He was of stout build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.17	.18	.14	.11 gm. %
Urinary Sugar	B.V.S.R.	++	++	No spec.	++

CASE 521.

J.H. aet 33 years, was examined on 3rd August 1940. He complained of feeling rather weak at times and of having slight dyspnoea with exertion. He said, on direct questioning, that he drank a fair amount of water. He had chorea in his school days. He was well nourished and of average physique. He was a nail biter. An occasional jerky movement of the face and trunk was seen. The pulse rate was 108 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.17	.15	.13	.11 gm. %
Urinary Sugar	B.R.	B.G.R.	++	++	+

CASE 522.

J.B. aet 33 years, was examined on 28th August 1940. He felt well and had no complaints. He was of the thin, wiry type.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.18	.15	.12	.09 gm. %
Urinary Sugar	nil	B.V.S.R.	B.R.	nil	nil

CASE 523.

A.B. aet 34 years, was examined on 25th September 1940. He felt well and had no complaints. He had a few boils when he was about 18 years of age. He was of spare build and his face was slightly blue. His eyes were rather prominent.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.17	.18	.15	.12 gm. %
Urinary Sugar	B.V.S.R.	++	No spec.	++	++

CASE 524.

J. McE. aet 35 years, was examined on 6th December 1940. He felt well and had no complaints. His father died of Diabetes at 47 years of age and his brother at 19 years of age. He was small and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.18	.18	.14	.10 gm. %
Urinary Sugar	nil	B.S.R.	B.G.R.	B.S.R.	nil

CASE 525.

A.B. aet 42 years, was examined on 19th June 1940.

For some time he had been troubled with epigastric

discomfort associated with flatulence and eased by taking food. He had slight frequency of micturition. He had Pneumonia in 1915. He was of heavy build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.13	.11	.09 gm. %
Urinary Sugar	nil	B.G.R.	+	B.R.	nil

CASE 526.

J. McM. aet 42 years, was examined on 24th March 1940. He felt well and had no complaints. He had Malaria when in Egypt during the last war. He was smallish and of broad build. He looked rather blue. The urine contained a cloud of albumin and abundant pus.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.17	.11	.10	.10 gm. %
Urinary Sugar	nil	B.R.	+	B.G.R.	B.V.S.R.

CASE 527.

J.D. aet 45 years, was examined on 11th April 1940. He felt well but on direct questioning said he had lost $1\frac{1}{2}$ stones in weight in the past year. He was grey haired, thin featured and of average build.

His teeth were deficient and decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
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Blood Sugar	.08	.14	.16	.15	.12 gm. %
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	B.V.S.R.	nil

CASE 528.

P.Q. aet 49 years, was examined on 3rd. May 1940.

He felt well and had no complaints. He was "chesty" as a child. When 3 years of age his left shoulder was scalded. In 1938 he had an operation for antral disease and immediately after that he had an attack of Diphtheria. For 3 or 4 years he had a leaking cyst at the foot of his spine. He was of average build and physique. There was a small thickened area at the upper part of the division of the nates with a pin hole opening - post anal dimple.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.18	.18	.15	.11 gm. %
Urinary Sugar	nil	B.G.R.	+	B.V.S.R.	nil

340. 18 years, was examined on 30th September
 He felt well. On direct questioning he said he had
 a diet of **water** and had occasional nocturia,
leucocytosis in childhood and had had **furuncles**
 in the past fortnight. He was of thin build and
 healthy looking. His teeth were decayed. There
 were furuncles on both forearms and on right chest.
 The Glucose Tolerance Test gave the following results:

	Fasting	½ hr.	1 hr.	1½ hrs.
Glucose	107	115	118	115
Urea Sugar	nil	nil	B.V.S.B.	nil

DEFECT or RENAL

341. 18 years, was examined on 30th September
 He felt **GLYCOURIA** complaints. He had nocturia
 and **leucocytosis** in childhood. He was of good build
 and healthy looking.

The Glucose Tolerance Test gave the following results:

	Fasting	½ hr.	1 hr.	1½ hrs.
Glucose	107	115	118	115
Urea Sugar	nil	nil	B.V.S.B.	nil

342. 18 years, was examined on 31st August 1911
 He felt well and had no complaints. When 10 years
 of age he had **leucocytosis** and when 10 years of age
 he had **leucocytosis**. He was of average build.

CASE 529. H. McG. aet 18 years, was examined on 30th October 1940. He felt well. On direct questioning he said he drank quite a lot of water and had occasional nocturia. He had Bronchitis in childhood and had had furunculosis in the past fortnight. He was of thin build and healthy looking. His teeth were decayed. There were furuncles on both forearms and on right chest. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.07	.16	.16	.12	.10 gm.%
Urinary Sugar	nil	nil	B.S.R.	nil	nil

CASE 530. G.J.B. aet 18 years, was examined on 30th September 1940. He felt well and had no complaints. He had Chickenpox and Tonsillectomy in childhood. He was of good build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.07	.15	.12	.09	.07 gm%
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 531. A.S.A. aet 18 years, was examined on 31st August 1940. He felt well and had no complaints. When 7 years of age he had Diphtheria and when 10 years of age he had his appendix removed. He was of average build

and nutrition. There was a fading acneiform eruption on his face.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.12	.12	.12	.11 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 532.

J.L. aet 18 years, was examined on 1st November 1940. He complained of not feeling well for a year, since he had had a "chill" in his stomach associated with diarrhoea and amorexia. On direct questioning he said he had lost about one stone in weight in the past year and that he had an itching rash on his back for about the same time. He had Measles and Pneumonia in childhood. His tonsils were removed when he was about 7 years of age. He looked hyperthyroid and his thyroid gland was full. He was of small thin build. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.16	.18	.14	.11	.10 gm. %
Urinary Sugar	B.S.R.	B.R.	B.G.R.	B.V.S.R.	nil

CASE 533.

P.C. aet 19 years, was examined on 21st December 1939. He felt well and had no complaints. He had Chickenpox, Measles and Mumps in childhood. He was of spare build

and rather pale complexion. The pulse rate was 104 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.17	.16	.12	.11 gm. %
Urinary Sugar	nil	nil	B.G.R.	B.V.S.R.	nil

CASE 534.

J.C. aet 19 years, was examined on 25th July 1940. He felt well and had no complaints. He had boils about 6 months before. He was tall and of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.15	.14	.10	.08 gm. %
Urinary Sugar	nil	nil	B.S.R.	nil	nil

CASE 535.

W.P. aet 19 years, was examined on 24th February 1940. He felt well and had no complaints. He had Measles, Scarlet Fever and Whooping Cough in childhood. He was tall and well nourished.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.17	.16	.12 gm. %
Urinary Sugar	B.V.S.R.	B.V.S.R.	B.R.	B.S.R.	nil

CASE 536. F.C. aet 19 years, was examined on 2nd October 1940.

He felt well and had no complaints. He had his appendix removed in 1928. He was small, thin and wiry looking. His tonsils were slightly enlarged.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.07	.13	.14	.13	.11 gm.%
Urinary Sugar	nil	nil	B.R.	B.R.	nil

CASE 537. J.F. aet 20 years, was examined on 1st October 1941.

He felt well and had no complaints. He had Scarlet Fever and Measles in childhood and had had boils on his neck about a year before. He was of average build and nutrition, nervous and apprehensive looking. His deep reflexes were exaggerated.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.15	.17	.12	.12	.10 gm.%
Urinary Sugar	B.G.R.	B.G.R.	B.G.R.	B.R.	nil

CASE 538. R.M. aet 20 years, was examined on 4th May 1940.

He felt well and had no complaints. He had Measles, Chickenpox and a slight attack of Rheumatism in childhood. He was well built and of good nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.14	.10	.11	.10 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 539. D.H. aet 20 years, was examined on 9th April 1940.

He felt well and had no complaints. Measles in childhood was his only illness. He had Tonsillectomy at 8 years of age. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.14	.13	.10	.10 gm. %
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	nil	nil

CASE 540. J.C. aet 20 years, was examined on 5th March 1940.

He felt well and had no complaints. He had Measles and Mumps in childhood. A few years previously he had boils on his back and about 2 years previously he had some generallised pruritus. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.13	.14	.13	.08 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 541. G. McM. aet 20 years, was examined on 30th October 1939.

He felt well and had no complaints. He had Diphtheria in childhood. He was tall and of medium physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.16	.14	.13	.10 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 542. J.C. aet 20 years, was examined on 3rd October 1940.

He felt well and had no complaints. He had had an occasional sore throat and at 17 years of age had several boils. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.13	.13	.11	.10 gm. %
Urinary Sugar	nil	nil	B.R.	B.V.S.R.	nil

CASE 543. J.R. aet 20 years, was examined on 7th November 1939.

He felt well. On direct questioning he said he was thinner in the past 6 months. He had Mumps in childhood and in November 1938 he was off work for 5 weeks with rheumatism in his feet. He was well built. Several of his teeth were carious.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.14	.10	.10 gm. %
Urinary Sugar	nil	B.R.	B.R.	B.R.	B.R.

CASE 544.

J.F. aet 20 years, was examined on 16th November 1939. He felt well and had no complaints. He had Whooping Cough, ringworm and Tonsillectomy in childhood. When 14 years of age he had several small boils on his neck. He was tall and of average nutrition. He looked anxious and his face was diffusely flushed. The isthmus of his Thyroid gland was just palpable. Several of his teeth were carious.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.16	.14	.13	.10 gm. %
Urinary Sugar	nil	No spec.	B.V.S.R.	B.V.S.R.	No spec.

CASE 545.

J.D. aet 20 years, was examined on 14th January 1940. He felt well and had no complaints. Measles and Scarlet Fever in childhood were his only illnesses. He was of average build and nutrition. His teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.17	.16	.11	.08 gm. %
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	B.V.S.R.	nil

CASE 546.

P.K. aet 20 years, was examined on 14th December 1940. He felt well and had no complaints. He had no illnesses apart from a forehead wound in his early years, resulting from a fall. He was of average build and nutrition. His tonsils were large and his fauces congested.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.13	.12	.10	.08 gm.%
Urinary Sugar	nil	nil	B.R.	B.V.S.R.	nil

CASE 547.

W. McC. aet 20 years, was examined on 1st November 1939. He felt well, his only complaint being of chronic constipation. He had Chickenpox, Measles, Mumps and Whooping Cough in childhood. In 1937 he was in hospital for 3 months with melena - X-ray examination at that time was negative. He was of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.16	.14	.13	.10 gm.%
Urinary Sugar	nil	nil	B.R.	B.S.R.	nil

CASE 548.

J.S. aet 20 years, was examined on 15th August 1940. He felt well and had no complaints. He had Measles in early childhood and boils as a schoolboy. He was

sparely built and slightly nervous. His hands were cold and red and showed fine tremor.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.15	.13	.10	.09 gm.%
Urinary Sugar	nil	No spec.	B.R.	nil	nil

CASE 549.

T.W. aet 20 years, was examined on 28th December 1939. He felt well and had no complaints. Measles in childhood was his only illness. He was of average build and nutrition and had a few acneiform pustules on his forehead. There were several slightly enlarged lymphatic glands in each axilla.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.15	.14	.12	.09 gm.%
Urinary Sugar	No spec.	B.V.S.R.	nil	nil	nil

CASE 550.

C.McI. aet 20 years, was examined on 30th December 1939. He felt well and had no complaints. Measles and Chickenpox in childhood were his only complaints. He was tall and lanky. He had a pale complexion and facial acne. The teeth were carious and he had nasal catarrh. His hands were red and cold. The right chest was more prominent and moved better than the left.

The respiratory murmur was harsh at the apices of both lungs and was cog wheel at the left. Medium rales were heard at the left base.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.18	.14	.13	.10 gm.%
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 551.

W.B. aet 20 years, was examined on 18th November 1939. He felt well and had no complaints. He was of small build. There was some tremor of the outstretched hands.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.18	.18	.15	.11 gm.%
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 552.

W.C. aet 20 years, was examined on 28th October 1939. He felt well and had no complaints. Measles and Scarlet Fever in childhood were his only illnesses. He was of good physique and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.14	.16	.09	.10 gm.%
Urinary Sugar	nil	nil	+	B.S.R.	nil

CASE 553.

G.L. aet 21 years, was examined on 25th May 1940. He felt well but on direct questioning he admitted to losing about 10 lbs. in weight in the previous 8 months and said he had thirst for the previous 2 months. He had left sided pleurisy when 13 years of age. In schooldays he had running ears. One year before he had 2 boils on his right arm. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.14	.13	.09	.10 gm.%
Urinary Sugar	nil	nil	B.S.R.	B.S.R.	nil

CASE 554.

P.G. aet 21 years, was examined on 11th November 1939. He felt well and had no complaints. He had Cervical Adenitis when 6 years of age. He was thin but healthy looking. He had a few decayed teeth. There was the scar of old Cervical adenitis on left side of his neck. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.08	.10	.08 gm.%
Urinary Sugar	nil	B.G.R.	B.G.R.	B.S.R.	B.S.R.

CASE 555.

J.H. aet 21 years, was examined on 7th December 1939. He felt well and had no complaints. He had Measles in childhood and between the ages of 5 and 9 years

was "run down" and debilitated. He had some boils on his neck 2 years before. He was well nourished, of good physique and looked somewhat older than his years. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.18	.10	.10 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 556.

J.H. aet 21 years, was examined on 23rd December 1939. He felt well and had no complaints. He had Scarlet Fever, Diphtheria, Measles, Whooping Cough and chicken-pox in childhood. In 1936 his left clavicle was fractured. He was thin featured but of average physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.16	.18	.12	.10 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	B.V.S.R.	nil

CASE 557.

A. McP. aet 21 years, was examined on 19th January 1940. He felt well and had no complaints. His mother died of Diabetes. He was smallish but of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.18	.12	.06	.08 gm. %
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	B.V.S.R.	nil

CASE 558. J.H. aet 21 years, was examined on 12th December 1939. He felt well and had no complaints. He had an attack of Tonsillitis 6 years before. His mother was a diabetic. He was of good physique and nutrition. His tonsils were enlarged.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.18	.10	.10	.10 gm.%
Urinary Sugar	nil	B.R.	B.R.	B.R.	nil

CASE 559. J.S. aet 21 years, was examined on 14th November 1939. He felt well and had no complaints but 6 weeks before he had an attack of epigastric pain, sickness after food and constipation. He was X-rayed and told he had a "fallen stomach". He had been well since. He was of slim build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.17	.13	.12	.10 gm.%
Urinary Sugar	nil	nil	B.G.R.	nil	nil

CASE 560. J.T.W. aet 21 years, was examined on 15th November 1939. He felt well and had no complaints. Chickenpox and Mumps in childhood were his only illnesses. He had a boil on his neck 2 weeks before. He was thin but

healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.18	.14	.13	.11 gm. %
Urinary Sugar	B.V.S.R.	B.V.S.R.	B.G.R.	B.G.R.	B.V.S.R.

CASE 561.

V. McC. aet 22 years, was examined on 26th January 1940. He felt well and had no complaints. Scarlet Fever and Rickets in childhood were his only illnesses. He was smallish but of average physique. Several of his teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.14	.14	.08	.10 gm. %
Urinary Sugar	nil	nil	B.R.	nil	nil

CASE 562.

T. T. aet 22 years, was examined on 12th February 1940. He stated that he felt well but had had a cough for 2 weeks. On direct questioning he said he might have lost a little weight recently. He had an attack of Influenza one month before. For some years he had had a running right ear and for about 2 years he had been deaf on this side. He was of small build and below average nutrition. He looked older than his years. Most of his molar teeth were carious. There was an

occasional fine rale heard at the right apex behind but it tended to disappear with deep inspiration.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.14	.13	.11 gm.%
Urinary Sugar	nil	B.S.R.	B.S.R.	B.S.R.	nil

CASE 563.

T.McG. aet 22 years, was examined on 26th January 1940.

He felt well and had no complaints. He had Measles in childhood and appendicectomy when 5 years of age.

He was smallish but of average physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.12	.12	.09	.06 gm.%
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 564.

H. McN. aet 22 years, was examined on 2nd February 1940.

He felt well but on direct questioning said he had probably lost a little weight and that his back had been itchy for a week or so. He had Measles in childhood. In 1938 and again in 1939 he had erysipelas.

He had one boil 12 years before. He was of average build and nutrition and of pasty complexion. He had nasal catarrh. His teeth was slightly defective.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hr.	2 hrs.
Blood Sugar	.11	.14	.14	.11	.09 gm.%
Urinary Sugar	nil	nil	B.S.R.	nil	nil

CASE 565. A.P.M. aet 22 years, was examined on 4th January 1940.

He felt well and had no complaints. Measles and Mumps in childhood were his only illnesses. He had one boil about 2 years before. He was of good build and nutrition. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.18	.15	.12	.09 gm.%
Urinary Sugar	nil	nil	B.V.S.R.	B.V.S.R.	nil

CASE 566. T.McC. aet 22 years, was examined on 7th January 1940.

He felt well and had no complaints. He had Diphtheria in 1932. He was smallish but of good physique. He had a slight internal strabismus in his right eye.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.15	.10	.10 gm.%
Urinary Sugar	B.S.R.	B.S.R.	B.S.R.	B.S.R.	nil

CASE 567. T.W. aet 22 years, was examined on 20th January 1940.

He felt well and had no complaints. He had Scarlet Fever and Tonsillectomy in childhood. In 1937 he had Gastro

enteritis and in 1938 he was "threatened" with Appendicitis. He was tall and of average nutrition. A few small lymphatic glands were palpable in the axillae.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.17	.16	.13	.11 gm. %
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	B.V.S.R.	nil

CASE 568.

J. McN. aet 22 years, was examined on 6th January 1940. He felt well and had no complaints. One aunt had Diabetes. He was of good physique. His teeth were badly decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.16	.15	.11	.10 gm. %
Urinary Sugar	nil	B.R.	B.V.S.R.	B.V.S.R.	nil.

CASE 569.

J. McA. aet 22 years, was examined on 21st January 1940. He felt well and had no complaints. He had Scarlet Fever, Measles and Tonsillectomy in childhood. In 1938 he had a compound fracture of his right forearm. His build and nutrition were satisfactory. At the site of his old fracture, there was a large bony projection on the lower right forearm. Supination

of the right forearm was limited.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.18	.15	.13	.10 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 570.

H. McA. aet 22 years, was examined on 20th October 1939.

He felt well and had no complaints. He had Scarlet Fever in childhood. In February and March 1939 he had colitis. He was tall and thin and had a few carious teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.14	.15	.09	.08 gm. %
Urinary Sugar	nil	nil	+	B.R.	B.V.S.R.

CASE 571.

R.S. aet 22 years, was examined on 2nd December 1939.

He felt well and had no complaints. He had Measles and Mumps in childhood. He was tall and of good physique. He had one carious molar.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.17	.15	.11 gm. %
Urinary Sugar	nil	nil	B.R.	B.V.S.R.	nil

CASE 572. M.P. aet 23 years, was examined on 24th September 1940.

He felt well and had no complaints. Measles and Mumps in childhood were his only illnesses. His tonsils were removed when he was 7 years of age. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.17	.18	.12	.09 gm.%
Urinary Sugar	nil	nil	nil	B.V.S.R.	nil

CASE 573. J.D. aet 23 years, was examined on 12th March 1940.

He felt well and had no complaints. He was of average build and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.18	.14	-	.13 gm.%
Urinary Sugar	†	†	B.R.	†	B.G.R.

CASE 574. N.M. aet 23 years, was examined on 20th March 1940.

He felt well. On direct questioning he said he was probably a little thinner. Measles in childhood was his only illness. He had boils on his neck when 16 years of age. He was of heavy build and had some decay of his teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.18	.14	.13	.09 gm.%
Urinary Sugar	B.V.S.R.	B.V.S.R.	B.V.S.R.	B.V.S.R.	B.V.S.R.

CASE 575.

W.H. aet 23 years, was examined on 15th June 1940.

He felt well and had no complaints. When 12 years of age he had an abscess over the sternum. In 1936 he had his appendix removed and in 1937 he had several boils. He was of average build and nutrition.

There was a scar over the Xyphisternum where an abscess had been incised.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.14	.08	.08 gm.%
Urinary Sugar	nil	nil	B.G.R.	B.V.S.R.	nil

CASE 576.

R.T. aet 23 years, was examined on 9th March 1940.

He felt well and had no complaints. He had Scarlet Fever, Measles, Whooping Cough and Chickenpox in childhood. His maternal grandmother had Diabetes and a cousin had glycosuria. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.14	.13	.09 gm.%
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	nil	nil

CASE 577.

W.R.L. aet 23 years, was examined on 15th March 1940. He felt well and had no complaints. He was of average build and nutrition. The Tonsils were enlarged.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.12	.17	.14	.12 gm. %
Urinary Sugar	nil	nil	B.R.	nil	nil

CASE 578.

A.W. aet 23 years, was examined on 13th April 1940. He felt well and had no complaints. He had Bronchitis in childhood. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.17	.12	.11	.10 gm. %
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	nil	nil

CASE 579.

W.K. aet 23 years, was examined on 9th April 1940. He felt well and his weight was increasing. Chickenpox and Scarlet Fever in childhood were his only illnesses. He was of small build but average nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.18	.12	.10	.08 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 580.

J.S. aet 23 years, was examined on 3rd February 1940. He felt well and had no complaints. He had Diphtheria in childhood. His tonsils were removed when he was very young. About 14 years of age he had several boils on his neck. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.18	.15	.10	.08 gm.%
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 581.

H.B. aet 24 years, was examined on 13th July 1940. He felt well and had no complaints. In childhood he had Measles, Whooping Cough and Mumps. In 1938 he had a mild attack of Dysentery. In November 1939 he had a retrocaecal abscess drained and his appendix removed. He had post operative thrombosis of his left leg and after that Bronchitis. He was of smallish build but average nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.14	.12	.12	.12 gm.%
Urinary Sugar	B.V.S.R.	B.V.S.R.	B.V.S.R.	nil	nil

CASE 582.

J.C. aet 24 years, was examined on 9th April 1940.

He felt well and had no complaints. Pneumonia in childhood was his only illness. He was thin featured, of average physique and dusky complexion. Several of his teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.15	.13	.10 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	B.V.S.R.	B.V.S.R.

CASE 583.

F.G. aet 24 years, was examined on 23rd June 1940.

In February 1940 he was buried in sand while at work and since then he was subject to headaches and giddy turns. He was well nourished and of good colour.

A few of his teeth were carious.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.11	.16	.11	.10 gm. %
Urinary Sugar	B.R.	B.R.	† †	B.G.R.	nil

CASE 584.

D.C. aet 24 years, was examined on 18th June 1940.

He felt well and had no complaints. Whooping Cough in childhood was his only illness. He had a few boils when about 16 years of age. His maternal grandmother had Diabetes. He was of good physique and well nourished. Some of his teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.15	.14	.10	.10 gm.%
Urinary Sugar	nil	nil	B.R.	nil	nil

CASE 585.

W.W. aet 24 years, was examined on 12th July 1940.

He felt well and had no complaints. He was thin featured, bespectacled, and below average physique.

His teeth were badly decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.17	.12	.12 gm.%
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 586.

R.M. aet 24 years, was examined on 2nd March 1940.

He felt well. On direct questioning he said he had occasional nocturia. He had Measles, Mumps, Whooping Cough and Pneumonia in childhood. He was tall, of good physique and well nourished.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.15	.14	.13	.11 gm.%
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	nil	nil

CASE 587.

J.Y. aet 24 years, was examined on 4th May 1940.

He felt well and had no complaints. He had Measles, Mumps, Chickenpox and Tonsillectomy in childhood. When 5 years of age he had dry Pleurisy and when 12 years of age he had Rheumatic Fever. He was tall and had a long face with a prominent chin. His hands were of normal size. He had a hallux rigidus of the left foot and acne vulgaris of his back. Many of his teeth were carious.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.12	.15	.12	.11 gm. %
Urinary Sugar	nil	nil	B.G.R.	B.S.R.	nil

CASE 588.

J.L. aet 24 years, was examined on 26th February 1940. He felt well and had no complaints. Measles in childhood was his only illness. 2 years before he had several boils on his neck. He was well nourished and of good physique. He was perspiring profusely in the axillae. Crackling rales were heard at both lung apices. X-ray examination of chest suggested **bronchiectasis** at the right lung base.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.18	.12	.11 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 589.

H.C. aet 24 years, was examined on 8th March 1940.

He felt well and had no complaints. He was tall and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.18	.12	.09	.09 gm. %
Urinary Sugar	nil	+	+	B.V.S.R.	nil

CASE 590.

W.C. aet 24 years, was examined on 13th January 1940.

He felt well and had no complaints. Measles and Mumps in childhood were his only illnesses. He was of good physique and bespectacled. His pulse rate was 100 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.17	.13	.09	.09 gm. %
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	B.V.S.R.	nil

CASE 591.

R.G. aet 24 years, was examined on 9th March 1940.

He felt well and had no complaints. He had a boil on his neck at the time of examination but was not subject to boils. He had croup when 2 years of age. He was of average build and nutrition and had an active boil on his neck.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.13	.12	.13	.11 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	B.V.S.R.	B.V.S.R.

CASE 592.

J.G. aet 25 years, was examined on 2nd March 1940.

He felt well and had no complaints. He was of average physique and healthy looking. Two of his teeth were carious.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.12	.11	.09 gm. %
Urinary Sugar	nil	B.G.R.	B.R.	B.V.S.R.	nil

CASE 593.

A.S. aet 25 years, was examined on 2nd March 1940.

He felt well and had no complaints. In 1938 he was in a pit accident and had his back injured - he was off work for 9 months because of pain and stiffness in his back. He was of medium height and of spare to medium build. He had acute conjunctivitis of his right eye (it had been present for 3 days). His teeth were badly decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.18	.12	.11	.12 gm. %
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	nil	nil

CASE 594.

M.G. aet 25 years, was examined on 15th June 1940. He felt well and his weight was increasing slightly. He was of burly build and had several decayed teeth. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.14	.18	.10	.08 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 595.

D.R. aet 25 years, was examined on 14th August 1940. He felt well but on direct questioning said he had lost a little weight. He drank a lot of water. Between the ages of 18 and 21 years he had frequent boils for which he received injections. He was of light build. There were scars on the lumbar region of the back due to boils and a few recent papules on his neck. He had a supplementary left nipple.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.16	.12	.10 gm. %
Urinary Sugar	nil	nil	nil	B.V.S.R.	nil

CASE 596.

R.C. aet 26 years, was examined on 3rd June 1940.

He felt well and had no complaints. He was of slim build. The pulse rate was 108 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.17	.18	.12	.09 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	B.V.S.R.	nil

CASE 597.

J.H. aet 26 years, was examined on 21st June 1940. His only complaint was of occasional backache. 5 years before he had an attack of right lumbar pain which radiated into the right testicle. X-ray examination of the urinary tract showed no abnormality. He was of smallish sturdy build. His tonsils were enlarged. The urine contained a very faint trace of albumin, and some calcium oxalate crystals.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.16	.15	.13	.11 gm. %
Urinary Sugar	nil	nil	B.R.	No spec.	nil

CASE 598.

A.F. aet 26 years, was examined on 27th July 1940. He felt well and had no complaints. He had Chickenpox in childhood and was subject to Hay Fever. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.15	.16	.14	.12 gm. %
Urinary Sugar	nil	nil	B.S.R.	B.S.R.	nil

CASE 599.

A.T. aet 26 years, was examined on 14th June 1940. He complained of feeling weak and tired most of the day. On direct questioning he said his weight was decreasing a little. He had Measles in childhood. He was tall, slim and rather pale.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.17	.18	.14	.12 gm. %
Urinary Sugar	B.V.S.R.	B.V.S.R.	+ +	+ +	B.G.R.

CASE 600.

J.R. aet years, was examined on 24th February 1940. He felt well and had no complaints. When 14 years of age he had Pneumonia. He was of average physique and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.18	.14	.12	.10 gm. %
Urinary Sugar	nil	B.G.R.	B.V.S.R.	nil	nil

CASE 601.

J.C. aet 26 years, was examined on 15th May 1940. He felt well. When questioned he said he had lost some weight in the past year. He had been troubled with boils for the past year. His mother had Diabetes and developed a carbuncle on her back of which she died. He was tall and of average physique. He had many carious teeth.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.12	.16	.11	.08 gm. %
Urinary Sugar	B.V.S.R.	nil	B.G.R.	B.V.S.R.	nil

CASE 602.

G.F.M. aet 27 years, was examined on 3rd July 1940. He felt well but had lost a little weight since an operation for left inguinal hernia in February 1940. He had been troubled with boils for the past 4 years. In childhood he had Mumps and Scarlet Fever. In 1938 his right forefinger was amputated for sepsis. He was of small build and well nourished. There was a boil at the angle of his jaw.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.15	.16	.15	.13	.08 gm. %
Urinary Sugar	nil	+	B.G.R.	B.V.S.R.	B.V.S.R.

CASE 603.

J.C. aet 27 years, was examined on 18th May 1940. He felt well. On direct questioning he said he had lost a little weight in the past few months, He had Influenza in January 1940. At 16 years of age he had numerous boils. He was of slim build and pasty complexion.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.13	.13	.10 gm.%
Urinary Sugar	nil	+	+	B.R.	B.V.S.R.

CASE 604.

W.A. aet 27 years, was examined on 8th August 1940.

He felt well and had no complaints. He had Measles, Chickenpox and Pneumonia in childhood and had recurring bilateral otitis media since childhood. He had a few boils on his neck some years previously. He was well nourished and of good physique. He was rather deaf. There was an old healed perforation of the right ear drum and the left was thickened and perforated in the upper quadrant.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.14	.13	.09	.07 gm.%
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	B.V.S.R.	nil

CASE 605.

W.H. aet 27 years, was examined on 15th June 1940.

He felt well and had no complaints. He was of average build and nutrition and looked younger than his years.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.17	.18	.13	.10 gm.%
Urinary Sugar	B.V.S.R.	No spec.	No spec.	B.V.S.R.	nil

CASE 606.

H.A. aet 27 years, was examined on 22nd May 1940.

He felt well and had no complaints. When 11 years of age his right ankle was fractured. He was of slim build but good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.
Blood Sugar	.09	.17	.13	.10 gm.%
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	nil

CASE 607.

S.R. aet 27 years, was examined on 18th May 1940.

He felt well and had no complaints. In 1938 he had a septic throat. He was tall and slim and rather pasty complexioned.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.15	.17	.13	.13	.13 gm.%
Urinary Sugar	nil	B.G.R.	nil	nil	nil

CASE 608.

H.P. aet 27 years, was examined on 30th June 1940.

He felt well and had no complaints. In 1937 he had an attack of Influenza. He was tall and slightly pale complexioned.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.14	.14	.10	.10 gm.%
Urinary Sugar	nil	B.V.S.R.	nil	nil	nil

CASE 609.

J.D. aet 27 years, was examined on 4th July 1940. He felt well and his weight was increasing. In childhood he had an operation for double hernia. 3 months before he had 4 boils. He was sturdy and well built. There was slight caries of his teeth. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.12	.13	.10	.10 gm.%
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 610.

W.C. aet 27 years, was examined on 10th August 1940. He felt well and had no complaints. He was of stout build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.15	.12	.10	.07 gm.%
Urinary Sugar	nil	No spec.	B.R.	nil	nil

CASE 611.

R.D. aet 27 years, was examined on 18th May 1940. He felt well and had no complaints. Measles in childhood was his only illness. He was of good physique and broad chested.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.17	.14	.11	.11 gm.%
Urinary Sugar	B.V.S.R.	B.R.	No spec.	No spec.	nil

CASE 612.

D.B. aet 27 years, was examined on 10th August 1940. For 3 or 4 months he had not been feeling quite well and he dated his symptoms to his beginning to work overtime. He was easily tired, had attacks of palpitation and his appetite was off. He had Measles, Mumps and Scarlet Fever in childhood. When 17 he had Bronchitis and when 22 he had Lobar Pneumonia. He was of average colour and nutrition. His lower teeth were dirty but fairly good. He had an upper denture. The isthmus of his Thyroid gland was just palpable. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.15	.11	.10	.08 gm. %
Urinary Sugar	nil	B.V.S.R.	nil	nil	nil

CASE 613.

G.L. aet 27 years, was examined on 19th June 1940. He felt well and had no complaints. He had an operation for nasal polypi when 17 years of age. He was of average build and nutrition. There was evidence of healed acne of the trunk.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.15	.13	.12	.10 gm. %
Urinary Sugar	nil	nil	B.R.	nil	nil

CASE 614.

T.C. aet 28 years, was examined on 23rd June 1940. He felt well and had no complaints. He was thin and looked pale but his mucous membranes were quite well coloured.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.15	.10	.10	.08 gm. %
Urinary Sugar	B.S.R.	B.G.R.	B.G.R.	B.V.S.R.	nil

CASE 615.

M.McG. aet 28 years, was examined on 18th June 1940. He felt well and had no complaints. He was smallish but healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.18	.12	.10	.09 gm. %
Urinary Sugar	nil	+	B.G.R.	nil	nil

CASE 616.

P.K. aet 28 years, was examined on 4th July 1940. He felt well and had no complaints. Measles in childhood was his only illness. He was of small build but well nourished.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.16	.14	.11 gm. %
Urinary Sugar	nil	nil	B.G.R.	B.S.R.	B.S.R.

CASE 617.

P.H. aet 28 years, was examined on 24th May 1940. He felt well and had no complaints. When 18 years of age he had several boils. He had Diphtheria when he was 22. A brother had glycosuria and was told to avoid excess carbohydrate. His symptoms were very vague. He was well nourished and of average physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.14	.11	.09	.10 gm. %
Urinary Sugar	nil	nil	B.S.R.	nil	nil

CASE 618.

W.G. aet 28 years, was examined on 4th May 1940. He felt well and had no complaints. He had Pneumonia when he was 3 years of age. In 1936 his appendix was removed. He had a crop of boils when he was about 16 years of age. He was of smallish build but good nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.17	.12	.10	.10 gm. %
Urinary Sugar	nil	B.V.S.R.	nil	nil	nil

CASE 619.

D.Y. aet 28 years, was examined on 16th July 1940. He felt well and had no complaints. Measles in

childhood was his only illness. He was tall and of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.14	.11	.11	.10 gm.%
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 620.

M.K. aet 28 years, was examined on 19th April 1940.

He felt well and had no complaints. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.16	.12	.10 gm.%
Urinary Sugar	nil	nil	B.R.	nil	nil

CASE 621.

G.H. aet 28 years, was examined on 21st June 1940.

He felt well and had no complaints. He was of slim build, anxious looking and his eyes were prominent.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.14	.18	.14	.11 gm.%
Urinary Sugar	nil	nil	B.R.	B.S.R.	B.V.S.R.

CASE 622.

M.M. aet 28 years, was examined on 18th June 1940.

He felt well. After direct questioning he gave a

history of frequency of micturition with loss of control of flow which he had had for 6 years, resulting from a football injury. He had his Appendix removed when he was 22 years of age. He was of average physique. His tonsils were rather large. The tip of the penis was eczematous but there was no discharge.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.17	.18	.14	.10 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 623.

W. McK. aet 29 years, was examined on 29th July 1940. He felt well. On direct questioning he said he had lost a little weight. He had Rheumatic Fever in his school days. He was of small build and sun tanned but looked seedy. He was slightly below average physique. The right tonsil was enlarged.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.16	.16	.12	.10 gm. %
Urinary Sugar	B.V.S.R.	B.R.	B.R.	B.V.S.R.	B.V.S.R.

CASE 624.

L.S.O. aet 29 years, was examined on 19th July 1940. He felt well and had no complaints. He was thin

featured and looked pale but the mucous membranes were fairly well coloured. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.15	.13	.11	.12 gm. %
Urinary Sugar	nil	+	+	B.G.R.	B.V.S.R.

CASE 625.

P.S. aet 29 years, was examined on 19th July 1940. He felt well but was troubled with headaches. He had Gastritis in 1932. He was thin featured of square build and healthy looking. His expression was anxious.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.18	.18	.14	.09 gm. %
Urinary Sugar	B.R.	++	++	B.G.R.	B.R.

CASE 626.

J.W. aet 29 years, was examined on 26 July 1940. He felt well and had no complaints. He had Scarlet Fever and Chickenpox in childhood and Lichen Planus in 1937.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.16	.14	.13	.12 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 627.

D.G. aet 29 years, was examined on 5th January 1940. He felt well and had no complaints. He had Measles and Whooping Cough in childhood and an operation for Inguinal Hernia when he was $1\frac{1}{2}$ years of age.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.12	.10	.10 gm.%
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 628.

M. McC. aet 29 years, was examined on 19th January 1940. He felt well but on direct questioning said he had lost some weight. He was smallish but of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.18	.16	.17	.12 gm.%
Urinary Sugar	nil	nil	B.R.	B.V.S.R.	nil

CASE 629.

J.H. aet 29 years, was examined on 15th June 1940. He felt well apart from pain in the left groin and left lower abdomen of 3 months duration. He was always troubled with constipation. On direct questioning he said he had lost a little weight. He was tall, thin and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.18	.12	.10 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	B.V.S.R.	B.V.S.R.

CASE 630.

J.S. aet 29 years, was examined on 22nd June 1940. He felt well and had no complaints. In 1938 he was "run down" and nervous for 6 months. He was of average nutrition and his manner was diffident.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	
Blood Sugar	.11	.14	.16	.11	gm. %
Urinary Sugar	nil	nil	B.R.	B.R.	

CASE 631.

J.W. aet 29 years, was examined on 9th July 1940.

He felt well and had no complaints. He had Scarlet Fever in childhood. In 1936 his appendix was removed and he developed a hernia through the scar for which he had an operation in 1937. He was of good physique. His teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.18	.17	.14	.09 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 632.

J. McG. aet 29 years, was examined on 11th July 1940.

He felt well and had no complaints. He had Measles, Chickenpox and Whooping Cough in childhood. He was of good physique and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2hrs.
Blood Sugar	.09	.18	.18	.12	.10 gm. %
Urinary Sugar	nil	nil	B.R.	nil	nil

CASE 633.

W.W. aet 29 years, was examined on 13th July 1940. He felt well but complained of being always nervous. He had Measles, Whooping Cough and Scarlet Fever in childhood and his right leg was fractured in his school days. In 1937 he had Pneumonia with abscess of the left lung. He was off work 9 months at that time. He was tall and muddy complexioned. The nails were curved and the nail beds slightly thickened. He was nervous and had tremor of the outstretched fingers.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.13	.14	.11	.11 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 634.

W.D. aet 29 years, was examined on the 18th January 1941. He felt well and had no complaints. He had Pleurisy

at 10 years of age. He was slim and anxious looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.17	.12	.09	.10 gm.%
Urinary Sugar	nil	B.R.	B.V.S.R.	nil	nil

CASE 635.

A.G. aet 30 years, was examined on 6th February 1940.

He felt well and had no complaints. Mumps in childhood was his only illness. He was of smallish build and average physique. His eyes were slightly full and there was some fine tremor of the outstretched fingers. The pulse rate was 130 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.14	.13	.08 gm.%
Urinary Sugar	nil	B.R.	B.R.	B.R.	nil

CASE 636.

J. McK. aet 30 years, was examined on 4th July 1940.

He felt well and had no complaints. He had Scarlet Fever in 1930 and an operation for Inguinal Hernia in 1938. He was of good physique and healthy looking. There were some acne marks on his face.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.17	.17	.12 gm.%
Urinary Sugar	B.V.S.R.	nil	++	++	B.G.R.

CASE 637.

J.S. aet 30 years, was examined on 8th July 1940. He felt well but said he had lost a little weight after an operation for Inguinal Hernia one month before. He had Measles in childhood and an operation for right Inguinal Hernia in June 1940. He was of squat build and pasty complexion. Several of his teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.16	.18	.15	.11 gm.%
Urinary Sugar	B.V.S.R.	B.V.S.R.	B.G.R.	B.G.R.	nil

CASE 638.

J.F. aet 30 years, was examined on 17th July 1940. He felt well. On direct questioning he said he drank a fair quantity of water. In childhood he had German Measles, Mumps and Tonsillectomy. He was well nourished and of good physique. He was rather nervous.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.18	.16	.11	.08 gm.%
Urinary Sugar	nil	No spec.	+	B.V.S.R.	B.V.S.R.

CASE 639.

W.C. aet 30 years, was examined on 16th August 1940. He complained of slight heartburn from time to time but stated that he felt well as a rule and that his

weight was increasing. Measles in childhood was his only illness. His mother was a diabetic. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.14	.14	.14	.10 gm. %
Urinary Sugar	No spec.	nil	B.V.S.R.	B.V.S.R.	nil

CASE 640.

J. McD. aet 30 years, was examined on 27th January 1940. He felt well and had no complaints, but he said he had always been a little deaf in his right ear. For 2 or 3 years he had had a left sided Inguinal Hernia for which he wore a truss but it had disappeared for the previous 6 months. He had boils on his neck when he was 16 years of age. He was of small build and average nutrition. There was gross deformity and perforation of the right ear drum. His teeth were dirty and carious.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.14	.14	.10	.09 gm. %
Urinary Sugar	nil	B.V.S.R.	B.V.S.R.	nil	nil

CASE 641.

J.G. aet 30 years, was examined on 3rd July 1940.

For some years he had been subject to bouts of indigestion - sense of collapse associated with an

"empty" feeling in his stomach, flatulence and a sense of fullness after meals. He had Rheumatic Fever at 14 years of age. At 17 years of age he had a "chill in the kidneys" and at 21 years he had Diphtheria. When he was 24 he had Pneumonia and Pleurisy. He had Mumps in childhood. He was thin featured, muscular and of good physique. His tongue was dry and furred. There was slight tenderness over the appendix region. The Test meal gave a normal result.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.18	.12	.08 gm. %
Urinary Sugar	nil	nil	+	+	B.V.S.R.

CASE 642.

M. McD. aet 30 years, was examined on 2nd January 1941. He had been well until one week previously but during the previous week he had had frequent bowel movements (about every $\frac{1}{2}$ hour) flatulence and central abdominal pain. He had Measles and Whooping Cough in childhood and had a nasal operation in 1930 and again in 1935. He was tall and well nourished.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.18	.11	.11	.10 gm. %
Urinary Sugar	B.S.R. No spec.		+	No spec.	+

CASE 643. J.K. aet 31 years, was examined on 27th September 1940. He felt well and had no complaints. He had an operation for appendicitis in 1928 and one for Inguinal Hernia in April 1940. He was tall and prematurely bald. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.17	.18	.18	.10 gm. %
Urinary Sugar	nil	nil	B.R.	B.R.	B.V.S.R.

CASE 644. G.B. aet 31 years, was examined on 14th July 1940. He complained of recurring pain over the right kidney region for about a year and on one occasion he felt the pain radiating to the testis. He had some polyuria. He had had German Measles in childhood but no other illnesses. He was smallish and of good physique. The right kidney was palpable and tender. The urine contained a haze of albumin and abundant pus.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.15	.12	.12	.12 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 645. P. McC. aet 32 years, was examined on 17th April 1940. He felt well and had no complaints. He had an operation for left Inguinal Hernia in 1932. He had injection

treatment for haemorrhoids some years before. About 1938 he had an axillary abscess. He was of small stature and had curved femora. A few of his teeth were carious.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.16	.16	.11	.10 gm. %
Urinary Sugar	nil	B.G.R.	B.G.R.	B.R.	nil

CASE 646.

G.M. aet 32 years, was examined on 27th September 1940. He complained of being easily tired for 3 years and in the previous 3 months he had fainted twice. On direct questioning he admitted to losing a stone in weight, having nocturia and polyuria and being troubled with thirst for 3 years. He had Measles, Whooping Cough, Chickenpox and Tonsillitis in childhood. Between 1929 and 1939 he had numerous boils. A maternal aunt died of Diabetes. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.17	.18	.18	.10 gm. %
Urinary Sugar	nil	nil	B.R.	B.R.	B.R.

CASE 647.

A.E. aet 32 years, was examined on 20th August 1940. He felt well but on direct questioning said he was often

thirsty. He was of slim build and rather pale.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.15	.12	.13	.11 gm.%
Urinary Sugar	nil	+	+	B.S.R.	nil

CASE 648. J.V.G. aet 32 years, was examined on 24th July 1940.

He complained of being easily tired. In childhood he had Measles, Whooping Cough, Scarlet Fever and Diphtheria. His brother was a Diabetic and received insulin. He was of average physique. His mucous membranes were pale but his blood count was normal.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.14	.14	.10	.10 gm.%
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 649. H. McA. aet 32 years, was examined on 23rd July 1940.

He felt well apart from slight indigestion in the previous week. In childhood he had an operation for Appendicitis. He was of average physique. He had a stutter which he said had been present since childhood.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.14	.12	.12	.09 gm.%
Urinary Sugar	nil	nil	+	B.V.S.R.	nil

CASE 650.

J.O. aet 33 years, was examined on 30th August 1940. He felt well and had no complaints. Measles in childhood was his only illness. He was thin featured, of smallish build and medium physique. The heart was enlarged to the left. At the mitral area the first heart sound was sharp and the second sound was accompanied by a short diastolic murmur. At the aortic area and down the sternum a loud blowing diastolic murmur was audible.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.18	.14	.10	.09 gm.%
Urinary Sugar	nil	B.V.S.R.	nil	nil	nil

CASE 651.

E.B. aet 33 years, was examined on 30th August 1940. He complained of being troubled with palpitation since he was 16 years of age. On direct questioning he said he was very thirsty and had skin irritation at night. He had Measles in childhood. When 10 years old he had an operation for Appendicitis and Peritonitis. He was subject to asthma from early childhood till he was 14. He was thin featured and of average physique. His eyes were slightly prominent and both lobes of the Thyroid gland were enlarged and of elastic consistence. The pulse rate was 126 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.18	.16	.10	.09 gm.%
Urinary Sugar	nil	+ +	+ +	B.S.R.	B.V.S.R.

CASE 652.

W.M. aet 33 years, was examined on 30th July 1940.

He complained of weakness of his legs for about 6 years.

In childhood he had Mumps and Ringworm and in 1934 he

was off his work for 16 weeks because of a nervous

breakdown. He was small, slim and anxious looking.

The pulse rate was 110 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.17	.11	.10	.09 gm.%
Urinary Sugar	No spec.	+ +	+ +	B.G.R.	B.S.R.

CASE 653.

J.C. aet 33 years, was examined on 16th January 1940.

He felt well and had no complaints. Scarlet Fever in

childhood was his only illness. He was of average

build and nutrition. His lower teeth were decayed.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.14	.13	.11	.08 gm.%
Urinary Sugar	nil	B.S.R.	B.S.R.	nil	nil

CASE 654.

C.B. aet 34 years, was examined on 28th December 1940. He felt well and his weight was increasing. Pneumonia and Mumps in childhood were his only illnesses. One brother had glycosuria for which he was put on a diet. He was of stout build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.18	.15	.09	.09 gm.%
Urinary Sugar	+	+++	++	++	B.G.R.

CASE 655.

S.D.B. aet 34 years, was examined on 2nd September 1940. He felt well and had no complaints. Measles, Scarlet Fever and Whooping Cough were his only illnesses. In 1936 he had an accident at work when he got a piece of steel in his left eye and was in the Eye Infirmary for 3 weeks. He had 2 small boils on his left arm about 2 months before. He was of burly build and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.17	.13	.08	.09 gm.%
Urinary Sugar	nil	+	+	B.V.S.R.	nil

CASE 656.

J.U. aet 34 years, was examined on 11th October 1940. He complained of dyspepsia since 1938 which took the

form of epigastric pain about 3 hours after food and was relieved by food. He had an occasional perianal abscess. In childhood he had Scarlet Fever and croup. He was smallish but of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.18	.17	.13	.10 gm. %
Urinary Sugar	B.V.S.R.	+	B.R.	B.V.S.R.	nil

CASE 657.

W.C. aet 34 years, was examined on 31st August 1940. He felt well and had no complaints. Measles and Scarlet Fever in childhood were his only illnesses. He was of average build and nutrition. Several of his teeth were carious.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.18	.18	.13	.11 gm. %
Urinary Sugar	nil	B.V.S.R.	nil	nil	nil

CASE 658.

D.J.G. aet 34 years, was examined on 5th August 1940. He felt well. On direct questioning he said he had lost half a stone in weight since beginning a heavier job in October 1939. He drank a fair amount of water and had nocturia once nightly. He had Measles in childhood and chickenpox when 27 years of age. He

was tall and of good physique. His teeth were very septic.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.16	.14	.12	.11 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 659. T.P.B. aet 34 years, was examined on 28th June 1940. He felt well and had no complaints. He was tall and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.18	.16	.14	.10 gm. %
Urinary Sugar	nil	nil	B.S.R.	B.V.S.R.	nil

CASE 660. W.P. aet 35 years, was examined on 27th December 1940. He had noticed a lack of energy for about 9 months. On direct questioning he said he had slight thirst. Glycosuria had been discovered 3 years previously in routine examination for a job. He was advised to avoid excess of starchy foods. In childhood he had Measles, Whooping Cough and Croup. He was of burly build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.17	.13	.12	.11 gm.%
Urinary Sugar	nil	B.G.R.	B.G.R.	nil	nil

CASE 661.

H.C.N. aet 35 years, was examined on 21st December 1940. He complained of feeling tired out by the evening and of feeling short of breath when he climbed stairs. On direct questioning he said his weight was a little down. He had Measles, Whooping Cough and Pneumonia in childhood and had his Tonsils removed in his late school days. He was of slim to medium build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.18	.17	.12	.09 gm.%
Urinary Sugar	nil	nil	B.G.R.	nil	nil

CASE 662.

T.H. aet 36 years, was examined on 1st February 1940. He felt well and had no complaints. He was of the tall muscular type. His lower teeth were badly decayed. The skin of the left arm and left side of the neck was pigmented due to an old burn.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.18	.12	.10	.08 gm.%
Urinary Sugar	nil	B.R.	B.S.R.	nil	nil

CASE 663.

A.W.L. aet 36 years, was examined on 27th December 1940. He felt well and had no complaints. In 1939 he had pruritus ani for about a year. His mother was on a restricted diet because of doubtful glycosuria. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.15	.17	.12	.10 gm.%
Urinary Sugar	nil	nil	nil	B.V.S.R.	nil

CASE 664.

J.S. aet 38 years, was examined on 21st January 1940. He felt well and said he drank a fair quantity of water. He had occasional nocturia. His appendix was removed in 1936. He was well nourished and of good physique and looked younger than his years.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.15	.14	.12	.09 gm.%
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

CASE 665.

J.L. aet 49 years, was examined on 23rd February 1940. He felt well and had no complaints. He had Dysentery in 1919. He looked his years and was of average build and nutrition. There was fine tremor of the outstretched hands. The tongue was heavily coated and was tremulous.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.16	.14	.12	.10 gm.%
Urinary Sugar	nil	nil	B.V.S.R.	nil	nil

W.S. age 19 years, was examined on 12th March 1934.

He felt well and had no complaints. He was well nourished and of healthy appearance.

The Glucose Tolerance Test gave the following results:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.12	.13	.18	.22	.18 gm. %
Urinary Sugar	nil	B.G.F.	+	+	+

CASE 501

W.S. age 20 years, was examined on 25th October 1934.

He felt well and had no complaints. For about 4 years

he had been subject to attacks across the upper abdomen,

not related to food, coming at intervals of some months

and lasting a week or so. The attacks were associated

with bilious vomiting. He had rheumatic and "neuritic

pains" in his legs in childhood. He was tall, thin

faced and of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.12	.13	.18	.22	.18 gm. %
Urinary Sugar	nil	B.G.F.	+	+	B.G.F.

CASE 502

W.B. age 21 years, was examined on 19th February 1934.

He felt well and had no complaints. He was well

nourished and of healthy appearance.

The Glucose Tolerance Test gave the following results:-

CASE 666.

W.S. aet 19 years, was examined on 29th March 1940.

He felt well and had no complaints. He was well nourished and of healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.20	.24	.22	.16 gm. %
Urinary Sugar	nil	nil	B.G.R.	+	+

CASE 667.

J.J. aet 20 years, was examined on 23rd October 1939.

He felt well and had no complaints. For about 4 years he had been subject to pain across the upper abdomen, not related to food, coming at intervals of some months and lasting a week or so. The attacks were associated with bilious vomiting. He had Measles and "Rheumatic pains" in his legs in childhood. He was tall, thin faced and of good physique.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.19	.22	.19 gm. %
Urinary Sugar	nil	B.G.R.	+	+	B.G.R.

CASE 668.

W.B. aet 21 years, was examined on 15th September 1939.

He felt well and had no complaints. He was healthy looking and of good build and physique. There was slight acne vulgaris of his face.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.16	.22	.20	.17 gm.%
Urinary Sugar	nil	No spec.	B.R.	B.G.R.	B.G.R.

CASE 669.

J.H. aet 22 years, was examined on 17th February 1940. He felt well and had no complaints. He had Measles in childhood and Impetigo of his face in 1938. He was sparely built and of pale complexion.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.14	.18	.22	.15 gm.%
Urinary Sugar	nil	nil	B.V.S.R.	+	+

CASE 670.

R.L. aet 22 years, was examined on 2nd December 1939. He felt well but was always nervous. He had Measles and Whooping Cough in childhood and in 1936 had his appendix removed. He was of small build but average nutrition. The pulse rate was 110 per minute.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.22	.20	.18	.15 gm.%
Urinary Sugar	nil	B.G.R.	+++	++	B.G.R.

CASE 671.

G.C. aet 24 years, was examined on 27th July 1940. He felt well and had no complaints. In childhood he had Measles, Scarlet Fever and Diphtheria. He had a Mastoid operation when 14 years of age and a fractured skull when he was 18. He was small, sturdy and healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.18	.22	.21	.19 gm.%
Urinary Sugar	nil	nil	† †	†	†

CASE 672.

J.C. aet 27 years, was examined on 14th May 1940.

He felt well and had no complaints. He was of good physique. His complexion was pasty.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.15	.24	.20	.16 gm.%
Urinary Sugar	nil	No spec.	B.G.R.	† † †	† †

CASE 673.

N.J. aet 28 years, was examined on 29th May 1940.

He felt well and had no complaints. When 6 years of age he had an operation for Inguinal Hernia. He was of smallish broad build.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.16	.21	.19	.16 gm. %
Urinary Sugar	nil	nil	+ +	+ +	+ +

CASE 674.

A.McI. aet 33 years, was examined on 24th September 1940. He felt well and his weight was increasing slightly. He had slight frequency of micturition but no polyuria. He had Measles in childhood. His appendix was removed when he was 13. He had a boil on his face some months before. He was of average physique and healthy looking. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.20	.19	.16	.16 gm. %
Urinary Sugar	nil	B.S.R.	+	B.G.R.	B.R.

CASE 675.

H.B. aet 34 years, was examined on 3rd August 1940. He complained of attacks of dyspepsia, characterised by a "nervous discomfort" at the umbilical region lasting about a week at a time and associated with nausea and flatulence. He had been troubled with this for 5 years and was rarely free from discomfort for a week. Constipation was severe. In 1930 he had numerous boils and in 1935 he had right sided sciatica. Because of his gastro intestinal symptoms he had his stomach and duodenum X-rayed in 1935 with

negative result and the Kidney and Bladder in 1936 again with negative result. His mother had Diabetes and had been on diet for 12 years. He was tall and of pale complexion.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hrs.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.20	.24	.21	.16 gm. %
Urinary Sugar	nil	B.R.	+	++	++

CASE 676.

W.D. aet 46 years, was examined on 10th June 1940.

He felt well and had no complaints. He was gassed in the last war and was on full pension for 3 years. In 1935 he had sciatica. In 1939 he had sickness and pain about 10 minutes after food and relieved by vomiting - X-ray examination was done and pylorospasm diagnosed. He was small, thin and haggard looking. He had intercostal neuofibromatosis. The heart sounds were soft.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.16	.20	.23	.18 gm. %
Urinary Sugar	nil	B.R.	+	++	++

CASE 677.

B.F. aet 23 years, was examined on 30th March 1940. He felt fairly well but complained of feeling more tired than usual for some months. Thirst had been troublesome for a year and sometimes he had to rise at night to drink water. He had polyuria and nocturia. Measles in childhood was his only illness. He was of average build and nutrition.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.26	.48	.50	.45	.38 gm. %
Urinary Sugar	+ +	+ +	+ + +	+ + +	+ + +

CASE 678.

J.C. aet 23 years, was examined on 8th March 1940. 2 years before he was troubled with thirst and noticed he was losing weight. He consulted his doctor when glycosuria was discovered and he was referred to the Out Patient Dept. of a hospital where he was given a diet and later put on insulin. For the previous $1\frac{1}{2}$ years he had been on a diet equivalent to 140 gms. carbohydrate and was taking 15 units insulin per day. In the past $1\frac{1}{2}$ years he had no symptoms and felt well. Measles in childhood was his only illness. He was tall and of good colour. His nutrition was average. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.22	.27	.29	.30	.29 gm. %
Urinary Sugar	+	+	++	++	+

CASE 679.

A.A. aet 24 years, was examined on 8th June 1940.

He felt well but had lost some weight in the previous months. He ascribed this to an indoor job. Measles, Mumps and Chickenpox in childhood were his only complaints. He had a crop of boils in 1938. He was tall, slim, and rather anxious looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.28	.38	.44	.44	.42 gm. %
Urinary Sugar	++	++	+++	+++	++

CASE 680.

F.C. aet 27 years, was examined on 5th June 1940.

2 years previously he had been troubled with thirst, polyuria, nocturia and was losing weight. He sought medical advice when Diabetes was diagnosed. He was put on a diet and insulin but due to carelessness in carrying out his treatment he was in hospital in 1938 and again in 1939 with incipient coma. For the previous year he had been on a diet of 120 gm.

carbohydrate, 60 gm. Protein and 60 gm. Fat and was

taking 20 units insulin morning and evening. He felt well and had no complaints at the time of examination. One brother died of Diabetes. He was well nourished, of good physique, and sallow complexioned.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.19	.22	.22	.23 gm. %
Urinary Sugar	B.G.R.	B.G.R.	+	++	++

CASE 681.

R.S.P. aet 32 years, was examined on 23rd July 1940. He complained of losing weight (3 stones in $1\frac{1}{2}$ years) and of being troubled with thirst. On direct questioning he said he passed more than a normal amount of urine and had to rise at night to pass urine. His symptoms had made him seek medical advice $1\frac{1}{2}$ years before, when he was told there was sugar in his urine and advised to minimise the carbohydrate in his diet. In 1920 he had a fracture of his jaw, in 1923 a fracture of one ankle and in 1926 a compression fracture of the cervical spine and injury to both kidneys. He was of average nutrition. His breath smelled of acetone but none was detected in the urine. His tongue was dry.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.28	.36	.48	.52	.49 gm. %
Urinary Sugar	+++	+++	+++	+++	+++

CASE 682.

D.M. aet 34 years, was examined on 5th April 1940. About December 1938 he began to feel easily tired, became troubled with thirst and noticed he was losing weight. He had some polyuria. In March 1939 he consulted his doctor and was admitted to hospital for 2 months because of Diabetes. He was discharged on a weighed diet and 10 units insulin morning and evening. Shortly afterwards he stopped weighing his diet and gradually reduced the insulin because of hypoglycaemic attacks. For 8 months previous to his examination he had been on an ordinary diet and had not taken insulin. He felt well and had no complaints. In childhood he had Measles, Whooping Cough, Chickenpox and Diphtheria. In 1926 he had malignant Tertian Malaria when in Burma and had frequent attacks until 1930, then less frequent attacks until 1937. In 1928 he had Amoebic Dysentery. One brother had Diabetes for 10 years but died of heart disease when he was 27. He was of small build, sun tanned and well nourished. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.21	.28	.38	.34	.32 gm. %
Urinary Sugar	B.G.R.	B.G.R.	+ +	+ + +	+ + +

CASE 683.

A.H. aet 49 years, was examined on 9th January 1940. His only complaint was of "rheumatic" pains in both legs of 4 years duration. He had Measles in childhood and Dermatitis three years before. He was of good physique. His few remaining teeth were badly decayed. The Blood Pressure was 180/90.

The Glucose Tolerance Test gave the following result:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.16	.20	.28	.42	.19 gm. %
Urinary Sugar	No spec.	No spec.	+	+++	+

CASE 684.

M. McC. aet 55 years, was examined on 14th December 1940. He felt well and played two rounds of golf at the weekend without any discomfort. When 16 years of age he had "Brain Fever" and was ill for 2 weeks. In 1937 glycosuria was discovered in routine examination. He was of average physique and heavy build. He looked healthy.

The Glucose Tolerance Test gave the following result:-

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.
Blood Sugar	.14	.30	.29	.27	.21 gm. %
Urinary Sugar	nil	B.G.R.	+	++	++

CASE 685. J.B. aet 20 years, was examined on 23rd October 1939. He felt well and had no complaints. Apart from an attack of Influenza in 1938 his previous health was good. He was of spare build and thin featured but healthy looking.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.32	.22	.24	.18 gm. %
Urinary Sugar	nil	B.G.R.	+	+	B.G.R.

The Test was repeated on 7th September 1940.

He still felt well. It showed:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.21	.19	.11	.09 gm. %
Urinary Sugar	B.S.R.	B.S.R.	+	B.G.R.	B.R.

CASE 686. A.R. aet 21 years was examined on 26th November 1939. In November 1938 he was feeling below par but after an operation for nasal obstruction he felt better. Three weeks later he developed Influenza and following this he became troubled with flatulant dyspepsia. In May 1939 he was very seedy and had frequent headaches with difficulty in focussing. He improved after a month's holiday but still felt below par. He had lost about a stone in weight. He was of slim build, pasty complexioned and anxious looking. There was

slight tremor of the outstretched fingers. Pulse rate was 120 per minute and there was irregularity due to an occasional extrasystole. His blood pressure was raised to 150/92.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.15	.18	.19	.22	.19 gm.%
Urinary Sugar	nil	B.G.R.	+ +	B.R.	B.G.R.

He was reexamined on 12th December 1941.

Soon after his first examination he was admitted to Dr. Muir Crawford's wards at Glasgow Royal Infirmary and after three weeks he was dismissed on a diet of 160 gms. carbohydrate, 80 gms. Protein and 120 gms. Fat. He had continued with this diet and felt well. He was still rather nervous but less so than at the first examination.

The Glucose Tolerance Test was as follows:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.21	.13	.10	.07 gm.%
Urinary Sugar	nil	nil	B.V.S.R.	B.V.S.R.	nil

CASE 687.

W.J.H. aet 21 years, was examined on 7th October 1939. He felt well and had no complaints. Measles, Chickenpox and Mumps in childhood were his previous illnesses. His paternal Grandfather and paternal

Aunt had Diabetes. He was of good physique and healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.16	.24	.23	.18	.16 gm. %
Urinary Sugar	nil	B.G.R.	B.G.R.	B.R.	nil

The Test was repeated on 18th November 1939 and showed:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.15	.22	.23	.19	.15 gm. %
Urinary Sugar	nil	B.R.	B.G.R.	B.G.R.	nil

CASE 688.

R.C. aet 21 years, was examined on 11th November 1939. He felt well and had no complaints apart from itching of the skin on the front of his chest. A year before he had seventeen boils on the back of his neck. He was of good physique and healthy appearance but had a genu valgum.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.17	.18	.20	.20 gm. %
Urinary Sugar	+	+	++	++	++

He was reexamined on 13th December 1941.

He had felt well since the last examination and had taken no precautions with diet. There was no change of physical signs.

The Glucose Tolerance Test showed:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.18	.18	.12	.10 gm. %
Urinary Sugar	nil	B.R.	+ +	+	B.S.R.

CASE 689.

A.S. aet 21 years, was examined on 11th September 1939.

He felt well and had no complaints. Whooping Cough and Tonsillitis were his only previous illnesses.

He was of small build but healthy appearance.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.16	.22	.23	.16 gm. %
Urinary Sugar	nil	nil	+	B.G.R.	B.R.

He was reexamined on 18th March 1940. He was still symptomless and the physical signs were unchanged.

The Glucose Tolerance Test showed:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.15	.16	.12	.12 gm. %
Urinary Sugar	nil	nil	nil	nil	nil

CASE 690.

R.T. aet 23 years, was examined on 5th June 1940.

He felt well but on direct questioning said thirst had been troublesome for some time. His only previous

illnesses were Measles and Chickenpox in childhood.

He was of small but sturdy build and looked healthy.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.12	.18	.21	.24 Gm.%
Urinary Sugar	nil	nil	nil	B.R.	+ +

A second Test was carried out three weeks later with the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.17	.17	.12	.10 gm.%
Urinary Sugar	B.V.S.R.	B.V.S.R.	B.G.R.	B.S.R.	nil

CASE 691.

J.M. aet 23 years, was examined on 10th March 1940.

He felt well but on direct questioning he stated that he drank 2 pints of water and ate $\frac{1}{4}$ lb. chocolate per day. Influenza three years before was his only illness. His mother was diabetic but did not have insulin. He was smallish, pasty complexioned but otherwise appeared healthy.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.24	.26	.18	.17 gm.%
Urinary Sugar	+ +	+ +	+ + +	+ +	+ +

He was reexamined on 17th December 1941.

After the previous examination he had been sent to the Victoria Infirmary and for some months was on a weighed diet containing 173 gms. carbohydrate with 20 units P.Z.I.

once daily. As long as he adhered to diet he felt well but carelessness with diet resulted in thirst. He had no other complaints. Since the last examination he had learnt that his mother's brother and sister were diabetic. The Glucose Tolerance Test showed:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.27	.26	.28	.24 gm. %
Urinary Sugar	B.S.R.	+ + +	+ + +	+ + +	+ + +

CASE 692.

A.P. aet 25 years, was examined on 12th April 1940. He had not felt well since January 1939 when he had an attack of Rheumatic Fever and was in Glasgow Royal Infirmary until April 1939. When in hospital sugar was discovered in the urine and he was dismissed on a qualitative reduction diet but did not adhere to it. Apart from the above mentioned Acute Rheumatism his only illness was Measles in childhood. His mother had Diabetes for which she was given insulin. She died of Tuberculosis. He was of average physique and healthy appearance. Examination of heart revealed no abnormality. The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.15	.20	.24	.18	.14 gm. %
Urinary Sugar	B.G.R.	+	+ +	+ +	B.G.R.

He was reexamined on 17th December 1941.

He felt well and had no complaints. He had been on an ordinary diet since the last examination.

The Glucose Tolerance Test showed:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.25	.15	.12	.14 gm. %
Urinary Sugar	B.R.	+ +	+ +	B.S.R.	B.S.R.

CASE 693.

D.S. aet 25 years, was examined on 7th June 1940.

He complained of pain in the right lower abdomen of about 3 months duration, aggravated by walking or exertion and unaffected by food. Occasionally the pain disappeared for a day at a time. His appetite was good. On direct questioning he said his weight had gone down a little during 1939 and thirst had bothered him for some time. He had an operation for hare lip in infancy. During 1930 he was in hospital suffering from ? appendicitis but no operation was performed. He was well nourished and of healthy appearance. There was slight tenderness on deep pressure over the right ilia● fossa.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.14	.18	.20	.18 gm. %
Urinary Sugar	nil	nil	B.V.S.R.	B.G.R.	B.G.R.

He was reexamined on 6th December 1941.

He had been on a carbohydrate reduced diet since June 1940 and had lost a little weight but felt well.

The Glucose Tolerance Test showed:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.19	.15	.11	.11 gm. %
Urinary Sugar	nil	B.S.R.	B.S.R.	nil	nil

CASE 694.

F. McG. aet 27 years, was examined on 5th June 1940. He stated that his weight was decreasing (6 lbs. in 4 months). He drank a fair amount of water and beer at times. For the past few months pain had been felt in both lumbar regions of the back and this was relieved by rest and did not radiate and there was no associated urinary frequency or dysuria. His appetite was poor in the mornings and half an hour after food he felt pain in the umbilical region. His father had a "touch" of Diabetes the previous year. He was small but of good physique. His teeth were badly decayed. Both lumbar regions of the back were tender on deep pressure and there was left subcostal hyperaesthesia. The urine contained a trace of albumin but nothing of significance was seen on microscopic examination of the centrifuged deposit.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.24	.20	.19	.15 gm.%
Urinary Sugar	nil	B.R.	+ +	+ +	B.V.S.R.

He was reexamined on 28th August 1940, when the Glucose Tolerance Test showed:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.10	.21	.20	.14	.08 gm.%
Urinary Sugar	nil	B.R.	+ +	+ +	nil

CASE 695.

W. McV. aet 27 years, was examined on 7th June 1940.

He felt well and had no complaints. Six weeks before he had a small boil on his nose. He had an attack of Gastritis for 3 weeks during 1936 and his only other illnesses, Bronchial Catarrh, Measles, Mumps and Scarlet Fever, occurred in childhood. He was well nourished and sun burnt. There was some sepsis of gums and his lower central incisions were carious.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.16	.16	.16	.16 gm.%
Urinary Sugar	nil	B.R.	+ +	+ +	+ +

The Glucose Tolerance Test was repeated on 7th July 1940 with the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.23	.17	.18	.12 gm.%
Urinary Sugar	nil	B.G.R.	+ +	+ +	B.G.R.

CASE 696.

M.M. aet 28 years, was examined on 7th June 1940.

He felt well. His weight was increasing slightly.

He was inclined to drink a lot of water. He had cervical adenitis when 15 years of age at which time his tonsils were removed. For years he had had left Otitis Media. Five years before he had two boils on his neck. His mother had glycosuria. He was over average weight. Scars of old abscesses were present on the right cheek and right side of his neck. His Blood Pressure was 150/90. Examination of the left ear drum showed perforation of the anterior part with granulation tissue seen through it.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.13	.20	.19	.19	.15 gm. %
Urinary Sugar	nil	B.V.S.R.	Nospec.	+ +	B.R.

He was reexamined on 6th December 1940.

He had no complaints. His weight was steady. He had taken no precautions with diet. He was still overweight. There was no change in physical signs.

The Glucose Tolerance Test showed:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.20	.15	.09	.09 gm. %
Urinary Sugar	nil	+	B.S.R.	B.S.R.	nil

CASE 697.

W.H.M. aet 29 years, was examined on 17th July 1940.

He felt well and had no complaints. Scarlet Fever in school days and appendicitis in 1937 were his only previous illnesses. He was tall, slim and rather pale but his mucous membranes were well coloured. Both tonsils were enlarged. The abdominal wall was lax and both kidneys were palpable, especially the right.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.14	.20	.22	.21	.20 gm. %
Urinary Sugar	No spec.	nil	+	B.G.R.	B.G.R.

He was reexamined on 10th December 1941.

In the interval he had felt well and had taken ordinary diet.

The Glucose Tolerance Test showed:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.11	.20	.22	.14	.10 gm. %
Urinary Sugar	nil	nil	B.G.R.	B.S.R.	nil

CASE 698.

J.H.C. aet 31 years, was examined on 19th November 1940.

He felt well but for a number of years he had noticed he was more easily short of breath than his friends. He played football till his doctor advised him to give it up 8 years before. He had an attack of Scarlet Fever in 1920 and some years before he had a few boils.

He was of average physique and healthy looking. His tonsils were slightly enlarged. When upright a longish blowing systolic murmur obscured the first sound at the apex and was well heard towards the sternum at the left lower border. When recumbent the murmur was somewhat louder and slightly more harsh at the left sternal margin and could be heard over the praecardium and was conducted towards the right nipple. The second sound was pure at all areas.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.09	.22	.28	.24	.16 gm. %
Urinary Sugar	nil	B.R.	+++	+++	++

He was reexamined on 6th December 1941.

In the interval he had been on an ordinary diet and had no further symptoms.

The Glucose Tolerance Test showed:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.08	.22	.16	.14	.09 gm. %
Urinary Sugar	nil	B.S.R.	++	B.R.	nil

CASE 699.

J.A.P. aet 31 years, was examined on 2nd August 1940. He felt well but was inclined to drink a lot of water and thought he passed more urine than normal. He drank 7 or 8 pints of beer per week. A gland was removed from

the left side of his neck when he was 6 years of age. He was tall, thin but healthy looking. A scar was present on the left side of his neck where a gland had been excised in childhood.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.22	.28	.24	.15 gm. %
Urinary Sugar	nil	B.V.S.R.	+ +	+ +	+ +

He was reexamined on 7th September 1940 when he stated that he had had no alcohol since the last examination.

The Glucose Tolerance Test showed:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.23	.17	.12	.09 gm. %
Urinary Sugar	B.R.	+ + +	+ + +	+	B.V.S.R.

CASE 700.

W. McI. aet 33 years, was examined on 5th August 1940. For 5 or 6 years previously he had occasional bouts of giddiness lasting about a quarter of an hour and occurring once in 3 months. These were not associated with gastric upset and might occur when he was standing or sitting. Scarlet Fever, Measles and Mumps in childhood were his only past illnesses. He was of average nutrition and healthy appearance. His tonsils were small and foveated.

The Glucose Tolerance Test gave the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.19	.25	.19	.14	.09 gm. %
Urinary Sugar	+ +	+ +	+ +	+ +	+

The Glucose Tolerance Test was repeated five days later with the following result:-

	Fasting	$\frac{1}{2}$ hr.	1 hr.	$1\frac{1}{2}$ hrs.	2 hrs.
Blood Sugar	.12	.19	.25	.14	.08 gm. %
Urinary Sugar	B.S.R.	+	+ +	+ +	+ +
