only imperfect evidence of the invalidism following nephritis.

With regard to the 109 men who showed no further nephritic history, their military efficiency cannot be exactly stated. Approximately, 79 became first-line troops, 30 being relegated to garrison duty or some form of home service. These 109 men are not, of course, all still in the service; 8 have been killed, others wounded, gassed, made prisoners, and 3 invalided for diseases other than nephritis.

The number of cases known to have proceeded again overseas on military service is 71; of these, three relapsed in France, one man having three distinct attacks. None of these three men had had nephritis before the war; all were ultimately invalided.

The different hospitals varied greatly in their handling of the patients: some cases were kept in hospital for long periods; others were discharged to duty after a few days, frequently relapsing; others were invalided after two or three months in hospital, not having had time to recover. One case invalided as permanently unfit showed no evidence of disease on medical examination about a year later.

Influence of Age on Prognosis.

The cases have been arranged in five groups, according to age; the numbers and percentage of the loss from death and invaliding due to nephritis are given in each group.

Age Groups.

	Under 26.	26-30.	31-35.	36-40.	Over 40.
Number of cases...	46	45	42	21	15
Loss due to nephritis ...	18	12	14	6	10
Percentage of loss ...	39	26	33	28	66

The cases over 40 thus did badly; and the youngest group also showed higher invalidism than the remainder. The fatal cases were aged 54, 39, 38, 32, 29, 20.

Influence of Previous Attacks.

Of the cases, 32 gave a history of previous renal disease; of these, 2 died, 10 were invalided during the first period of home treatment, and 4 were invalided after returning to duty, making a total loss of 16, or 50 per cent. In one of the invalided cases the previous attack had been in France during the war.

In 134 cases no previous renal history was obtainable; of these, 4 died, 22 were invalided during the first period of home treatment, and 18 were invalided after returning to duty—a total loss of 44, or 32 per cent. In 3 cases, all of whom recovered, information as to previous attacks was not recorded.

Prognostic Indications during Initial Stage.

Prolongation of the initial stage is unfavourable. The cases were not evacuated from France until free from oedema and uraemic symptoms, and until the urinary flow was re-established; the average period from the onset (as given by the patient's history) to the date of evacuation was twenty-four days. Of 68 cases in which this period was above twenty-four days, 50 per cent. died or were invalided; whereas of 97 cases in which this period was twenty-four days or under, only 27 per cent. died or were invalided.

Cases showing severe uraemic symptoms during the initial phase are slightly more unfavourable with regard to remote prognosis than the ordinary type of case. Five of the cases had convulsions in France; of these, two were ultimately invalided, and three returned to duty, two of them proceeding again overseas. Eight cases showed other severe uraemic symptoms (deep torpor, twitching, amaurosis); of these, four were ultimately invalided, and four returned to duty. Convulsions were thus less unfavourable than other severe uraemic manifestations; this accords with the observation¹ that after convulsions a severe case often begins to improve rapidly.

Definite ascites is unfavourable; of fourteen cases, eight were invalided. The abdominal tumidity sometimes mistaken for ascites has no prognostic importance.

No special symptoms marked the initial stage of the fatal cases.

Pathological Sequelae.

Cardio-vascular changes were noted in the hospital records or invaliding documents of fourteen cases, in which

such changes had not been observed during the initial phase.

Tuberculosis appears to have a definite consecutive association; in one fatal case, dying seven weeks from the onset, early active tuberculosis of the lungs was found in addition to nephritic lesions; in a second case, invalided for nephritic symptoms one year after the onset, tubercle bacilli were present in the sputum at the time of invaliding; a third patient, who during the initial stage had shown typical renal dropsy, was invalided for tuberculosis of the kidney and epididymis nine months after returning to duty; and a fourth case was invalided for pulmonary tubercle about a year from the onset of nephritic symptoms.

Persistent albuminuria was the most frequent cause of invaliding.

Prognosis in "Lower Tract" Nephritis.

This name has been suggested¹ for a condition, not uncommon in France, of febrile haemorrhagic pyelitis, sometimes associated with cystitis, tending to relapse, showing neither oedema, uraemic symptoms, nor raised blood pressure, but with urine containing granular casts. Six such cases (not included in the series) have been traced. Five returned to and remained at duty; one, aged 38, was invalided for headache and accentuation of the cardiac sounds; a few months later the albuminuria had completely disappeared.

Such cases are therefore more favourable than the true nephritis cases. In none of them was there mention of the occurrence of oedema.

Remarks.

During the early stage of the war it was necessary to evacuate the cases from France as soon as possible. With greater hospital accommodation, it may now be possible to keep them longer in France, with advantage, for early transport unquestionably sometimes provokes relapse. This, together with more experience in English hospitals, should lead to improved results.

The records permit conclusions other than those expressed statistically. Cases arriving in England ought not to be discharged from hospital until they have been tested by full diet and ward work, with subsequent examination of the urine; they should not be sent to duty till the albuminuria is absent or minimal. Men should not be invalided as permanently unfit until a reasonable time (say, five months) has been allowed for recovery; two attacks during the war should justify invaliding.

Although against instructions, cases with abundant albuminuria are constantly sent to command dépôts, which are ill adapted for such cases. Better results might perhaps be obtained by collecting the cases in special convalescent camps, where their final convalescence and early hardening could be under experienced observation.

SUMMARY.

Approximately 3 per cent. of the cases died, 18 per cent. were invalided during the first period of home treatment, 12 per cent. were invalided after return to duty, 63 per cent. showed no further nephritic history. Men over 40 years old did badly; 71 cases proceeded again overseas.

My acknowledgements are due to Dr. Matthew Young, of the Medical Research Committee, for his help in the collection and collation of the records.

REFERENCE.

¹ Abercrombie: Observations on the Acute Phase of 500 Cases of War Nephritis, *Journal of Royal Army Medical Corps*, August, 1916.

INVALID RATIONS.

BY

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MEDICAL men have been placed in much difficulty of late in the matter of giving certificates to invalids for special rations, and the issue of definite instructions by the Ministry of Food (Regulation M.G.R.M. 27) will be welcomed by them as well as by Food Control Committees.

Diabetes and Tuberculosis.

The regulations allow a greatly increased ration to two large classes—namely, sufferers from diabetes and tuberculosis.

The term "diabetes" may be taken in this connexion to include all subjects of persistent glycosuria who are in need of special diet. They are allowed a maximum of 2½ lb. of butcher's meat, 1 lb. of bacon, and 1½ lb. of butter or margarine weekly. These quantities are intended for a large number of cases of mild diabetes or glycosuria who are able to keep well and active by simple restriction of, or abstinence from, carbohydrate food, and who require to make up their intake of energy entirely, or almost entirely, from protein and fat. The ration is not, of course, suitable for patients suffering from acute diabetes with acidosis. For them such quantities would be excessive and harmful. Indeed, the ration alone, without any other foods, gives about 1,500 calories a day, whereas the diabetic who has been made sugar-free and is gradually recovering his tolerance to carbohydrate, fat, and protein often does not take much more than 1,500 calories of total food for a considerable period.

In tuberculosis a maximum of 2½ lb. of meat, 1 lb. of bacon, and 1 lb. of butter is allowed weekly, giving roughly 1,300 calories a day from these foods. It is common knowledge that a good allowance of protein and fat is of great value in helping the tuberculous subject to keep thoroughly well nourished, and that by thus maintaining nutrition and avoiding overfatigue, the infective process may be prevented indefinitely from advancing or from recurring, as the case may be.

The medical grounds, therefore, for making special regulations for the subjects of diabetes and tuberculosis are obvious, and there can be no doubt that the people of this country will desire that they, like other sick folk, shall receive the diets suited to their complaints. On administrative grounds it is convenient to separate them because they are so many. On national grounds also their special treatment is justified, because there are great numbers of glycosurics and of those who are or have been tuberculous, who are doing a good day's work, and not a few who are carrying out duties of more than usual value to their fellow men. The disablement of such a large body of home workers from a lack of the special food they need would be an unnecessary loss to the country at this time.

Lactation and Pregnancy.

The nursing mother is allowed an extra quantity of meat and fat indirectly, as, soon after the baby is registered, she is able to draw for it a child's ration, which she should consume herself. She is also entitled to a preferential allotment of a pint and a half of milk daily until the child is 18 months old. These allowances will cover the 500 to 1,000 calories which the infant may receive from the breast. Indeed, in most cases there will be a good margin in the mother's favour.

During pregnancy such large additions of food are not required, as though both the growth of the infant and the laying up by the mother of a store of fat for lactation have to be provided for, yet the daily addition of tissue is but small. A pint of milk extra a day in the last three months is allowed in addition to the ordinary diet.

Other Invalids.

If extra food is required by any other classes of invalid except those who are the subjects of diabetes, tuberculosis, and one or two rare complaints mentioned below, it should be supplied in the form of milk, for which a priority ticket may be issued by Food Control Committees on a medical certificate; or in the form of non-rationed foods. Most of the articles of food, besides milk, which are important in cooking for the sick, such as eggs, fish, arrowroot, rice, and flour, are not rationed.

Acute Illnesses.

A broad survey of those invalids whose diet requires special regulation shows that the greater number are suffering from temporary acute or subacute illnesses, including febrile affections of all kinds. Of these a large proportion take less food than ordinary folk and many cannot take solids at all. For all who need it extra milk may be obtained.

Beef-tea.

The beef-tea which in years gone by was used in large quantity for the sick cannot now be made, and medical men should be especially careful not to order it. Our profession has long been explaining to the public that

beef-tea does not possess the food value with which it has been credited for generations. At the present time it is especially wasteful, as it uses up good meat, the food value of which can be utilized fully when it is cooked and eaten by others. The real use of beef-tea is not to feed the sick, but to comfort, satisfy, and stimulate them. Its place may be taken by a mixture of meat extracts with boiling water, or with barley or rice water, to which food value may be added in the form of dried milk.

Neurasthenia.

Neurasthenia, in its many forms, is commonly treated by a liberal diet, containing a large proportion of protein and fat. But it would have been impracticable to allow extra rations for that complaint, as there is no possible limit to the number of claims that might have been made. For the severer cases, which are comparatively uncommon, a sufficiently nourishing diet can be obtained from non-rationed foods, particularly fish and eggs.

Malnutrition.

There appears to be greater hardship in withholding extra rations from cases of severe malnutrition following acute or chronic illness. Some of these patients would undoubtedly make good use of a larger allowance of meat and fat. It would, however, be difficult to draw up a definition which would include them and them only, and there is no reason why, with the help of fish, eggs, and an extra allowance of milk, they should not receive all the food they need. The cereal foods, which are not rationed at present, are plentiful, and will remain the most important source of energy in their diet. It must be remembered also that probably the greater number of such cases will be found in hospitals. In the military hospitals more meat is available. In civilian hospitals the fixed ration of meat and fat is drawn for each patient, but, as those who are acutely ill do not need so much, more is available for the convalescent.

Indigestion.

The numerous sufferers from indigestion do not, as a rule, require extra food, rather the reverse. There is, however, one form of indigestion—the hyperacid form—which is benefited by a diet containing a higher proportion than usual of protein and fat. A free use must be made in such cases of eggs and fish, whilst those who are able to take olive oil, in a dose of an ounce before a meal, three times a day, will receive benefit and incidentally a food value of nearly 800 calories. Milk is often badly borne by such patients. These remarks refer only to hyperacidity as ascertained by analysis of the gastric juice. The diagnosis made from symptoms alone is often mistaken.

Chronic Diseases.

There is a large class of chronic diseases, such as gout, colitis, and diseases of the heart, liver, and kidneys, which require adjustment of the diet, but not as a rule any increase of meat and fat. In rickets plentiful fat is beneficial, and has even been thought to be specific; it can be supplied in good milk, or as olive oil, cod-liver oil, or any medicinal preparation of fat that can be obtained. In scurvy, as in other cases of deficiency of vitamins, it is a suitable variety of diet that is needed, and not necessarily any increase of quantity.

Rare Diseases.

Special rations will be allowed for certain diseases, such as coeliac disease, pancreatic insufficiency and sprue. All these are of such rarity that there are many medical men who have never seen a case.

Coeliac disease is a disorder of childhood, arising usually at the age of 2 to 3 years. The symptoms are chronic diarrhoea with large pale motions, weakness and sometimes tetany. There may be deficient absorption of fat. It is treated by giving a diet of ½ lb. to 1 lb. of raw minced meat daily.

The term "pancreatic insufficiency" is used in two senses. It is sometimes applied to cases showing no gross disturbance of the absorption of food in which mild pancreatitis or early diabetes is diagnosed from the occurrence of sugar in the urine or from more complex examinations of the urine and faeces. Such as these, unless they come into the diabetic class, do not require extra rations.

Genuine pancreatic insufficiency comprises cases in which, owing to inflammation or disease of the pancreas or obstruction of its duct, the pancreatic juice is in good part or entirely absent from the intestine. In such cases the digestion of fat is greatly interfered with, as is that of protein, and in some the assimilation of carbohydrate is also impaired. Much of the food is then wasted and extra food has to be given, especially meat, if nutrition is to be maintained.

Sprue is somewhat commoner than either of the above but it is not every case of sprue which needs a special allowance. There are, however, cases which improve wonderfully on a diet of meat alone, and are able to take large quantities, more than 2 lb. a day, with relish.

In such cases as these, and doubtless in others in which sound reason can be given, the ration may be varied on detailed application being made to the Food Control Committee, who will communicate with the Medical Section of the Ministry of Food.

Sugar: White Flour.

Extra sugar will only be allowed in severe cases, such as are fed by tube. Applications for white flour should be reduced to the minimum, since it has been shown that war bread, when properly baked and chewed, is as digestible as white bread, though it may not be so palatable.

Restricted Tastes.

The doctor's chief difficulty is not with the sick. It is with those, not obviously ill, who assume that the food to which they are accustomed is the food that is necessary for their health, and appeal to him to support this view by a certificate. Many people have grown up in the belief that their digestion is peculiar. Occasionally that is true, but nearly always it is not. Every one of experience will agree that genuine idiosyncrasies are among the rarities of medicine. The thoughtless indulgence of parents is sometimes to blame for restricted tastes; but whatever the cause may be all doctors know what a handicap to the individual such special dislikes are in illness; and at the present time they prove most inconvenient to their owners. No one would pretend that the foods now available are what we would prefer either in health or sickness, and those who feel the change most will have general sympathy; nevertheless, it is the duty of the medical man to explain to such applicants that their condition is not one for the treatment of which it is justifiable to ask for a larger share of the national store.

Conclusion.

For those who are really ill it will often be necessary to draw up a diet scheme in some respects different from that which would have been drawn up in former days. But, with the allowances made by the Food Controller, it is possible to secure that invalids of all classes shall receive suitable food, and enough of it for their needs.

A CASE OF PROMPT RECOVERY AFTER NERVE SUTURE.

BY

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My reason for recording this case is that I do not know and have not read of so early a recovery of practically all functions in a severed nerve after operation. When a nerve is bound up in scar tissue, or has simply been bruised, operation to rectify this condition is usually at once successful, but not if the nerve is severed, except after a long period.

Sergt.-Major —, a German, aged 26, wounded left elbow, in France, June 22nd, 1917; the internal condyle of the humerus and part of the olecranon process of the ulnar were smashed. On August 3rd operation for septic condition of the wound was performed, and some sequestra removed; x-ray examination showed fracture of the internal condyle and olecranon process, and three foreign bodies in the forearm. On November 23rd I removed one foreign body from the front of the elbow-joint. The wound gradually healed, leaving a triradiate scar on the inner side of the joint.

Sensation was lost over the cutaneous distribution of the ulnar nerve in the hand, both front and back. He could not flex his little finger, and only very slightly the ring finger. He had a trophic sore over the dorsum of the little finger. There was no doubt that the ulnar nerve distribution was almost completely paralysed.

Operation.

On January 24th, 1918, an incision was made over the inner side of the elbow-joint. The ulnar nerve, exposed above and below the joint, was found to be severed in the region of the internal condyle of the humerus. The proximal and distal portions were dissected, found slightly bulbous, with some intervening scar tissue between the two ends. The upper and lower segments of the main trunk were electrically stimulated. Some slight response was seen on stimulating the lower segment, and a very feeble response on stimulating the upper segment. The severed ends were cut off transversely as level as possible, and brought together with fine catgut sutures, and the junction surrounded with Cargile membrane. Exact apposition of the cut ends was aimed at.

After-History.

January 27th, 1918. The patient could feel very slightly on the fourth and fifth fingers.

January 30th. The wound had healed by first intention. Sensation had increased over the whole of the ulnar distribution. To my intense surprise the patient on being asked to flex his little finger and his fourth finger did so quite well.

February 27th. Sensation had completely returned over the whole area formerly insensitive. His grip grew stronger every day. He could hold a book or a weight quite well, and even use a hammer. The only defect present four weeks after operation was a feebleness in the action of the third and fourth dorsal interossei muscles. All this, notwithstanding the fact that his wound was formerly septic, and though now perfectly healed, he still has two small foreign bodies in his forearm.

We are told that, according to the theory of Wallerian degeneration, a nerve severed completely degenerates in its whole distal portion. Again, there is ample evidence that regeneration does occur when the cut ends are joined by fibres growing down from the proximal end. In this case there was no doubt whatever that section of the nerve had taken place at the time of injury by the bullet, yet the fact that there was some response in the distal portion when electrically stimulated may be accounted for, because probably some nerve fibres were present in the $1\frac{1}{2}$ in. of scar tissue between the two separated ends of the nerve. Most recent writers on nerve injuries—for example, Sir Purves Stewart and Mr. Evans—say that regeneration seldom takes place in less than three months, and that it is often eighteen or twenty-four months; that sensation returns first and motor function some time after, the earliest known recovery of sensation alone being ten days. Moreover, after considerable septic infection results are longer delayed.

Professor Waller, to whom I wrote, has kindly sent me a few lines on the case. He says that "in those few cases of prompt recovery which have been recorded no satisfactory explanation has been offered. I am inclined to think that prompt recovery may be due to the stirring up by the operation itself of recurrent sensory fibres belonging to other nerves that may form part of the peripheral distribution, and may have had their action in abeyance during complete paralysis before operation. Increased knowledge in the present day of the extensive halo of functional disturbance aroused by an organic focus of real injury would lead me to be on the watch for the possibility of prompt reappearance of sensation, by the cerebral suggestion as well as by the peripheral excitation afforded by the operation itself. I am at the present moment engaged in measuring the 'emotivity' of shock and other cases, and it would be useful to know if your patient was of high or low emotivity."

As far as one can judge clinically this patient is of low emotivity.

I am indebted to Dr. Charles Corben for assisting at the operation, and to Lieut.-Colonel Guthrie, R.A.M.C., for permission to publish the case.

THE Carnegie United Kingdom Trust has published a most elaborate report on public baths and wash-houses, prepared for the trustees by Miss Agnes Campbell, B.A. The report sets out with lavish detail the present provision of baths and wash-houses throughout the United Kingdom, the use made of the facilities provided, the finance of such undertakings, and a discussion of the factors which bear upon the subject generally. Without wishing to minimize the value of such an exhaustive investigation, the question occurs to us whether, in the present situation, with an extreme scarcity of paper, the publication of a monograph weighing 2½ lb. is expedient.