means to have a patient staying weeks in a mental hospital instead of months one has only to ask the husbands, wives, sons, or parents of such a patient.—I am, etc.,

Bodmin.

ERNEST E. FELDMESSER.

Nicotinamide and Diabetes Mellitus

SIR,—In the *Journal* of Feb. 9, 1946 (p. 218), you kindly published my results of massive nicotinamide therapy in diabetes mellitus. These investigations were prompted (as then described) by an original theory that diabetes mellitus was a vitamin deficiency disease, and when commencing "experimentation" by using massive dosages of different vitamins I was unaware that work had previously been executed on nicotinamide and carbohydrate metabolism. I have since learnt that such investigations have been reported. After publication of my results I received an overwhelming amount of correspondence from interested colleagues all over the world (some themselves diabetics), who promised to report their results to me. This was indeed welcome in view of the fact that I wished to pursue the question more extensively and the number of diabetics under my care was rather small. I have since collected an imposing and interesting amount of data which I hope to publish at a later date.

I was therefore most interested in Dr. H. J. Wade's results of nicotinic acid amide on the sugar tolerance curve in six cases of diabetes (March 27, p. 414). Dr. Wade asserts that my results prompted him to pursue this investigation further, but unfortunately he did not pursue it very far. His administration of nicotinamide was of too short duration and the numbers of cases lamentably small. This is regrettable in view of Wade's superb opportunities for exhaustive investigation (Dr. Wade is in charge of the Diabetic Clinic at the Salford Hospital, Manchester).

The fact that some workers report poor or negative results with this therapy need cause no despondency. My theory is that nicotinamide "slogs" the remaining islets of Langerhans to greater insulin production, but does not affect the sugar tolerance curve in itself. The beneficial results of nicotinamide depend upon the amount of functioning pancreatic tissue. If the pancreas is completely fibrosed or lamentably poor in islets of Langerhans, then the nicotinamide will have no effect irrespective of dosage or duration of dosage, because a general cannot exhort a non-existent army to greater endeavour. Should there be, however, a reasonable quantity of functioning pancreatic tissue, then varying good results will be obtained by means of the nicotinamide stimulating the remnant of secretory tissue to greater production. According to the amount of islet of Langerhans present, so the results will vary.

I would suggest, therefore, that every diabetic be administered with massive doses of nicotinamide. Some will receive no benefit, whereas others, with more functioning pancreatic tissue, will be able to partake of the joys of eating more liberally and extensively without constant insulin injections. I hope to publish more rather interesting data on this subject later, but meanwhile I shall be grateful if interested colleagues will send me their results.—I am, etc.,

Poole.

W. GORDON.

Folic Acid

SIR,—Dr. Cecil L. Forde reports (May 24, p. 740) the use of folic acid in a case of subacute combined degeneration which had, in addition, the peripheral blood picture of pernicious anaemia. He reports that the blood picture "responded" to "intensive" liver therapy for three weeks, but that the nervous lesions are not affected. Folic acid was given and "in a few days" there was marked improvement in the neural condition. If this improvement continues on folic acid alone this case deserves a detailed report, for it is, to my knowledge, the only example in the literature of a case of subacute combined degeneration which has responded to folic acid therapy. It is reasonable to suggest, however, that the three weeks' intensive liver treatment was the most likely cause of the improvement—nervous as well as haematological—in this case. It is an established fact that unless treatment of pernicious anaemia is adequate—i.e., red cell count of 5,000,000 per c.mm. or more, with a normal mean cell volume—subacute combined degeneration

may supervene. Such *adequate* treatment of pernicious anaemia is always possible in the uncomplicated case, and, unless full haematological details are given, the onset of, or the progression of, subacute combined degeneration in pernicious anaemia adequately treated with liver extract cannot be accepted.

The work of Spies in America and Davidson in this country—to mention but a few—has already made it clear that folic acid will not prevent the development of the neural complications of pernicious anaemia nor improve them if they are already present. Severely progressive subacute combined degeneration has been reported in many cases receiving intensive folic acid therapy. This is a matter of grave concern to the patient and the doctor.

Folic acid is still in the experimental stage. It is *not* adequate treatment in pernicious anaemia, for in only a handful of reported cases has folic acid restored and maintained a normal blood picture. Much more research is required for the establishment of the indications for folic acid therapy. Spies—and the manufacturers of folic acid—have already recommended that pernicious anaemia should not be treated by folic acid alone because of the danger of the onset of subacute combined degeneration in such cases treated with massive doses of folic acid. It is surprising that so far there has been lacking in British journals the warning that folic acid is inadequate for the routine treatment of pernicious anaemia. There is still no substitute for adequate liver therapy in this condition.—I am, etc.,

Frodsham, Cheshire.

J. G. A. MCSORLEY.

Vitamin C Deficiency

SIR,—In *The Russells in Bloomsbury*, by G. S. Thomson, there is a passage referring to a treatise on scurvy circulated in 1665: "He [Dr. Maynwaringe] was referring particularly to that disease [scurvy] and to nervous complaint or complaints which went by the name of melancholia or hysteria and were associated by Maynwaringe with the Scurvy," and later: "The real root of the trouble lay in the quantity of salt meat eaten of necessity by both rich and poor." In the *Journal* of May 17 (p. 679) Dr. L. I. Hatherley reports a case of vitamin C deficiency lasting six years which, within half an hour of the injection of ascorbic acid, instead of being weak, apathetic, and apparently dying became alert, bright, and cheerful. Later a deficiency of vitamin P was thought to be present in addition. Many years ago at a meeting of the Royal Society of Medicine I heard an Arctic explorer quoted as saying that he only once had any trouble with scurvy, and that was when a party instead of shooting bears for food lived on tinned food found in a cache.

As a poor substitute for lightly cooked meat for the past few years I have prescribed black-currant purée in a number of cases suspected of vitamin C and P insufficiency and more especially recurrent subconjunctival haemorrhage. At present I have a case of intra-ocular haemorrhage under treatment, as no other treatment has had any success. From clinical experience and the studying of numerous reports, etc., I suggest: (1) that much of the present tiredness, ill-health, etc., is due to deficiency of vitamin C and P; (2) that more fresh meat should be on the ration; (3) tinned meat should not be included in the meat ration, as its position in our diet is misleading; (4) we are certainly being starved, as with the present calories, sufficient or insufficient, the chance is remote of a sufficiency of vitamins being present.—I am, etc.,

Southsea, Hants.

F. C. B. GITTINGS.

The Nation's Food

SIR,—I find your "Medical Notes in Parliament" (May 31, p. 790) most interesting, for it appears that in the House of Lords on May 22 Lord Addison proceeds to prove Dr. Bicknell's statement to be true and anything but false, sloppy, or inaccurate. It seems generally agreed that the domestic rations yield 1,600 calories per day and that unless one is financially placed so that one can afford to eat in restaurants, the remaining 1,300 calories per day, which are necessary for normal health, have to be made up of bonus issues of sugar, jams, meat pies, sausages, and the sweets ration. Lord Addison states that if the total quantity of food going into consumption is divided by