for a short period require only one injection of T.A.B."; now it is stated this is "wishful thinking," and that such people "... should have the full course of three inoculations—two doses before travelling. . . ."

How does such a thing happen and just what advice are you advocating? As one concerned with organizing immunization policy I would dearly like to know. Having already altered procedure at this clinic in line with your earlier views, I am reluctant to switch back before being assured that you will not change sides again.

It is interesting that only three, from a total of 24 references, are common to both articles, which could suggest that depending on choice of source material support may be gained for almost any view—a dangerous pit which surely the *B.M.J.* has not fallen into? One function of a professional journal is properly to sift current evidence, and in doing so consistency of advice (at least over short periods) would be expected.—I am, etc.,

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Modes of Memory

SIR,—Your leader writer (14 March, p. 641) asserts: "The older idea that endless reverberating electrical circuits could act as memory stores seems untenable in view of the fact that memories survive profound hypothermia and virtual cessation of electrical activity in the brain." It should however be pointed out that if a particular pattern of memory circuitry is established by the development of physical changes in neuronal cells and synapses, and if this pattern is maintained by the spontaneous activity of the neurones involved, then this physical change should *not* be disturbed in any way by a period of hypothermia.—I am, etc.,

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Mild Ulcerative Colitis

SIR,—I would agree with Professor I. E. Gillespie (14 March, p. 689) that operation is usually unnecessary in patients who have symptom-free periods lasting several years, and it is certainly ill advised on the grounds of the prevention of a very dubious cancer risk in such patients.

Nevertheless, the vast majority of patients suffering from mild ulcerative colitis have symptoms, though be it of low grade, from which they are rarely free. They are troubled by periods of diarrhoea and rectal bleeding; they are listless and tired and slightly anaemic. They lead second-class lives and are prevented from the full enjoyment and pleasure of living. Year in and year out, despite medical therapy, they exist in this state of mild ill-health. Incidentally, the combination of penicillin V and sulphonamide is often more valuable than sulphasalazine and can be tolerated better.

The lives and health of these patients can be transformed if the whole of the diseased colon is removed and if continuity of the intestinal track is re-established by anastomosis of the ileum to the rectum. There is no need whatsoever for the operation of

pan-proctocolectomy and the establishment of a permanent ileostomy. The removal of the colon is sufficient to relieve the patient of the chronic toxæmia by which he or she is affected, and as weight is regained and health restored any ulceration in the rectum heals. The mortality of this operation in such cases is virtually nil—no more than that of the laparotomy itself.

If Mr. A. K. Maitra (14 February, p. 431) or Professor Gillespie would carry out this operation in such cases their patients would be no different from mine in their return to full and normal life and in their regret that such an operation had not been proposed and undertaken years previously. The danger of carcinomatous change in long-standing colitic disease must be correspondingly reduced by the elimination of the major portion of its potentiality, and in no case of this type of ulcerative colitis has cancer developed in the residual, now normal, rectum.—I am, etc.,

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Plate Technique for Folate Assay

SIR,—The method used by most laboratories for assaying folates in serum and red cells is a microbiological assay in which folate is measured by its effect on the growth of *L. casei* in liquid medium. The drawbacks of the liquid assay method are well known, and there is a need for a simpler and more reliable method.

A plate assay method has now been devised based on a simple plate agar diffusion technique, as is already used for many microbiological assays (for example, Guthrie test, etc.). Briefly, a minimal medium is prepared containing the requisite growth factors for the selected organism except the substance to be measured. The bacteria are depleted to this substance and seeded in the media. This is poured into plates, which are then dried and can be stored in a refrigerator for periods of time up to one week. Using discs or fish-spine beads, the samples to be assayed are placed on the surface of the prepared medium. A series of standards is also prepared. After 14-18 hours' incubation the growth zones are measured and read against the standard curve. The plate method has the following advantages:

(1) Contamination can be detected easily, whereas growth in the tube method is measured by turbidity, which may be affected by undetectable contamination.

(2) There is no longer a requirement for skilled technicians using a large amount of laboratory space and extra carefully cleaned glassware.

(3) Instead of waiting to accumulate a batch, one sample can be analysed at a time, and the result is available within 18 hours compared with the one to two weeks' delay using the tube method.

(4) The technique is considerably cheaper per sample than the tube method.

(5) It can differentiate between biologically active folates and breakdown products.

As in the tube technique, different organisms can be used and made to respond only to the presence of the substance to be measured. Methods for extraction of assay samples are being investigated. Results of work carried out so far indicate that the plate method is a satisfactory device for

the measurement of folates in red cells and serum. It is simple, cheap, and reproducible, and is less liable to error than the existing tube method of assay.

This is a preliminary communication; full results will be published in a separate paper.—I am, etc.,

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Adhesives and Closure of Wounds

SIR,—I am so very glad that Mr. G. T. Watts (21 February, p. 501) has sounded a word of caution concerning the use of the experimental glues at present being evaluated for many surgical procedures.

Adhesives for skin closure are less interesting than their use in other sites. In animal research they have been used to fix polythene cannulae into various collecting channels—for example, lymph,¹ vascular, and urinary, together with strain gauges² and electrodes to various physiological systems. In clinical practice they have been used to reinforce a suture line in the gastrointestinal tract where there is danger of a leak. In the heparinized patient bleeding which leaks through the anastomosis can be controlled by use of these adhesives. They have also been used to control bleeding from severe injuries of the liver,³ the closure of established leaks in the gastro-intestinal tract,⁴ the sealing of perforations of the eye,⁵ and rapid fixation of skin grafts.

Adhesives are still in their infancy and, save for animal research work, will still for some time fall into the category of emergency usage. As your leading article (17 January, p. 129) stated, the future may well see the development of highly efficient tissue adhesive which may or may not replace sutures.—I am, etc.,

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Drug Menace and Children

SIR,—The drug menace has now become so serious that even our school children are affected. It is particularly bad, since they may be tragically introduced to hard drugs at cannabis parties. I understand that the medical profession some years ago ~~permitted~~ the complete suppression of hard drugs because of there being no suitable substitutes (see *Supplement*, 14 July 1956, p. 9).

Now that suitable substitutes seem to have appeared is it not essential for the nation's youth that the profession will now agree to the cessation of manufacture and importation of all habit-forming drugs?—I am, etc.,

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