White Paper. I imagine that one of the reasons why I suffered neglect was that most of your present-day correspondents were still in the karyokinetic stages of their medico-political development. I am glad to think they have now passed the early stages of dentition, for some of them *can* bite ! But, Sir, why ask for more than the fundamental requirements enumerated in the White Paper above quoted ?—I am, etc.,

London, S.W.3. A. R. EATES.

Assistant Dispensers in N.H.S.

SIR,—I am from time to time asked what is to be the position of assistant dispensers under the new Health Service, and shall be grateful if you will allow me, through your columns, to clarify the position in so far as this is at present possible. The Act lays down that " nothing in this Act shall interfere with the rights and privileges conferred by the Apothecaries Act, 1815, upon any person qualified by that Act to act as an assistant to any apothecary in compounding and dispensing medicines." With the taking over of the hospitals it is anticipated that the staffs will continue in their existing posts, and it is thought that many health centres will employ holders of the Assistant's Certificate. It cannot yet be known how many doctors will continue to dispense their own medicines, but at the present time the demand for assistant dispensers far exceeds the supply.—I am, etc.,

The Worshipful Society of Apothecaries of London. ERNEST BUSBY, Clerk.

Iron in Anaemia

SIR,—With reference to the question and answer on iron in anaemia (March 27, p. 625), we agree from our own experience that there is no advantage in adding manganese or other trace elements. Iron seems to be specific in this disease.

We have been concerned for a long time with the problem of refractory microcytic hypochromic anaemias. Even when due allowance is made for complications such as neoplasm, infection, and continued haemorrhage, and when concurrent deficiencies of vitamins, thyroid, etc., have been corrected, they have formed a not inconsiderable proportion of the total. Such patients appear unable to absorb adequate quantities of iron, while an additional group of patients are unable to tolerate iron preparation when given orally. In a much larger number of cases the response to oral iron falls short of expectations.

The problem, therefore, is one of introducing sufficient iron into the body in a form free from the complications of local pain and toxic reactions. Once introduced, iron-deficiency anaemia appears to utilize it quantitatively. We have made many trials of different types of iron compounds parenterally, both by the intramuscular and the intravenous routes, but all the intramuscular preparations tried proved to be too painful. On the other hand an intravenous iron-sucrose complex, similar to the saccharated iron used by J. A. Nissim (*Lancet*, 1947, **2**, 49), but having constant therapeutic and chemical characteristics in routine sterilization, has given entirely satisfactory results with freedom from reactions in the day-to-day out-patient treatment of 55 cases of iron-deficiency anaemias during the past twelve months. It has also proved invaluable in the experimental study of iron metabolism.

The clinical results and studies on iron metabolism, using this complex, are now in preparation for publication. Using this preparation the treatment of the average patient with iron-deficiency anaemia can be completed in 10 out-patient visits without fear of reactions, provided that a simple system of increasing the dosage is adopted. The injections present no special difficulties after a short initial experience, and no follow-on venous lavage is ordinarily required. Many of the clinical results are as dramatic as the response of pernicious anaemia in relapse to full doses of parenteral liver. In all cases of iron-deficiency anaemia the anaemia was relieved fully.—We are, etc.,

H. G. B. SLACK,
Manchester. JOHN F. WILKINSON.

Human Chorionic Gonadotrophin

SIR,—In the annotation on this subject (April 3, p. 650) attention is drawn to observations of Brown and Bradburg (*Amer. J. Obstet. Gynec.*, 1947, **53**, 749) of the effect of human chorionic gonadotrophin on the menstrual cycle of women, and the conclusion is reached that their findings strengthen the suggestion that chronic gonadotrophin prolongs the activity of a pre-existing and functioning corpus luteum, but does not by itself induce ovulation or initiate luteal activity. The further inference was drawn " that it should be used when it is desired to enhance already established but deficient luteal activity. . . . "

That it would appear to be unwise to accept without considerable reserve either of these conclusions may be deduced from the findings in two cases of hydatidiform mole which I have recently investigated. The Friedman test was positive at dilutions of 1 in 10 and 1 in 100 respectively (10 ml. urine being the standard quantity injected), indicating the presence of considerable quantities of chorionic gonadotrophin (not less than 20,000 and 200,000 I.U. per litre respectively), but in both cases the urinary pregnanediol excretion was nil when estimated on five occasions. If one accepts the urinary pregnanediol level as reflecting the blood progesterone concentration, the inescapable conclusion is that in these cases abnormally large amounts of chorionic gonadotrophin were incapable of maintaining the activity—and it may be wise to emphasize activity rather than morphology—of established corpora lutea.

There is a further inference to be drawn from these observations, namely that the placental tissue responsible for the elaboration of chorionic gonadotrophin cannot be the same as that which, in the second and third trimesters of pregnancy, secretes progesterone.—I am, etc.,

London, W.C.1. G. I. M. SWYER.

Posterior Pituitary and Labour

SIR,—Dr. Mavis Gunther's letter (March 20, p. 567) recording her observations on the escape of milk during the contractions of labour are most interesting. Though pregnancy should inhibit the lactating processes, lactation does continue in spite of the large amount of oestrogens being produced. But it is usual to find that if this is the case prolactin has continued to be secreted because of suckling. It would be therefore interesting to know when this terminated in actual fact.

Many mothers even though gravid continue for various reasons to suckle till term, and therefore, in theory, milk should in these cases be present in the breasts at the onset of labour. The myo-epithelium—the basket cells that surround the alveoli—because of their contractibility, and provoked by the posterior pituitary extract, can be responsible for the expulsion of the contained milk, and this is what Dr. Gunther observed. The visual demonstration of this expulsion coinciding with each uterine contraction, and the knowledge that the former is due to posterior pituitary extract, is highly suggestive that the uterine contractions were identically produced.—I am, etc.,

London, W.1. JOHN SOPHIAN.

BAL and Lead Poisoning

SIR,—The article by Dr. N. R. W. Simpson (March 20, p. 545) adds another link to the lengthening chain of evidence that 2:3 dimercaptopropanol is effective in the treatment of chronic gold poisoning. The curative action of BAL on the toxic effects of gold in man runs counter to the experimental findings in acute toxicity studies in mice. Graham and Hood (1947) found that BAL, 40 mg. per kg., given intraperitoneally to groups of white mice increased the lethality of sodium aurothiomalate also given intraperitoneally immediately before the BAL. The mode of action of BAL on acute gold poisoning in animals and chronic gold poisoning in man is obviously different.

Similarly Braun, Lusky, and Calvery (1946) working with rabbits, and Graham and Hood (1947) working with mice, have shown that BAL has a deleterious effect on animals acutely poisoned with lead. It does *not* follow that BAL will be ineffective in acute or chronic lead poisoning in man. This point should be tested clinically as soon as possible, since the treatment of lead poisoning at present is not entirely satisfactory.—I am, etc.,

Glasgow. JAMES D. P. GRAHAM.

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Braun, H. A., Lusky, L. M., and Calvery, H. O. (1946). *J. Pharmacol.*, **87**, Suppl. 119, 19.

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