when iron is probably unnecessary anyway. If problems occur later a change from one preparation to another can usually solve them (backed with firm reassurance that it will do so). I would suggest that a good case has been made out for the routine prescription of iron from about 16 weeks and that this has yet to be disproved.

DENIS V CASHMAN

North Shields, Tyne and Wear

SIR,—Your leading article (11 November, p 1317) on iron in pregnancy shows muddled thinking. If you object to prophylactic iron because of the expense (about a penny a day) you must set against this the unknown but surely much greater expense in time and money of attempting to identify risk factors in individuals.

If you believe it is not justifiable to give iron to all expectant mothers when only 7% will benefit you must presumably condemn all forms of prophylaxis. Should we treat all hypertensives to prevent strokes in the minority? Should we advise all smokers to stop when most of them will not get lung cancer?

JOHN HODGSON

Birmingham

SIR,—I was interested in your leading article, "Do all pregnant women need iron?" (11 November, p 1317).

It might be thought equally pertinent to ask, "Do all pregnant women need folic acid?" Today most women are confined, save in remote areas, in hospital and the family doctor is involved in shared ante- and post-natal care. Patients are referred fairly early in pregnancy. Very often the patient is prescribed her first course of supplemental iron in the hospital antenatal clinic. Scarcely ever, in my experience, is it given in a cheap and simple form such as ferrous sulphate. Usually an expensive iron and folic acid preparation is given, often in a slow-release tablet or capsule.

In 1976 a small but significant survey was carried out by the then South-east England Faculty of the Royal College of General Practitioners under the guidance of Professor T A J Pranker and using the facilities of the department of haematology at University College Hospital, London. The results of this survey¹ showed that in south-east England folate supplements in pregnancy were of no particular benefit. It was conceded, however, that there could be regional differences.

Megaloblastic anaemia of pregnancy should be detected as part of efficient antenatal care and where found treated appropriately. There seems scant justification for giving folic acid to every pregnant woman "just in case."

KENNETH H TRIGG

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¹ Trigg, K H, *et al*, *Journal of the Royal College of General Practitioners*, 1976, **26**, 228.

Treadmill exercise test for predicting coronary disease

SIR,—Dr B Balnave and others from Belfast (15 April, p 958) describe an exercise index for the detection of coronary artery disease. Fifty out of 53 patients with coronary artery disease were identified by an abnormal "exercise index" compared with 43 by abnormal ST

segment displacement. The lower limit of normal, 2500 units, was arbitrary and, by definition, no patient with normal coronary arteries at angiography fell below this level. We have examined 78 patients using this index and are unable to confirm their findings. Of our series of 31 patients with normal coronary arteries, only four had indices in excess of 2500 and the mean was 1115 (± 1377). This value did not differ significantly from the mean value for the 47 patients with coronary artery disease, whether taken as a whole (mean = 850 ± 1159) or grouped according to the number of vessels diseased. The mean values and ranges for the three diseased groups (one, two, or three vessels) were in accord with the findings of Dr Balnave and his colleagues.

The reason for the discrepancy between the two series is unclear. In Belfast the blood pressure was measured during the last 30 s of exercise, whereas in our laboratory it was measured immediately after exercise. The delay is short since the cuff is already in place. Dr Balnave and his colleagues point out that a small error in cuff measurement leads to a large error in calculated index. This may explain the difference between our respective normals, but one would then expect similar differences between our abnormal groups. Our series contained a higher proportion of women (24 out of 78) and most were in the normal group; the Belfast workers do not differentiate between sexes in their report. When we examined only our male population the means were not significantly different. It is also possible that our series contained a higher proportion of patients with the syndrome of angina with normal coronary arteries in whom the pressor response to exercise may be attenuated by poor left ventricular function. In the Belfast series there may have been more patients with typical chest pain in whom coronary arteriography was undertaken merely for diagnostic reasons.

Whatever the cause of the discrepancy, it is apparent that the "exercise index" is not a reliable predictor and that we must look elsewhere for methods of improving the diagnostic accuracy of the treadmill exercise test.

This work was supported by a grant from the British Heart Foundation.

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Abnormal cerebrovascular regulation in hypertensive patients

SIR,—We were interested in the letter from Drs S Strandgaard and S Tominaga (28 October, p 1230) and thank them for their suggestions as to the possible causes for the differences between their results and ours. However, some comment is required.

The theoretical reason suggested why one might expect to find a fall in cerebral blood flow, as measured by ¹³³Xe inhalation, in response to hypercapnia is difficult to accept in the face of normal response in our control group as measured by the same method. To update our results we have currently found abnormal reactivity in 12 out of 36 hypertensive patients compared with no abnormal responses in 20 controls. The 12 patients with abnormal reactivity had an age range of 31-69 (mean 52.8) years.

It was with interest also that we noted a

paper by Hartling *et al*¹ reporting what may be a parallel abnormality in leg vessels in hypertensive patients. They report impaired vasodilatation (in response to lowered barometric pressure) in hypertensive patients when compared with a control group but suggest that this may be due to increased wall thickness, and consequent decreased compliance, in the resistance vessels.

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¹ Hartling, O J, *et al*, *Proceedings of 5th Scientific Meeting of the International Society of Hypertension, Paris, 1978*, p 110.

Zuckerman overtaken

SIR,—With reference to your leading article (21 October, p 1108) I wish to make the following observations which will clarify a few points.

Firstly, that medical laboratory scientific officers (MLSOs) during their training are still practically examined in technical skills at both Ordinary National Certificate and Higher National Certificate levels. These are standard laboratory tests and as far as clinical chemistry is concerned are on a par with the membership of the Royal College of Pathologists examinations in content. After a lot of heart-searching the practical examination in the special examination of the Institute of Medical Laboratory Sciences was dropped, one of the reasons being that candidates had already shown themselves to be practically competent. A second is that the more senior MLSOs perform tests of a complex nature requiring sophisticated equipment, which would make it very difficult to gather the correct equipment in sufficient quantity to have a meaningful examination which would satisfy the examiners of the candidate's advanced technical competence. How could one assess the candidate's technical competence in gas-liquid chromatography techniques or radio-immunoassay, for instance, unless there are large numbers of the machines available? All of these techniques are commonplace in laboratories and performed by MLSOs.

You make the assumption, I think wrongly, that an "increasing number of graduates . . . , unable to obtain posts as scientists, are entering the MLSO grades." Might I venture to suggest that the inability of graduates to obtain other posts is not the sole reason but that many graduates now see this as a worthwhile career and that many of them are the counterpart of the technician of yesteryear, many now in senior positions, who because of social and economic reasons and the smaller number of university places entered the service after School Certificate or 'O'-level examinations but would, as a result of greater opportunity, today have gone on to university? A further factor is that many graduate entrants see a better career structure, with better prospects of promotion and a job description which is better defined and consequently with fewer of the frustrations which seem to be prevalent in the other scientific grades.

Although I agree with you that job satisfaction comes from practising scientific skills, please let us not lose sight of the fact that skills have to be managed. Decisions on training, supplies, equipment, servicing