person other than a widow, widower, or single person can claim a housekeeper allowance in spite of representations from professional women's organizations, this being politically unacceptable. Also a wife's earned income allowance is unrelated to her family responsibilities. I suggest that a married woman who has children under 16 or a dependent relative and who is in at least half-time employment should be given an earned income allowance that increases with the number dependants. This would enable her to pay for adequate domestic help, thus increasing her work capacity without seeing her own wages disappear in essential expenses.—I am, etc.,

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SIR,—Your leading article "State of Health" (28 December, p. 732) quotes figures which show that only a minority of British-trained women doctors are fully employed in senior posts within the N.H.S. It does not quantify part-time work by women, nor the loss to the community of trained doctors by emigration.

Dr. Dora Black (15 February, p. 393) seeks a solution to the problems of "women" doctors so that "a large work force, eager to use their skills" can return to adequately paid employment, bearing in mind the financial consequences of such work which includes, in Dr. Black's submission, the substantial sum of £1330 per annum devoted entirely to her home and family.

When this distressing problem is considered it must be accepted that any success in the medical profession depends on the right skills being supplied where and when these are required. Such demands are not easily compatible with motherhood. Medically qualified mothers, presumably eager to have children, may then have to make sacrifices from either their own professional aspirations and purses or their husbands'. Would they be helped if we were all paid more? This could prevent some of them dropping out, but there might be inconvenient competition from potential emigrés. Is it possible to produce sick patients in the right place and at the right time, or do the rest of us cope increasingly with the emergency work in unpopular places? Should we seriously consider extra pay for some doctors to provide for their children's care, fillet steaks, and these unimaginable exclusively medical clothes in the face of existing tax differentials? What are the inequalities in returns from professional journals and conferences?

It is time Dr. Black and her fellow-sufferers examined their position honestly and before too many women students give up in despair. As a whole-time consultant psychiatrist (and a woman) I would assure such students that I at least have been treated absolutely fairly by my male colleagues. It is only when professional women seek to gratify their maternal instincts that they must choose between having their cake and eating it; the choice is theirs. It would be a pleasant change to hear some constructive suggestions from those medical mothers who feel that work is worth while instead of a constant stream of excuses and demands for preferential treatment.—I am, etc.,

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Alpha-fetoprotein in Amoebic Colitis and Liver Abscess

SIR,—I would like to report the association of amoebic colitis and amoebic liver abscesses with the finding of α -fetoprotein (AFP) in the serum, as evidenced by the following case. To the best of my knowledge this association has not been previously described.

A 59-year-old Negro man presented with a two-week history of bloody diarrhoea, painful abdominal swelling, and anorexia. He was dehydrated, cachectic, anaemic, and deeply jaundiced. There was right basal atelectasis and a tender, soft, fluctuant mass of 10 cm diameter arising from the liver. The testes were normal. Serum protein was 61 g/l, total bilirubin 213.75 μ mol/l (12.5 mg/100 ml), of which 104.3 μ mol/l (6.1 mg/100 ml) was conjugated. All hepatic enzyme levels were grossly elevated, the prothrombin index was 60%, and the E.S.R. was 120 mm in the first hour (Westergren). *Entamoeba histolytica* was recovered from the stool and from malodorous blood-stained aspirate from the liver. Tests for serum AFP, utilizing the Ouchterlony immunodiffusion method, were positive. In spite of energetic therapy the patient died and necropsy confirmed an enormous hepatic abscess. There was no evidence of cirrhosis, and careful search failed to reveal any tumour. The intestine showed numerous abscesses. The testes were normal.

AFP has been demonstrated as a measurable parameter of malignancy, more particularly of primary hepatocellular carcinoma and embryonic tumours of the ovary and testis. However, this protein has been demonstrated in the serum of patients with gastric,^{1,4} pancreatic,⁵ and oesophageal carcinoma,⁶ in each case with hepatic metastases. False positive results unassociated with malignancy are rare but have been reported in viral hepatitis⁷⁻⁹ and cirrhosis,⁷ though in the latter the possibility of subclinical primary liver cell carcinoma could not be excluded. In 16 clinical cases of amoebic abscess, five confirmed pathologically, tests for AFP were negative.⁷

Though a positive AFP test is good corroborative evidence of hepatic or gonadal malignancy, the possibility of other conditions should be borne in mind. With the increased sensitivity of radioimmunoassay over immunodiffusion techniques it is quite possible that other hepatic diseases will be found to be associated with the presence of the specific globulin in the serum. Experimental evidence to support this is available from Purves,⁹ who has shown that the administration of dimethylnitrosamine to baboons causes a rise in AFP level during the early hepatotoxic stage, during liver regeneration following a rest period, and once a tumour is established.

It is concluded that a hepatic mass with positive AFP test should not exclude treatable disease without further investigation, and a study of the incidence of AFP positivity in benign space-occupying lesions of the liver would be of interest.—I am, etc.,

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- 1 Alpert, E., Pinn, V. W., and Isselbacher, K. J., *New England Journal of Medicine*, 1971, 285, 1058.
- 2 Kozower, M., et al., *New England Journal of Medicine*, 1971, 285, 1059.
- 3 Mehrlan, D. J., Bulkley, B. H., and Wiernik, P. H., *New England Journal of Medicine*, 1971, 285, 1060.
- 4 Bierfeld, J. L., et al., *American Journal of Digestive Diseases*, 1973, 18, 517.
- 5 O'Connor, G. T., et al., *Cancer*, 1970, 25, 1091.
- 6 Sprague, J., Hall, W. H., and White, H. J., *Annals of Internal Medicine*, 1972, 77, 322.

- 7 Alpert, M. E., Uriel, J., and de Nechaud, B., *New England Journal of Medicine*, 1968, 278, 984.
- 8 Gelfroy, Y., et al., *Presse Médicale*, 1970, 78, 1107.
- 9 Purves, L. R., and Geddes, E. W., *Lancet*, 1972, 1, 47.

Levodopa and Dopadecarboxylase in Treatment of Postural Hypotension

SIR,—We wish to report the case of a man aged 65 who for many years had suffered from severe postural hypotension, which latterly had been associated with an extrapyramidal syndrome. This had been treated with levodopa. At that time a study by rheoencephalography of the patient's postural regulatory mechanisms showed an obvious decrease in cerebral blood flow when the blood pressure fell, despite an accompanying tachycardia and vasoconstriction of the leg vessels. These symptoms were unlike those seen in the Shy-Drager syndrome.¹ The hypotension was unaffected by treatment with dihydroergotamine, phenylephrine, and heptaminol together with levodopa.

In 1974 Modopar (levodopa with benserazide) was substituted for levodopa. After three weeks further study by rheoencephalography showed an increase in cerebral blood flow when the patient was sitting, which, nevertheless, was associated with as large a fall in blood pressure as in the previous study (from 125/90 mmHg to 60/40 mmHg). Despite this fall the patient did not feel faint.

These findings invite three comments. (1) Blood pressure measurements in postural hypotension are not a good guide to the state of cerebral blood flow.² (2) The findings corroborate in man the part played by central catecholamines in the postural regulation of cerebral blood flow already shown in animals.³ (3) There is a chemically and anatomically distinct action on the nervous mechanisms responsible for the postural regulation of cerebral blood flow and the arterial blood pressure.⁴—We are, etc.,

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J. BOQUET

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- 1 Shy, G. M., and Drager, G. A., *Archives of Neurology*, 1960, 2, 511.
- 2 Skingjic, O. Y., and Strandgaard, S., in *Brain and Blood Flow: 4th international symposium on the regulation of cerebral blood flow*, ed. R. W. R. Russell. London, Pitman, 1971.
- 3 Smith, O. A., *Annual Review of Physiology*, 1974, 36, 93.
- 4 Wilson, M. F., et al., *Circulation Research*, 1961, 9, 491.

Men, Women, and Obesity

SIR,—The self-assessment of body size, referred to in your leading article (2 November, p. 249), is an area of increasing interest. The paper by Ashwell and Etchell¹ which you discussed presents data that indicate that 90% of overweight women and 70% of overweight men considered themselves to be overweight.

Further insight on the subject of body size perception is obtained from our study in two Scottish towns. During a health survey of all the primary schoolchildren in one school in each town the children's mothers were asked in a self-administered questionnaire to give their height and weight. A random sample of 40 mothers

(aged 24-50) were then visited without prior warning and their height and weight measured. Their reported heights and weights were on average 0.5 in (12.7 mm) above and 6.1 lb (3.13 kg) below their actual measurements. As in Ashwell and Etchell's paper, overweight was assessed using the Metropolitan Life Insurance Company tables.² For 90% of the women the reported measurements indicated a lower degree of overweight than the actual measurements, the difference being roughly proportional to the degree of overweight.

As well as broadly classifying body size as either "overweight," "suitable," or "underweight" Ashwell and Etchell define categories of over- and underweight. Individuals 30%, 20%, and 10% above ideal weight were classed as severely, moderately, and mildly overweight respectively, with corresponding groupings for underweight. Using these categories 15 of the 40 women in our study were classified in a lower category on reported than on actual measurements. Four of these changes were from the broad classification "overweight" to that of "suitable weight."

Our data indicate that reported height and weight should be treated with great caution, as there appears to be systematic underestimation of body size. It may well be that this underestimation of body size as assessed from reported data reflects awareness of overweight status. We would suggest that any further studies on perception of overweight should obtain information on reported as well as actual height and weight and also perceived weight status.—We are, etc.,

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¹ Ashwell, M., and Etchell, L., *British Journal of Preventive and Social Medicine*, 1974, 28, 127.
² Metropolitan Life Insurance Company, *Statistical Bulletin*, 1959, 40, Nov.-Dec.

SI Units

SIR,—If and when SI units are introduced into clinical practice I foresee very real difficulties in the management of patients. Apart from the expense involved in converting to SI, the management of common diseases is surely going to be very much more difficult. When one is informed that a patient in diabetic ketoacidosis has a blood sugar of 780 mg/100 ml one has an instant picture of what that patient's clinical state is likely to be. The SI unit normal range of blood sugar is 3.0-5.0 mmol/l and we are told that the approximate range found in hospital practice could vary from 0.6 to 60 mmol/l. It will not be easy to decide on insulin dosage in such patients. I would think that the same difficulties would arise in uraemic patients when the blood urea is measured in SI units.

We are told that prescribing will not be changed to SI; neither will blood pressure recordings. These have presumably been left alone because of expediency. I think many practising clinicians would feel that much the same argument could be applied to many of the parameters routinely measured in blood chemistry and that to introduce a completely new set of values at this time, when the Health Service is in dire trouble,

will not help in the management of patients.

There is still doubt that the Americans will go over to SI units and this must mean that the American and British medical literature will be in two completely different sets of units. Medicine is not a science; is empiricism now a dirty word?—I am, etc.,

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Tafracher

SIR,—I was most interested in Dr. F. I. D. Konotey-Ahulu's Personal View of the Ghanaian word *tafracher* (8 February, p. 329). Though English has no direct equivalent the sentiment has not, at least in the past, been foreign to us, as is witnessed by the expression of an Irish woman describing the death of her daughter's child to my father some years ago: "... and then, saving your presence, his little bowels gave way."—I am, etc.,

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** We have received several letters drawing attention to similar expressions in use in a variety of languages and cultures.—ED., *B.M.J.*

Comparison between Free Thyroxine Index and Effective Thyroxine Ratio

SIR,—We read with great interest the paper by Dr. E. G. M. D'Haene and others (21 September, p. 708) on the comparison of the Mallinckrodt effective thyroxine ratio (E.T.R.) with the serum free thyroxine index (F.T.I.). Using Spearman's rank correlation analysis, the authors found a highly significant relationship between the E.T.R. and the F.T.I., with a correlation coefficient of 0.68. The correlation coefficient was considerably less than that found by us—namely, 0.95—when we used the Pearson product-moment correlation coefficient in a study of three groups of patients classified as hypothyroid, euthyroid, and hyperthyroid.¹ A similar correlation coefficient (0.93) was found between the E.T.R. and the free thyroxine concentration (F.T.C.). We found it necessary to select patients and subjects in order to yield diagnostic groups of approximately equal numbers. This leads to a much more sensitive regression analysis because of the wider spread of values.

Dr. D'Haene and his colleagues, however, consider that if a given variable has a normal distribution in the population it is necessary, in assessing the variable, to select test subjects (or specimens) by random sampling and hence are critical of our statistical handling of our data. However, we submit that their approach, which studies a randomly selected group of subjects, has no application in the regression model used by us. The essential point in the design is the random distribution of assay errors and not of the population from which the specimens were collected.

It seems that these authors have confused regression with correlation analysis. As pointed out by Hays,² each is appropriate to

a particular kind of research enterprise. Correlation analysis applies especially to problems of prediction. Regression analysis on the other hand determines the relationship between a set of variables—for example, does the E.T.R. increase as the F.T.I. increases and, if so, is there a mathematical rule which describes the relationship? Dr. D'Haene and his colleagues have found a poorer correlation between E.T.R. and F.T.I. because 70-75% of their specimens had normal values and because the E.T.R. has a very low coefficient of variation (C.V.) (3.7% in our hands) in euthyroid subjects. Furthermore, they would have encountered a substantial number of multiple tied values, which would also detract from the degree of correlation found, and there is no indication in their paper that they have corrected for ties.

Further studies from our laboratory³ have indicated that the E.T.R. is a good screening technique, as in euthyroid patients with low activity of thyroxine-binding proteins the diagnostic accuracy of the E.T.R. (80.5%) is superior to that of the F.T.I. (62.5%) and F.T.C. (67%). In euthyroid patients with elevated thyroxine-binding proteins the diagnostic accuracy of E.T.R. is 93.5% compared with 83% for F.T.I. and 91% for F.T.C.

Though the conclusion of Dr. D'Haene and his colleagues that the E.T.R. is not a satisfactory substitute for the F.T.I. is probably incorrect in the light of our studies, we do agree that there are some limitations in the E.T.R., as continuing studies in our laboratory have demonstrated. It is not a good parameter to use in patients undergoing triiodothyronine (T-3) suppression, nor is it a good assay in either thyroid-stimulating hormone (T.S.H.) or thyroxine-releasing hormone stimulation tests. Furthermore, the very low C.V. of the E.T.R. may indicate relative insensitivity rather than a high degree of precision. This leads to a marked overlap in values between clinically hypothyroid patients and normal subjects, particularly where treatment has been given for thyroid disorders. In clinical situations, such as that following radioiodine treatment, it is mandatory to use serum assays such as T.S.H. and T-3 concentration to supplement the E.T.R. test.—We are, etc.,

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¹ Wellby, M. L., O'Halloran, M. W., and Marshall, J., *Clinica Chimica Acta*, 1973, 45, 255.

² Hays, W. L., *Statistics for the Social Sciences*, p. 536. New York, Holt, Rinehart and Winston, 1972.

³ Wellby, M. L., O'Halloran, M. W., and Marshall, J., *Clinical Endocrinology*, 1974, 3, 63.

Venous Gangrene in Multiple Myeloma

SIR,—The incidence of thromboembolism in myelomatosis based on a preliminary estimate of 376 patients admitted to the Medical Research Council's myelomatosis trial up to March 1970 was reported to be about 3%,¹ but the incidence of gangrene of the feet as a presenting feature is uncommon. Catovsky *et al.*¹ reported 14 cases of myelomatosis associated with major