results obtained in the treatment of hyperglycaemic diabetic men by the recommended weight-maintaining American Diabetes Association (ADA) diet with an isocaloric high unrefined carbohydrate diet. The ADA diet contained refined starch 23%, sucrose 20%, fat 34%, protein 23%, crude fibre 4.7 g/d. The high unrefined carbohydrate diet contained unrefined starch 55%, sucrose 20%, fat 9%, protein 16%, crude fibre 15 g/d. Daily estimations of fasting plasma glucose monitored the response and permitted a safe reduction of insulin or hypoglycaemic agent in many patients. Among 13 hyperglycaemic diabetic patients who ate the high carbohydrate diet for two weeks five insulin-treated men, previously receiving for many years from 15 to 25 units a day, had insulin discontinued, and all five sulphonylurea-treated men had this therapy discontinued. Three men, previously receiving a higher dose of insulin from 40 to 55 units a day, remained unaltered in their requirements. Mean fasting serum cholesterol and triglyceride levels both fell significantly.

Two patients could not tolerate the high-carbohydrate low-fat diet, but only one patient chose not to continue the diet as an outpatient. The main difficulty in eating this diet is one of unpalatability; fat is very low at 9%, sugar is high at 20%, so is protein at 16%. A more palatable diet would be unrefined starch 50%, fat 20%, sugar 15%, protein 15%. Refractory patients might benefit by further increases of unrefined starch but decreases of fat and sugar, but such a diet is less palatable. The dietary change may be sudden or gradual. If gradual, then fat and sucrose percentages of the previous diet could be decreased stepwise and the unrefined starch increased to equalise the calories. Careful questioning would reveal whether fat is missed more than sucrose and would constitute a guide to future stepwise reductions. Unrefined high-fibre starchy foods should come from a wide variety of sources and the scanty fat and sucrose diverted to increase their palatability. Wholemeal bread and flour, potatoes, ryemeal crispbread, whole-grain breakfast cereals rather than those enriched with bran, whole maize, brown rice, bananas, beans, and peas offer a wide choice.

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¹ Kiehm, T G, Anderson, J W, and Ward, K, *American Journal of Clinical Nutrition*, 1976, **29**, 895.

² Brunzell, J D, et al, *New England Journal of Medicine*, 1971, **284**, 521.

³ Anderson, J W, et al, *American Journal of Clinical Nutrition*, 1973, **26**, 600.

⁴ Brunzell, J D, et al, *Diabetes*, 1974, **23**, 138.

Blood sugar and beta-blockers

SIR,—Recently it has been suggested that the selective beta₁ adrenergic blockers may be free of troublesome hypoglycaemic side effects, and therefore potentially safer for use in diabetic patients. However, this hypothesis has been substantiated by studies performed only in normal subjects,^{1,2} and these are not strictly applicable to diabetics. Also, Pinter *et al*³ concluded that the non-selective beta-blocker propranolol produced no predictable or characteristic effect on blood glucose levels in healthy subjects. Hence the actual results obtained using the selective beta₁ blockers in normal subjects may be open to criticism. The report by Dr S P Linton and others (9 October, p 877) showed that the blood glucose was

lowered in exercising normal subjects following the intravenous administration of the selective blockers metoprolol and acebutalol. Although no statistically significant results were obtained, if one uses the areas bounded by the mean blood glucose curves and compares the values for these drugs against that for placebo, it can be seen that metoprolol potentiated hypoglycaemia by a factor of 54% and acebutalol by 95%. These values are large and seem likely to be significant.

In my letter (4 September, p 587) I suggested that the hypoglycaemic effect of a beta-blocker was not related to its ancillary pharmacological properties but was inversely related to its degree of beta₁ specificity. This may explain the differing hypoglycaemic actions of metoprolol and acebutalol observed by Dr Linton, although his results are actually the reverse of those of Dr R J Newman (21 August, p 447), who observed a lesser hypoglycaemic effect with acebutalol than with metoprolol. A league table of beta₁ specificity is needed, since the most specific beta₁ blockers should be the drugs of choice for clinical trials in subjects prone to hypoglycaemia.

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¹ Deacon, S P, and Barnett, D, *British Medical Journal*, 1976, **2**, 272.

² Newman, J R, *British Medical Journal*, 1976, **2**, 447.

³ Pinter, E J, et al, *Lancet*, 1967, **2**, 101.

Increasing work

SIR,—It has been suggested that the work load will inevitably increase in general practice. For this extra work load further payment will be requested. Is this extra work load and payment what the GPs desire?

What is the point of increasing the load, thereby decreasing the time given to each patient? One's standard of work will decline unless one compensates by working longer hours. This can only be to the detriment of one's own health and family life. Finally, what is the point of increasing one's remuneration simply to pay back 50% or more to the Government in taxation?

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Oxytocin and neonatal jaundice

SIR,—Dr B Alderman and Professor J M Beazley's comments (2 October, p 818) on the paper "Oxytocin and neonatal jaundice"¹ puzzle me. Three points require clarification.

Firstly, they misquote when they state that the frequencies of hyperbilirubinaemia in the study and control groups were 10.2% and 7.3%. The figures published showed the frequencies to be 7.3% and 10.2% respectively. Secondly, they are, of course, correct when they state that one would not expect the mean bilirubin concentrations to differ between two groups in which the incidence of hyperbilirubinaemia is low. This is an incontestable mathematical fact which I did not attempt to disprove, nor would I wish to. The third point refers to oxytocin dosage. Here I take the liberty of quoting directly from the paper² Dr Alderman and Professor Beazley use to support their argument: "The acceleration of spontaneous labour with oxytocin was

found not to have any significant dose dependent relationship to neonatal hyperbilirubinaemia," and again, "The absence of any meaningful association between increasing doses of oxytocin and neonatal hyperbilirubinaemia in accelerated labours whilst such an association was demonstrable in induced labours suggests that the mode of onset of labour may also be of importance." In this hospital oxytocin is not given in doses which exceed 10 units.

I must again emphasise that my investigation specifically excluded induction of labour with oxytocin because of the lower mean gestational age which is an inevitable result.

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¹ Boylan, P, *British Medical Journal*, 1976, **2**, 564.

² Beazley, J M, and Alderman, B, *British Journal of Obstetrics and Gynaecology*, 1975, **82**, 265.

Computer interrogation of patients

SIR,—The doctor rarely has time to investigate all the areas of a patient's social and medical history that he needs to know about. I make this point because I think that Dr A L Jacobs (2 October, p 814) is premature in dismissing the expanding human science of man-computer interaction. To imply that the issue is either the computer or human contact is to reject a potentially valuable clinical tool.

The results we have obtained in a recent study of history-taking by computer show that suitably designed computer programmes can (1) have therapeutic effects, (2) increase the value of the subsequent doctor-patient interview, (3) give pointers to areas of concern, on which the doctor can then concentrate.

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Emergency medical care

SIR,—As one with experience as a consultant surgeon associated with a university medical centre, a casualty officer in the Royal Alexander Infirmary at Paisley, and more recently a general practitioner on the Isle of Mull, perhaps I may have some reason to be aware of one aspect of the problem of the quality of emergency care that has not been considered in Dr H Conway's article (28 August, p 511), nor by Drs P D'A Semple, J C Murdoch (25 September, p 752), and Dr R Erskine and others (2 October, p 813) in commenting on the article.

In 1966 Klugs, reviewing emergency room care in five United States hospitals, found that two-thirds of the patients did not need hospital centre medical care. They either did not have a family doctor or he was either not available or sought out. The problems of emergency care are not unique to the NHS.

It goes without saying that primary care requires a physician to be available 24 hours a day. The NHS pays general practitioners to practise in groups so that continuity of care will be available and profitable. But part of the satisfaction of general practice is derived also from managing (as far as possible) the patient's diagnosis and treatment. The practitioner who gives this up voluntarily is mistaken. Informed co-ordination of *all* aspects of patient care is really what general practice is all about.