come back to us to be reinvested for the benefit of our patients. This would at once encourage thrift and improve our facilities.

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SIR,-In my experience it is not only general practitioners' surgeries where trivial complaints could well be reduced by education of the public (leading article, 11 December, p 1408). Accident and emergency departments today are besieged with persons whose bruises and sprains show a very low threshold of selfreliance and self-help and one which has become noticeably lower over the past few years—so much so that any little bump is another excuse to visit "mother's knee" in the shape of the local casualty department. The demand for an x-ray is made on the assumption that clinical examination is always fallible. Fear of litigation, though not yet as crippling in its effect on clinical morale here as in the USA, twists the casualty officer's arm to accede where even a lay person should be able to withstand such unnecessary pressure.

The GP faced with trivia has at least the compensation of "pastoral" contact with his own patient. The casualty officer who, as kindly as possible, tells the patient that there is nothing that time will not rapidly ameliorate is hard put to it to derive anything but frustration from the interview. Much more could be done to educate the public (a) as to which injuries merit hospital attendance and (b) as to the real function of the accident department, whose ability to deal with serious cases is constantly being sapped by time and energy spent on trivia

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## Vitamin D status in different subgroups of British Asians

SIR,—We read with interest the article on this subject by Dr Sandra Hunt and her colleagues (4 December, p 1351). We believe that the higher serum 25-hydroxycholecalciferol (25-OHD<sub>3</sub>) concentrations in the Roman Catholic Goans compared with the Ismailis, Sikhs, Moslems, or Hindus may have a different explanation from the one they put forward. The most striking difference between the groups was that the Goans ate a Western-style diet while the other groups ate a traditional Eastern vegetarian diet. Recently it has been recognised that individuals who eat meat have a higher rate of drug oxidation than vegetarians, who, among other differences, have a lower protein intake.1 Taken together, these results make it probable that one of the limiting factors determining the plasma concentration of 25-OHD<sub>3</sub> is its rate of formation in the liver by inducible microsomal oxidation. In a study in which the rate of oxidation of antipyrine was related to diet, cigarette smoking, and other environmental factors the difference in rate between a vegetarian non-smoker and a meat-eating cigarette smoker was approximately two-fold.2 It is of great interest that the mean difference of serum 25-OHD<sub>3</sub> between the Goans and the rest is almost exactly of that order. If this explanation is correct it would indicate that the predominant reason for the prevalence of vitamin D deficiency in the Asian community is not poor dietary intake of vitamin D; rather that their traditional diet does not contain the factors in Western diet which compensate for the lack of sunlight by stimulating the mixed-function oxidase system of the liver.

This postulated mechanism is quite distinct from that occurring in anticonvulsant osteomalacia. In the latter case phenobarbitone and other agents are thought to divert the metabolism of cholecalciferol or 25-OHD<sub>3</sub> from normal pathways and thus produce a conditioned deficiency.3 -5

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Alvarez, A P, et al, Proceedings of the National Academy of Sciences of the USA, 1976, 73, 2501.
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- <sup>a</sup> Präser, H. S., et al., Clinical Phalmacology and Therapeutics. In press.
  <sup>a</sup> Dent, C. E., et al, British Medical Journal, 1970, 4, 69.
  <sup>a</sup> Silver, J., Neale, G., and Thompson, G. R., Clinical Science and Molecular Medicine, 1974, 46, 433.
  <sup>b</sup> Hahn, T. J., et al, Journal of Clinical Investigation, 1972, 51, 741.

SIR,-Dr Sandra P Hunt and her colleagues (4 December, p 1351) have carried out painstaking investigations to determine serum 25-hydroxycholecalciferol levels in the various groups of British Asians and related these to the dietary intake of vitamin D and exposure of their bodies to the sunlight here in London.

For better interpretation of the results of the study it is important to specify whether the subgroup of Hindus included Guiratis or Panjabis or both. Comparatively speaking, the diet of the Panjabi/Hindu vegetarian is richer than that of his Gujrati counterpart. The former obtains his vitamin D requirements from eggs, milk, butter, and cheese, while the latter consumes only small quantities of milk and butter. In addition, no mention is made of the educational and social class of the groups and subgroups included in the study. Generalisations without those considerations can be misleading.

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## Asthma: Spinhaler usage warning

SIR,-Prescribing physicians and pharmacists will be aware of the widespread usage of Intal (sodium cromoglycate) and Intal Compound (with isoprenaline) in the prophylactic treatment of asthma both in the UK and internationally.

Since the introduction of Intal in the UK in 1968 the Spinhaler device has been used regularly each day by many asthmatics without mishap. However, recently three case reports have been received by us-from the UK and Sweden-which demonstrate that the Spinhaler mouthpiece may become detached during Intal inhalation if it has not been firmly screwed home. Fortunately the patients did not suffer any ill effects but at the time the event was obviously alarming to them. Although the Spinhaler is a very safe device, since the events described are extremely rare, nevertheless we feel that patients (especially long-term Intal users) need to be reminded that it should be operated according to the manufacturer's instructions. Thus the patient must ensure that the mouthpiece is firmly screwed home and checked before inhaling Intal from the device.

Future product packs and accompanying literature will emphasise this requirement. We request the assistance of all prescribing physicians to bring this warning to the attention of all patients taking Intal as soon as possible so that the events recently reported do not recur.

> D C QUANTOCK Director of Medical Affairs, Fisons Ltd Pharmaceutical Division

Loughborough, Leics

## Metronidazole and anaerobic sepsis

SIR,-We would like to apologise to our colleagues in Newcastle for inadvertently referring in our recent paper (11 December, p 1418, ref 14) to a case report of their use of intravenous metronidazole in brain abscess rather than to their report of more extensive use of both oral and intravenous preparations of the drug in anaerobic infection.1 Like us, they achieved good results and observed no evidence of toxicity with the intravenous preparation.

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<sup>1</sup> Selkon, J B, Hale, J H, and Ingham, M R, in Chemo-therapy: Proceedings of the 9th International Con-ference, London, vol 1, ed J D Williams and A M Geddes, p 277. New York and London, Plenum Press, 1976.

SIR,-I was surprised that Dr Susannah J Eykyn and Dr I Phillips (11 December, p 1418) reported no side effects with metronidazole.

In a pilot study I have treated 19 patients (six with small-bowel diverticulosis and 13 with Crohn's disease) for intestinal bacterial overgrowth with oral metronidazole (200 mg 8-hourly) for four weeks. Eight were unable to tolerate the drug, complaining variously of severe lethargy, anorexia, nausea, and a sore, furred tongue. These complications usually occurred after one week of therapy, while the serum levels were within the range 8-16 mg/l.

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## Oestrogens for menopausal flushing

SIR.—We wish to draw to the attention of Dr G P Mulley and Professor J R A Mitchell (16 October, p 944) and Professor L A Klopper (30 October, p 1069) the results of our two double-blind randomised cross-over placebo trials<sup>1 2</sup> on the effect of conjugated equine oestrogens (Premarin 1.25 mg) on the psychological and symptomatic status, including vasomotor instability, of peri- and post-menopausal women.