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Correspondents are urged to write briefly so that readers may be offered as wide a selection of letters as possible. So many are being received that the omission of some is inevitable. Letters should be signed personally by all their authors.

American ban on saccharin

SIR,—The United States ban on the use of saccharin, announced in the British press recently, will undoubtedly cause concern in this country both in medical circles and among the general public. We have tested both saccharin and cyclamate for their carcinogenic potential by feeding to laboratory rats and would like to express our opinion that it would be unfortunate if saccharin were to be withdrawn from the market here following the United States action.

There are two ways of assessing the carcinogenic hazard to man of compounds such as saccharin—namely, retrospective epidemiology and testing in laboratory animals. The former approach was adopted by Sir Richard Doll and his colleagues, who found no positive correlation between the increase in bladder cancer and saccharin consumption in Britain; their studies suggest that saccharin is not carcinogenic for man in the amounts commonly consumed even by diabetics.^{1,2} Some years ago we demonstrated that either saccharin or cyclamate used on their own, when fed to rats at very high concentrations, could produce a low incidence of bladder cancer and could also have a synergistic effect with another known bladder carcinogen.³ However, we also pointed out that with saccharin a dose level at least 300 times greater than the maximum daily consumption by diabetics was used to produce a carcinogenic effect.^{3,4} Cyclamate on the other hand is less sweet than saccharin and approximately 10 times the quantity has to be eaten to achieve the same sweetening effect. We found that with cyclamate a weak carcinogenic effect in rats could be obtained with about 40 times the maximum likely consumption for man.^{3,4} Unlike saccharin, cyclamate is actively metabolised and can produce other toxicological

effects, including diarrhoea, in both animals and man. This, coupled with the lack of retrospective epidemiological evidence for cyclamate, which was on the market for too short a time for it to be properly assessed,⁵ in our opinion is sufficient reason to continue to regard cyclamate with caution and not to advocate its reintroduction for general consumption.

The situation in the USA is unfortunate because, as a result of the Delaney amendment which was enacted in 1964, "any food additive must be removed from the market if it has been shown to cause cancer when fed to humans or animals." There is no let-out clause which takes into consideration relative dose levels or risk/benefit assessment, and thus there is no option open to the Food and Drug Administration but to ban saccharin and cyclamate, both of which can undoubtedly produce

tumours in animals when used at very high dose levels.

No such restrictive legislation exists in Britain. At the levels currently consumed saccharin does not appear to be a measurable hazard to health. It is, however, a valuable dietary substitute for sugar, not only for diabetics but also for the control of obesity and associated cardiovascular disease. To withdraw saccharin as well as cyclamate from the market in this country could well create more health problems than it could conceivably prevent.

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¹ Armstrong, B, and Doll, R, *British Journal of Preventive and Social Medicine*, 1974, **28**, 233.

² Armstrong, B, and Doll, R, *British Journal of Preventive and Social Medicine*, 1975, **29**, 73.

³ Hicks, R M, Wakefield, J St J, and Chowaniec, J, *Chemico-Biological Interactions*, 1975, **11**, 225.

⁴ Hicks, R M, and Chowaniec, J, *Cancer Research*. In press.

⁵ National Cancer Institute, Division of Cancer Cause and Prevention. *Report of the Temporary Committee for the Review of Data on Carcinogenicity of Cyclamate*, pp 9-10. Bethesda, Maryland, National Institutes of Health, 1976.

Burst abdomen—a preventable condition?

SIR,—Surely the art of journalism lies in accurate reporting and in detecting quickly a breakthrough to new understanding. Your leading article on burst abdomen (26 February, p 534) achieved a wide survey of this complex problem, but I fail to understand why, in referring to my paper¹ the application of measurement to the distending abdomen and to wound closure was ignored completely, this being the point of the paper.

Scientific advance follows measurement. Insulin had no clinical use until blood sugar could be measured. Curare came into anaesthetic use only when a standard preparation could be calibrated by biological assay. The mathematical facts which have been present

in every fascial wound closure have been ignored in the past 100 years of abdominal surgery. The many reported random trials testing suture materials shared the same technical faults in terms of length of sutures relative to the length of the wound and hence achieved the same results.

By applying measurement I have shown that postoperative abdominal distension may lengthen the abdominal wound by 30% or more; by the use of very simple mathematics, using the length of the wound fascial layer, the length of suture used to close it, and the number of stitches the effect of this distension on the tissue held by the sutures can be predicted. From theoretical and clinical