

for use in dentists' surgeries because we know that they are not given. Amoxicillin is known to provide the required bactericidal activity, and proof of efficacy in the rabbit model is not particularly relevant.

The logic of unselective prophylaxis relates to the 60% or so of patients with viridans endocarditis who had previously been unaware of heart disease. Selective prophylaxis, even if perfectly protective, could not do more than make a small dent in the incidence since the majority of cases would not have been given any protection. If prophylaxis is relevant and works, more people should receive it and provided the regimen is simple they probably will.

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¹ Fleming HA, Newsom SWB. In: Yu PN, Goodwin JF, eds. *Progress in cardiology*: 9. Philadelphia: Lea and Febiger, 1980:80.

Alcohol and alcoholism

SIR,—Dr Colin Brewer is right in his letter (28 November, p 1466) to express surprise at the absence of any reference to supervised disulfiram (Antabuse) treatment in Dr Richard Smith's series of papers on alcoholism (26 September, p 835; 3 October, p 895; 10 October, p 972; 17 October, p 1043; 24 October, p 1108; 31 October, p 1170, and 7 November, p 1251). Dr Brewer's technique of supervised contractual chemical deterrence is eminently suitable for general practitioners having a treatment room.

In the past year we have started five patients on supervised contractual chemical deterrence. Very little work is involved in the treatment room—the sister providing a crushed disulfiram tablet twice daily—and, as the patients have little travelling to the surgery, they seem to attend readily. All five patients have been seen within the past three months. Four are definitely off alcohol and one is probably. For most of the group this is the longest they have been off alcohol since adolescence.

What has led disulfiram therapy into disrepute in the past has been that it has been given either to the patient himself to administer or to a relative, or it has been administered at a clinic distant from the patient's house. All these methods have considerable disadvantages; and all general practitioners with a practice nurse should consider the adoption of this useful technique of disulfiram given twice daily by the treatment room sister.

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ABC of alcohol

SIR,—I have been following with pleasure the "ABC of Alcohol" series and was particularly interested in "Tools of detection" (5 December, p 1531).

It has been my experience that, for a number of reasons, many doctors find blood or urine alcohol measurements useful. Today large laboratories measure alcohol by relatively sophisticated chromatographic or enzyme techniques or by breath alcohol meters. Small laboratories without a heavy demand for this service cannot justify the purchase of such instruments and I feel that mention should be

made of the now sadly neglected Cavett method,¹ which is simple, robust, and cheap. For a very modest outlay on a few chemicals, two pipettes, a petri dish, and a burette (and almost all laboratories still have a number of these gathering dust somewhere) blood and urine alcohols concentrations can be measured with an accuracy of about ± 10 mg/100 ml. Although other volatile, easily oxidisable compounds such as methanol can potentially interfere, acetone at the concentrations encountered in diabetic blood and urine does not. In practice this means that sources of interference are almost negligible.

The Cavett method is also eminently suitable for the measurement of the alcoholic content of home-made beer and other beverages; and experience has shown that the demand for and the prestige accruing from this latter service can at times outstrip that of the former.

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¹ Kent-Jones DW, Taylor G. *Analyst* 1954;**79**:121-33.

SIR,—In the "ABC of Alcohol" series (5 December, p 1531) you suggest the use of breath analysis for the diagnosis of alcoholism and illustrate the alcometer as a means of doing it. One of these instruments has been in use in the accident and emergency department of Northwick Park Hospital for four years,¹ and some attempts have been made to use it in alcohol clinics—with not much success because of the embarrassment sometimes caused to both patient and doctor by the result.

It is much less distressing to both parties to do a blood test so that the patient does not have to know that a test for alcohol is being done and the result can be considered by the doctor before he discusses it with the patient. Blood tests can be quickly and easily done with the alcometer because it is an aspirating instrument and so can be used for head space analysis on a sample of blood or urine. The accuracy of the result is quite sufficient for clinical (if not for forensic) purposes.² This aspirating property also makes it possible to take breath samples from unconscious patients, when an immediate result is particularly valuable.³

Finally, may I suggest that the figures quoted should be related to the time of day? A blood alcohol level of 80 mg/100 ml is much more significant in the morning than it is in the evening.

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¹ Welch TP, Wright BM. *Br Med J* 1977;**i**:1032.

² Jones TP, Jones AW, Williams PM. *Proceedings of seventh international conference on alcohol, drugs and traffic safety*. London: Department of Transport, 1977:259-66.

³ Welch TP, Wright BM. *Lancet* 1977;**ii**:1154.

SIR,—In your timely series "ABC of Alcohol" (14 November, p 1318) Dr A Paton and colleagues describe the increase in alcohol consumption in Britain over the last 20 years. They report increases of 155% in the consumption of wine and 290% in consumption of spirits. I would suggest that these are rapid rises from low initial values, and may not tell the whole story.

The review by Spring and Buss¹ of Customs

and Excise records from 1684 to 1975 shows that by 1950 alcohol consumption in Britain was at its lowest level ever. Beer consumption fell steadily from 800 pints/person/year in 1700 to only 100 pints/person/year in 1950. Spirit consumption was highest in the 1870s, equivalent to 4 oz (115 g) proof spirit per week for every man, woman, and child. Wine drinking has fluctuated according to taxation and legislation, but although now at its highest level ever it still accounts for under 10% of total alcohol intake. The contribution of alcoholic drinks to the energy content of our diet has fallen by about two-thirds since 1750, and with it the contribution of B vitamins and minerals.

Probably the main stimulus to recent rises in consumption has been a fall in the real cost of drink. The number of minutes worked to earn a pint of beer, a bottle of whisky, and a large loaf of bread has changed from 23, 659, and 9 respectively in 1950, to 12, 209 and 11 in 1976. Before improvements in sewage disposal, beer was a healthier drink than water from a contaminated town supply, and inns performed important social functions as places of business as well as entertainment. It is difficult to assess the prevalence of alcohol-related problems in the past, and such problems are recognised more frequently now. The Industrial Revolution increased the potential for alcohol-related accidents. But is it realistic to believe that recent trends in drinking are the only cause of our "dramatic and continuing rise in a variety of alcohol related problems"? It is important that other factors, such as social contexts of drinking behaviour and types of beverage consumed, are not neglected. If the problems of over-drinking are to be understood and tackled, oversimplification had better be avoided. The attribution of the rapid growth in alcohol-related disease to increases in consumption alone may be misleading.

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¹ Spring JA, Buss DH. *Nature* 1977;**270**:567-72.

SIR,—The article entitled "Nature of the problem" in the series "ABC of Alcohol" (14 November, p 1318) contains several glaring errors in its graphical and pictorial presentation of statistical information. Almost no reference is made in the text to the seven diagrams which appear. Of these seven, each of the first five is seriously misleading.

How are we to interpret the triangles? Presumably they are supposed to represent the effects of two different values of average consumption on the incidence of excessive drinking. However, the proportionate areas labelled "alcoholics" are equal for the two triangles, as are the proportionate areas labelled "heavy drinkers."

The axes of the frequency curve are incorrectly labelled. The horizontal axis should read "Daily consumption in cl of absolute alcohol," while (since the distribution is continuous) the vertical axis should read "Frequency function" or "Probability density function." It is the area under the curve which represents the proportion of drinkers. On the substantive question, it should be noted that the curve represents not the actual distribution of alcohol consumption but a mathematical approximation to it, which by its form implies that it is impossible, ab initio, to distinguish