up to examine the long-term effects of therapy and also the incidence of second (possibly treatment-related) neoplasms.

There is some evidence (from our own experience and the data of others^{1,2}) that the incidence of testicular tumours is increasing. Agreement on treatment protocols and clinical studies and national co-operation on histological and staging assessments (including serum marker levels), which would result from setting up a national study group based on specialist treatment centres, should help ensure that the maximum possible number of these young men survive to enjoy a normal life span, and also lead to an increase in the understanding of the biology of this uncommon but interesting group of tumours.

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¹ Hill, J T, *Journal of the Royal Society of Medicine*, 1978, **71**, 737.

² Clemmens, J, *Acta Pathologica et Microbiologica Scandinavica*, 1969, **209**, suppl, p xv.

Minor tranquillisers and the care of children

SIR,—I was extremely interested to read the article (7 April, p 917) on minor tranquillisers and road accidents. Another area in which I am sure that tranquillisers might have an important effect is with regard to potentially dangerous situations in young children.

Some years ago I was looking into the precise ways in which young children got hold of poisonous substances and I was impressed by the fact that in a number of instances it was quite obvious that the parents' level of awareness had been reduced because they were on tranquillisers and that they had not reacted appropriately. The other areas in which I feel sure that this might well be important is with regard to protection from trauma and also in the recognition of early symptoms of illness in young children.

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Health problems of anaesthetists and their families

SIR,—Dr P J Tomlin's report on health problems of anaesthetists in the West Midlands and the publicity in Parliament and in the lay press both before and after its appearance in your pages (24 March, p 779) are bound to alarm all who are concerned with the safety of the operating room as a working environment. It is a pity therefore that further consideration was not given to the possible reasons for the marked difference between Dr Tomlin's conclusions and those of other, larger studies.

In both the United Kingdom^{1,2} and the United States³ national surveys have shown an increase in the frequency of spontaneous abortion associated with the mother working in an operating theatre during pregnancy. Pharoah and others⁴ could not confirm this. Nevertheless, in both countries health authorities have accepted the possibility of an abortion risk as a result of pollution by anaesthetic gases and advice about the installation of scavenging systems has been before hospital authorities in this country since 1976.

The national surveys⁵ in both countries found an increased reporting of congenital abnormality

associated with operating theatre work by both males and females. However, it was considered that the UK data should be interpreted with caution since the difference between the children of exposed subjects and controls could be largely explained by an increase in reporting of "minor" abnormalities, suggesting the possibility of bias in recalling information. Although an apparent association between operating theatre work and congenital abnormality has been shown, in none of the national studies has the order of the effect approached the alarming level suggested by Dr Tomlin. It is true that information about conditions such as epilepsy and diabetes was not studied previously, but even if these are subtracted from the total Dr Tomlin's findings are still not in accord with previous reports of national surveys. While there is a possibility of special local factors operating in the West Midlands which have a bearing on Dr Tomlin's findings, the limitations inherent in a study of small numbers are obvious. Statistical comparisons in the present report have been to some extent selective; for example, no comment is made on the lack of significant differences between his surveyed control and combined exposed groups for birth weight (3269 g and 3283 g) and congenital abnormalities (4.3% and 9.4%). For miscarriage rate (9.8% and 18.0%) the significance of the difference is critically affected by the correction of χ^2 for continuity or not.

One possible benefit of a study of limited numbers in a restricted locale is that a higher reply rate can be achieved. Dr Tomlin implies, quite reasonably, that this improves the quality of his findings. In one survey² with a 70% overall response rate we compared the information from those who responded to a first mailing with that of responses to reminders and could find no difference between them. Obviously, there must be uncertainty about those who did not reply at all and it would be important to learn if in Dr Tomlin's experience reluctant respondents had a different pattern of problems from the others.

We do not doubt the sincerity of Dr Tomlin's concern about the possible hazards of the operating theatre as a place of work. However, we consider that he has done little to elucidate the extent of the problem by his present report. The small sample size, the absence of a truly comparable control group, and a failure to standardise the data on reproduction to take account of such well-known effects as smoking, birth order, and maternal age pose more questions than are answered. In discussing his results Dr Tomlin assumes uncritically that his conclusions can be attributed only to environmental contamination by anaesthetics. Others have drawn attention in both man⁶ and animals⁷ to impressive evidence in support of the "stress hypothesis" but neither is cited. Furthermore, Pharoah *et al*⁴ showed that female doctors without a medical appointment at the time of conception had a significantly lower spontaneous abortion rate (12%) than working doctors (13.8%). Our findings in non-working (13.7%) and working (18.2%) anaesthetists¹ are consistent with this observation, one interpretation of which is that part at least of the increased abortion rate in anaesthetists may well be shared by their colleagues working in other disciplines.

The health departments, which Dr Tomlin has taken to task (not for the first time⁸), have in our opinion acted in good faith according to present evidence and after wide consultation with the profession. We doubt if many anaesthetists will share Dr Tomlin's more radical views.

We would finally remind your readers of the ongoing five-year prospective study sponsored by the Medical Research Council (with the support of the Department of Health and Social Security and the Scottish Home and Health Department) in which we seek annually detailed information about the health and outcome of pregnancy of all female doctors in the NHS aged 40 years or less.⁹ Although our final report cannot be expected until 1982, we are prepared to make known at the earliest

possible time any significant abnormal findings not revealed in earlier surveys. We are, of course, dismayed that Dr Tomlin has chosen to duplicate the effort in part of our cohort and we hope the ladies concerned, many of whom are particularly busy on account of domestic and professional commitments, will not be discouraged at having been asked similar questions twice. If Dr Tomlin is dissatisfied with the manner of our present inquiry, he has made no effort to tell us.

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² Knill-Jones, R P, Newman, B J, and Spence, A A, *Lancet*, 1975, **2**, 807.

³ Cohen, E N, *et al*, *Anesthesiology*, 1974, **41**, 321.

⁴ Pharoah, P O D, *et al*, *Lancet*, 1977, **1**, 34.

⁵ Spence, A A, *et al*, *Journal of the American Medical Association*, 1977, **238**, 955.

⁶ Fink, B R, and Cullen, B F, *Anesthesiology*, 1976, **45**, 79.

⁷ Lansdown, A B G, *et al*, *Teratology*, 1976, **13**, 299.

⁸ Tomlin, P J, *Anaesthesia*, 1977, **32**, 578.

⁹ Spence, A A, *British Medical Journal*, 1977, **1**, 975.

Fats and atheroma

SIR,—Professor M F Oliver (31 March, p 889) and Dr J R Vane (17 February, p 484) add clarity to this somewhat confused debate and both support the thesis I put forward over twenty years ago¹—that atheroma and ischaemic heart disease (IHD) are related to a relative deficiency in the body of essential fatty acids (EFA), which means an adverse ratio of fatty acids of the linoleic and linolenic classes to certain non-EFA (mainly long-chain saturated fatty acids and *trans* isomers of EFA).

I studied Eskimos 35 years ago because of their diet very high in fat, but very high in EFA, and absence of ischaemic heart disease; and in the old ones I was able to examine with a special slit-lamp microscope there was no arcus senilis.² Sir John McMichael (20 January, p 173) states that *trans* fatty acids are unnatural, but they occur in the fats of ruminants (for example, cattle and sheep) and therefore in butter, as well as in margarine. Arcus senilis, which usually accompanies severe atheroma (though it can undoubtedly occur without this), was common in old cows I examined (in a home for sacred cows in India); but I have never seen it in old horses (which are not ruminants).

Both Sir John McMichael and Dr J I Mann (17 March, p 732) miss the point about coconut and peanut oils, both of which are atherogenic. Coconut oil has almost entirely saturated fatty acids (86%, polyunsaturated 2%) and the fatty acids contain 44% lauric (C₁₂) and 16% myristic (C₁₄), which are atherogenic but do not much affect the thrombotic tendency of blood; hence the atherosclerosis but very low IHD in, for instance, certain Pacific islanders. The unusual atherogenicity of native peanut oil (17% saturated, 31% polyunsaturated) has been shown by Kritchevsky³ to be related to the position in the triglycerides of the unusual saturated fatty acids arachidic (C₂₀) and behenic (C₂₂); if the fatty acids are randomised the oil behaves similarly to corn oil.

In IHD we are concerned more with thrombotic tendency of blood than with the chronic process of atherosclerosis that produces atheroma. During the 1939-45 war deaths attributed to IHD fell in European countries, though they rose in Britain after Lease-Lend brought in saturated fats (fat bacon, hard margarine, and spam). In Scandinavia mortality from circulatory diseases (corrected for age) exactly paralleled the consumption of fat in the form of butter, milk, cheese, and eggs,⁴ and in Oslo thromboembolic phenomena following operations also ran parallel.⁵

We should cease to contrast animal and vegetable fats, denigrating the former and