This was shown in the survey referred to earlier as well as in Dr Tomlin's study.

With the routine use of ventilators the use of low-flow rebreathing systems with carbon dioxide absorption appears to be diminishing. The higher gas flows employed are adding to the pollution. In addition flowmeters and vaporisers often remain open in anaesthetic rooms long after the patient has gone back to the ward via the operating theatre.

The problem of pollution is perhaps well recognised now. The current shortage of anaesthetists is putting more stress on the available people and perhaps forcing them to face the pollution for longer periods. It must be even more so in Birmingham!

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¹ *Guardian*, 14 January 1977, p 3.

² Mirakhur, R K, and Badve, A B, *Anaesthesia*, 1975, 30, 18.

³ Rector, G H M, and Eastwood, D W, *Anesthesiology*, 1964, 25, 109.

⁴ Fink, B R, et al, *Nature*, 1967, 214, 146.

⁵ Anderson, N B, *Anesthesiology*, 1968, 29, 113.

Should the indications for prenatal chromosome analysis be changed?

SIR,—The question posed by the title of the paper from Copenhagen by Professor John Philip and others (29 October, p 1117) begs an answer, which we suggest should be in the negative.

Close scrutiny of the data presented by the Copenhagen group (see table) reveals that the low overall frequency of chromosome abnormality in their high-risk group is accounted for by the unusually low number of abnormalities detected in pregnancies in mothers aged 35-39 years (0.2%). This low figure is of considerable interest but disagrees with our experience in Edinburgh and with that of the other major studies quoted in the paper. The explanation for the difference in incidence of chromosome abnormality is not obvious, but it is of interest that almost all women over 35 years in the Copenhagen population appear to have had diagnostic amniocentesis. One explanation advanced for the finding of a much higher than expected number of fetal chromosome anomalies in the second trimester of pregnancy compared with the incidence at birth² is that unknown selection factors may affect the population of older mothers having antenatal diagnosis performed.⁴

However, continued availability of facilities for antenatal diagnosis for older mothers is in our opinion essential. Antenatal diagnosis fulfils a dual role—primarily to reassure the majority of individuals tested that the fetus has a normal chromosome constitution and secondly by providing a smaller number of individuals, when chromosome abnormality is detected, with the offer to terminate the pregnancy. Pregnancies in women over 35 years are currently accorded "high-risk" status, and the removal of one risk (chromosome abnormality) is beneficial to the patient,

by reducing one source of anxiety, and to the clinician, who has an extremely useful additional piece of information available if faced with difficult decisions on management in later pregnancy. Serious handicap associated with chromosome abnormality in infants of women over 35 years would be reduced, the reduction of Down's syndrome infants in the Danish population by screening all pregnant women aged 35 and over being estimated at 25%.⁵ Such a policy has obvious benefits for the parents involved, and is generally reckoned to be cost-effective.^{5,6}

Two main problems in this field remain at present: firstly, to ensure that prenatal diagnosis is readily available to the older woman, and, secondly, to evolve a method of detection of younger women who may have a higher-than-average risk of a chromosomally abnormal fetus. It has been calculated that only 12% of patients over 40 in south-east England have diagnostic amniocentesis performed.⁴ Responsibility for increasing the number of older women screened lies with health workers caring for pregnant women, since Professor Philip and his colleagues emphasise that the acceptance rate among women offered amniocentesis is high. Unfortunately, using age as the sole criterion of risk for chromosome abnormality, the precise age (in the 35-39-year age group) where transition from low to high risk occurs is not yet defined. We therefore intend to continue our current policy, which is to offer amniocentesis to patients of 38 years or over and to make the procedure available on request to those aged 35-37.

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¹ Canadian Collaborative Study, *Canadian Medical Association Journal*, 1976, 115, 739.

² Ferguson-Smith, M A, *Lancet*, 1976, 2, 252.

³ Gajard, H, *Cytogenetics and Cell Genetics*, 1976, 16, 453.

⁴ Polani, P E, et al, *Lancet*, 1976, 2, 516.

⁵ Mikkelsen, M, Nielsen, G, and Rasmussen, E, in *Towards the Prevention of Fetal Malformation*, ed J B Scrimgeour, p 209. Edinburgh, University Press, 1978.

⁶ Hagard, S, and Carter, F A, *British Medical Journal*, 1976, 1, 753.

Treatment of echinococcosis

SIR,—We were interested to read the paper by Dr A Bekhti and others (22 October, p 1047) in which they reported encouraging results with mebendazole in the treatment of human echinococcosis. This drug had already given good results in the treatment of experimental echinococcosis in mice.¹ Unfortunately, however, the compound proved to be toxic for rat fetuses and has been withdrawn from the market.²

Its derivative fluoromebendazole is endowed with a broad spectrum of activity and high efficacy. Results obtained in treating diffuse mice echinococcosis show promise.³ No side effects have been reported as yet.⁴

We have tested this compound in three cases of human echinococcosis at a dosage of 2 g a day for 10, 6, and 12 months respectively. Clinical and biological tolerance has been excellent. The first patient was a 25-year-old woman in whom rupture of a cyst had occurred during surgery for echinococcosis of the liver. No secondary localisation has been observed. The second patient was a 20-year-old man

with disseminated abdominal echinococcosis contraindicating surgery. Considerable clinical and radiological regression has been observed; in particular a giant pelvic cyst compressing the bladder and ureters has almost completely disappeared. In the third patient, a 28-year-old man, rapid progression of diffuse lung echinococcosis has been halted.

Despite the small number of observations, in view of the fact that there is no known medical treatment for disseminated echinococcosis, which has a very poor prognosis, we think that fluoromebendazole might be a useful drug and deserves further study in that field.

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¹ Heath, D D, Christie, M J, and Chevis, R A F, *Parasitology*, 1975, 70, 273.

² Marsboom, R, Janssen Pharmaceuticals Toxicological Research Report N8269 revised.

³ Thienpont, D, et al, *Arzneimittel-Forschung*. In press.

⁴ Marsboom, R, Janssen Pharmaceuticals Toxicological Research Report No 572.

Iodine and the thyroid

SIR,—In your leading article on this subject (17 December, p 1566) it is stated that hyperthyroidism is common in Iceland. In a survey on Graves's disease in Iceland from 1938 to 1967¹ the annual incidence was found to range from 0.097 to 0.138 per 1000 inhabitants and toxic nodular goitre was virtually unknown. From Denmark,² the Soviet Union,³ and West Scotland⁴ an incidence of thyrotoxicosis ranging from 0.22 to 0.50 per 1000 has been reported.

It is well known that an increase in iodine intake in areas of endemic iodine deficiency is associated with an increase in the incidence of thyrotoxicosis, but there is no evidence that a chronic high iodine intake will permanently increase the incidence (or prevalence) of thyrotoxicosis. In fact the evidence from Iceland suggests that the opposite may be true. However, further studies on the prevalence of thyroid disease and on the interplay between environmental and genetic factors in populations on different iodine intakes are needed to define the optimal iodine intake.

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¹ Thjodleifsson, B, *Acta Medica Scandinavica*, 1975, 198, 309.

² Thommesen, N, et al, *Ugeskrift for Laeger*, 1971, 133, 34, 1663.

³ Levitt, I D, et al, *Sovetskaya Meditsina*, 1969, 32, 136.

⁴ Greig, W R, in *Ninth Symposium on Advanced Medicine*, ed G G Walker, p 39. London, Pitman Medical, 1973.

Donor blood for neonatal exchange transfusion

SIR,—I read with much interest the letter from Dr J P Lee-Potter (12 November, p 1290) asking for conclusive evidence why the administration of properly tested blood up to four days old for neonatal exchange transfusion should be discouraged. In West Germany we observe an increasing vogue for "warm blood," meaning absolutely fresh

Chromosome abnormalities in pregnancies in women aged 35-39 years

Canadian study ¹	..	..	..	..	..	1.6%
Glasgow ²	..	..	..	..	..	1.5%
European study ³	..	..	..	..	..	1.2%
Edinburgh	..	..	..	..	..	1.4%
Copenhagen	..	..	..	..	..	0.2%