

supplied at half the scale originally asked for but is rarely fully used.—I am, etc.,

London W.1.

J. M. ALSTON.

The Fifth Freedom

SIR,—The plea of Sir Dugald Baird for a fifth freedom (13 November, p. 1141), freedom from the tyranny of excessive fertility, is both welcome and topical at a time when there is increasing demand for some liberalization in the laws concerning termination of pregnancy. Whatever compromise this society succeeds in reaching concerning this, there is little doubt that this alone will have little impact on the sexual life of most of the inhabitants of this island, for reliance on induction of abortion as a means of avoiding unwanted pregnancies will always remain a distasteful method of escape either to those directly involved or those implicated in the performance of the operation. This operation will occasionally be necessary, of course, and Aberdeen is fortunate in having a uniformity of opinion in its approach to this problem. In a large town such as this, however, such uniformity is difficult to attain, and each individual involved is afraid to show any relaxation lest the flood-gates be opened.

This does not apply to the avoidance of repeated pregnancies by sterilization. For some years now it has been the practice at the Birmingham Maternity Hospital to offer tubal ligation in the puerperium to most "grand multiparae," and some 5% of patients delivered at the hospital during recent years have had this operation carried out. This is a particularly opportune time to perform the operation, for, if done on the second day of the puerperium, it still allows the mother to return home on the tenth day, and a very small incision only is required, as the uterus at this time is an abdominal organ. There is also little pain associated with the operation, as the abdominal muscles are lax and cause little drag on the wound.

Surely the time is coming when we should be prepared to carry out this operation at the request of the patient, so long as she understands that this will result in permanent sterility. Where permanent sterility is not certainly desired then the pill or intrauterine contraceptive device should be the alternatives, for the use of a contraceptive method entailing mechanical interference at the time of the act of intercourse is becoming increasingly unacceptable and unnecessary.

As a gynaecologist I would like to suggest that it should not necessarily always be the woman who has to be subjected to surgical assault in order to attain this fifth freedom. Where removal of the uterus, either abdominally or vaginally, is required to relieve her of menorrhagia or prolapse, it will be necessary for her to be subjected to surgery and the fifth freedom will frequently be a welcome bonus of these operations. Tubal ligation in the puerperium will also incommode her but little. If permanent sterility is required, under other circumstances, however, why should not the husband receive the attentions of the surgeon? Ligation of the vasa is such a simple procedure (carried out in factory clinics on the way home from work in India) that it seems a pity that we have not

become orientated to a more general acceptance of this method. Nevertheless, I find it difficult to persuade my surgical colleagues to carry out this operation, as well as a certain reluctance on the part of the men to have the operation performed, though very willing that their wives should have a more disabling operation. If the Indian can be persuaded to have this operation, surely a little well-directed propaganda could overcome our own reluctance? Could not our general surgical colleagues also be persuaded that this is the correct solution?—I am, etc.,

Birmingham 15.

A. L. DEACON.

SIR,—It is a pleasure to read Sir Dugald Baird's scholarly and admirable survey of the population problem as a whole (13 November, p. 1141), to notice how he leads on to the problem for the individual, and how that has been dealt with in Aberdeen. He demonstrates clearly that contraception and therapeutic abortion can and should be honourable links in the whole chain of maternal and obstetric care. The Aberdeen women are fortunate to have their maternal health in the charge of so humane and skilled a team as Sir Dugald and his co-workers. No wonder that in Aberdeen "there seems to be very little termination of pregnancy by unqualified persons." Let the B.M.A. Committee which is now said to be taking "a long, cool look" at the problem of abortion study this splendid document and take its lessons to heart.

I accompanied Dr. Marie Stopes in 1937 when she visited the Aberdeen branch of the Constructive Birth Control Society which was being run by Mrs. Fenella Paton. At that time work for the birth-control movement was mostly looked upon coldly by one's medical colleagues, and had Professor Baird been hostile the clinic might not have thriven. It has been very gratifying to learn more of its subsequent history.—I am, etc.,

London S.W.13.

EVERLYN FISHER.

Diet and Prevention of Dental Caries

SIR,—Dr. H. M. Sinclair (4 December, p. 1368) asks for the evidence that fluoride is an essential element in man, although this question is hardly relevant to the fact that fluoride reduces caries. Interpreted literally, his question is unanswerable because minute amounts of fluoride are so widely distributed in our foods that no acceptable human diet completely free from fluoride has ever been devised or tested.

As Dr. Sinclair must know (because he was present at a meeting of the Nutrition Society where this point was made) there is evidence that fluoride is essential for the rat. When rats were fed on fluoride-free foods grown by hydroponics on specially purified salts dissolved in rain-water, in one experiment¹ animals died of starvation owing to total destruction of their teeth by caries. In another similar experiment² on a larger scale the rats on the fluoride-free diet had poor growth, suffered from rampant caries, and survived for only two to three months.

It is also well established³ that the teeth of certain human groups who show low caries incidence (Indians, Eskimos, Malays, and Greeks) contain a higher concentration of fluoride than those from the U.S.A. or Britain. It is reasonable to suppose that this fluoride is at least one of the causes of their caries-resistance. It is, however, not suggested that fluoride is the only means of reducing a disease influenced by as many factors as caries. It is not, therefore, justifiable to regard caries as a fluoride deficiency in the same sense as iron deficiency causes anaemia.

Dr. Sinclair has read into my lecture more than I intended. The teeth from South Shields (1 p.p.m. F) were on the average 11% less soluble than those from North Shields, and, although Dr. Sinclair quotes me correctly in saying that the difference was not statistically significant, this does not mean that there was no difference. If we had been able to compare larger numbers of teeth a difference of this magnitude might have been significant. In all the comparisons we have made between teeth from high- and low-fluoride areas there has been a trend towards lower solubility (in some cases statistically significant) in the teeth from the high-fluoride area.

It is well known that to exert its greatest effect fluoride must be present while the teeth are forming—that is, during the first eight years of life. There is some effect on teeth after formation, but it is smaller then and must therefore depend mainly on some action built into the tooth. Although I gave some grounds for believing that ingested fluoride may also act directly (not via the fluoride of the tooth) as an inhibitor of bacterial enzymes, I emphasized that the evidence was incomplete.—I am, etc.,

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- Shaw, J. H., Resnick, J. B., and Sweeney, E. A., *J. dent. Res.*, 1959, **38**, 129.

Prognosis in Bell's Palsy

SIR,—The paper by Drs. O. A. Peiris and D. W. Miles (13 November, p. 1162) demonstrates a remarkable correlation between the loss of taste in Bell's palsy and the incidence of denervation. The authors conclude that tests for taste by electrogustometry allow an immediate prognosis to be given, even in the very early stages of the disease. We hope this will prove to be so, but feel that our own experience does not permit so convenient a solution to our difficulties.

We have a series of 55 cases in which tests for taste have been done carefully in the traditional way with concentrated solutions applied to the tongue. We have only recently begun to use electrogustometry, but Krarup,¹ and more recently Bull,² have shown that, though the latter technique detects more sensitively the absence of taste, all cases detected by the older method are included in those unmasked by the galvanic stimulus.

Forty-one of our series were tested within 14 days of the onset of paralysis. Thirty-two of them showed loss of taste, but only three of these went on to fibre degeneration and ultimately incomplete recovery. The others, 29 in all, retained normal nerve excitability throughout and made an early and complete recovery from