

Although it is realised that a precise diagnosis can be difficult, parents are emphatic that maximum information should be shared. Vague fears are far more distressing than a frank discussion of possibilities. In attempting to protect parents from diagnoses which they see as too ill defined, incomprehensible, or just too awful, doctors leave parents to the ravages of their imaginations. A leaflet could be issued to concerned professionals listing the generalised questions commonly raised and providing guidelines for specific verbal and written answers. (Written information would be a supplement to, not a substitute for, good face-to-face communication.) A written report, tailored to the child's condition and to parental characteristics, would represent a significant advance in professional-client communication. The proposal is appropriate for parents of both the stillborn and the handicapped, sharing a profound grief. For the latter it is a chronic grief, reinforced by the child's very presence, and it is therefore essential to consider all means of alleviating the pain.

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Dental caries and between-meal snacks

SIR,—The timely letter from Drs A R P Walker and P E Cleaton-Jones (11 February, p 361) highlights important issues: firstly, the role of between-meal sugary foods in the aetiology of dental caries and, secondly, the confuser which exists in the interpretation of the available data.

If sugar is extremely cariogenic, as it is,¹ then its effect is likely to be exerted most when it has the possibility of remaining in the mouth relatively undisturbed. A few sweets regularly consumed slowly several times daily may be more cariogenic than a larger amount of total sugar in foods eaten at normal mealtimes followed by consumption of un-sweetened foods and adequate oral hygiene. Nearly three-quarters of a century ago Wallace² observed that cooks and confectioners, who frequently taste the foods they are preparing, as a rule have carious teeth. This is seen currently wherever consumption of cakes and sweet pastries between meals is common.³ Nevertheless, several human studies^{4,5} have shown that the cariogenic challenge from sugar in our foods can be modified by other items of non-cariogenic foods eaten at the same time, some of which are included in the list given by Drs Walker and Cleaton-Jones. Yet they apparently disregard the sequence of distribution of sugary and non-sugary snacks in the diet of the subjects they investigated.

Moreover, the difference in caries experience among children in Johannesburg may be related to a difference in their resistance against dental caries. Although comparative studies have shown clearly that race or heredity is of little significance in the development of dental caries when compared with environmental influences, it is evident that factors such as consumption of unrefined foods, maturation of enamel with age, and fluorides in the diet increase the resistance of teeth against dental caries. The variability of net cariogenic influence dependent on these factors has been discussed elsewhere.⁶ Nevertheless, it does not absolve between-meal sugary foods of their cariogenic potential, which could be of major importance.

The association of such indiscriminate consumption of sugar with dental caries is not due to a mere emotive obsession, as Drs Walker and Cleaton-Jones would have us believe. It is a fact established by centuries of careful observation and decades of patient research. It is the acceptance of this fact which has given an impetus to further research in the quest for factors which can raise the resistance of tooth enamel and oral environment against dental caries.⁷ The elegant primate studies⁸ at the Royal College of Surgeons of England are but one testimony to this assertion. Until such work can suggest other safe and certain preventive measures we have, in the dietary control of sugar, an excellent way of combating this most prevalent of all diseases. It should be widely appreciated that it is possible for all children, as some have done even in Britain, to grow up free of dental caries by judiciously controlling the consumption of sugar. It is sad that our attention is being continuously diverted into relatively unproductive lines by the failure of some to accept that, in the fight against dental caries, we have reached a stage when the paramount need is to search for means to limit the local hazards of sugar and to search for a way of persuading people to use sugar sparingly and sensibly.

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- ¹ Jenkins, G N, *International Dental Journal*, 1972, 22, 350.
- ² Wallace, J S, *The Cause and Prevention of Decay in Teeth*. London, Churchill, 1900.
- ³ *Confectionery and the Statistics of Dental Caries*. London, Cocoa, Chocolate and Confectionery Alliance, 1974.
- ⁴ Rugg-Gunn, A J, et al, *British Dental Journal*, 1975, 139, 351.
- ⁵ Imfeld, T, Hirsch, R S, and Mühlemann, H R, *British Dental Journal*, 1978, 144, 40.
- ⁶ Adatia, A K, in *Refined Carbohydrate Foods and Disease*, ed D P Burkitt and H C Trowell. London, Academic Press, 1975.
- ⁷ Lehner, T, *Journal of the Royal Society of Medicine*, 1978, 71, 161.
- ⁸ Bowen, W H, et al, *British Dental Journal*, 1975, 139, 45.

Choice of contraceptive method in teenage girls

SIR,—The '70s have seen an increasing availability of contraceptive services for the single teenage girl. The introduction of newer intrauterine contraceptive devices (IUCDs), with more doctors being trained to insert them, has led to a growing tendency to use this method in teenage girls. This is especially favoured in those who are poorly motivated to use other methods effectively or have a history of one or more unwanted pregnancies.

Although there is generally a greater awareness of the need to guard against pregnancy, there is a lesser awareness of the still increasing risk of sexually transmitted infection, especially gonorrhoea. The table shows the changes in contraceptive habits in women attending this clinic with gonorrhoea in 1972 and 1976. There was no significant increase

overall in the proportion fitted with IUCDs, but there was a significant increase in their use by those who had repeated gonococcal infection in 1976. Seven of 43 "repeaters" (16.3%) compared with 17 of 373 girls (4.6%) with single infections had an IUCD ($\chi^2_1=7.7$; $P<0.02$). Teenage girls were responsible for almost half of all female gonococcal infections and were three times as likely as those aged over 24 to have repeated infection in the same year.

Because the increased risk of pelvic inflammatory disease (PID) in those with IUCDs, especially with gonorrhoea, and the increased risk of treatment failure it is our practice to remove them as soon as the condition is diagnosed. Should PID already have occurred there is a high risk of permanent infertility, knowledge of which in the teenage girl can be a severe handicap and lead to long-standing emotional disorders. When more permanent relationships have been established in future years expensive infertility investigation may be required if the history of gonococcal infection is concealed from the spouse and her doctors.

Teenage girls, therefore, need to be counselled that pregnancy is not the only risk of intercourse. Those who provide contraceptive services need to be aware of the marked overlap in those teenage girls who are at risk from repeated unwanted pregnancy and repeated gonococcal infection and should weigh the potentially increased risk of permanent infertility and its consequences before an IUCD is inserted.

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Heart-rate response to standing as a test for autonomic neuropathy

SIR,—Using the technique of routine ECG analysis reported by Dr D J Ewing and others (21 January, p 145) the heart rate response to standing has been examined in nine normal young controls and 11 elderly subjects. It was found that the "30:15 ratio" as described by Dr Ewing and his colleagues was not necessarily the most appropriate measurement to take in all cases, for although in all nine of the young controls (mean age 24 years) the overall pattern of response was normal, in three the ratio was less than 1.03 and thus abnormal. Moreover, in these young controls sinus arrhythmia was noticeably present, as can be seen in the figure, and this can lead to great variations in the 30:15 ratio. Thus this is not such a simple definitive screening test, and by alteration in the pattern of breathing it may be possible for the subject to alter the value obtained.

Of the 11 old people living in their own homes (mean age 75 years) none showed postural hypotension, but in all the heart rate

Contraceptive methods in women presenting with gonorrhoea

	Total	Pill (%)	IUCD (%)	Tubal ligation (%)	Barrier methods or none (%)	Pregnant (%)
1972	239	85 (37.1)	12 (5.2)	14 (6.1)	101 (45.1)	17 (7.4)
1976	416	235 (56.5)*	24 (5.5)	13 (3.1)	126 (30.3)+	18 (4.3)

* $\chi^2_1=21.4$; $P<0.001$. + $\chi^2_1=11.8$; $P<0.001$. χ^2 values given at one degree of freedom using Yates's modification.