

DISCUSSION

Question: Could Dr White tell us why he did not mention teeth as a criterion of nutrition, and how we should advise mothers to feed their children so that their teeth do not drop out.

Dr Mayon-White: The safe answer is that one cannot feed children so that their teeth don't drop out. Mothers may be fed so that the children's teeth improve, and caries may probably be prevented by putting fluorine into the drinking water, but much of the nutritional work on teeth has been done on rodents whose teeth grow continuously throughout life. To a very large measure the teeth are outside the body in the human being and are not influenced by the diet to a great extent, so I don't believe the evidence that, for example, calcium deficiency in the diet is really responsible for caries; I am quite certain that you can feed children calcium which is deposited in their tissues and you will not improve their teeth. The same is not true for the fluoridation of water, but I think there is a great deal of nonsense talked about human teeth as an index of good or bad nutrition. The incidence of caries quite clearly reflects the amount of sweets, chocolates, and toffees consumed by the child population of this country and has been stigmatized with the distinction of consuming more sweets per head of the population than in any other country in the world. If you want me to advise you on the right food to produce perfect teeth in children, I cannot help you.

Question: I have met colleagues who thought that overloading a child's diet with starches or carbohydrates helps to perpetuate any catarrhal conditions that they may have. Has anything been done at all on this relationship?

Dr Mayon-White: The subject is a little bit confused because there is no doubt at all that the rickety child was very susceptible to respiratory infections. Possibly, the association of vitamin A deficiency with vitamin D deficiency had something to do with this, and it was certainly the case when rickets was common that as appropriate treatment was given, the general health and in particular respiratory infection began to improve. It was recognized that a very high carbohydrate diet was a factor that could contribute towards the pathogenesis of rickets. It was not the sole cause, but it was an important cause, and I think that this was the period when the popular idea got about that carbohydrates cause catarrh. That idea still persists, and of course it is believed that if school-children are given cod-liver oil, for example, they will get fewer colds and coughs during the winter. There is no evidence in favour of this, but it is a fallacy still perpetuated by the welfare clinics. I do not think that there is any more satisfactory evidence of the association

between starch foods and catarrh than that.

Question : Can you tell us something about the disadvantages of four-hourly feeding as against demand feeding.

Dr Mayon-White: I suppose really that demand feeding was the beginning of the orthodox method of four-hourly feeding, because if you allow children to choose when they will feed, the vast majority of them in two or three weeks after birth will settle down to demanding their feeds fairly regularly about every four hours during the day-time, quite frequently omitting the night feed. The original work on demand feeding involved a study of, amongst other things, the reasons why newborn babies cried. Three basic reasons were found: (1) the child was hungry; (2) he was wet and dirty (and of course it is around feeding time that the child's bowels may work); (3) the child in the next cot was crying and had woken some of his neighbours. If the house is quiet in the middle of the night, it is quite likely that the demand-fed baby will quickly drop the night feed if he is getting adequate food during the day. This is what happens if children are left on demand feeding, so that five feeds at four-hourly intervals, omitting the night feed, is the common pattern for many babies growing satisfactorily and getting an adequate diet by the time they are a month old. One of the interesting things about demand feeding is that the smaller the baby is by birth weight, the later he gives up the need for the night feed. Consequently in a large demand-fed population some of the smaller infants demand feeds more frequently, which again may be the fundamental background of our practice of offering 3-hourly feeds to premature babies and some who are fairly small. The real answer is that babies were invented before clocks, and most of what was regarded as adequate and satisfactory for a healthy community was derived by watching normal babies grow and by timing the intervals at which they demanded their feeds. An earlier generation of paediatricians then said, "Let's tidy this up." Strict feeding by the clock, of course, was a Victorian fashion at a time when matters of home life were strictly regulated. I am not at all surprised that at that time babies and their nurses became slaves to the clock. I think that our present-day freedom is an important contribution in infant feeding, but I do not see any real quarrel between regular feeding and demand feeding. Any freedom brings the opportunity for abuse, and I am quite certain that you can abuse demand feeding. This is not a condemnation of the system.