Rickets under control again in UK

VITAMIN D deficiency rickets is not a disease of epidemic proportion in Britain's Asian community. Dr John Ablett, a senior medical officer in the Department of Health and Social Security (DHSS), said last week there was now enough evidence to confirm that rickets is again on the decline in the UK. The DHSS now takes the view that rickets can be eradicated completely by the use of direct vitamin D supplements to children at risk. A policy of fortifying specific target foods — such as chapatic flour — is therefore not necessary.

Rickets was first documented as a serious problem in the Asian community of Glasgow 18 years ago, and since then it has been observed in most of the larger Asian communities in the UK. Despite claims to the contrary by some doctors, the DHSS says the problem can be controlled by the traditional method of vitamin D supplements backed up by a health education programme — directed at the Asian community — about rickets and its adult equivalent, osteomalacia.

The claim that rickets is on the decline is based on figures from hospital admission records. Rickets is not a notifiable disease and data collection is not easy. However, the DHSS has used figures from its Hospital Inpatient Enquiry programme — in which 10% of all hospital admissions are analysed — from over 90 areas. The declining national trend, says the DHSS, is also supported by a survey involving general practitioners in areas with a large immigrant population.

The DHSS says there is evidence that Asian immigrants are entering the country with rickets or osteomalacia, which are quite common in India, Pakistan and Uganda. This means it should now be possible to identify the population most at risk. According to Ablett, the high risk are the infant children of recent immigrants who may be vegetarians, who come from a poor rural background, and who may have a family history of rickets and osteomalacia.

The DHSS's decision that it does not want a food fortification programme is in line with the recommendation of the department's Committee on Medical Aspects of Food Policy (COMA), which has studied the problem for three years.

The composition of milk cannot be altered without renegotiations of a European Economic Community directive (see *Nature* **270**, 289; 1977). Margarine has a high composition of fatty acids (46% in some brands; butter has only 10% trans fatty acids) and is causing concern to DHSS officials anyway, as these acids have been implicated in some forms of cancer.

Chapati flour, the most serious contender, also has problems, largely over what concentration of vitamin D to use. A concentration sufficient to prevent rickets in young children would be dangerously high for adults consuming more flour per head. This is too risky, the DHSS argues, as there is now evidence to suggest that high vitamin D intakes result in high blood calcium and may cause cardiovascular complaints and even heart attacks.

One of the healthy ones: a hospital survey showed decline in rickets in immigrant areas

The other problem with vitamin D in chapatic flour is that the vitamin is unstable, and up to 50% may be broken down in cooking processes. These technical problems with the flour have still not been resolved, and millers are reluctant to embark on a vitamin D fortification programme unless forced to do so by law.

Finally, there is the problem of hypercalcemia. The DHSS believes — and the COMA report due to be published next year will say this — that there is now good evidence to show that high vitamin D intakes in the 1950s caused the deaths of over 200 infants reported to have hypercalcemia. Although the DHSS acknowledges that chapati flour fortified with vitamin D would not affect this age group, it says that high vitamin D intakes could casuse problems for older teenagers and young adults.

In reaching its conclusion to rely on vitamin D supplements, COMA will point out that cod liver oil supplements reduced the incidence of rickets in children, from 13% in 1943 to almost nil by the end of the Second World War in 1945. If vitamin D supplements could eradicate the problem then, the DHSS argues, that it could do the same today.

However, there may be problems on the way. Preliminary evidence from Glasgow and Birmingham suggests that some 10% of children receiving vitamin D supplements are still developing rickets. These groups will require closer scrutiny to identify why this is happening.

Alastair Hay

UK scientists wait anxiously for £7.5m share-out

SCIENTISTS throughout Britain will learn in the next two or three weeks if they have earned a share in the Science Research Council's £7.5 million special investment in new equipment for university and polytechnic research departments. The cash distribution, which will benefit several hundred projects, follows the last government's improvements in the science budget and although the present administration has since reduced the level of increase, the SRC is committed to the move.

Originally only about £3 million had been considered for the equipment programme but the SRC has since been inundated with responses from scientists following its March appeal for applications for new research hardware. Now an expected £5.25 million alone is to go to chemistry, physics, biology and other departments covered by the SRC's science board and the remaining £2.25 million will be split between departments covered by the engineering, astronomy, and nuclear physics boards.

The decision to invest its share of the first £10 million increment in the science vote on equipment follows the SRC's prophetically accurate view that future increases were by no means guaranteed. So it was decided to spend the money as quickly as possible and grants for projects which would involve commitments to staff for several years were ruled out.

"We consider the best way that we can help universities and polytechnics to benefit from the present circumstances is to encourage them to pay particular attention to their needs for equipment", stated the March letter from the SRC to researchers.

This decision also recognised that many departments are facing severe financial problems in purchasing modern, sophisticated — and expensive — replacements for outdated instruments to provide the traditional "well-founded" university laboratory. This latter role is the function of the University Grants Committee, of course, but there are many intermediate areas between the domains of the SRC and the UGC.

Although the SRC stresses that it is not taking over any of the UGC's functioning, it is hard not to view the move as some form of help for the now financially-burdened UGC. However, in providing this new equipment, which will include items such as nuclear magnetic resonance instruments and mini-computers, the SRC is selecting those laboratories where it feels investment is best suited for its future research programme.

And the level of this need for new equipment can be judged by one estimate of £35 million for the total value of the applications received by the SRC. However

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