

Prevalence of Dental Caries in the United States

A national survey of schoolchildren in the United States has shown that the prevalence of dental caries has decreased substantially in the last decade. The survey was designed and funded by the National Caries Program of the National Institute of Dental Research, part of the National Institutes of Health, and involved children in the 5-17 year-old age group. The findings from the study were presented in a 1982 meeting of the American Academy for the Advancement of Science, in Washington, D.C.

Dental caries is the leading chronic childhood disease and costs the nation at least US\$5 billion a year. Techniques utilized to prevent the disease include the fluoridation of water supplies, use of toothpastes with fluoride (which now comprise about 80 per cent of the current toothpaste market in the U.S.), topical applications of fluoride solutions, dentist-prescribed fluoride dietary supplements, school-based programs of daily fluoride tablets, and mouthrinsing with fluoride solutions. Furthermore, oral hygiene programs and publicity and educational campaigns have aimed at emphasizing reduced consumption of sugar and sugar products. The application of a plastic sealant to children's teeth, which provides added protection against the effect of cariogenic organisms, has also gained wider acceptance in recent years.

The nationwide survey was conducted on children enrolled in public or private schools in the contiguous United States. Clinical examinations were carried out on a sample of approximately 40,000 children drawn to represent the 48 million in that age group.

A total of 37 per cent of children aged 5-17 was found to be caries-free, that is, with no decayed, missing, or filled permanent teeth, as opposed to the 28 per cent found in the National Health Studies conducted from 1971-1973. The average number of decayed, missing, or filled permanent surfaces was found to have decreased from 7.1 to 4.8 in the present survey. A total of 36 per cent of all 5-9 year-olds had no decayed teeth.

Although the National Caries Program cannot point to a single causative factor in the decrease in prevalence of dental caries and the corresponding increase in caries-free children, it considers these to be the possible result of a combination of the techniques for the prevention of dental

caries and their wide acceptance and use by the public, dentists, and the school system.

(Source: National Dental Caries Prevalence Survey, National Caries Program, National Institute of Dental Research, National Institutes of Health, Department of Health and Human Resources, United States Government, and Dental Health Program, Non-communicable Diseases, Division of Disease Prevention and Control, PAHO.)

Editorial Comment

Since 1967 the Pan American Health Organization, in compliance with recommendations of its Directing Council, has been carrying out a specific program aimed at introducing the use of fluorides for the prevention of dental caries in Latin America. At present it is estimated that nearly 50 million people are benefiting from fluoridized water supplies alone, and several million more children are participating in oral hygiene and fluoride mouthrinsing programs. Fluoride toothpastes are now available in many countries.

Despite the fact that survey results of the effects of water fluoridation have been comparable to those of the U.S., the introduction of the use of fluorides on a mass scale has been slow. The lack of treated water supplies and the rural nature of the population has indicated the need for additional universal and economical vehicles for fluoride ingestion, such as table salt.

The PAHO program has operated on the basis of collaboration with participating governments, promotional activities, technical cooperation, and training in the use and application of the techniques identified in the U.S. study. Over 1,500 professionals from all countries in Latin America (including water engineers, chemists, dentists, and government administrators), have been involved in the program.

It is hoped that the results of this survey will encourage the implementation of fluoride programs for children in areas where this preventive element against dental disease is still lacking.