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REFUTATION OF "TEMPORARY DELAY" HYPOTHESIS WITH
DATA ON DECAYED, MISSING, AND FILLED TEETH (DMF)

Opponents of fluoridation frequently attempt to discredit the proven dental health benefits of optimally fluoridated water by alleging that fluoridation provides only a temporary reduction (delay) in tooth decay in children. This allegation is based on misinterpretation of dental health statistics.

When the appropriate data on actual results are analyzed, it is clearly evident that children born and raised in an optimally fluoridated community have fewer decayed and missing teeth. Dental health studies among adults in the U.S. and other countries confirm the long-term dental health benefits of the continuous use of fluoridated water.

In addition, there is no scientific basis for the claim that the prevention of decay in children in fluoridated communities is due to a supposed delay in the eruption of teeth when fluoridated water is used. Studies in areas with optimal fluoridation, both natural and adjusted, show no delay in tooth eruption in any age group. Further, studies have shown no delayed eruption in areas where water is fluoridated naturally at nearly twice the recommended concentration.

The misuse of statistics by those who allege that the benefits of fluoridation are only temporary becomes evident on close examination. The only valid way of estimating the future long-term benefits of growing up in a fluoridated community is to use the DMF data for those residents in a fluoridated community who have used fluoridated water from birth. The DMF data that have been misused to erroneously predict the future results of fluoridation have always included DMF rates for older groups of children who have not had the benefits of fluoridation from birth.

For example, some of the DMF data so misused included children aged 10-12, 13-16, and 12-16 who had used fluoridated water for only 6½, 9½, and 10 years, respectively. These inappropriate data are arranged in various ways in attempts to provide evidence to support the allegation. These presentations really show only that older children are deprived of the full dental health benefits of fluoridation when they do not get fluoridated water from birth.

The enclosed chart shows some dental health statistics from a fluoridated community. Curve #1 shows the DMF data for children up to age 15 before fluoridation was started. Curves #2 and #3 show the reduced DMF rates for 15-year-old children who used fluoridated water for only six and ten years, respectively. These two curves are representative of the arrangements of data from which erroneous conclusions about the future results of fluoridation have been drawn. Curve #4 shows the further reduced DMF rate for 15-year-old children who have used fluoridation water continuously from birth. A look at the continuing divergence between Curve #1 and Curve #4 is sufficient to disprove the allegation that the benefits of fluoridation are temporary.

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