

# ***Dental fluorosis among Hong Kong children drinking 0.5ppm fluoridated water***

[E.C.M. LO](#), University of Hong Kong, Hong Kong, and A.H.H. WONG, University of Hong Kong, Hong Kong

Objectives: A survey conducted in 1985 in Hong Kong found that the prevalence of fluorosis among the school children was 47% and the Dean's Community Fluorosis Index (CFI) was 0.75 when the water fluoride concentration was 0.7 ppm. The fluoride concentration was subsequently adjusted to 0.5 ppm in 1988. The aim of this study was to describe the prevalence and severity of dental fluorosis among the Hong Kong school children in 2001. Methods: A sample of 820 children aged 12 years from 18 schools in Hong Kong was selected through a two-stage stratified cluster random sampling. After obtaining consent, clinical photographs of the labial surface of their anterior teeth (premolar to premolar) were taken. The photographs were digitized and rated by two calibrated examiners who viewed these images on a LCD monitor with an approximately 3x magnification from a distance of around 0.5 metre. The fluorosis status of each child was determined by consensus of the two examiners and recorded using the Dean's fluorosis index. Results: The response rate of this study was 77.8% and photographs were taken on 638 children. Most of the children (70.4%) were rated as zero (normal) while 20.5% was rated as one (questionable) on the Dean's fluorosis index. The prevalence of fluorosis was found to be only 8.9% (95% C.I. = 8.3% - 9.5%). The CFI score was 0.21. Compared to the situation in 1985, there has been a drastic reduction in both the prevalence and the severity of fluorosis among the school children in Hong Kong since the last downward adjustment of water fluoride concentration from 0.7 to 0.5 ppm. Conclusions: The prevalence and severity of fluorosis was very low among the school children in Hong Kong where the water fluoride concentration was 0.5 ppm.

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