

TOOTH DECAY TRENDS FOR 12 YEAR OLDS IN NONFLUORIDATED AND FLUORIDATED COUNTRIES

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SUMMARY: Graphs of tooth decay trends for 12 year olds in 24 countries, prepared using the most recent World Health Organization data, show that the decline in dental decay in recent decades has been comparable in 16 nonfluoridated countries and 8 fluoridated countries which met the inclusion criteria of having (i) a mean annual per capita income in the year 2000 of US\$10,000 or more, (ii) a population in the year 2000 of greater than 3 million, and (iii) suitable WHO caries data available. The WHO data do not support fluoridation as being a reason for the decline in dental decay in 12 year olds that has been occurring in recent decades.

Keywords: Fluoridated countries; Nonfluoridated countries; Tooth decay trends; World Health Organization data.

INTRODUCTION AND METHOD

Tooth decay trends in nonfluoridated and fluoridated countries were studied by preparing graphs using the most recent World Health Organization data from national studies on 12 year old boys and girls.¹

The criteria required for inclusion of a country were:

- a mean annual per capita income in the year 2000 of US\$10,000 or more
- a population in the year 2000 of greater than 3 million
- suitable WHO caries data available.

No countries with appropriate data were excluded. Countries were considered fluoridated when more than 40% of their population had fluoridated water containing about 1 ppm of fluoride and nonfluoridated when less than 10% of their population had such water. For clarity, the nonfluoridated countries were represented in two graphs.

RESULTS

Figures 1a, 1b, and 2 show that the decline in dental decay in recent decades has been comparable in both nonfluoridated and fluoridated countries.

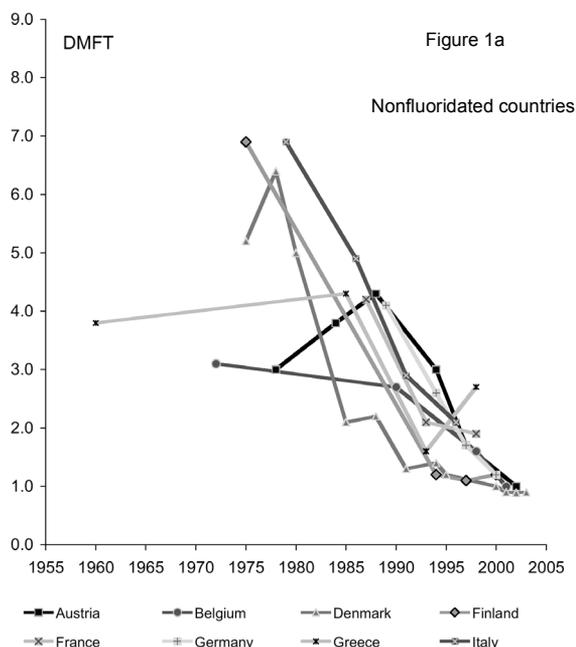


Figure 1a. Tooth decay trends, as indicated by the DMFT Index (Decayed, Missing, or Filled Permanent Teeth), for 12 year olds in eight nonfluoridated countries (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy) using World Health Organization data.

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Figure 1b. Tooth decay trends, as indicated by the DMFT Index (Decayed, Missing, or Filled Permanent Teeth), for 12 year olds in eight nonfluoridated countries (Japan, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, The United Kingdom) using World Health Organization data.

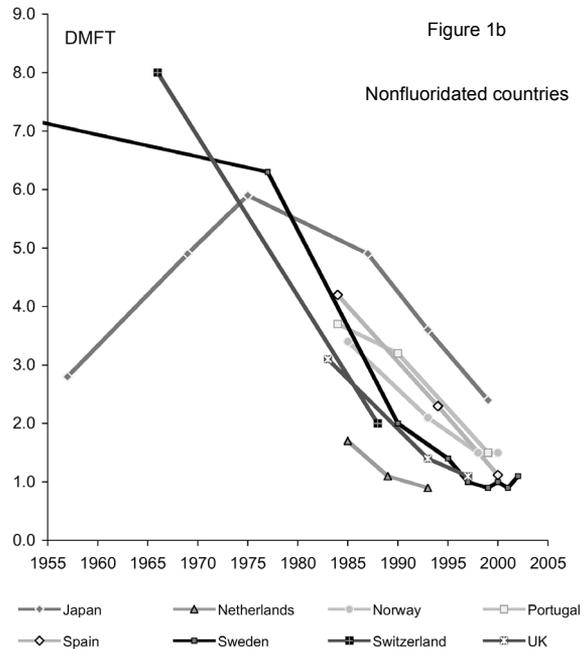
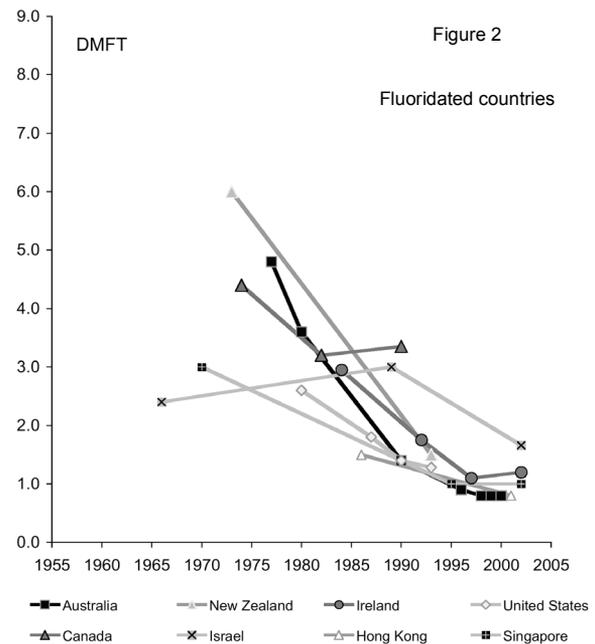


Figure 2. Tooth decay trends, as indicated by the DMFT Index (Decayed, Missing, or Filled Permanent Teeth), for 12 year olds in eight fluoridated countries (Australia, Canada, Hong Kong, Iceland, Israel, New Zealand, Singapore, The United States of America) using World Health Organization data.



DISCUSSION

The World Health Organization data on dental decay trends in 12 year olds in 24 countries do not support fluoridation as being a reason for the decline in dental decay that has been occurring in recent decades.

REFERENCE

- 1 WHO Oral Health Country/Area Profile Programme. WHO Headquarters Geneva, Oral Health Programme (NPH), WHO Collaborating Centre, Malmö University Sweden [homepage on the Internet]. Geneva and Malmö: WHO Oral Health Country/Area Profile Programme; [updated 2005 June; cited 2005 Nov]. Oral health profiles for countries listed according to WHO regions [about 7 screens]. Available from: <http://www.whocollab.od.mah.se/expl/regions.html>