

## FLUORIDATION AND CHILD DENTAL HEALTH IN NEW ZEALAND - AN UPDATE

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**SUMMARY:** The most recent available statistics indicate that child dental health in New Zealand is still not significantly better in fluoridated areas.

Key words: Child dental health; Dental caries; DMFT; Fluoridation; New Zealand.

New Zealand is unique in that dental health statistics are available for almost the entire child population. These statistics are collected annually for all 12- or 13-year-olds as they leave the care of school dental clinics. The two key pieces of information from each health authority's area are: the average percentage of the children who are free of dental caries; and the average number of decayed, filled and missing teeth, or "DMFT".

More than a decade has passed since studies using these annual surveys compared the state of children's teeth in fluoridated and non-fluoridated areas.<sup>1,2</sup> These studies revealed that, when similar kinds of communities were compared, child dental health (in terms of dental caries prevalence) was slightly better in the nonfluoridated areas. If one considered also the prevalences of dental fluorosis,<sup>3,4</sup> child dental health was substantially better in the non-fluoridated areas.

Being curious to know the present situation, I obtained the Ministry of Health's most recent available (1995) child dental health statistics for my own region (Northland) where I practise dentistry. The results suggest that the situation has not changed:

TABLE 1. Dental caries prevalences in Northland, New Zealand, in 1995

	No. of children	% caries-free	DMFT
Fluoridated	113	46.02	1.04
Non-fluoridated	2106	46.58	1.60

Only one town (Kaitaia) in Northland is fluoridated. The non-fluoridated area comprises other towns and large rural areas which, according to our Official Census, are of low average income. Northland is, in fact, the most poverty-stricken area in New Zealand. Lower-income areas have always had higher tooth decay prevalences. So the small (half-tooth) difference in DMFT between the fluoridated and nonfluoridated parts of the province, and higher decay-free rate in the nonfluoridated part, do not support the claimed benefits of fluoridation

The same information supplied from the central region of New Zealand, which includes the capital city, Wellington (a much more affluent region than Northland) is equally revealing:

TABLE 2. Dental caries prevalences in central region, New Zealand, in 1995

	No. of children	% caries-free	DMFT
Fluoridated	6469	49.73	1.24
Non-fluoridated	5601	49.83	1.39

The nonfluoridated area in this region contains small-town and rural areas of lower income level than the fluoridated larger towns and cities. Yet there is a slightly higher decay-free percentage in the nonfluoridated area (as in Northland) and only 0.15 of a tooth difference in DMFT.

#### DISCUSSION AND COMMENT

It is clear from this information that water fluoridation not only does not provide the traditionally claimed "40-60%" reduction in tooth decay, but is of doubtful if any benefit at all. Despite the availability of the above statistics, they receive no publicity in our media. Instead, the public is continually presented with assertions from our health "authorities" that fluoridation is effective and safe. The New Zealand Public Health Commission report in 1994 claimed that immense savings in expenditure on dental treatment resulted from fluoridation.<sup>5</sup> Close examination of its references for that assertion reveal that the claim was based, not on New Zealand statistics, but on a review in 1989 of various pro-fluoridation studies around the world, by a prominent US fluoridation proponent.<sup>6</sup> That review was written before many of the comprehensive studies discrediting fluoridation,<sup>7-11</sup> which were available to the Public Health Commission by 1994, had been published. Also, the author of the 1989 review had omitted the comprehensive studies from New Zealand<sup>1,2</sup> which had by then been published.

The reason why our public health officials and academics cling to their orthodoxy is difficult to find. Could it be because they cannot face the reality that they have for decades been promoting a procedure which is ineffective as well as, from recent evidence,<sup>12</sup> probably unsafe?

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