

Access to fluoridated drinking-water

HIGHLIGHTS:

- 60% of New Zealanders had access to fluoridated drinking-water in 2016-17. This proportion has remained unchanged since 2014-15.
- People in larger cities were more likely to have access to fluoridated drinking-water.
- People in the North Island were more likely to receive fluoridated drinking-water.



Fluoride can be added to drinking-water supplies to reduce and prevent tooth decay

Tooth decay (dental caries) is a major chronic disease among New Zealanders of all ages. It is often accompanied by pain, infection, tooth loss and absence from work or school (Royal Society of New Zealand 2014).

Dental caries are caused by acids that are produced by oral bacteria. The acid dissolves the hard mineral structure of the tooth surface and initiates dental decay. A diet high in sugar can raise the number of bacteria that cause decay and increase the production of acids (Ministry of Health 2009; Royal Society of New Zealand 2014).

Fluoride is known to protect teeth against dental caries. It can stop the demineralisation process caused by acid-producing bacteria. Adding fluoride to drinking-water supplies can help prevent and reduce tooth decay (Royal Society of New Zealand 2014).

Fluoride works in three ways (Royal Society of New Zealand 2014):

- Strengthens tooth surface and makes teeth more resistant to decay
- Interferes with growth of bacteria that cause cavities
- Helps to repair early stages of tooth decay

Data for this indicator

The datasets for this indicator come from the Ministry of Health Annual report on drinking-water quality reports. Drinking-water statistics are presented for all registered community drinking-water supplies that served more than 100 people. This describes the access to safe drinking-water for 3.8 million New Zealanders (Ministry of Health 2018).

60% of New Zealanders have access to fluoridated drinking-water

In 2016-2017, **nearly 60% percent** (2.3 million people) of the population on registered drinking-water supplies had access to fluoridated drinking-water (Table 1).

74% (2.1 million people) percent New Zealanders in the North Island had access to fluoridated drinking-water. In comparison, in the South Island, 18% percent of New Zealanders (0.2 million people) had access to fluoridated drinking-water.

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Table 1: Population on registered drinking-water supplies with access to fluoridated drinking-water, 2016-17

Access to fluoridated drinking-water	Population (count)	Population (%)
North Island	2,118,815	73.8%
South Island	165,930	17.6%
Total New Zealand	2,284,745	59.9%

Source: Ministry of Health 2018

People in the North Island were more likely to have access to fluoridated drinking-water

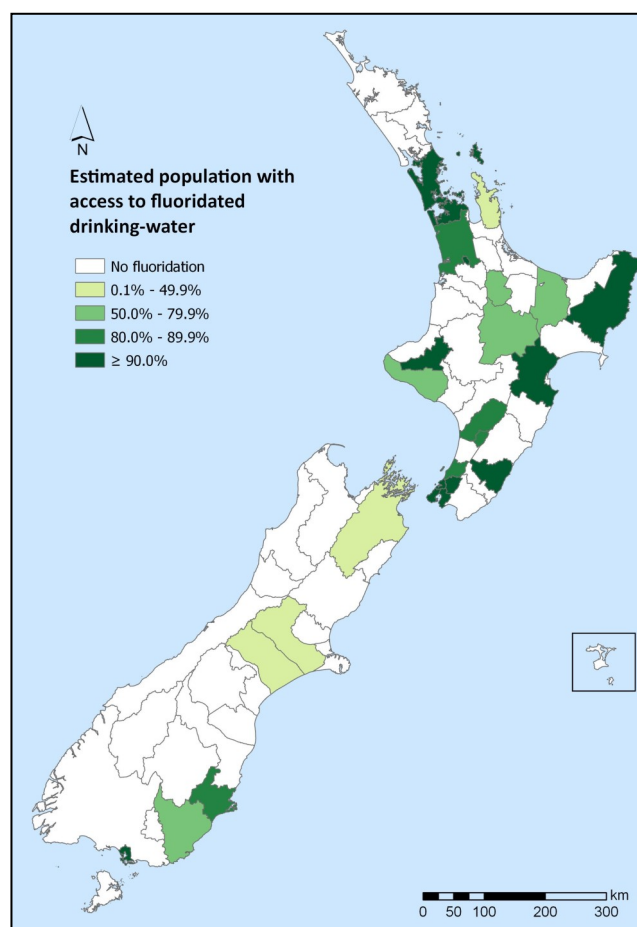
The majority of the population in 21 territorial authorities have access to fluoridated drinking-water, a further 4 have some access. In comparison, non-fluoridated drinking-water is served in 42 territorial authorities. Most of the territories with access to fluoridated drinking-water contain large cities, especially in the North Island (Figure 1).

Over half of the population on registered drinking-water supplies with access to fluoridated drinking-water live in the greater Auckland region. Of the other major cities in New Zealand, Wellington, Hamilton and Dunedin have the greatest percentage population with access to fluoridated drinking-water. The drinking-water supply for Christchurch City is not fluoridated.

The number of people with access to fluoridated drinking-water increased since 2013-2014

Between 2013-14 and 2014-15, the number of people on registered drinking-water supplies with access to fluoridated drinking-water increased by almost 150,000 people. This was a seven percent increase, which is almost completely explained by the re-introduction of fluoride to drinking-water supplies in the Hamilton City District in 2014. Since 2013-14, the proportion of New Zealanders receiving fluoridated water has remained constant at around 60% (Figure 2).

Figure 1: Percentage of population on registered drinking-water supplies with access to fluoridated drinking-water by territorial authority, 2016-2017



Source: Ministry of Health 2018

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Figure 2: Percentage of population on registered community drinking-water supplies with access to fluoridated drinking-water, 2010-2017



Source: Ministry of Health (Annual Reports on Drinking-Water Quality)

RELATED INDICATORS

Related environmental health indicators for the drinking-water quality domain, available from the [EHINZ website](https://ehinz.massey.ac.nz), include:

- Water-borne diseases related to drinking-water
- Population with access to safe drinking-water supplies
- Oral health of children

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CITATION:

EHINZ. 2018. *Population with access to safe drinking-water supplies*. Wellington: Environmental Health Indicators Programme, Massey University.

REFERENCES

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