

Access to fluoridated drinking-water

HIGHLIGHTS:

- In 2015-2016, three out of five New Zealanders had access to fluoridated drinking-water.
- 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 demineralization 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

Table 1: Population* on registered drinking-water supplies with access to fluoridated drinking-water, 2015-2016

Access to fluoridated drinking-water	Estimated population	Percentage population
North Island	2,113,204	73.8%
South Island	162,524	17.5%
New Zealand	2,275,728	60.0%

Source: Ministry of Health 2017

* based on the population served by registered drinking-water supplies serving more than 100 people

Sixty percent of New Zealanders have access to fluoridated drinking-water

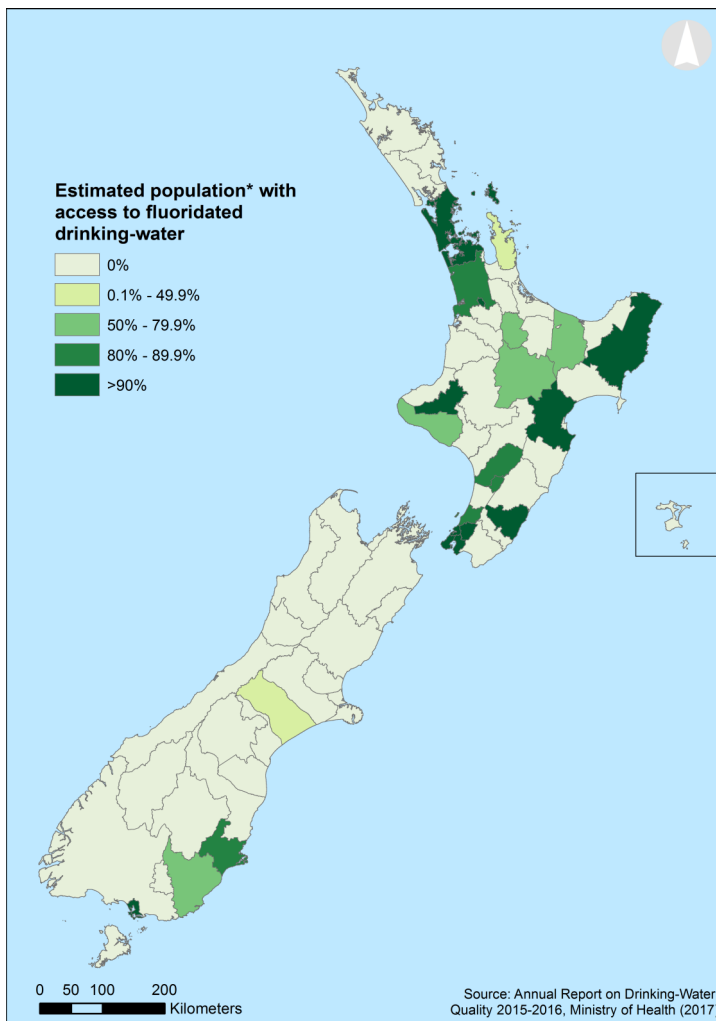
Drinking-water statistics are presented for all registered community drinking-water supplies that served more than 100 people. This describes the access to drinking-water for 3.8 million New Zealanders (Ministry of Health 2016).

In 2015-2016, sixty percent of the population on registered drinking-water supplies (2.3 million people) had access to fluoridated drinking-water (Table 1).

Three out of four New Zealanders in the North Island (2.1 million people) had access to fluoridated drinking-water. In comparison, in the South Island, one out of five New Zealanders (0.2 million people) had access to fluoridated drinking-water .

Access to fluoridated drinking-water

Figure 1: Percentage of population* on registered drinking-water supplies with access to fluoridated drinking-water by territorial authority, 2015-2016



Source: Ministry of Health 2017

* based on the population on registered drinking-water supplies serving more than 100 people

REFERENCES

- Ministry of Health. (2010). *Our Oral Health: Key findings of the 2009 New Zealand Oral Health Survey*. Wellington: Ministry of Health.
- Ministry of Health. (2012). *Annual report on drinking-water quality 2010-2011*. Wellington: Ministry of Health.
- Ministry of Health. (2013). *Annual report on drinking-water quality 2011-2012*. Wellington: Ministry of Health.
- Ministry of Health. (2014). *Annual report on drinking-water quality 2012-2013*. Wellington: Ministry of Health.
- Ministry of Health. (2015). *Annual report on drinking-water quality 2013-2014*. Wellington: Ministry of Health.
- Ministry of Health. (2016). *Annual report on drinking-water quality 2014-2015*. Wellington: Ministry of Health.
- Ministry of Health. (2017). *Annual report on drinking-water quality 2015-2016*. Wellington: Ministry of Health.
- Royal Society of New Zealand. (2014). *Health effects of water fluoridation: A review of the scientific evidence*. Wellington: Office of the Prime Minister's Chief Science Advisor and Royal Society of New Zealand

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

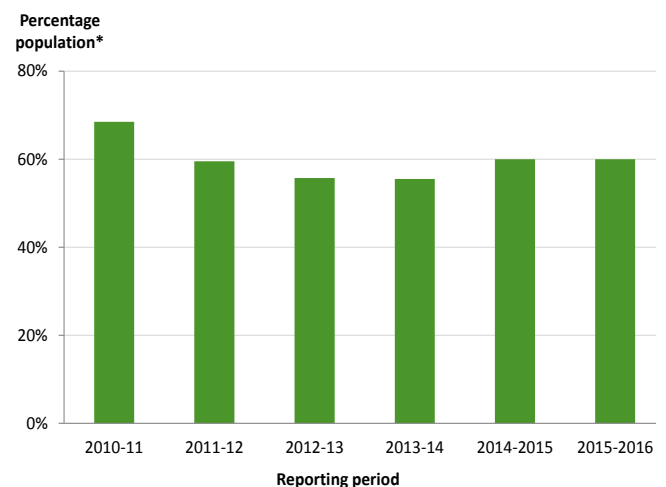
23 territorial authorities in New Zealand have access to fluoridated drinking-water. In comparison, non-fluoridated drinking-water is served in 44 territorial authorities. Most of the people with access to fluoridated drinking-water live in large cities, especially in the North Island (Figure 1).

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

Since 2013-2014, the number of people on registered drinking-water supplies with access to fluoridated drinking-water increased by almost 150,000 people (Figure 2). This is 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.

Figure 2: Percentage of population* on registered community drinking-water supplies with access to fluoridated drinking-water, 2010-2016



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

* based on the population served by registered drinking-water supplies serving more than 100 people

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