

## Frequently asked questions about water fluoridation

### What is fluoride?

Fluoride is a naturally-occurring mineral that strengthens our teeth. It makes the outer layer of teeth more resistant to decay and helps repair early damage caused by decay.

### What is water fluoridation?

All water sources naturally contain fluoride. Water fluoridation adjusts the amount of fluoride in drinking water, to the optimal level for protecting against tooth decay.

### Why do we need water fluoridation?

Tooth decay is the most common chronic disease in Australian children and adults<sup>1</sup>, leading to pain, infection, tooth loss and even hospitalisation.

Water fluoridation is the most effective, equitable and economical way to help prevent tooth decay at a community level, improving oral health and saving money for individuals and the health system.

### Who benefits from water fluoridation?

Fluoridation benefits people of all ages: children, adults and the elderly. It helps prevent tooth decay in everyone who drinks it, even if they're not able to maintain proper dental hygiene or access appropriate dental care.

### Is it effective?

Yes. The National Health and Medical Research Council's 2017 review<sup>2</sup> of the latest evidence found that water fluoridation reduces tooth decay by up to 44% in children and by 27% in adults.

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<sup>1</sup> Australia's Oral Health Tracker, 2018

<sup>2</sup> National Health and Medical Research Council: Water Fluoridation and Human Health, 2017

## **Is it safe?**

Yes. The NHMRC review found there was no reliable evidence of an association between water fluoridation at Australian levels and any health problems – including cancer, cognitive dysfunction, lowered intelligence, kidney problems or thyroid disorders.

It's one of 18 international reviews since 1994 to have examined the evidence on fluoridation and general health, with none finding that fluoridation poses a known health risk.

Fluoridation began in NSW in 1956. Around 96% of NSW residents now have access to fluoridated tap water.

## **Should I still use fluoride toothpaste if my community is fluoridated?**

Yes. Water fluoridation and the twice daily use of fluoride toothpaste are considered baseline prevention for tooth decay.

The combination of drinking fluoridated water and brushing with fluoride toothpaste offers more protection against dental decay than either measure alone. Water fluoridation maintains low levels of protective fluoride in saliva and dental plaque all day, while the much higher concentration of fluoride in toothpaste offers additional benefit<sup>3</sup>.

### **For the best protection against tooth decay:**

- Drink fluoridated tap water
- Brush twice a day with fluoride toothpaste (from 18 months of age)
- Reduce sugar consumption
- Visit the Dentist for regular check-ups, at least once a year

## **Do I still need fluoride treatments at the dentist?**

For people at higher risk of decay or with specific dental needs, fluoride treatments at the dentist offer extra protection on top of water fluoridation and brushing with fluoride toothpaste.

Fluoride treatments at the dentist include gels and varnishes. Dentists may also recommend additional fluoride treatments at home such as fluoride mouth rinses, gels and high-strength fluoride toothpaste.

Do not stop drinking fluoridated tap water or brushing with fluoride toothpaste twice daily unless directed by your Dentist or Doctor.

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<sup>3</sup> NHMRC Water Fluoridation and Human Health in Australia: Questions and Answers, 2017

## Can I get too much fluoride from drinking tap water?

No. Only tiny amounts of fluoride are needed in water to help prevent tooth decay – in NSW, just 1mg/L or 1 part per million (ppm). To visualise that concentration, it's like four drops mixed into a 208-litre barrel of water<sup>4</sup>.

Water fluoridated at 1ppm is safe to drink while still getting fluoride from other sources, including foods, drinks, and dental products, regardless of how much tap water you consume.

The NHMRC supports water fluoridation within the range of 0.6 to 1.1 mg/L – enough to prevent tooth decay, while minimising the risk of noticeable dental fluorosis.

## What is dental fluorosis?

Dental fluorosis is a change in the appearance of the tooth surface. It usually appears as white markings on the enamel and is caused by a high intake of fluoride when teeth are developing (birth to six years of age).

Studies show that dental fluorosis is more closely associated with swallowing fluoride toothpaste than with water fluoridation<sup>5</sup>. The very small amount of noticeable fluorosis that occurs in Australia is found equally in fluoridated and non-fluoridated areas, meaning there is no evidence it is caused by water fluoridation<sup>6</sup>.

Most fluorosis in Australia is mild or very mild, is not of aesthetic concern, and does not affect the health or function of the tooth<sup>7</sup>.

### **To reduce the risk of dental fluorosis ADA NSW recommends:**

- Parents/carers do not start using toothpaste for children until they are 18 months of age, unless recommended by a health professional
- Using low-fluoride toothpaste for children aged six years and under
- Parents/carers supervise tooth brushing for children aged eight years and under to ensure children:
  - Use only a pea-size amount of toothpaste when brushing
  - Spit toothpaste out
  - Do not lick, eat or swallow toothpaste
  - Do not rinse with water after brushing their teeth

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<sup>4</sup> Australian Research Centre for Population Oral Health, University of Adelaide, Dental Practice Education Research Unit

<sup>5</sup> Australian Research Centre for Population Oral Health, Fluoride Review Guidelines, 2012

<sup>6</sup> NHMRC Water Fluoridation and Human Health in Australia: Questions and Answers, 2017sp

<sup>7</sup> Ibid.