



Fluoride in Drinking Water

Introduction

Fluoride is an element that is naturally found in all water sources, including fresh and sea water. Fluoride is also found naturally in a wide range of food items including tea, fish and rice. It has also been shown that when added to drinking water supplies, fluoride can promote dental health by preventing tooth damage and decay.

This factsheet is designed to provide answers to common questions and concerns that are associated with the use of fluoride.

Is drinking water in Western Australia fluoridated?

Yes, water fluoridation was introduced in Western Australia in 1968. Currently, around 92% of the population is provided with fluoridated water through a scheme drinking water supply.

Does fluoridation work?

Yes. Water fluoridation is supported by a number of major health organisations including the World Health Organization (WHO), the National Health and Medical Research Council (NHMRC), the Australian Dental Association (ADA), and the Australian Medical Association (AMA).

What are the benefits of drinking water containing fluoride?

Water fluoridation plays an important role in reducing dental decay for the entire population. At low levels, fluoridated drinking water can help to strengthen teeth and repair damage caused by early decay before it becomes permanent.

Are there any adverse health effects from drinking fluoridated drinking water?

No. More than sixty years of experience around the world, including over forty in Western Australia has clearly shown that the correct amount of fluoride in drinking water poses no risk to your health at all.

Exposure to high levels of fluoride (above 1.5mg/L), however, may place young children at increased risk for fluorosis. Fluorosis is a condition in which mineralizing tooth enamel (in young children) becomes damaged before the teeth erupt (emerge through the gums). This damage causes the tooth enamel to become porous, and prone to discoloration through the uptake of colour from foods and drinks.

Are there guidelines for fluoride levels in drinking water supplies?

Yes. The 2004 Australian Drinking Water Guidelines, published by the National Health and Medical Research Council, specifies a maximum level of 1.5mg/L for fluoride in any drinking water supply. This guideline value has been set to protect children from the risk of fluorosis while still providing benefits for oral health. (The World Health Organization also sets a maximum guideline value of 1.5 mg/L for fluoride in drinking water.)



What level of fluoride is maintained in WA's drinking water?

The optimal level for fluoride in drinking water is dependent upon a number of factors, including the average consumption of drinking water and average temperature in a given region. In WA the fluoride concentration range is between 0.7 and 0.9mg/L. By law, it must not exceed 1 mg/L.

Are the fluoride levels in Western Australian scheme water supplies monitored?

Yes. In WA, scheme drinking water supplies are monitored on a continuous to weekly basis to ensure that fluoride levels do not exceed the legal limit.

How can I find out if my drinking water has been fluoridated?

In WA, fluoride is added to the water schemes in the metropolitan area, and most large country centres. You cannot taste or smell fluoride, so you will need to contact your local water authority if you wish to find out if your drinking water has been fluoridated.

The Water Corporation can provide more information on the water composition in your area.

Is bottled water fluoridated?

Yes, in some cases. Australian regulations permit the voluntary addition of fluoride to bottled water at a range of 0.6 – 1mg/L (total amount of fluoride contained). It is a legal requirement that any bottled water with added fluoride sold in Australia must be clearly labelled with words stating that the product contains added fluoride. This labelling allows consumers to make informed decisions about their drinking water.

Can I remove fluoride from my drinking water?

Yes. While many home filters do not remove fluoride from water, distillers and reverse osmosis filtering systems have been shown to be highly effective and will remove most of the fluoride in your drinking water. These filters, however, are quite sophisticated and expensive to purchase, install and operate.

The fluoride concentration maintained in scheme drinking water (less than 1mg/L) is a safe and effective way of protecting teeth against dental decay, and it is not necessary or desirable to remove the fluoride.

More information about removing fluoride from your drinking water can be obtained from a professional water treatment company. Water treatment companies can be found in the Yellow Pages telephone directory under the heading 'Water Treatment and Equipment'.

Summary

- Fluoride plays an important role in strengthening tooth enamel and preventing dental decay.
- Water fluoridation is widely practised throughout Australia, and is recommended by many major health organisations including the Australian Dental Association.
- Fluoride is not harmful at low levels, but young children exposed to higher levels (≥ 1.5 mg/L) face an increased risk of developing fluorosis, a dental condition in which mineralizing tooth enamel becomes damaged before the teeth erupt.



- The National Medical Health and Research Council and the World Health Organisation have both specified a guideline value of 1.5mg/L for fluoride in drinking water.
- The fluoride concentration in WA scheme drinking water supplies are maintained at safe and effective levels, and regularly monitored.
- Drinking water fluoridated at optimal levels will not taste or smell any differently than non-fluoridated water.
- Any bottled water sold in Australia which has added fluoride must state on the label that the product contains added fluoride.
- Many home filtering systems are not useful for removing fluoride from drinking water, but reverse osmosis filters and distillers will remove most of the fluoride.

Other factsheets available:

Standard Drinking Water Assay

http://www.public.health.wa.gov.au/3/968/2/drinking_water_monitoring_and_testing.pm

Drinking Water Filters

http://www.public.health.wa.gov.au/3/970/2/drinking_water_treatment.pm

Web links:

Australian Drinking Water Guidelines

<http://www.nhmrc.gov.au/publications/synopses/eh19syn.htm>

World Health Organization Drinking Water Guidelines

http://www.who.int/water_sanitation_health/dwq/guidelines/en/index.html

National Health and Medical Research Council – National water fluoridation review

<http://www.nhmrc.gov.au/publications/synopses/eh41syn.htm>

Water Corporation

<http://www.watercorporation.com.au>

More information

Water Unit

Environmental Health Directorate

Department of Health

PO Box 8172

PERTH BUSINESS CENTRE WA 6849

Telephone: (08) 9388 4999

Fax: (08) 9388 4910

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