



Frequently Asked Questions (FAQs)

Nickel in Drinking Water

Metals can be present in drinking water but they are only allowed to be present up to specific legal limits. Nickel is an example of a metal that may be found in drinking water. The following Frequently Asked Questions have been developed to give you more information if high levels of nickel are found in your drinking water (whether you are on a public or private water supply).

Where is Nickel found, and what is it used for?

Nickel is a silver-white metal widely found in soil, rocks and air and is used to produce stainless steel and other alloys which are used in coins, jewellery, electrical equipment, household appliances and batteries. Food such as nuts, dry beans and chocolate is the main source of nickel exposure in the non-smoking population and in those not occupationally exposed to nickel.

How does Nickel get into drinking water?

Water is generally a minor contributor to the normal daily oral intake. The main source of nickel in your drinking water is from contact with nickel or chromium plated fixtures such as taps and/or internal plumbing fittings.

What's the acceptable level of nickel in drinking water?

In Ireland, the European Union (Drinking Water) Regulations 2023 have set a nickel limit of 20µg/l (micrograms per litre). No adverse health effects are expected below the World Health Organization health based guideline value of 70µg/l which was set at this level to protect nickel sensitive individuals who are the most vulnerable group¹.

What are the possible health effects of Nickel?

Nickel is an essential nutrient in our diet. The level of nickel in your water is unlikely to cause adverse health effects. The most common harmful health effect of nickel in humans (including children) is an allergic reaction. People can become sensitive to nickel when jewellery or other nickel containing items are in contact with the skin for a long time. Once

¹ World Health Organization. Guidelines for drinking-water quality. 4th edition. Geneva: WHO; 2011
Available at: <https://apps.who.int/iris/rest/bitstreams/1414381/retrieve>



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a person is sensitised to nickel, further contact may produce a reaction, most commonly a skin rash at the site of contact. Less frequently some people who are sensitised to nickel may have asthma attacks following exposure.

Some sensitised people react when they eat food or drink water containing metal. If you are allergic to nickel you may wish to use an alternative source of water or consult your General Practitioner.

How would I know Nickel levels in my drinking water are a concern?

It may not be possible to tell from looking at or tasting your drinking water that there are high levels of nickel in it. Developing an allergic reaction like a skin rash may be the first sign of increased levels. If you are concerned that the levels of nickel are high in your drinking water you should contact your drinking water provider to get advice about testing your water.

What do I do if I find elevated Nickel in my drinking water?

You can drink water containing nickel below the WHO based value of 70µg per litre of water.

If the nickel concentration exceeds 70µg/l and you are allergic to nickel, you should use an alternative source of water or consult your General Practitioner for medical advice.

Running (flushing) the water before using it for drinking or cooking may lower the level of nickel. However, the only way to know if flushing works is by testing. Your water supplier should advise you on appropriate testing, flushing and re-testing. This will tell you how much water needs to be run off before using it for drinking or cooking. If, after running the water, the level of nickel consistently stays above 20µg per litre, you should use safe drinking water from some other source.

How can I learn more about Nickel

Uisce Éireann

www.water.ie/help/treatment-and-testing/drinking-water-tests/

Environmental Protection Agency (EPA)

www.epa.ie/publications/