

Drinking Water Consumer Advice Note No. 1 – Lead (Pb)

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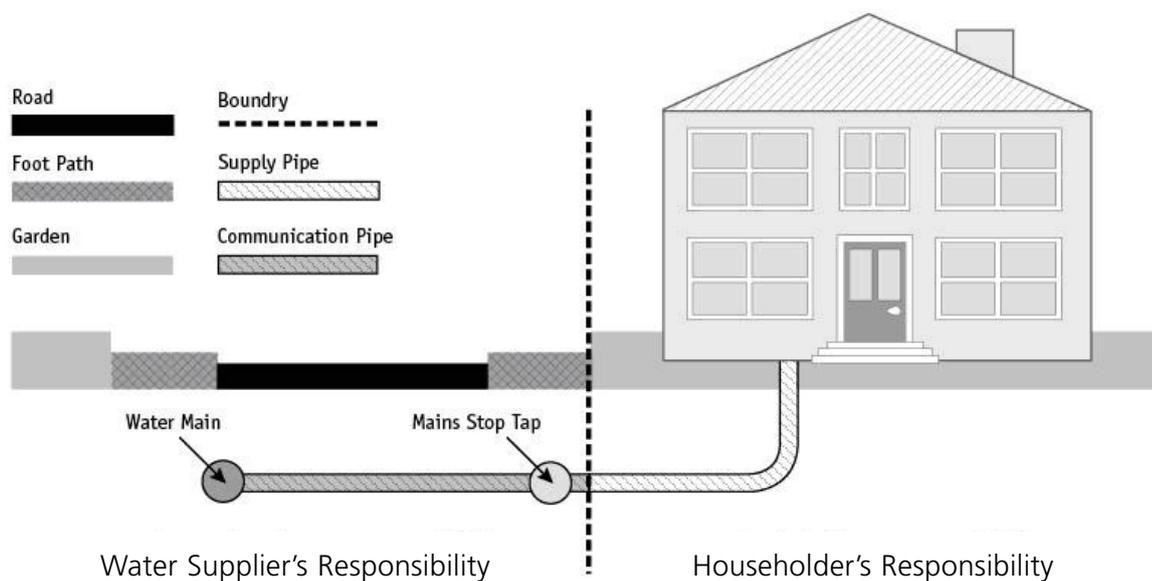
LEAD

- Lead is a metal which is found in soil, rocks, air and water.
- It is used for making batteries, roofing materials, pipes and other plumbing fittings.
- Lead can be inhaled (breathed in) from air or dust and can be ingested (eaten) in food or water.
- Lead has been removed from petrol and paint.

LEAD IN DRINKING WATER

- Water does not usually contain lead when it leaves a water treatment plant.
- Lead leaches into drinking water from lead pipes and other types of lead plumbing such as fittings and solder.
- Houses built up to and including the 1970s may contain lead in their drinking water if lead pipes and plumbing were used inside the house. Lead pipes may also have been used outside, to supply the house.
- Figure 1 shows the different types of outside pipes and who owns them.
- Lead pipes are not typical in homes and buildings built since the 1970s.
- Modern pipes can however sometimes be joined with lead solder.

Figure 1. Types of water distribution pipes



LEVELS OF LEAD IN DRINKING WATER

- The legal limit of lead in drinking water in Europe was lowered on December 25th 2013 (from 25 micrograms per litre to 10 micrograms per litre). This was part of a greater plan to reduce everybody's lifetime exposure to lead to the lowest possible level.
- The level of lead in drinking water in a house depends on whether there are lead pipes and plumbing in or supplying the house, the length of the lead pipes, the amount of water used (dishwasher, showers, washing machine) and the softness and temperature of the water.

LEAD IN DRINKING WATER AND HEALTH

- ▼ Lead can affect the development of a child's brain leading to problems with learning, behaviour and attention.
- ▼ The risk is greatest for young children, infants and babies in the womb.
- ▼ Lead may harm the kidneys and may contribute to high blood pressure. It has also been linked to cancer.
- ▼ These health problems were discovered at very high levels of lead. We now know that even low levels can have health effects.

HEALTH ADVICE

- ▼ No level of lead in drinking water is now considered to be completely safe.
- ▼ It is therefore best to keep everybody's exposure to lead, from all sources (drinking, eating, inhaling), as low as possible.
- ▼ Everybody should therefore try to drink water with as little lead in it as possible.

ROUTINE TESTING FOR LEAD IN DRINKING WATER

- ▼ Water supplies that come under the European Union (Drinking Water) Regulations are tested for lead.
- ▼ Houses and buildings served by these supplies are randomly chosen for testing. Your individual property may not have been tested previously.
- ▼ The water testing results of your water supply are available for you to see. Contact your Local Authority (LA) for public water supplies (operated by the LA on behalf of Irish Water) and also for all private regulated supplies including group water schemes. <https://www.water.ie/help-centre/contact-us/>
- ▼ The Environmental Protection Agency (EPA) publishes a yearly report with a summary of drinking water results from all Irish regulated drinking water supplies <http://www.epa.ie/water/dw/>

CHECKING YOUR HOUSE FOR LEAD PIPES

If your home was built:

- up to and including the 1970s it may have lead pipes or the lead pipes may have been replaced
 - after the 1970s it is unlikely to have lead pipes
- ▼ If you suspect you may have lead pipes, look for them. A qualified plumber could help you.

Check inside your home

Look in the cupboard under your kitchen sink or behind it. You may also need to look in other places, e.g. the cupboard under the stairs. Find the pipe that comes straight in from the outside and leads to the cold kitchen sink tap. Check if it is made of lead along as much of its length as possible. Unpainted lead pipes are dull grey. They are also soft. If you scrape the surface gently with a knife, you will see the shiny, silver-coloured metal beneath.

Check outside your home

- ▼ Open the flap of the stopcock (also called mains stop tap) outside your property. Examine the pipe leading from the stopcock to the property. If you can, scrape its surface gently with a knife. It may not be possible to do this in some cases as access may be difficult.

Other pipe materials in common use are:

- copper - bright, hard and dull brown
 - iron - dark, very hard and may be rusty
 - plastic - may be grey, black or blue.
- ▼ The communication pipe from the water main to the stopcock, or the water main itself, both of which belong to the water supplier, may still contain lead (see Figure 1). If in doubt, ask your water supplier for advice.

TESTING THE DRINKING WATER IN YOUR OWN HOUSE

- ▼ If you find lead pipes or lead in your plumbing system, either inside or outside your house, you should have your drinking water tested.
- ▼ Contact your water supplier for advice.
 - For public supplies, contact your Local Authority, who operate public water supplies on behalf of Irish Water.
 - For private water supplies contact your group water scheme committee or the owner of your private supply.
 - For private wells, a number of private and public laboratories offer testing of drinking water.

IF YOU FIND LEAD IN YOUR DRINKING WATER

- ▼ The best way of dealing with lead in your drinking water is to replace all lead pipes and plumbing.
- ▼ Alternatively, running the water at the cold tap in the kitchen before using it for drinking or cooking can sometimes lower the level of lead.
- ▼ The amount of water you need to run off will vary from house to house.
- ▼ The only way to know the right amount is by testing and retesting the water.
- ▼ If after running the water, the level of lead stays above 10µg/l (micrograms per litre) you should use safe drinking water from some other source.
- ▼ This is especially important for bottle-fed infants, young children and pregnant women.
- ▼ Bathing and showering is safe for you and your children, even if the water contains lead higher than legal level.

ALTERNATIVE SOURCES OF DRINKING WATER

- ▼ It is important that any alternative source of drinking water is safe.
- ▼ Switching to a well instead of using your usual supply is unlikely to bring down the level of lead in your drinking water because it uses the same internal plumbing.
- ▼ Well water contamination can come and go and may not show up on occasional tests.
- ▼ Bottled water can be used for drinking, cooking and making up infant formula.
- ▼ The World Health Organization recommends that babies should be breastfed for the first six months.
- ▼ Avoid bottled water labelled as 'Natural Mineral Water' to make up infant feeds as it can have high levels of sodium (salt) and other minerals.
- ▼ Bottled water used to make up infant formula should be boiled (rolling boil for 1 minute) once, and cooled in the normal way.
- ▼ Ready-to-use formula that does not need added water can also be used.

Further information can be found in the HSE FAQs on Lead in Drinking Water and EPA HSE Lead Position Paper at www.hse.ie/water and at www.drinkingwater.ie