

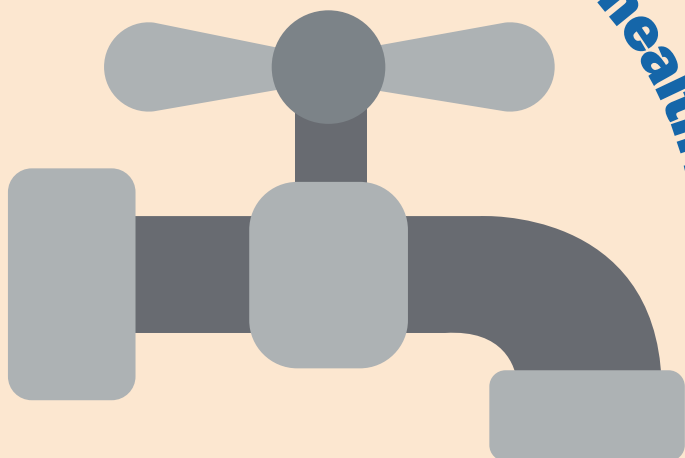
What you need to know about Lead in Drinking Water on health?



衛生防護中心
Centre for Health Protection



衛生署
Department of Health



What is lead?

Lead is a naturally occurring heavy metal which has widespread industrial use, and it may be found in products such as batteries, lead-based paints, lead-containing ceramics, lead solder, leaded petrol and even cosmetics and herbal medicines. Lead may also be found at low levels in urban dust, contaminated food and water. In everyday life, lead is found everywhere and exposure seems unavoidable. Notwithstanding this, it is always good for health to achieve the lowest possible lead exposure.

Adverse health effects of lead

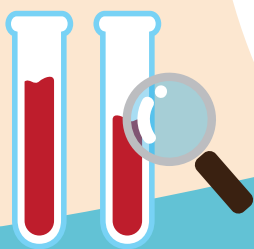
Lead can enter the human body mainly by mouth and breathing. Lead has no biological role. Its toxic effect depends on dose, duration, frequency of exposure and vulnerability of the exposed person. Significant exposure to lead is associated with a wide range of effects, including neurodevelopmental effects, neurological impairment, anaemia, high blood pressure, gastrointestinal symptoms, impaired renal function, impaired fertility and adverse pregnancy outcomes.

Valuable experience from the 2015 lead in water incident

Cessation of further exposure to contaminated water with concentration of lead exceeding the World Health Organization's provisional guideline value is most important. Universal screening for lead in blood among exposed individuals, including more easily affected groups, who do not have any symptom is not considered helpful in identifying or managing clinical poisoning cases. Over time, lead is passed out of the body along with urine and stool.

Lead level in breastmilk is far lower than that in blood. Breastfeeding is unlikely to raise baby's blood lead level if mother's blood lead level is only slightly elevated. Therefore, in most circumstances, breastfeeding mothers with exposure to lead in drinking water can continue to breastfeed and let their babies benefit the most from breastmilk.

Children under six, pregnant women and lactating mothers are more likely to be affected by the adverse effects of lead.



Good hygiene practice

- Dust off your house regularly and wash your (or your children's) hands and face frequently to remove dust on skin, especially after handling items which may contain lead or before taking care of children.



- Wash children's toys and pacifiers frequently.

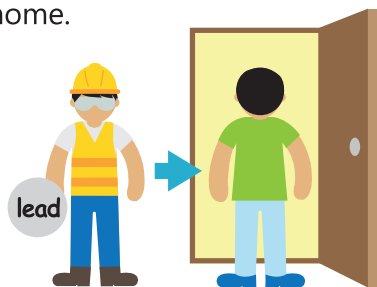


Avoid common sources of lead exposure

- Do not smoke



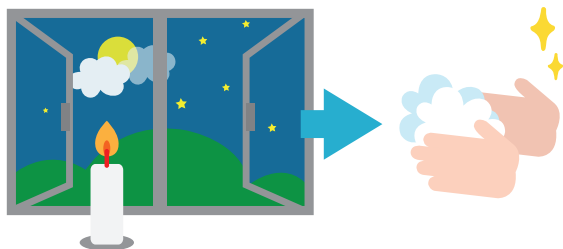
- Individuals who are exposed to lead and lead compound at work are advised to change their clothes and shoes before going home.



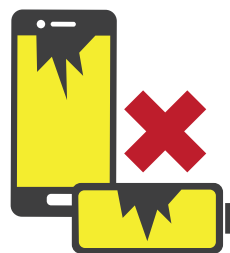
- Refrain from using colour painted ceramic tableware and cups unless the item is labelled "lead-free" or you are sure that the material used is safe.



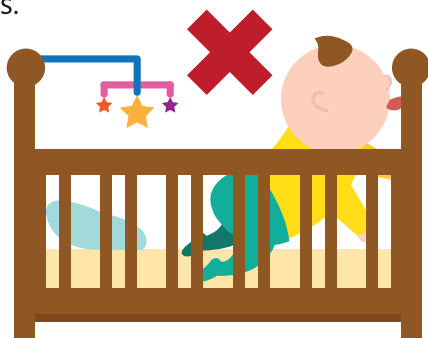
- Ensure good ventilation when using candles and burning incense and wash your hands immediately after handling.



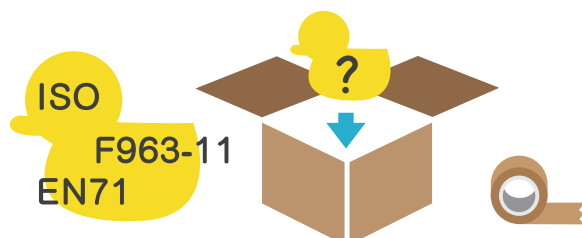
- Avoid contact with damaged batteries and electronic devices.



- Do not allow children to swallow or chew paint fragment, or the paint surface of toys and furniture as lead could be present in some paints.



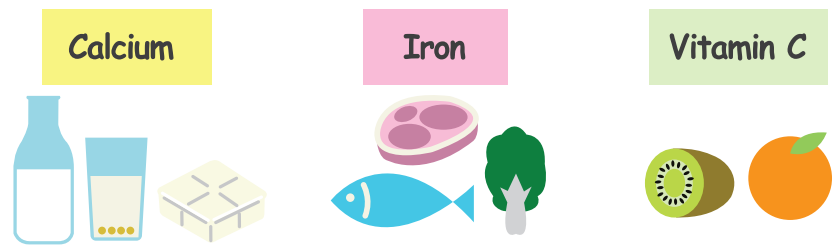
- Toys with paints of deeper colour may contain lead. Parents can verify with the retailers or manufacturers or check the product label for statements on the compliance with the ISO, EN71, or ASTM F963-11 safety standards. Remove the toys if you are not sure whether they are safe for children.



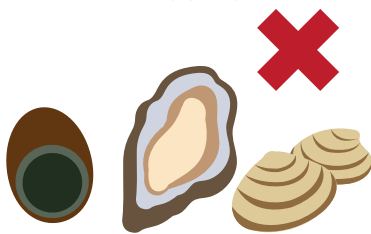
How to minimise lead exposure in everyday life?

Good dietary practice

■ Sufficient dietary intake of calcium, iron and vitamin C can help to minimise lead absorption. Food sources of calcium include milk, tofu, and calcium-fortified soymilk. Meat, fish, and dark green leafy vegetables are rich in iron. Fresh fruits such as orange and kiwifruits are good sources of vitamin C.



■ Reduce consumption of foods high in lead, such as lime preserved egg, oyster, and shellfish.



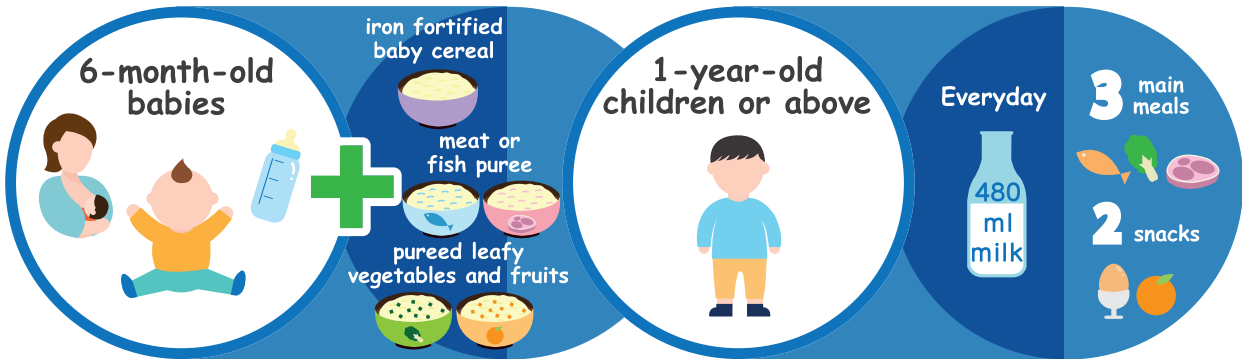
■ Before cooking, wash vegetables thoroughly, particularly leafy vegetables, to remove dust and soil in order to reduce the level of lead.



■ A higher calcium intake helps to minimise lead absorption and lower the blood lead level in pregnant women and lactating mothers. Consume two glasses of milk or calcium-fortified soymilk every day; also choose calcium-rich foods, such as tofu, small fish eaten with their bones, green leafy vegetables. You may need to take calcium tablet on top of the prenatal multivitamin and mineral supplements. Seek advice from your doctor or pharmacist.

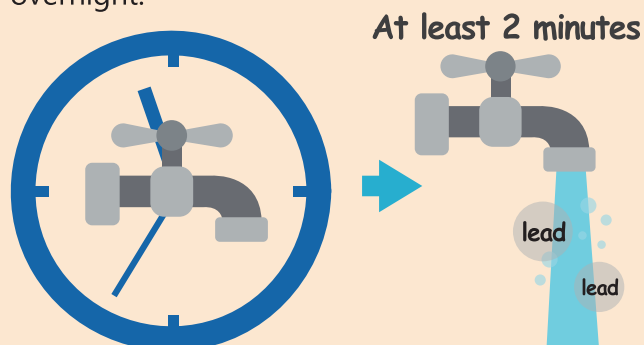


■ For feeding babies, other than breast milk or formula milk, introduce solid food at around 6 months of age. Apart from iron-fortified baby cereal, meat or fish puree, pureed leafy vegetables and fruits are nutritious first foods. After their first birthday, children can generally share family's foods. They eat better with a regular schedule of 3 main meals and 2 snacks a day. A daily diet with 480ml milk is sufficient to meet their needs for calcium.

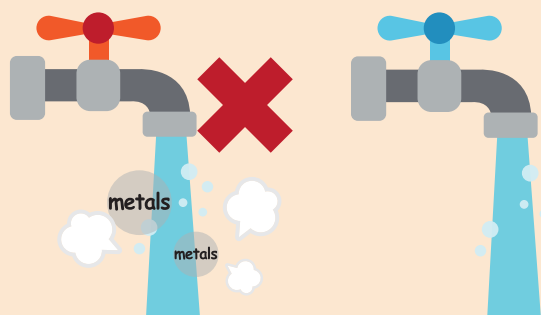


Cultivate good habits of water use

- Run tap water for at least two minutes if the plumbing system has not been used for some time, for instance, after several hours or overnight.

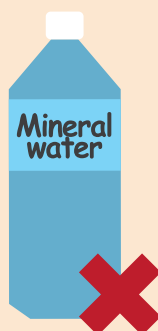


- As hot water increases the amount of metals that may leach from the plumbing materials, only water from a cold water tap should be used for drinking and cooking.

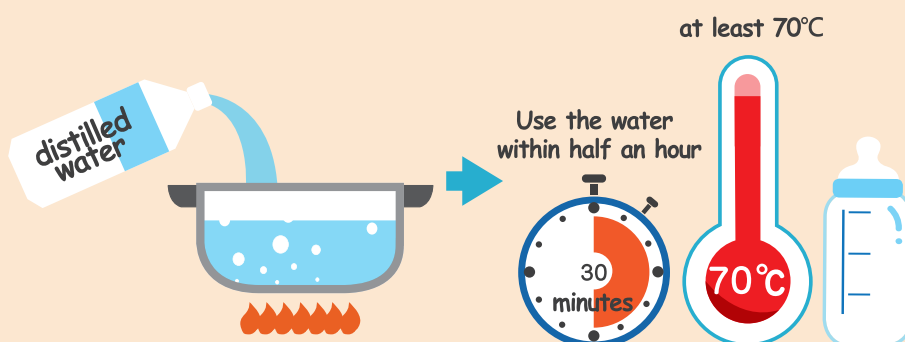


- When using bottled water to make up infant formula:

- Mineral water may contain minerals in excess of the requirements of infants and young children, hence it should not be used for preparing formula milk.



- Use only distilled water to substitute tap water in preparing formula milk. Distilled water should be boiled when preparing formula milk. Use the water within half an hour of boiling when the water temperature is at least 70°C.



If you have a health concern after drinking water contaminated with lead, you may consult your family doctor or private paediatrician for advice

