

Lead – your health around the home

Lead can be hazardous to health. Lead may be found in and around your home. Always be vigilant in home cleanliness and personal hygiene to prevent lead exposure.

Lead in the environment

Lead is a naturally occurring element that has been used in a range of household, recreational and industrial products.

Many uses of lead have been phased out, including lead paint, leaded automotive fuel and some forms of solder used in plumbing. Lead continues to be used in lead-acid car batteries, some forms of solder, waterproof flashing for roofs and gutters, and radiation protection.

Figure 1 Potential sources of lead contamination



Lead can therefore be found in the environment in many forms, including in:

- lead-based paint on houses built before 1970, and lead paint flakes around structures
- lead dust from industrial and domestic sources in soil, and in roof and wall cavities
- lead waste from industrial sources in soil
- some household products

- some vegetables and plants that are grown in contaminated soil
- eggs and other animal products from animals reared on contaminated soil.

Lead and your health

A common way for lead to enter the body is through breathing lead-contaminated dust or consuming lead-contaminated food or water.

Once within the body, lead can build up and cause a range of health problems.

Exposure to lead is linked to harmful effects on organs and bodily functions. Elevated blood lead levels can cause anaemia, kidney problems, and neurological or developmental effects.

Lead can harm people of all ages, but the risks are greater in pregnant women, infants and children. Other factors that influence the impact of lead on an individual are age, health status, the amount of lead and the duration of exposure.

If you suspect you or your family have been exposed to lead, visit your doctor for advice.

For more information, please refer to the NHMRC Statement and Information Paper on the health effects of lead at www.nhmrc.gov.au/health-topics/lead-blood-levels.

Test for lead

Find out where the sources of lead are likely to be around your home by testing all suspected lead-contaminated surfaces and materials using commercially available lead test kits. These kits are available from major hardware retailers.

If you cannot test for lead, it is best to assume that paint, soil or dust is contaminated.

Preventing exposure at home

If lead dust is, or is likely to be, present at elevated levels around the home, there are a number of ways to minimise exposure to yourself and your family.

1. Wet-wiping and mopping

- If you live in an older home or close to a lead industry, wash front steps and verandas at least once a week.
- Wet-wipe benchtops, windowsills, kitchens, furniture and toys using a high-phosphate detergent (such as liquid sugar soap).
- Mop floors using the **three-bucket system**:

You will need three buckets (one for a detergent solution, one for dirty water and one for clean water), two mops or rags (one for cleaning with detergent and one for rinsing), and a high-phosphate detergent.

1. Start at the furthest corner from the door.
2. Wet the first mop in the bucket with detergent and wipe the area. Replace the detergent and water for every room or every half hour.
3. Squeeze the first mop into the empty “dirty water” bucket.
4. Wet the second mop in the “clean water” bucket and wipe the area to rinse.
5. Squeeze the second mop into the “dirty water” bucket.

2. Vacuuming

Ordinary vacuum cleaners do not filter fine lead particles. Use a ducted vacuum cleaner or one with a high-efficiency particulate air (HEPA) filter. If these are not available, vacuum when young children are not present, allow time for dust to settle and wet-wipe before children return.

3. Old carpets

Remove old carpets as they are much harder to clean than hard surfaces. To remove carpet, wet it first, roll it inwards, wrap it in plastic and tape it

up. Mop the floor area once the carpet is removed. Carpets may need to be safely disposed of if contaminated during renovations.

4. Pets

Animal coats may catch considerable amounts of dust, including lead-contaminated dust from inside or outside the home.

- Brush pets outside and ensure that children wash their hands after patting them.
- Wash animal bedding once a week.

5. Laundry

- Regularly wash children’s toys and blankets using a phosphate detergent, and rinse well.
- Do not shake or leave dusty clothes near children.
- Wash work clothes separately and use a phosphate detergent. Rinse the washing machine after use to avoid contaminating other clothes.

6. Play areas and sandpits

- Move play areas away from bare soil and grow grass or plants in bare areas of dirt.
- Use clean sand in sandpits and cover when not in use.

7. Vegetable gardens

- See the *Lead – gardening and home renovations* fact sheet for advice.

8. Minimise exposure

- Prevent children from accessing lead-based hobby areas (e.g. in soldering).
- Always maintain a high level of hygiene.

Where to get advice

- Call the EPA’s Environment Line on 131 555.
- Visit the EPA lead safety webpage, www.epa.nsw.gov.au/your-environment/household-building-and-renovation/lead-safety.
- Ask your doctor for information about blood tests and the effects of lead on your health.