

Lead – gardening and home renovations

Lead can be hazardous to health. Lead may be found in and around your home. Be lead-safe while gardening or renovating.

Lead and your health

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

Sources of lead in the home

Lead can be found in and around the home 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.

Gardening

If you live near a current or former lead pollution source (such as a mine, lead smelter or major road), or if you have lead paint on or around your

home, you must remain vigilant when gardening, and growing or consuming vegetables from your garden.

Figure 1 Potential sources of lead contamination



What can you do?

The first step is to test your soil for lead. If lead is detected, cover patches of bare contaminated soil with clean soil and grass or mulch to prevent exposure.

Some plants can absorb lead from the soil, so always use a pot or raised garden bed for growing vegetables. Raised garden beds should be:

- at least 30 cm tall (higher for large plants)
- lined with mesh at the bottom to allow drainage and to prevent soil mixing
- filled with certified clean soil from a nursery.

Lead dust in the air can deposit on vegetables, so:

- always wash vegetables before eating them
- always wash your hands after gardening.

Home renovations

Lead paint and lead dust in roof and wall cavities are significant hazards for renovators. Activities that can create or disturb lead dust include:

- preparing old lead paint surfaces by dry-sanding or using open-flame torches

- demolishing or repairing walls, floors or ceilings
- replacing or maintaining plumbing in cavities
- moving carpets contaminated with lead dust.

What can you do?

1. Planning

- Test painted surfaces for lead using lead test kits from major hardware retailers.
- If lead is present, hire a professional who is trained and qualified to work safely with lead to do your renovations.
- If you decide to renovate yourself, take full safety precautions:
 - Consider work methods that deal with lead hazards safely and prevent pollution (e.g. never smoke in work areas).
 - Get disposable coveralls and a respirator that is approved under AS 1716 and fitted with a P1 or P2 filter. Basic paper masks may not fit well and do not protect against fine dust.
 - Consider the clean-up process.
- Ensure pregnant women and children will not be exposed to lead during renovations.

2. Preparation

- Wash all walls with a commercially available phosphate detergent (such as liquid sugar soap).

Outside

- Lay plastic sheeting under the work area to prevent lead dust spreading.
- Close windows and doors.
- Inform your neighbours so they can protect themselves if dust blows their way.

Inside

- Seal the work area off from the rest of the house, and outside areas, by covering floors, doors and windows with plastic and tape.
- Remove soft furnishings (including curtains and carpets) or cover them with plastic.
- If removing old carpet, spray the surface with water to keep dust down. Roll the carpet inwards, wrap it in plastic and tape it up.

3. Equipment and practices

When repainting

- Use wet-sanding and wet-scraping methods.
- Do not use open-flame torches and heat guns as they create lead fumes.
- Follow the manufacturer's instructions for chemical strippers as some are dangerous.
- Avoid methylene chloride paint strippers.

When working in roof or wall cavities

- Arrange for the area to be professionally cleaned using a vacuum cleaner fitted with a high-efficiency particulate air (HEPA) filter.
- Move soft furnishings and lay plastic under the access hole.

When plumbing

- Use lead-free solder and flush the pipes with water for five minutes afterwards.

4. Clean-up process

- Clean up before pregnant women, children or pets return to the property.
- Wet-wash the work area with a phosphate detergent and then rinse with clean water.
- Rinse mops and cloths to avoid spreading contaminated debris.
- Seal waste in heavy-duty plastic bags and spray down dust with a water bottle before wrapping it up.
- Keep a high level of hygiene: wash hands and face before smoking, drinking or eating.
- Wash work clothes separately from other clothes using a phosphate detergent and rinse the washing machine afterwards.

Where to get advice

- Call the EPA's Environment Line on 131 555.
- Visit the EPA lead safety webpage, <http://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.

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