

Lead and home renovations

Lead and your health

Lead is a metal which, because it is cheap and useful, is found in many products and in many places in the environment.

Lead can affect anybody, but children under the age of four and pregnant women are most at risk. Lead can affect children by causing learning and attention problems, hearing loss, slowed growth, and behaviour problems.

Lead can affect adults too. Low levels of exposure can cause joint and muscle pain, high blood pressure and infertility. Higher levels (or lead poisoning) can cause memory loss and nerve problems; and very high levels can cause fits.

Lead gets into our bodies when we breathe in lead dust or fumes in the air, or if we eat food or drink water that contains lead. Children can rapidly pick up lead through normal hand-to-mouth activity. Small amounts can gradually build up in the body and cause health problems for you and your family.

Sources of lead in houses

Houses have many sources of lead that can cause hazards when home maintenance or renovation activities are done unsafely. Old lead paint is the greatest potential hazard facing renovators. Nearly all houses built before 1970 contain lead paint. Some types of paints manufactured before 1970 contained up to 50% lead. The house paint you buy now has only a small amount of lead in it (about 0.25%).

The other main source of lead in houses is lead-contaminated dust in ceilings, in wall cavities, under the floor and in old carpets. Dust comes from the breakdown of lead paint and deposits of industrial pollution and car exhaust over time.

Other sources of lead in the house include:

- contaminated soil around outside walls, fences, sheds and garages
- lead flashing around roofs, windows, doors and chimneys
- lead solder and paint on pipes, rainwater tanks and collection systems (iron roofs and gutters)
- lead water pipes in very old houses and brass or bronze plumbing fittings
- PVC-coated electrical wire and other PVC products.

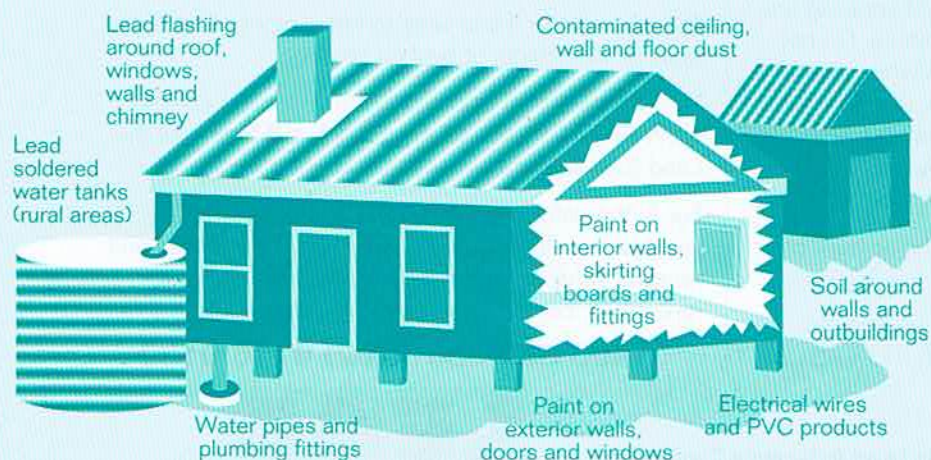
When is lead a danger to renovators?

Lead becomes a danger when maintenance or renovation activities disturb existing lead paint or dust in the house, or create new hazards (see diagram).

Renovation or maintenance activities which can cause lead hazards are:

- Preparation of old lead paint surfaces for new paint. Power sanding or open-flame torches create fine lead dust and fumes which can contaminate the house and be breathed in.
- Demolition of, or work on, walls, floors, ceilings or fittings. This can disturb lead dust and release it into living spaces.
- Replacement or maintenance of plumbing. Pipes may be located in areas that contain lead-contaminated dust. Lead solder can create fumes which can be breathed in. Moving old lead-soldered pipes can break off solder that will get into your drinking water.
- Moving old carpets. These can be full of lead dust that can contaminate the house and be breathed in.

Sources of lead in pre 1970 houses



What you can do

Assume lead is present in pre-1970 houses unless tests prove otherwise.

Avoid creating new lead hazards by only doing renovations that are necessary. If you must get work done, hire a professional experienced in lead-safe work. If you decide to renovate yourself, take full precautions (below).

Take simple and sensible precautions

- Pregnant women, children and pets should move out during renovations until after the clean up.
- Wash hands and face before meals, and shower and change clothes when you finish work.
- Don't smoke or carry cigarettes in the work area, as you can breathe in lead dust which settles on them. Wash hands before smoking to stop lead entering your mouth.
- Wash work clothes separately from all other clothes using a phosphate detergent. Rinse the washing machine afterwards.

Prepare the renovation area

Outside: Lay plastic sheeting under the work area to protect your garden and children's play area. Close windows and doors. Warn 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 by covering floors, doors and windows with plastic and tape. Remove soft furnishings, curtains, carpets and other household items 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.

Use the right equipment and practices

- When **repainting**, wet sanding and wet scraping are the safest methods of preparing the surface. Do not use open-flame torches on lead paint as they create lead fumes. If you must use a heat gun, use it on the lower setting to keep the paint temperature below 370°C. Chemical strippers are dangerous so follow the manufacturer's instructions strictly.
- When **demolishing**, try to minimise the amount of dust created.
- If **creating lead dust** or fumes, always wear an AS-1716-approved respirator fitted with P1 (dust) or



Preventing lead hazards during renovations

P2 (dust and fumes) filters, and coveralls. Simple paper masks offer no protection against fine dust.

- When doing **roof and ceiling work**, make sure that any lead dust accumulated in roof cavities does not fall into the living areas. Remove dust in roof cavities with a high-efficiency particulate air (HEPA) vacuum cleaner. Don't do this work yourself: hire a professional.
- During **plumbing work**, use lead-free solder and flush the pipes with water for 5 minutes afterwards.

Clean up carefully after renovations

- Don't sweep. Use a HEPA vacuum cleaner, not a domestic vacuum cleaner. Then wet-wash the entire work area with a phosphate detergent. Rinse with clean water.
- Dispose of waste in sealed heavy duty plastic bags in your rubbish bin.

How to get advice

Ask your doctor if you want to know more about blood tests or the effects of lead on health.

For information on lead and the environment call the NSW EPA's Pollution Line on **131 555** or visit the Lead Safe website: www.epa.nsw.gov.au/leadsafe.

For further information and advice about protecting yourself from lead, about qualified paint inspection and removal services, and guidelines for safe home renovation, call the Lead Advisory Service on:

1800 626 086 or (02) 9716 0132

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