

Lead-based paint

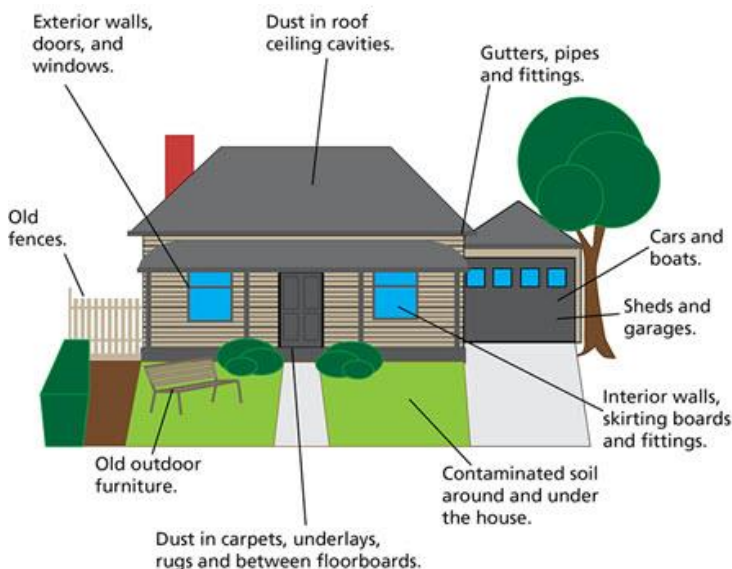
Prior to 1970, lead-based paint was used on the interior and exterior of homes and buildings. Paint available today is only allowed to contain very small quantities of lead, if any. However, lead-based paint is still present in many homes, including those built after 1970, and exposure to this paint is a major health concern. It is important to be aware which areas of your house may have been painted with lead-based paint. Lead-aware practices must be followed when renovating, restoring or repainting or you could be putting your health and the health of your family at risk.

Why is paint a problem?

Lead is a naturally occurring heavy metal that is used to make many different products. Since the removal of lead from petrol, exposure to lead-based paint in domestic dwellings is one of the leading causes of elevated blood lead levels in children and adults, except in communities that have large mining or smelting operations such as Broken Hill, Mount Isa and Port Pirie, and in some occupational settings.


Before 1970, paint used in many Australian houses contained high levels of lead because lead is an effective colour pigment and it makes paint tough and durable. In 1969, the Australian Uniform Paint Standard was amended to reduce the amount of lead in domestic paint from the previously recommended level of 50% to 1%. The maximum content was further reduced to 0.25% in 1992 and to the current level of 0.1% in 1997. Lead-based paint becomes a problem when it deteriorates or is damaged or disturbed, when it can be a significant health hazard.

Sources of lead-based paint around the home



Where is lead-based paint found?

It is not possible to know if paint has lead in it by its appearance alone. Lead-based paint can be found throughout the inside and outside of homes and buildings. Lead may be present in both topcoats and undercoats and particularly on surfaces like window frames and sills, doors, skirting boards, cupboards, gutters, metal surfaces, fascia boards, fences and areas where primers have been used. Lead dust and paint flakes from previous renovations and activities can also be present in ceiling spaces, wall cavities, under floors, in carpets and in yard soil.



In the past, lead-based paint has also been used on cars, boats, old furniture (including baby cots, and garden chairs and benches), children's toys (particularly old inherited toys, collectible lead soldiers or those bought from markets, garage sales or overseas) and in artist or hobby paints. Lead-aware practices need to be taken if these items are restored, renovated or used by small children.

How can lead affect my health?

There is no 'safe' level of lead exposure. The current recommendation is that 'if a person has a blood lead level greater than 5 micrograms per decilitre, the source of exposure should be investigated and reduced, particularly if the person is a child or pregnant women'. Exposure to lead should be minimised to keep blood lead levels as low as possible. Lead from paint can enter the body by breathing in fumes and small particles or by swallowing paint flakes or dust. Your health is at risk because lead is readily absorbed to circulate in the bloodstream, where it can cause damage and be stored in organs, teeth, bones and the body's tissues. The effects of very high blood lead levels can include stomach pain, convulsions and even death. Long-term exposure to low levels has been associated with symptoms including joint and muscle pain, fatigue and headaches, small increases in blood pressure, and damaged nerve, brain and renal function. Those with diabetes have a higher risk of adverse effects associated with the kidney.

Children and pregnant women are at most risk from lead. Children are more susceptible to lead than adults because:

- > they swallow, absorb and retain more lead in their bodies
- > while their brains are developing and growing, they are vulnerable to damage.

Lead can pass through the placenta to the unborn child and small amounts can pass through breast milk. Long-term exposure of children to low levels of lead has been associated with:

- > reduced growth
- > learning, attention and behavioural problems
- > hearing loss
- > delayed onset of puberty
- > reduced IQ in exposed populations of children.

Household pets may display symptoms of lead exposure before other household members because they come into close contact and readily lick and swallow lead contaminated soil, dust and paint flakes around the home.

How do I know if there is lead in my paint?

You should assume all houses built prior to the mid-1970s contain lead-based paint, and homes built up to the 1940s are especially hazardous because there was so much lead used in paints at that time. Houses built after the mid-1970s can still be a risk if old house paint or industrial or marine paint has been used.

Paint can be tested using one of the following methods:

- > *Laboratory testing* – is the most reliable method of testing but it can be expensive. Samples need to be scraped off and each layer of paint may need to be tested. You can collect and send off your own samples by following the laboratory's instructions. Use a laboratory accredited by the National Association of Testing Authorities to test for lead. Laboratories can be found in the Yellow Pages under *Analysts*.
- > *Colour-change test kits* – are available from most hardware, paint or safety equipment supply stores. These kits are relatively cheap and quick to use but are limited in their accuracy. It is important to test all layers of paint, which may require a cut be made through all layers of paint.
- > *Portable x-ray fluorescence device* – does not damage the paint surface and gives an instant indication of the presence and level of lead. This service is not readily available to the public.

If you suspect paint in your home might contain lead but you have not had it tested, assume it does and take precautions.

What precautions should I take if I am renovating?

Before you start renovating, the first step you need to take is to read the national Lead Alert: Six Step Guide to Painting Your Home (see 'Further Resources').

Important lead-aware practices include:

PLAN AHEAD

- > **TEST** – it is important to find out if lead-based paint is present in your home. See 'Further Resources' for guides that can help you.
- > **CONSIDER** using a professional painter who is trained in lead-paint management and removal, particularly for large areas. See 'Further Resources' for contact details for professionals.
- > **CONSIDER** covering lead-based paint with lead-free paint instead of removing it, but only if it is in good condition (for example, not flaking or chalking). This is only a temporary solution as lead-based paint can be exposed if the covering paint is chipped.
- > **RELOCATE** children and pregnant women out of the house for the duration of the renovation and clean-up. Do not carry out renovations that may expose you to lead-based paint or other lead fixtures if you are pregnant.

PREPARE

- > **CONSIDER** using a professional painter who is trained. See 'Further Resources' for contact details for professionals.
- > **SEAL OFF** the work area to stop contamination moving to other areas of the house.
- > **REMOVE** all furnishings, curtains, rugs and other household items. Carpets and larger furniture items should be covered with plastic.
- > **COVER** the floor or ground with plastic sheeting to catch and contain debris.

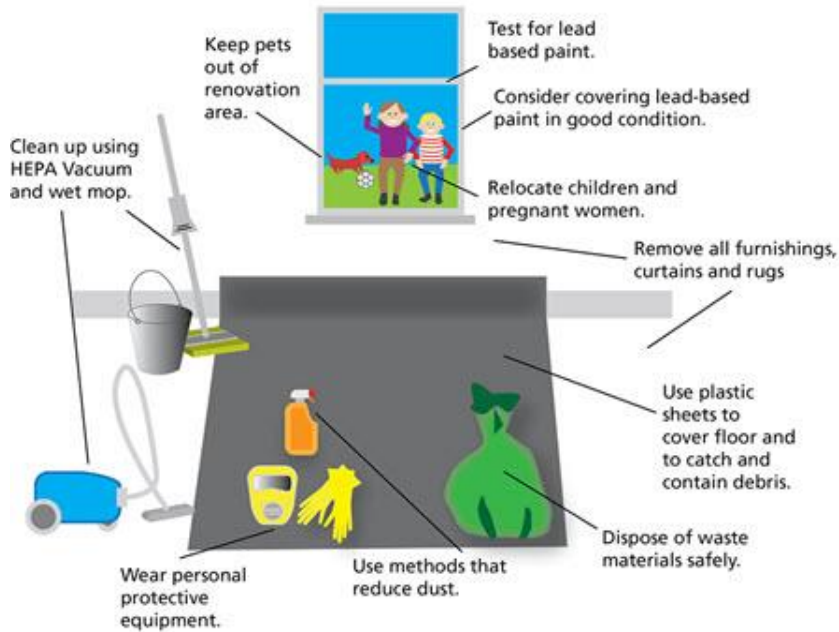
PROTECT YOURSELF AND OTHERS

- > **WEAR** appropriate personal protective equipment and wash clothing separately from other items after use.
- > **DO NOT** use renovation methods that create dust or fumes such as grinding, blasting, using torches and heat-guns, scraping and dry sanding. Wet scraping, wet sanding and chemical stripping help reduce the amount of airborne dust.
- > **PREVENT** ingestion of paint particles by not eating, drinking or smoking in the work area.
- > **KEEP** pets out of the renovation area for their own safety and to prevent transfer of dust and debris throughout the house
- > **PREVENT** soil and garden contamination when working on the outside of your home or disposing of renovation waste.
- > **INFORM** neighbours of your activities so they can take appropriate action.

CLEAN UP

- > **CLEAN** using a HEPA filter equipped vacuum and wet mopping.
- > **DISPOSE** of contaminated waste material safely. Prevent contamination of your garden and drains. Contact your local council for local requirements for waste disposal.
- > **TEST** the work area after clean-up to make sure it has been done correctly. See 'Further Resources' about collecting dust and soil samples.

Lead-aware renovating practices



What can I do if I am concerned?

If you are worried that you or your family have been exposed to lead it is important to see your doctor and discuss having a blood lead test. If you are renting a privately-owned house and you are concerned about the condition or type of paint in your home you should contact your property owner or agent.

If you need further assistance, the Tenancy Advice section of the Tenancies Branch (Office of Consumer and Business Affairs – telephone 8204 9544) or the Housing Improvement Branch (Housing SA – telephone 131 229) may be able to assist you.

Further Resources

Australian

- > **Painting your home:**
environment.gov.au/protection/publications/lead-alert-six-step-guide-painting-your-home
- > **Lead in house paint:**
environment.gov.au/protection/publications/factsheet-lead-alert-facts-lead-house-paint
- > **Renovating advice:** *Renovating in Port Pirie* SA Health fact sheet
<https://bit.ly/2kqzrbz>
- > **Lead and your health:** SA Health fact sheet
<https://bit.ly/2kqA7O9>
- > **Lead and your health:**
www.nhmrc.gov.au/about-us/publications/evidence-effects-lead-human-health
- > **Laboratory testing:**
www.nata.com.au/nata

Professional contractors

- > Master Painters of South Australia: www.masterpainterssa.com.au
- > National Painting and Decorating Institute: <https://painters.edu.au/search-painters>
- > Master Builders SA: www.mbas.com.au

International

- > **Lead-aware renovation:**
www.epa.gov/sites/production/files/documents/renovaterightbrochure.pdf
www.epa.gov/lead/steps-lead-safe-renovation-repair-and-painting-october-2011
www.health.govt.nz/your-health/healthy-living/environmental-health/hazardous-substances/removing-lead-based-paint

For more information

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