



Lead exposure risk reduction

Advice for patients

What is lead and where is it found

Lead is a naturally occurring metal found in abundance throughout the earth. It has been used in a wide variety of products including, petrol, paint, plumbing pipes, cigarettes, ceramics and cookware, solders, batteries, imported toys, cosmetics, herbal preparations and pigments.

Lead may be present in soil, consumer products, paint, drinking water, food, cosmetics and medicine, jobs, hobbies and other activities.

Exposure

Exposure to lead can occur when it is absorbed into the human body.

This may occur from eating foods or drinking water that is contaminated with lead or handling objects contaminated with lead or made of lead and then not washing hands before eating or drinking.

Another way that lead can be absorbed into the human body is through breathing in air that is contaminated with lead. In the environment, lead can be present in the air as a dust, fume or mist. If it is inhaled, it can be absorbed into the lungs and upper respiratory tract. Some hobbies and pastimes can generate lead dust and fumes which may contaminate air, food, water and soil.

When lead gets into the human body it circulates in the blood stream and can store in various organs and body tissues including bone. Usually the body is very good at filtering lead out of the body, but some can remain in the blood and other tissues. Eliminating lead exposure where possible is the best approach.

Who is most at risk from lead exposure?

Pregnant women need to minimise their exposure to lead because it can cross from the mother to the baby through the placenta. Small amounts of lead can also transfer into breast milk. Pregnant or breastfeeding women need to keep well away from areas which may be contaminated with lead and avoid activities which generate fumes or dust that is contaminated with lead.

Young children are more sensitive to the effects of lead and are likely to absorb up to 5 times more ingested lead than adults. Children can often place objects in their mouths, suck their fingers and may swallow dust and soil, making them more vulnerable to lead exposure. Give young children regular meals and snacks – a child with an empty stomach can absorb 7 times more lead than a child that has eaten.

People with iron and calcium deficiencies also tend to absorb more lead and are encouraged to eat a balanced diet with adequate levels of calcium, iron, vitamin C, zinc and magnesium. Good sources of iron include poultry, red meat, liver, fish, fortified cereal, cooked beans/lentils, and green leafy vegetables. Milk, cheese and yoghurt are good sources of calcium.

How to minimise exposure

Elevated lead levels are preventable however sometimes the source of lead can be difficult to locate.

Diet can have a major impact on how much lead is absorbed into the body. Consuming a balanced diet and forming healthy eating habits can help minimise the absorption of lead into the body.

Eat plenty of healthy food

- Eating a healthy, balanced diet with adequate levels of calcium, iron, vitamin C, zinc and magnesium helps to minimise lead absorption. Good sources of iron include poultry, red meat, liver, fish, fortified cereal, cooked beans/lentils, and green leafy vegetables. Milk, cheese and yoghurt are good sources of calcium.
- Young children need frequent meals and snacks – a child with an empty stomach can absorb 7 times more lead than a child who has eaten.
- Avoid high fat diets as they increase lead absorption.
- **Do not** eat or drink after working with lead or materials containing lead, until you have thoroughly washed your hands.
- **Do not** use pottery or ceramic products purchased overseas unless you are certain they are safe for storing or cooking food. These products may be coated in lead glazes or paints which may leach lead into food.

Painting renovating and hobbies

When painting, renovating or disposing of items containing or contaminated with lead, clean and dispose of materials safely to prevent lead exposure to you and your family.

Many do-it-yourself (DIY) activities and hobbies involving lead containing materials can produce dangerous levels of lead fumes and dust.

Such activities include:

- house renovations.
- car engine maintenance.
- making lead sinkers.
- panel beating or other body work on cars and boats.
- sanding or stripping old paint.
- spray painting cars and boats.
- heating, burning, flame cutting, melting, grinding or sanding any other products which contain lead.

What to do before undertaking any of these activities:

- Use an area which can be isolated and readily cleaned.
- Fence off areas to restrict access if possible.
- Ensure area is well-ventilated and wear a respirator fitted with suitable filters when heating, welding, flame cutting or burning products which could contain lead. Filters are available which protect from dust or fumes; choose the one appropriate for the task.
- **Do not** walk lead dust or dirt into your home. Place durable mats at all entrances which are regularly cleaned and leave work boots and yard shoes outside.

- **Do not** take contaminated clothing into the house. Remove as much dirt or dust as possible from clothes and keep them in a plastic bag until they can be washed. Wash contaminated clothing separately.

Painting and renovating

- Seek professional advice on the most appropriate and safe methods of renovating an old house/removing old paint.
- Test old paint for lead concentration before starting any renovations. Test kits are available from hardware stores.
- Use chemical paint strippers instead of blow torches or sandpaper when removing old paint which might contain lead. Chemical paint strippers can themselves be very toxic, so read the label and follow all safety directions.
- Consider painting over old lead paint if renovations cannot be carried out without generating a lot of dust and fumes.
- **Do not** renovate when children are present. Consider temporarily covering old paint until renovations can be completed without children present.

Cleaning or disposing of items containing or contaminated with lead

- Thoroughly wipe clean areas contaminated with lead paint flakes or lead dust using a wet rag or mop and discard after use.
- If vacuuming lead dust use a High Efficiency Particulate Air (HEPA) vacuum cleaner to prevent dust being re-released into your home.
- Empty HEPA vacuum bags and dust collected into a plastic bag. Do this outside the house and place the waste in an external bin.
- Cover or seal lead tailings or contaminated soil. Depending on the location and how often the area is used, consider sealing the contaminated area with concrete, paving, gravel, clean fill or planting grass to restrict contact with your family and pets.
- **Do not** store old car batteries, radiators or lead flashing in or around your house. Contact your local government authority for further information on recycling and the safe disposal options.
- **Do not** burn painted wood.

Additional information

- A booklet titled *Lead Alert: A six step guide to painting your home* contains information about the safe and appropriate methods of handling lead compounds and lead-containing material. It is available at <http://www.environment.gov.au/protection/publications/lead-alert-six-step-guide-painting-your-home>
- A guide about what to do if you are concerned about cosmetics purchased online. It is available at https://healthywa.wa.gov.au/Articles/N_R/Purchasing-cosmetics-online

This document can be made available in alternative formats on request for a person with disability.

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