

## Lead poisoning

Lead is a naturally occurring metal. It is used in industry and, in the past, was added to petrol and household paints. Lead can be a hazard when taken into the body by swallowing or breathing in lead fumes and dust.

### Household sources of lead poisoning

Possible sources of lead in and around the home include:

- Lead-based paint
- Lead-contaminated soil
- Lead-contaminated household dust
- Lead piping or solder
- Lead crystal
- Glazed pottery
- Pewter
- Lead flashing for roofing materials.

### Hobbies and lead poisoning

Hobbies which involve the use of lead may include:

- Leadlighting
- Making or handling lead sinkers used for fishing
- Recreational shooting, including casting bullets and shooting at a pistol range.

### Young children and lead poisoning

Lead exposure can permanently damage the brain and impair intellectual development. Children under five years of age are especially vulnerable to lead exposure because:

- They frequently put their hands to their mouths.
- They absorb and retain more lead from the gut and airways than adults do.
- Their developing brains are more sensitive to the effects of lead.

Children with pica – a behaviour that leads them to eat non-food substances such as old peeling paint flakes, soil or stones – are also at an increased risk of lead exposure.

Unborn babies are also at risk, since lead swallowed by the pregnant mother readily passes through the placenta. Breastfeeding mothers can also pass lead on to their infants via their breastmilk.

### Symptoms of acute lead poisoning

The symptoms of acute lead poisoning (a high level at one time) include:

- Muscle pains

- Fatigue
- Abdominal pains
- Headache
- Nausea and vomiting
- Seizures
- Coma.

## Symptoms of chronic lead poisoning

Chronic (long-term or ongoing) exposure to lower levels of lead may produce symptoms such as:

- Irritability
- Lack of energy
- Loss of appetite
- Learning disabilities
- Behavioural problems
- Poor school performance
- Poor coordination
- Impaired growth.

Many of these symptoms could be caused by other conditions, so it is important to see a doctor if you are worried.

Some children or adults may not have any symptoms at all.

## Lead exposure in Australia

The most common sources of lead exposure in Australia include:

- Occupations and hobbies – people can bring lead residues into their home on work clothes, skin, hair and equipment after contact with lead in their work or hobbies
- Paint – lead-based household paints were commonly used before 1970. Children are particularly at risk during redecorating or renovating, as they may pick up or swallow paint chips or dust. Risk of lead exposure is greater if the lead paint is damaged (for example, flaking or chalking) or chewed by children
- Dust – household dust may contain lead from a number of sources, including deteriorating lead-based house paints, contaminated soil or dust brought into the house on feet, clothing or on pets' paws or fur
- Soil – some industrial and mining activities may cause high lead levels in soil, as can lead-based household paints
- Air pollution – vehicle battery works, iron and steel production, soldering, and copper and lead smelters can produce airborne lead. In early 2002, leaded petrol was phased out in Australia
- Water – some copper household pipes used to be soldered with lead, which can dissolve into water that may be sitting in these pipes
- Traditional and alternative medicines – some 'traditional' medicines, usually sourced overseas, have been found to contain high levels of lead
- Toys – old painted toys (for example, cars or toy soldiers) may contain high levels of lead. Australian standards strictly limit the amount of lead in Australian-made or painted toys. However, some imported toys have presented a risk. Also, very old cots or second-hand painted cots may contain unsafe levels of lead
- Food – do not store food in pewter, lead crystal glassware or pottery containing lead-based glazing. Imported cans from specialty stores with irregularly soldered side seams may contain high levels of lead. Legislation restricts lead levels in Australian foods to safe limits.

The Department of Health (Victoria) can provide advice about lead sources in the home and how to manage them safely.

## Getting tested for lead poisoning

Suspected cases of lead poisoning can be diagnosed with a blood test. If you or a member of your family believes they have been exposed to lead, visit your doctor for further advice.

The national goal for all Australians is to have a blood lead level below 10 mcg/dl (micrograms per decilitre) as determined by the National Health and Medical Research Council (NHMRC).

Your doctor or paediatrician can advise you about avoiding lead exposure. They may recommend monitoring of your blood lead level(s) to assess the effectiveness of any action taken.

## Prevention of lead poisoning

If you think you live in a situation where you may be exposed to lead, you can reduce your exposure by:

- Following appropriate safety regulations and practices at work and home if your job or hobby involves the use of lead. Do not bring home lead-contaminated work clothing to wash with the household laundry
- Not working with lead in or around your home. Melting, grinding, sanding or swallowing lead is dangerous. Follow safety guidelines if making, using or storing lead fishing sinkers and bullets or projectiles, and consider using non-lead alternatives
- Consulting with your water supplier or council environmental health officer if you suspect your drinking water may contain lead
- Painting over intact old paint on walls or salvaged doors and windows (don't disturb the surface) when redecorating or renovating your home to reduce the amount of lead dust. Pregnant or breastfeeding women and children under five should not be present
- Cleaning the house regularly and ensuring there is no build-up of dust, wetting dusty floors, ledges, windowsills and other flat surfaces to minimise the risk of lead containing dust getting into the air
- Discouraging your toddler from playing in or eating dirt and from putting dirty fingers or toys in their mouth, washing toys and dummies frequently, and washing children's hands and faces before they eat or nap
- Ensuring that children do not have access to peeling paint or chewable surfaces painted with lead-based paint, such as windowsills and old cots
- Ensuring old toys and furniture have not been painted with lead-based paint. If you can't be sure, take the safe option and keep them away from children
- Avoiding storing food in pewter, lead crystal or glazed pottery containers
- Ensuring your diet is adequate in calcium and iron, and avoiding high-fat diets, as they encourage lead absorption.

## Where to get help

- Your doctor
- Victorian Poisons Information Centre Tel. 13 11 26 – for advice when poisoning or suspected poisoning occurs and poisoning prevention information (24 hours, 7 days)
- Department of Health, Environmental Health Tel. 1300 761 874 – for health advice about lead issues in the home or lead in your reticulated water supply
- Worksafe Victoria Tel. 1800 136 089 – for health advice about lead in your workplace
- Victorian Environment Protection Authority Tel. (03) 9695 2777 – for advice on safe ways to dispose of lead materials, advice about pollution from lead industries and contaminated land
- Consumer Affairs Victoria Tel. 1300 55 81 81 – for advice on consumer items containing lead

## Things to remember

- Lead is a metal that may be found in the home or work environment.
- Lead exposure can impair intellectual development and damage the brain if levels are high enough.
- All children's exposure to lead should be minimised.
- All women should minimise their exposure to lead both before and during pregnancy.
- Breastfeeding women should also maintain adequate calcium intake.
- Children under five years of age are at greater risk.

- See your doctor to request a blood test if you are concerned.

**This page has been produced in consultation with, and approved by:**

DH - RHP&R - Health Protection - Environmental Health Unit

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