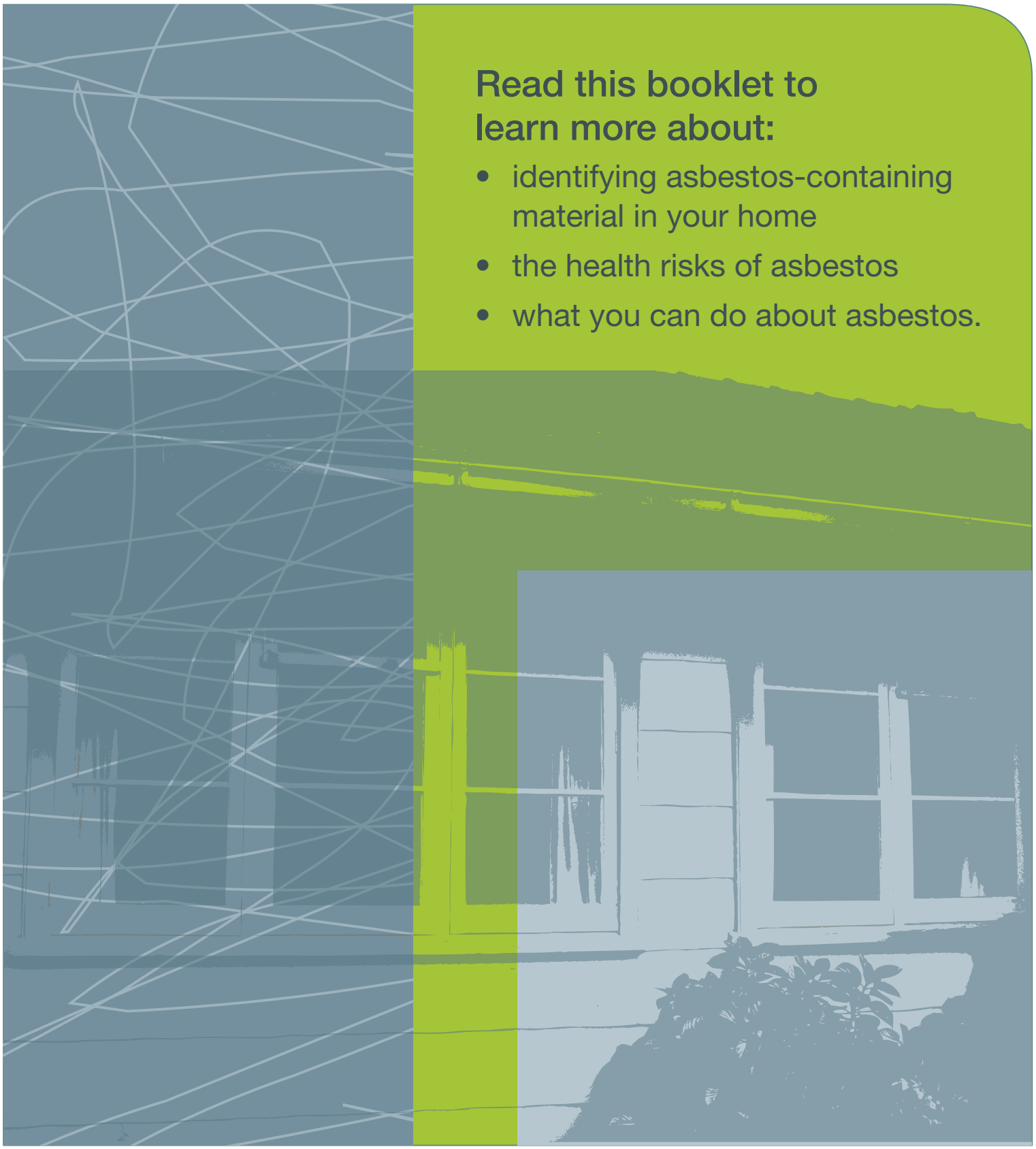
Te Whatu Ora
Health New Zealand

All about Asbestos

Protecting your health at home



Read this booklet to learn more about:

- identifying asbestos-containing material in your home
- the health risks of asbestos
- what you can do about asbestos.

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Contents

What is asbestos?

Asbestos is a naturally occurring mineral made up of many small fibres. These fibres are very strong and are highly resistant to heat, fire, chemicals and wear.

In the past, the special properties of asbestos made it popular for:

- asbestos-cement sheet cladding, roofing and drainage pipes
- backing material for floor tiles and vinyl sheets
- insulation board for thermal protection (eg, around fire places)
- textured ceilings and sprayed-on wall surfaces
- lagging for insulation around pipes, heaters and hot water cylinders
- vehicle brakes and clutches
- textiles
- spouting and guttering components.

Asbestos was also used in household items, such as:

- oven gloves
- ironing board pads
- simmer mats for stoves
- fire blankets.

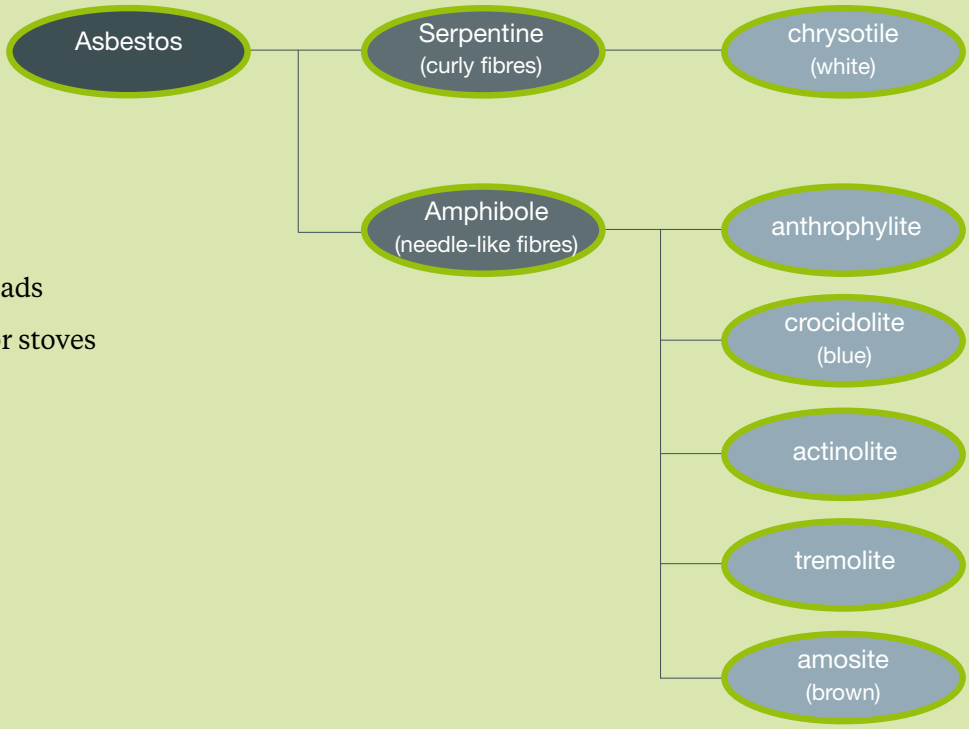
Asbestos was mainly imported and used before the 1980s. Once the health risks of asbestos were known, its use was gradually stopped, and other materials replaced it. However, products and appliances with asbestos content may still be around, particularly in homes built before 1984.

The most common types of asbestos fibre you are likely to find are:

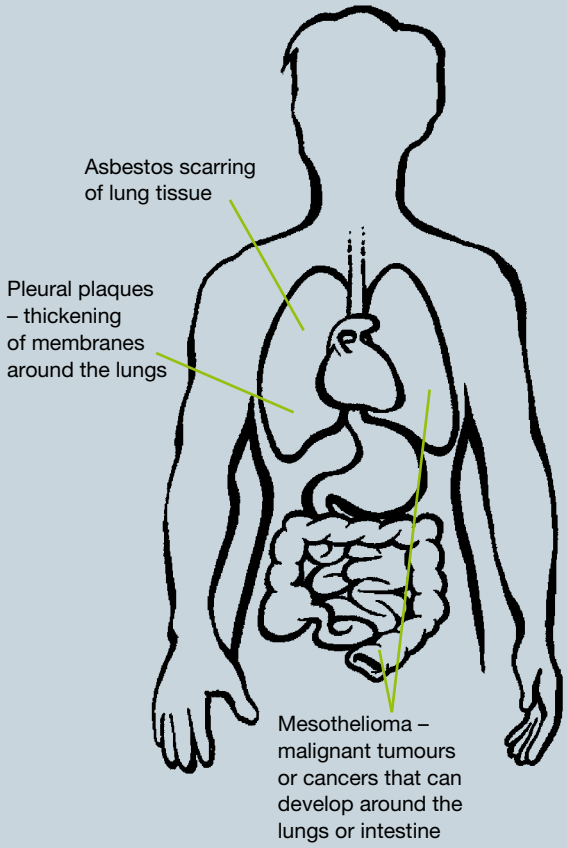
- chrysotile (white)
- amosite (brown)
- crocidolite (blue).

The colour differences are very slight and laboratory analysis is needed to identify different types of asbestos fibre.

It is now illegal to import these three types of asbestos in their raw fibrous states and any manufactured items that contain asbestos.



How asbestos can harm health



Asbestos is a proven human carcinogen, and all forms of asbestos can cause cancer. Asbestos causes cancer in a dose-dependent manner. The greater the exposure, and the longer the time of exposure, the greater the risk of developing an asbestos-related disease. No 'safe' lower limit of exposure has been identified with certainty – all exposure is thought to add to the overall risk of disease development – but the risk from a single, low-level exposure is considered to be extremely low. Keep exposure to asbestos as low as possible.

Intact asbestos-containing material is not a risk merely by its presence. Potential health problems occur if asbestos fibres become airborne.

Inhaling significant quantities of airborne asbestos causes:

- asbestosis (scarring of lung tissue)
- mesothelioma (malignant tumours, cancers that develop around the lungs or intestine)
- pleural plaques (thickening of membranes around the lungs)
- cancer of the lung, larynx and ovary.

Symptoms of asbestos-related diseases include breathing difficulties and 'scarring' of the lung that can be detected by x-ray.

Harmful effects following ingestion of asbestos have not been clearly documented. However it has been shown that few fibres are able to penetrate the gastrointestinal tract. Therefore the non-gastrointestinal effects from oral exposure to asbestos are unlikely. There is no consistent evidence that ingested asbestos is hazardous to health.

Smoking can increase the risk of developing lung cancer following exposure to asbestos.

The main way people are exposed to asbestos is by breathing in air that contains asbestos fibres. Small levels of asbestos fibres occur naturally in air, including as a result of weathering breaking down asbestos-containing materials, windblown soil from hazardous waste sites or deterioration of motor vehicle clutches and brakes.

The levels of asbestos in dust and windblown soil may be higher close to degrading asbestos cement clad buildings, or former sites of such buildings, or a waste site where asbestos is disturbed or not properly covered.

Asbestos in the home

Generally, asbestos-containing materials that are in good condition will not release asbestos fibres. There is no danger unless fibres are released and inhaled into lungs. If you are not living in a home that contains asbestos, your exposure to asbestos is unlikely to present a high level of risk.

People can be exposed to higher levels of airborne asbestos inside their homes than levels in outdoor air, usually as a result of cutting or drilling through asbestos-cement materials or sanding down asbestos-containing surfaces, linoleum or tiles during home maintenance, renovating, repair and remodelling. Fibres are released when physical actions (deliberate or accidental) disturb the surface.

Exposure levels indoors depend on the type of asbestos and its condition. Constant exposure to crumbly or powdery (friable), damaged, exposed or poorly maintained asbestos materials may increase the health risk.

People may be exposed to asbestos from a secondary source, for example, workers' families may inhale asbestos fibres released by clothes that have been in contact with asbestos-containing material. People who live or work near asbestos-related activities may also inhale asbestos fibres that have been released into the air by the activities.

The number of fibres that are released depends on:

- the percentage of asbestos in the material
- the way it is handled, used or worked on
- how tightly the fibres are bound
- the degree of damage or wear.

Table 1 outlines the risk of asbestos exposure based on the age of a home and the presence of asbestos-containing materials in the home structure. The materials should be assumed to be asbestos-containing materials if there is uncertainty.

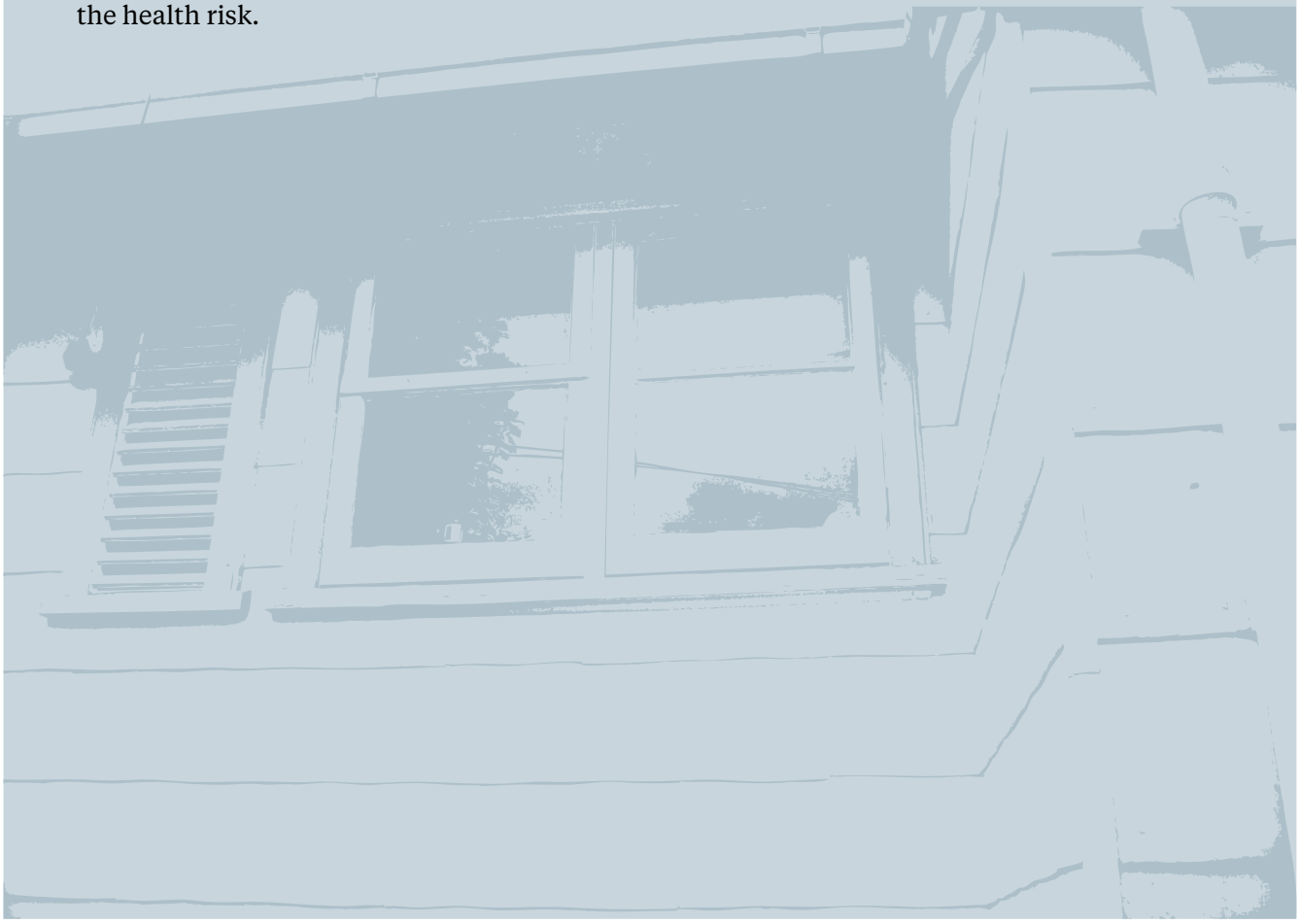


Table 1: Residential risk assessment based on age of home, presence of asbestos-containing materials and activities that could increase or decrease risk to people

Building age	Possible asbestos-containing materials present	Status of asbestos-containing materials if present	Activities impacting asbestos-containing materials and exposure	Risk level
Pre-1940 unrenovated	None likely			None or negligible risk
Pre-1940, renovations performed 1950–1985	Exterior – corrugated cement roofing, Fibrolite or Hardiplank cladding, Fibrolite eaves	Cracks, chips or breaks in roofing or exterior cement sheeting (walls and eaves)	Materials wet during removal, not sanded or drilled, OR materials sealed/encapsulated	Extremely low risk
			Present when damaged materials were sanded or drilled	Possible short-term exposure – very low risk
		Materials undamaged and well-maintained (sealed and painted)		Extremely low risk
	Interior – textured ceilings, wall linings, vinyl flooring	Decorative ceiling crumbling or removed, vinyl flooring uplifted or old wall board crushed or drilled	Present during removal, but clean-up thorough	Possible short-term exposure – very low risk
			Home furnishings contaminated with dust, not cleaned or removed	Low risk but possible ongoing low-level exposure*
		Materials intact		Extremely low risk
1940–1990	Exterior – corrugated cement roofing, Fibrolite or Hardiplank cladding, Fibrolite eaves	Cracks, chips or breaks in roofing or exterior cement sheeting (walls and eaves)	Materials wet during removal, not sanded or drilled, OR materials sealed/encapsulated	Extremely low risk
			Present when damaged materials were sanded or drilled	Possible short-term exposure – very low risk
		Materials undamaged and well maintained (sealed and painted)		Extremely low risk
	Interior – textured ceilings, wall linings, vinyl flooring	Decorative ceiling crumbling or removed, vinyl flooring uplifted or old wall board crushed or drilled	Present during removal but clean-up thorough	Possible short-term exposure – very low risk
			Home furnishings contaminated with dust, not cleaned or removed	Low risk but possible ongoing low-level exposure*
		Materials intact		Extremely low risk
Post-1990	None likely			None or negligible risk

□ = possible presence of a hazard but probable low risk, □ = minimised risk, □ = ongoing presence of the hazard and higher risk.

* 'Risk' depends on the amount of asbestos-containing materials and extent of disturbance/works carried out. Although the risk is low in absolute terms, it will increase with time if steps are not taken to remove the asbestos fibres after work has been completed.

Source: Bardsley A. 2015. *Asbestos Exposure in New Zealand: Review of the scientific evidence of non-occupational risks*. URL: www.pmcsa.org.nz/wp-content/uploads/Asbestos-exposure-in-New-Zealand_9April15.pdf (accessed 13 September 2017)

How to tell if material around your home contains asbestos

A sample tested in an approved analytical laboratory is the most certain way to find out if a material contains asbestos.

If you need to get a sample tested, contact a health protection officer at the Te Whatu Ora National Public Health Service (www.tewhatuora.govt.nz/our-health-system/health-sector-organisations/public-health-contacts/). They will tell you what to do. Do not take a sample without consulting them first.

What to do if you find asbestos in your home

If there is asbestos or asbestos-containing material (confirmed by laboratory analysis) in your home or the soil around your home, talk with your health protection officer about:

- leaving it as it is, disturbing it as little as possible
- sealing, encapsulating or enclosing it
- removing it.

Asbestos-containing material on decorative ceilings, walls or flooring is not likely to be a health risk unless it is damaged, deteriorating or crumbly. If the asbestos-containing material is poorly bonded, damaged or deteriorating, fibres may be released into the air. This asbestos-containing material should be sealed, encapsulated, enclosed or removed.

Sealing is done by applying paint to the surface. When hardened, this stops the release of loose asbestos dust.

Encapsulation is when asbestos-containing material is coated with a material that soaks through the asbestos-containing material and hardens, stopping the release of loose asbestos fibres.

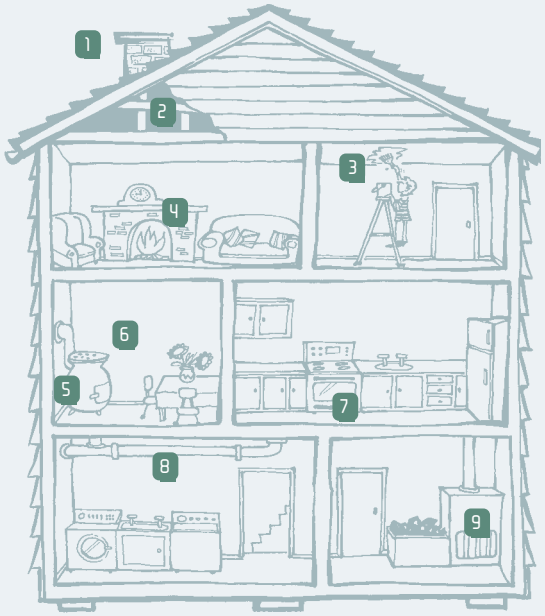
Enclosing is when a construction is placed around the asbestos-containing material (like a false wall or plasterboard ceiling) to contain the asbestos.

Contact a health protection officer at Te Whatu Ora National Public Health Service if you think you might have asbestos in your home. They will advise you.

External cladding (including roof tiles made of asbestos) should not cause any concern if it is not damaged. Even if the cladding is deteriorating, we recommend that it be sealed rather than removed or replaced. The process of removal will disturb the asbestos, releasing high-risk concentrations of fibres into the air and endangering the health of everyone in the locality. If left in place, the amount of fibres released poses a negligible health risk. However, if you have asbestos-containing roofing, be aware that the ceiling space under the roof may have high concentrations of asbestos dust, particularly if the roofing is weathered and brittle.

Using an approved commercial sealant may stop the release of fibres. Both water-based (emulsion) coatings and solvent-based coatings may be used. They can be pigmented or clear. Not all paint and surface coatings are suitable. Some may increase fire risks, so you should consult the paint manufacturer to find out more about the suitability of the product.

Examples of asbestos in homes



1. Some roofing and siding shingles were made of asbestos cement.
2. Houses built between 1930 and 1950 may have asbestos as insulation.
3. Asbestos may be present in textured paint and in patching compounds on wall and ceiling joints.
4. Artificial ash and embers used in old gas-fired fireplaces may contain asbestos.
5. Older products such as stove-top pads may have some asbestos compounds.
6. Walls and floors around wood-burning stoves may be protected with asbestos paper, millboard or cement sheets.
7. Asbestos is found in some vinyl floor tiles and linoleum, and as backing on vinyl sheet flooring and adhesives.
8. Hot water and steam pipes in older houses may be coated with an asbestos material or covered with an asbestos blanket or tape.
9. Oil and coal furnaces, wood burners and door gaskets may have asbestos insulation.
10. The soil around your home may have asbestos in it from inappropriate removal or storage, or from deteriorating roof or wall cladding (or other sources).

Do not use power tools or high-pressure water blasting on external cladding as this will release large amounts of fibres, which are a health risk as a mist or dust and when they dry.

We strongly advise that you seek the help of a WorkSafe New Zealand licensed asbestos removalist to remove any asbestos-containing material from your home as exposure to asbestos fibres is a danger to health. A licensed removalist will take the necessary precautions and follow good work practices, as required by the Health and Safety at Work (Asbestos) Regulations 2016.

You can find the names of licensed asbestos removalists on WorkSafe New Zealand's website at: https://worksafe.govt.nz/the-toolshed/registers/asbestos-licence-holder-register/

For more information

If you still intend to remove asbestos from your home yourself, make sure you follow the advice in the Te Whatu Ora booklet *Removing Asbestos from Your Home* available from the Te Whatu Ora website tewhatuora.govt.nz

- For more information about removing asbestos in or around your home, you can also read the *Approved Code of Practice: Management and Removal of Asbestos*, available at: https://www.worksafe.govt.nz/topic-and-industry/asbestos/management-and-removal-of-asbestos/