

All About Asbestos

Read this booklet to learn more about:

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

What Is Asbestos?

Asbestos is the name used for a group of natural minerals that are made up of many small fibres. These fibres are very strong and are highly resistant to heat, fire, chemicals, and wear due to friction.

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

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

Asbestos was also used in household items, such as:

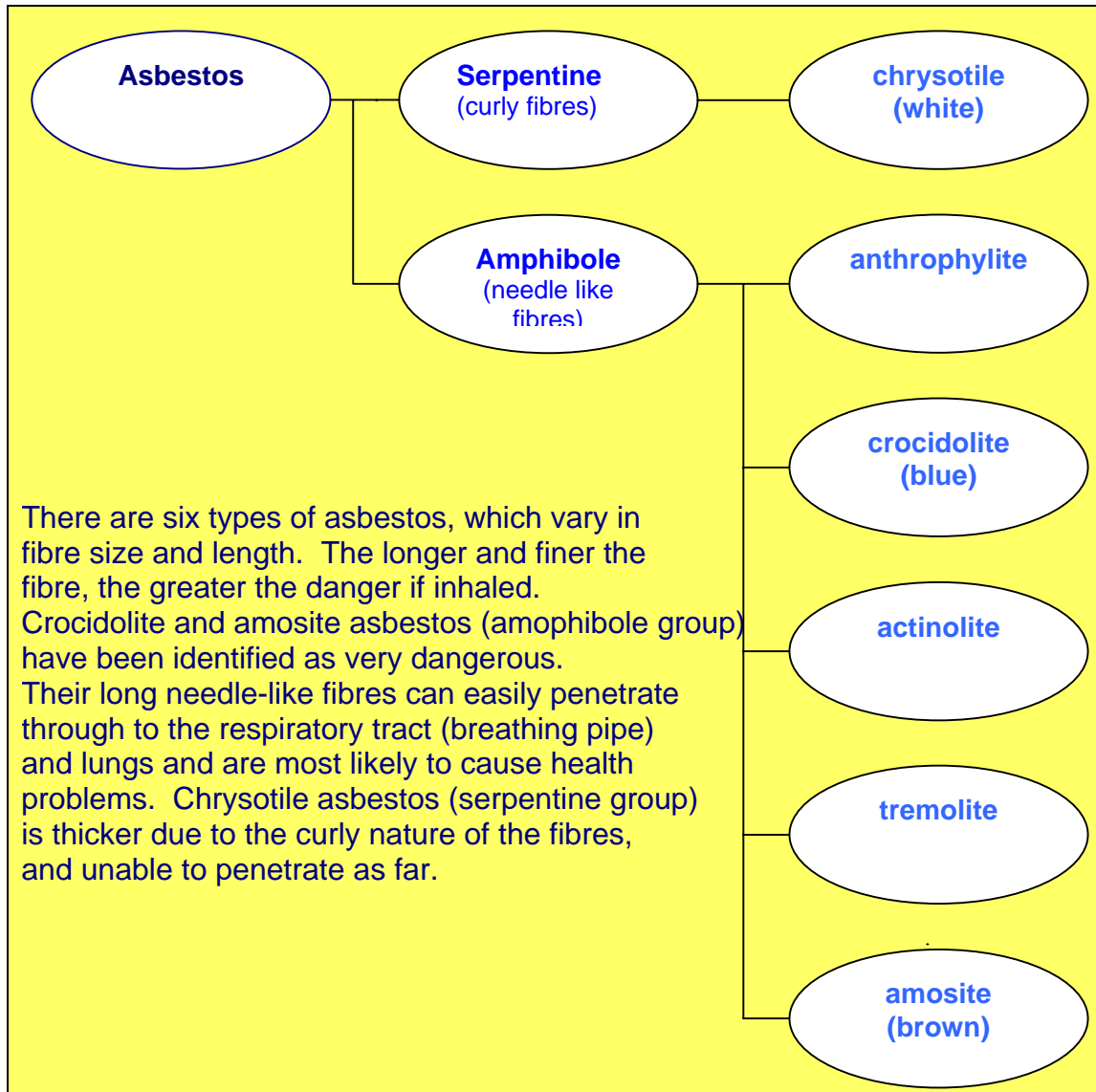
- oven gloves
- ironing board pads
- simmer mates for stoves
- fire blankets.

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 used instead. However products and appliances with asbestos content may still be around, particularly in homes built before 1980.

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

- chrysotile (white),
- amosite (brown) and
- crocidolite (blue)

- although importation of crocidolite has not been allowed since 1967. The colour differences are very slight and laboratory analysis is needed to identify different types of asbestos fibre.



Can asbestos harm our health?

Asbestos is a risk to health only when it is inhaled (breathed in) as fine dust. The risk to health increases with the number of fibres inhaled and with frequency of exposure.

When asbestos dust is inhaled, larger fibres tend to be cleared by protective mechanisms in the lungs and upper respiratory tract. The finer fibres are more difficult to remove, and may become deposited in the lungs, or penetrate further into the body.

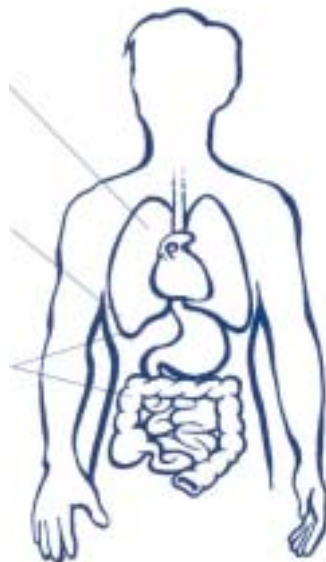
There are a number of diseases that can be related to the deposit and penetration of asbestos fibres:

- asbestosis (scarring of lung tissue)

asbestos
scarring of lung
tissue

pleural plaques
– thickening of
membranes
around the
lungs

mesothelioma –
malignant
tumours or
cancers that
can develop
around the
lungs or
intestine



- mesothelioma (malignant tumours, cancers which develop around the lungs or intestine)
- pleural plaques (thickening of membranes around the lungs), and
- lung cancer.

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

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

While some asbestos fibres may be swallowed there is no consistent evidence that swallowing asbestos fibres is a health risk.

Asbestos is primarily controlled by the Asbestos Regulations administered by the Occupational Safety & Health Service (OSH) of the Department of Labour. The Building Act 1991, and the New Zealand Building Code clause F2 hazardous Building Materials, control the use of asbestos in buildings.

As asbestos-containing materials (ACMs) are now generally unavailable the use of asbestos is not often an issue in new buildings. If ACMs are used in new buildings, they must be sealed or encapsulated with a suitable coating, or bonded in a matrix, to comply with the Building Code. You should get advice from your local authority (city or district council).

How will you be affected if there is asbestos in your home?

Brief exposure to low concentrations of airborne asbestos fibres is unlikely to be a major health risk. The following table describes concentrations of asbestos fibres in different situations.

| | | |
|---|-------------------------|----------------------------------|
| Normal exposures | Environmental/rural | 0.03-3 fibres per cubic metre* |
| | Indoors | 30-600 fibres per cubic metre |
| New Zealand control limits for the workplace | crocidolite and amosite | 10,000 fibres per cubic metre |
| | chrysotile | 100,000 fibres per cubic metre |
| Minimum levels causing injury and death (over 20 years) | lung injury | 1,000,000 fibres per cubic metre |
| | death | 3,400,000 fibres per cubic metre |

*A cubic metre is approximately the amount of air inhaled in one hour.

To cause death, or serious disease, concentrations of asbestos fibres would need to be more than 166 times the level for 'normal exposure indoors' (see table above). People exposed to such levels in the past were mainly unprotected workers handling asbestos materials.

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

Extreme deterioration or disturbance of the material would release high concentrations of fibres into the air.

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.

How to tell if a suspect material contains asbestos

Testing a sample in an approved analytical laboratory is the only way to find out if a material contains asbestos.

If you need to get a sample tested, contact a health protection officer at the public health service of your local District Health Board (DHB). They will tell you what to do. Do not obtain a sample without consulting them first.

What should you do if asbestos is in your home?

If there is asbestos or ACM (confirmed by laboratory analysis) in your home, you should 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.**

ACM on decorative ceilings, walls or flooring is not likely to be a health risk unless it is damaged, deteriorating or crumbly. If the ACM is poorly bonded, damaged or deteriorating, fibres may be released into the air. This ACM 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 ACM is coated with a material that soaks through the ACM and hardens, stopping the release of loose asbestos fibres.

Enclosing is when a construction is placed around the ACM (like a false wall) to contain the asbestos fibres.

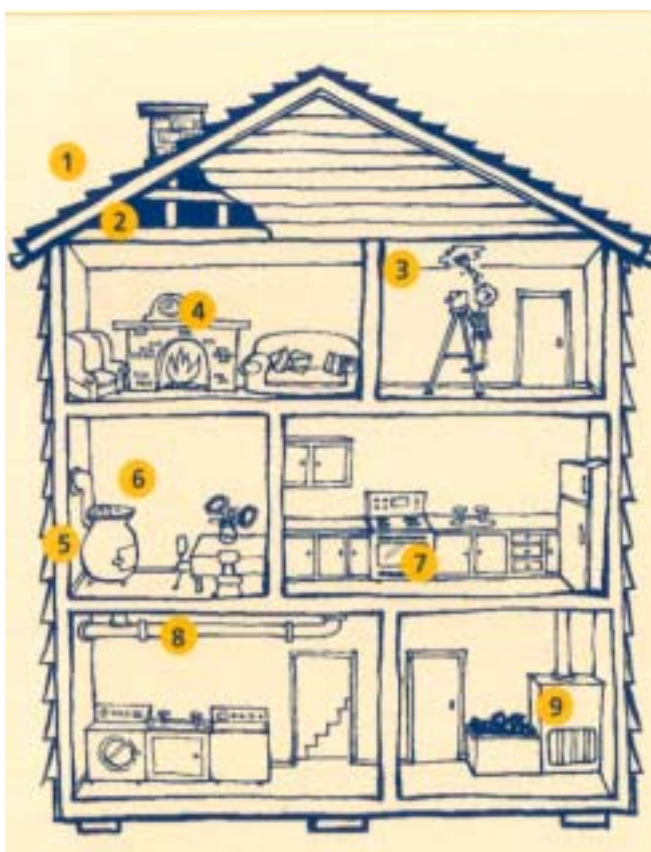
1. Some roofing and siding shingles are made of asbestos cement.

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. Their use was banned in 1977.

4. Artificial ashes and embers sold for use in 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 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 and door gaskets may have asbestos insulation.

Contact a health protection officer at your local District Health Board (DHB) 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 not damaged. Even if the cladding is deteriorating, the Ministry of Health advised that the cladding should be sealed rather than removed or replaced. The process of removal will disturb the asbestos, releasing high-risk concentrations of fibres into the air, endangering the health of everyone in the locality. If left in place, the amount of fibres released is not considered to be a 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.

The use of an approved commercial sealant may stop the release of fibres. Both water-based (emulsion) coating and solvent-based coating 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.

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

The Ministry of Health strongly advises that you use certified contractors to remove ACMs as exposure to asbestos fibres is a danger to health. Necessary precautions and good work practices are well known to experienced specialist firms. They will also be better equipped to handle asbestos. Names of certified contractors are listed in the Yellow Pages.

If you still intend to do the work yourself make sure you follow the advice in the Ministry of Health booklet *Removing Asbestos From the Home* (code 7022) available from the public health service of your local District Health Board (DHB).



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