



Asbestos:

A guide for schools and early childhood education services

Regional Public Health provides advice to the public about health risks from asbestos and many other hazardous substances. At times, we are asked to help schools and early childhood centres who have a concern about asbestos.

An introduction to asbestos

Asbestos is a mineral fibre that occurs naturally in the environment. Individual fibres cannot be seen by the naked eye but can remain in the air for a long time because they are small and light.

Asbestos fibres are very strong and are highly resistant to heat, fire, chemicals, and wearing down. Historically asbestos was mined because of these special properties, so that it could be used for:

- asbestos-cement cladding and roofing
- backing material for floor tiles and vinyl sheets
- insulation board for thermal protection (eg, around fireplaces)
- textured ceilings
- lagging for insulation around pipes, heaters and hot water cylinders
- some household items, such as oven gloves, ironing board pads, simmer mats for stoves, and fire blankets.

Asbestos was mainly imported and used before the 1980s. After the health risks of asbestos became known, other materials were used in its place. However, products and appliances with asbestos content are still around, particularly in buildings built before 1984. This includes school and early childhood education (ECE) services buildings.

There are always low 'background' amounts of asbestos fibres in air. These come from natural sources (weathering of asbestos-containing natural materials), windblown soil from some waste sites, or breakdown of asbestos-containing materials. The levels of asbestos in dust and windblown soil may be higher around building demolition/renovation that contains asbestos products, or an improperly covered asbestos waste site.

Asbestos products can be bonded or friable:

- Bonded into a cement, the fibres are tightly bound up in the material and cannot be released if the material is in good condition.
- Friable products are more dangerous because they are crumbly and the asbestos fibres can be released into the air more easily.

The number of fibres that are released depends on the percentage of asbestos in the material; whether the material is bonded or friable; the way it is handled, used or worked on; and the degree of damage or wear.

How can asbestos affect health?

Everyone is exposed to low levels of asbestos, and the vast majority of people will never have an asbestos-related health problem because the levels of asbestos present in the environment are very low. Most people who have been exposed to higher levels of asbestos for a short time, will never have any asbestos-related health problems.

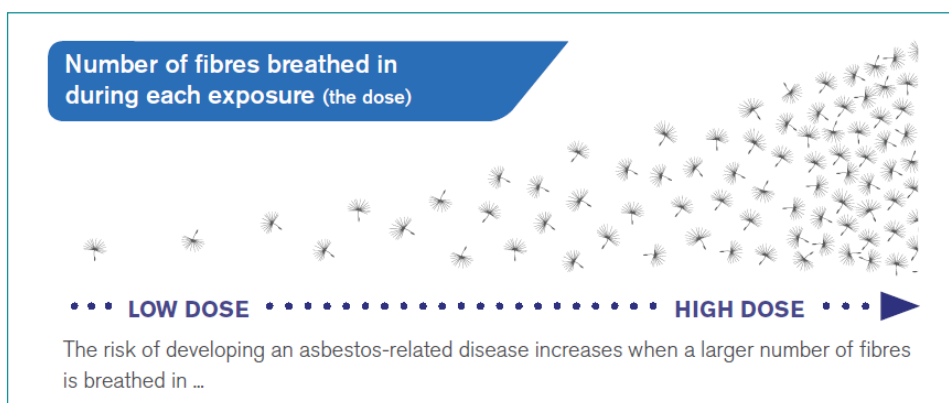
Asbestos may be harmful when its fibres are breathed in as fine dust. It is more harmful to breathe in a lot of fibres, on many occasions, than a few fibres for only a short time period.

If asbestos dust is breathed in, the lungs and bigger airways are able to remove the larger fibres through the body's protective mechanisms. Finer fibres are more difficult to remove and may settle in the lungs, or go further into the body. There are a number of diseases that may be related to breathing in asbestos fibres:

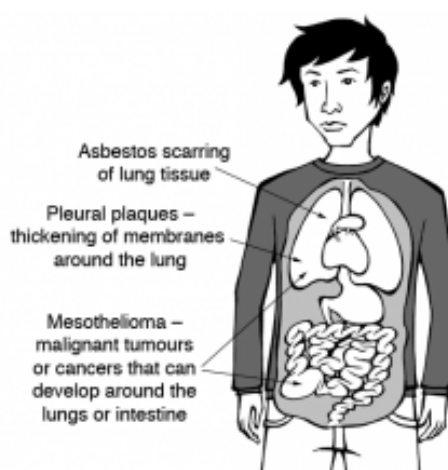
- pleural plaques (thickening of linings around the lungs)
- asbestosis (scarring of lungs that can cause breathlessness)
- lung cancer
- mesothelioma (cancers which can develop around the lungs or gut)

Asbestos-related diseases can begin many years after asbestos exposure. Most people who develop asbestos-related diseases have been workers in industries like construction, where they frequently breathed in large amounts of asbestos fibres over many years. In the past, workplace fibre concentrations of asbestos were thousands to millions of times higher than normal background levels.

- Smoking increases the risk of developing lung cancer following exposure to asbestos.
- Ingesting (swallowing) asbestos is not thought to be harmful because the vast majority of fibres are not absorbed through the gut and are passed out through faeces.



Risk of asbestos-related disease increases with increasing exposure to fibres



How can we tell if a material contains asbestos?

Having a sample tested by an approved laboratory is the only way to find out if a material contains asbestos. To find a laboratory, look in the Yellow Pages under "asbestos".

What should we do if we are worried about exposure to asbestos?

Discovering that you or people around you may have been exposed to asbestos can be worrying. Generally, bonded asbestos-containing materials in good condition will not release asbestos fibres. There is no danger unless fibres are released and inhaled into lungs. The health risk from exposure to asbestos in school or ECE service settings is usually very low.

Measuring asbestos exposure is not easy- there is no simple test, like a blood test. We can do a 'risk assessment' of how much exposure is likely to have occurred by looking at the material type and condition (including sample testing), the likely amount of contact with the fibres, and the surrounding environment.

If you have concerns about asbestos exposure for staff or children in your school or ECE service, contact your Public Health Unit to discuss these.

Terms

Sealing is applying special paint to the surface. Once hardened this stops the release of loose asbestos dust/fibres.

Encapsulation is when asbestos material is coated with a substance that soaks through the material and hardens. This stops the release of loose asbestos fibres.

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

What should we do if asbestos is in our school or early childhood education service?

If there is laboratory-confirmed asbestos in your school or early childhood education service, you need to ensure that the asbestos-containing material is properly managed. This means engaging appropriate professionals, informing others who may do work on the area concerned, and ensuring plans are in place to monitor the asbestos material at intervals.

Each school or early childhood education service has a legal responsibility to:

- maintain facilities in good condition
- take remedial action to remove any safety hazards
- protect staff members, students and visitors from health and safety hazards.

For asbestos, they are required to use certified specialist contractors to maintain, repair or remove any asbestos-containing materials. Certified contractors are both experienced and specialised in this area which makes them aware of the necessary precautions and best practices when handling asbestos. Certified contractors would know when to:

- leave the asbestos as it is,
- minimally handle so that the asbestos is disturbed as little as possible
- use best practice for removal.
- use best practice for sealing, encapsulating or enclosing asbestos

In addition to asbestos certified contractors, other organisations can help with providing the advice and support that your community will require.

- The Ministry of Education website and your school property advisor can provide advice and support.
- Public Health Units can help with assessing what the level of risk is likely to be for people at the facility and communicating this risk to those who are potentially affected, e.g. parents/caregivers of attendees/students.
- The Ministry of Business, Innovation and Employment (Labour Group) (MBIE (Labour Group)) can advise about employee health and safety if there are any concerns. MBIE (Labour Group) have developed guidelines for the management and removal of asbestos.

This information is summarised in the flow chart.

An example of an asbestos concern at an education service

An early childhood education service re-tested its roof to determine if it contained asbestos. The manager thought it was asbestos material because she had been told that it had been tested 20 years ago; however documentation could not be found. The testing came back saying that it was asbestos-containing material in poor condition. The Centre then contacted their local Public Health Unit who provided advice on the likely risks to staff/children, and options available to manage those risks. The roof was sealed and a plan was made for replacement. Public Health Unit staff also attended parent meetings and answered subsequent queries from concerned parents.

Further information

Asbestos resource (Ministry of Health)

All About Asbestos

www.healthed.govt.nz/resource/all-about-asbestos

Public Health Unit – Wellington region

(Regional Public Health)

Telephone (04) 570 9002 (can supply the Ministry of Health resource above)

Ministry of Business, Innovation and Employment (Labour Group)

Telephone 0800 20 90 20

Ministry of Education

www.minedu.govt.nz

Asbestos accredited analytical laboratory see **Yellow Pages** under "asbestos".

Certified asbestos repair/removal companies see **Yellow Pages** under "asbestos".

