



**SPREP**  
Secretariat of the Pacific Regional  
Environment Programme



This initiative is supported by **PacWastePlus**-a 64-month project funded by the European Union (EU) and implemented by the Secretariat of the Pacific Regional Environment Programme (**SPREP**) to **sustainably and cost effectively improve regional management of waste and pollution.**

# LIVING SAFELY WITH ASBESTOS

March 2021



This publication provides home owners with some important information on how to live safely with Asbestos.



#### **Disclaimer**

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#### **SPREP Library Cataloguing-in-Publication Data**

Living safely with asbestos. Apia, Samoa : SPREP, 2021.

15 p. 29 cm.

**ISBN:** 978-982-04-0969-9 (print), 978-982-04-0970-5 (ecopy)

1. Asbestos – Law & Legislation. 2. Hazardous substances – Health aspects. I. Pacific Regional Environment Programme (SPREP). II. Title.

363.728



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**Our vision:** A resilient Pacific environment sustaining our livelihoods and natural heritage in harmony with our cultures. As part of SPREP's commitment to the environment, this item is printed on paper made from 100% recycled post-consumer waste.

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## Introduction

Asbestos is a known health hazard, and may be present in your home, but it may not be a risk, depending on its condition. In this publication we provide useful information on how to **live safely with asbestos**.

Although asbestos containing materials are now banned and no longer produced in many countries, they may still be found in a number of public and household buildings especially here in the Pacific.

Generally, one cannot tell whether a material contains asbestos simply by looking at it. The only definitive way to determine whether a product contains asbestos is to have a professional test for it.

Asbestos is only a hazard when small particles become airborne, are inhaled and deposited within the lungs. Asbestos containing materials in buildings pose no risk to health unless asbestos fibres become airborne and are inhaled. Intact, sealed and undisturbed materials are not a hazard.

If in doubt, treat the material as if it contains asbestos and leave it alone. If building materials in your home are not damaged and will not be disturbed, you do not need to have your home tested for asbestos. Material that is in good condition and will not be disturbed (by remodeling, for example) should be left alone.

It is important to note that should you discover asbestos in your home, please **Don't Panic, Don't Touch It and Call in the Professionals** to deal with it safely and properly without putting you, your family and your neighbors at any risk.

We strongly advise against you personally undertaking any form of remedial works-repairs, removal or disposal of items that you think may contain asbestos. Please engage trained asbestos removal professionals to undertake this work.

### THE BEST THING TO DO WITH ASBESTOS CONTAINING MATERIALS IN GOOD CONDITION IS TO LEAVE IT ALONE!



The management and disposal of asbestos containing materials are currently a cause of concern in the Pacific region. In seeking to improve the ways that asbestos and asbestos containing materials are managed in PacWastePlus countries, the focus is to prevent exposure to asbestos fibres in order to eliminate asbestos-related diseases. Inhalation of asbestos fibres can cause a range of fatal diseases such as asbestosis (fibrosis of the lungs) and a range of cancers, including mesothelioma (WHO, 2018).

When **products containing asbestos are damaged or become degraded over time, asbestos fibres are exposed and may become airborne**. Health risks are exacerbated in natural disasters, with destructive cyclones damaging products such as asbestos roofing and cladding, an issue of increasing concern as the impacts of climate change are experienced across the region.

The World Health Organisation (WHO) states that when a country stops using asbestos, their asbestos-related disease burden decreases over time. In contrast, countries continue to use asbestos are likely to have a substantial burden of asbestos-related disease in the future due to their past and ongoing asbestos use. Reducing exposure without addressing ongoing import and use are insufficient to eliminate asbestos-related diseases (Kameda et al, 2014).

# What Is Asbestos?

Sounds dangerous, right? But what exactly is it? Unless you've been affected by this hazardous material or you know someone who has it's probably not something you think about every day.

Asbestos is a term for a group of minerals made of microscopic fibres. Before its dangers were known, asbestos was often used in buildings for insulation, flooring and roofing and sprayed on ceilings and walls. These mineral fibres have worked well for manufacturers for many reasons. For starters, they're flexible and resistant to heat, chemicals, and electricity. That's why they were widely used for years to make construction materials, automotive parts, and even textiles.

## Brief History of Asbestos

Thousands of years ago ancient civilizations including the Greeks and Romans mined and wove the fibres into clothing and used them in building materials, taking advantage of their high strength and fire and corrosion resistance.

Historians have traced the use of asbestos back to ancient times when the naturally-occurring minerals were worked into candle wicks, cloth, pottery, and cooking utensils. Many different cultures saw the benefits of asbestos fibres being that they were strong, flexible, and resistant to heat and fire. It is believed that the word "asbestos" derives from the Greek, and literally means "inextinguishable" or "indestructible."

Even in ancient Rome, where asbestos fibres were woven into tablecloths and napkins, Pliny the Elder documented respiratory illness in those working with the substance in mines or production areas.

Different asbestos minerals were used throughout the middle ages in countries like France, Germany, and Italy, but were not commercially mined until the late 1800s. In 1879, the first asbestos mine was opened within the Canadian province of Quebec. After 300 tons of asbestos had been commercially produced in Canada, Russia and other countries quickly began mining the substance as well.

The Industrial Revolution in the United States saw many needs for asbestos. Given the minerals' resistance to heat and flame, asbestos fibres added to insulation and other products used in steam locomotives, automobiles, commercial and residential buildings, and more. The flexible characteristics of asbestos fibres added to their binding and strengthening capabilities.

Until relatively recently modern societies have also taken advantage of asbestos' useful properties, using it in about 3000 products such as vehicle brake-linings, fibre-cement sheeting for roofs and walls, guttering, insulation and water pipes. The relatively inexpensive production and mass abundance of asbestos containing materials created a widespread desire to utilize asbestos in building materials.

Asbestos material was widely used in buildings up to the 2000s because it's fire resistant and provides good insulation. If your home was built after the year 2000 you don't have to panic, and even if was you still don't have to get too alarmed!



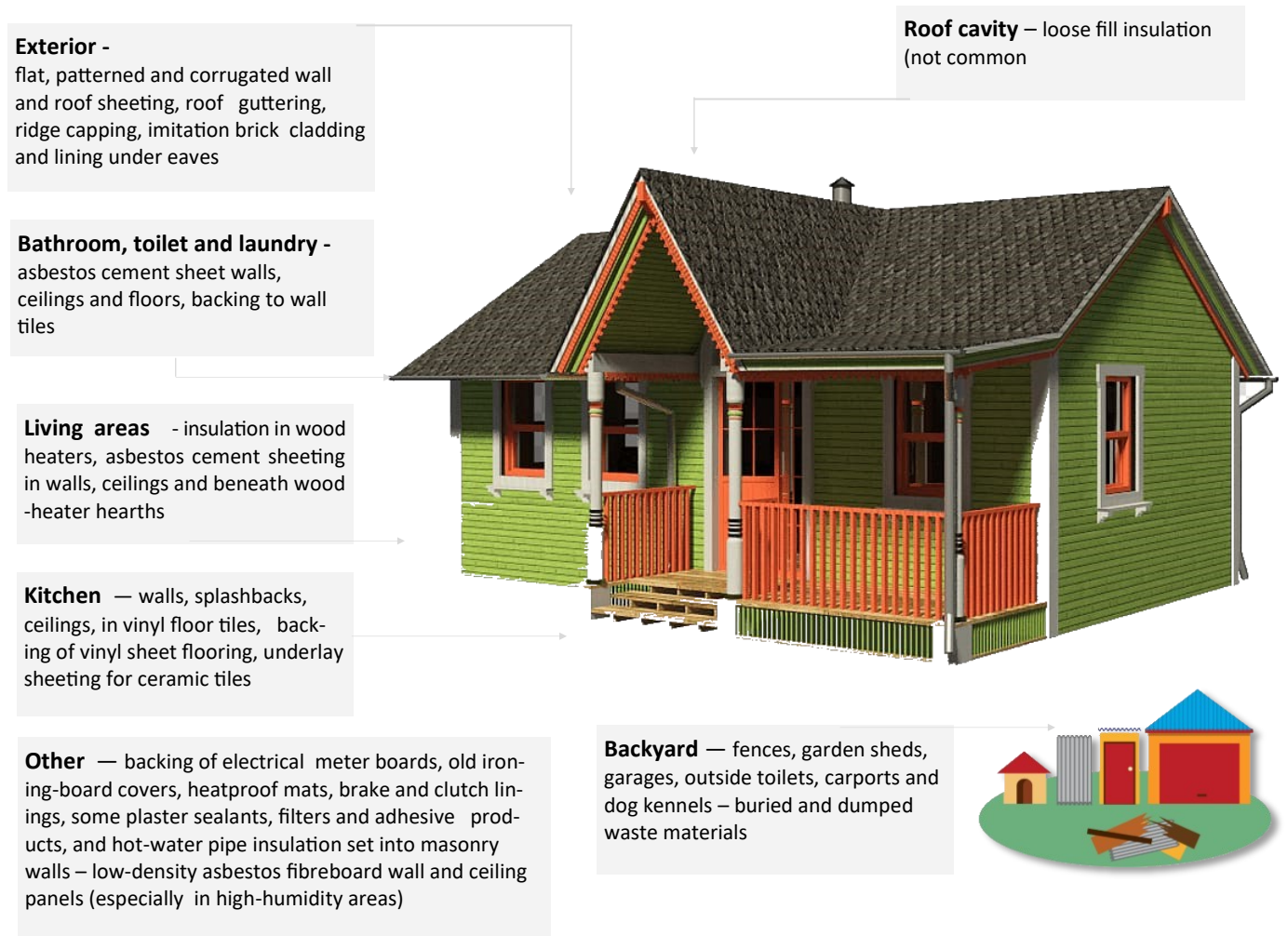
## Why was asbestos a popular choice for builders?

- Extreme heat resistance
- Chemical resistance
- Exceptional insulation properties
- Fire resistance
- Provides strength when mixed with other materials
- Resistance to harsh weather conditions
- Durability
- Malleability

In the Pacific region, the main product encountered is asbestos cement sheeting which is not a threat to health as long as it remains undamaged. However, as buildings age or become damaged, for example by extreme weather events such as tsunamis and cyclones, they can release dangerous asbestos fibres to the environment. When inhaled these fibres can lead to a number of diseases including asbestosis, mesothelioma and lung cancer.

Similarly, during building demolition or renovation, disturbance and breakage of asbestos containing products are likely to release asbestos fibres. Workplace health and safety procedures should be employed to reduce or eliminate exposure to workers from inhaling airborne fibres. In order to protect Pacific communities from exposure to airborne asbestos fibres and work towards an asbestos-free Pacific, we need to be careful to protect all individuals who will be exposed to potential risk, be they residents, workers in the building and waste disposal industries, or disaster response personnel. The best means of protection may be a combination of initial stabilisation of asbestos containing materials to minimise or prevent further release of fibres, followed by eventual removal and disposal.

## Where Might I Find Asbestos in My Home?



## IS IT SAFE TO LIVE WITH ASBESTOS IN YOUR HOME?

If the asbestos materials are **in good condition, and do not pose a threat of becoming damaged** the answer to the question *“is it safe to live with asbestos in your house?”* is **YES**. However, living on a property that contains asbestos does come with some responsibilities.

If you suspect your house contains asbestos, you could seek a professional inspection by an asbestos technician to determine the level of hazard. Households can be exposed to asbestos during normal wear and tear, minor household maintenance, during any renovations, or natural disaster. In essence, it is strongly recommended that any damaged or exposed asbestos material pose possible health risks and should be managed by a professional as soon as possible. If asbestos materials are friable, they require immediate removal and remediation by an asbestos professional. If asbestos materials are non-friable, they should be assessed and closely monitored, safely encapsulated, or pre-emptively removed to avoid future asbestos exposure.

# What are the Differences between Friable and Non-Friable Asbestos?

To prevent exposure and the harm that can occur, we should know a little bit about asbestos, how it can affect us and where the potential for exposure exists. One significant fact of asbestos is the difference between friable and non-friable asbestos.

## What is Asbestos Friability?

Friability is the tendency for asbestos containing materials to break down, chip or crumble under pressure or as a result of abrasion. Asbestos containing materials that are more likely to be damaged, and release inhalable asbestos fibres as a result, are known as 'friable'. These materials can easily be crumbled or reduced to a powder by hands.

## What is Friable Asbestos?

Friable asbestos is asbestos that is more prone to damage and can easily be broken, and that will release inhalable asbestos fibres into the air as a result. Friable means when dry, or as the result of a work process, may be crumbled, pulverised or reduced to a powder by hand pressure.

## What is Non-Friable Asbestos?

Non-friable asbestos is asbestos that is more resistant to damage and abrasion, so is less likely to release harmful fibres into the air. Non-friable asbestos cannot be damaged by the human hand. It cannot be easily disturbed for example materials containing asbestos that have been mixed with cement or other hard bonding materials.

## What is the Friability of Asbestos?

Different asbestos containing materials have different concentrations of asbestos fibres, and this affects how friable they are. Materials with a high concentration of fibres are more harmful to health and are likely to be more friable.

## What are Examples of Friable Asbestos?

Examples of friable asbestos materials are thermal insulation, insulation boards, pipe lagging, and sprayed coatings. Friable asbestos materials are more susceptible to damage and more likely to release harmful fibres into the air. They can be easily damaged by the human hand.

## What are Examples of Non-Friable Asbestos?

Examples of non-friable asbestos include vinyl floor tiles, cement sheets, bitumen products and textured decorated coatings (such as Artex). Non-friable asbestos materials are less likely to be damaged and release harmful fibres into the air. They cannot be damaged by the human hand and so pose less risks to health.

## What Makes Asbestos Friable?

Many asbestos containing materials become friable over time due to deterioration in the material, such as due to age or weathering. Some materials are naturally friable, such as insulation, and are more at risk from damage.

## Non-Friable Asbestos may become Friable

Non-friable asbestos may become friable as a result of work processes over time (for example, degradation due to chemical exposure) or due to other factors (for example, damage by fire).

Friable	Non-Friable
<ul style="list-style-type: none"><li>• Crumbly in texture</li><li>• Can be easily crushed by hand</li><li>• Prone to damage</li><li>• Releases asbestos fibres into air</li><li>• Contains more than 1% asbestos</li><li>• Extremely harmful</li></ul>	<ul style="list-style-type: none"><li>• Tightly bonded</li><li>• Bound in with other materials</li><li>• High resistance to damage</li><li>• Less likely to release asbestos fibres</li><li>• Cannot be damaged by hand</li></ul>





**Roofing** - Asbestos cement roofing is corrugated (wavy) and grey in colour. Asbestos can also be found in cement shingles/tiles).



**Walls** - Asbestos wall sheeting (also called cladding) is common but can be hard to recognise because it looks very similar to other types of cladding.



**Ceilings** - Some types of ceiling tiles contain asbestos.



**Gutters and water pipes** - Some gutters and pipes are made from asbestos cement.



**Floors** - Asbestos materials can sometimes be found in the lining used underneath tiles and in vinyl flooring.



**Outside** - Sometimes asbestos materials can be found in piles of rubbish, usually in places where houses have been knocked down or on building sites.



**Gardens** - Sometimes asbestos sheeting is used to edge garden beds.



**Old buildings or sheds** - Old or abandoned buildings may contain asbestos.



**Shops** - Sometimes people sell old asbestos building materials. Also, some new building materials might contain asbestos. It's always best to ask.

## When Is Asbestos in a Home Dangerous?

**Asbestos containing materials only pose a health risk when small airborne particles are released and inhaled.** If an asbestos-containing substance is easily crumbled or reduced to fine particles with hand pressure, the asbestos containing material can become airborne and then enter your lungs when you breathe, leading to disease.

Non-friable asbestos containing materials, such as floor tile and roofing felt, usually do not emit airborne fibers. The danger to you comes from drilling, cutting, sanding, or disturbing materials that contain asbestos.

If you are renovating your home, make sure you have licensed professionals carry out the work according to national and international specifications and safety protocols. **Do not try to remove, treat or discard asbestos on your own.**



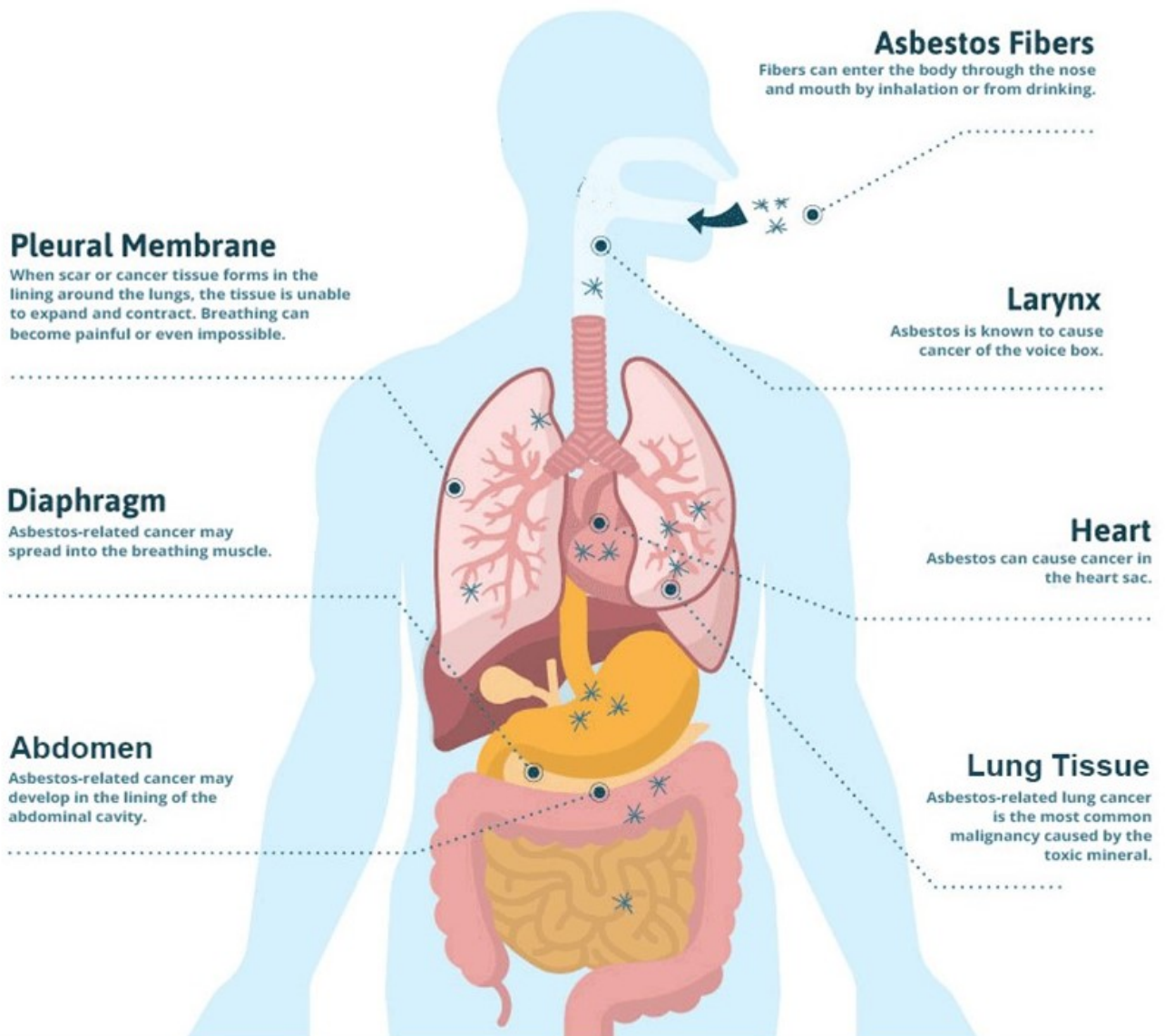
## How Can Asbestos Affect My Health?

Asbestos fibres are dangerous when they are inhaled becoming embedded in organ linings and tissues. From studies of people who were exposed to asbestos in factories and shipyards, we know that breathing **high levels of asbestos fibres** can lead to an increased risk of:

- Cancers include mesothelioma, lung cancer, laryngeal cancer, and ovarian cancer. The risk of lung cancer and mesothelioma increases with the number of fibres inhaled. The risk of lung cancer from inhaling asbestos fibres is also greater if you smoke.
- The symptoms of these diseases do not usually appear until about 20 to 30 years after the first exposure to asbestos.

Additionally, studies have found correlations between asbestos and several other cancers, such as breast cancer and colon cancer. Asbestos diseases include asbestosis, pleural thickening, pleural plaques and other conditions.

Most people exposed to small amounts of asbestos, as we all are in our daily lives, do not develop these health problems. However, **if disturbed**, asbestos material may release asbestos fibres, which can be inhaled into the lungs. Asbestos material crumbles easily if handled, or that has been sawed, scraped, or sanded into a powder, is more likely to create a health hazard, as small asbestos particles are easily made airborne and able to be inhaled.



# ASBESTOS-RELATED RISK OF DISEASE

Risk of disease increases with increased exposure (measured as number of fibres and frequency of exposure)

## General public

All air has a low level of asbestos fibres



### Exposure

Number of fibres:  
Background

Frequency:  
Constant

VERY LOW RISK

## Householder

Incident such as unsafe renovation or demolition next door



### Exposure

Number of fibres:  
10s-100s x Background

Frequency:  
Occasional

LOW RISK

## Home renovator

Unsafe removal of asbestos in home renovation



### Exposure

Number of fibres:  
100s-1000s x Background

Frequency:  
Occasional

MEDIUM RISK

## Builder/tradesperson

Frequent exposure to high levels of asbestos by builders, etc if using unsafe practices



### Exposure

Number of fibres:  
100s-1000s x Background

Frequency:  
Frequent

HIGH RISK

## What Do I Do If I Think I Have Asbestos in My Home?

If you think there may be asbestos in your home, **do not panic**. Asbestos containing materials that are not damaged or disturbed are not likely to pose a health risk.

If the asbestos containing material it is in good condition the best thing is to leave asbestos containing materials alone.

The method used for dealing with asbestos in the home depends upon where the asbestos is found and the condition of the material.

If asbestos containing material is currently in good condition and fibres cannot be released, then no action is needed. However, the situation should be monitored for signs of asbestos deterioration and damage.

Asbestos removal is the only permanent solution to eliminate risk from asbestos exposure. However, removal poses a high risk of fibre release if not done properly. Air samples should be taken after the work is completed to ensure the safety of the homeowner.

Whether asbestos is repaired or removed from your home, it is important that you choose a competent professional who is certified to do asbestos removal work.

## Do's and Don'ts to Consider if You Think You Might be Dealing with Asbestos

IF YOU FIND ASBESTOS IN OR AROUND YOUR HOME;

**DON'T CUT IT!**  
**DON'T DRILL IT!**  
**DON'T DROP IT!**  
**DON'T SAND IT!**  
**DON'T SAW IT!**  
**DON'T SCRAPE IT!**

**DON'T SCRUB IT!**  
**DON'T DISMANTLE IT!**  
**DON'T TIP IT!**  
**DON'T WATERBLAST IT!**  
**DON'T DEMOLISH IT!**

AND WHATEVER YOU DO...

**DON'T DUMP IT!**



**DO:**

- Be aware of asbestos containing materials around your home.
- Leave undamaged asbestos containing materials alone.
- Keep activities to a minimum in any areas having damaged material that may contain asbestos, including limiting children's access.
- Take every precaution to avoid damaging asbestos containing materials.
- If asbestos containing materials need replacing, install new materials to cover over it instead of removing the asbestos materials
- If you know that water pipes constructed of asbestos contaminated materials need replacing, leave the existing pipes underground
- Have removal and major repair done by people trained and qualified in handling asbestos.

Remember that asbestos is only dangerous if it is disturbed or destroyed.  
By following these safety precautions, you can keep everyone in your home safe.

## What if a Cyclone has Damaged My Home; How do I Clean Up Safely Without Getting Exposed to Asbestos Fibres?

Natural disasters such as cyclones and floods can damage asbestos containing materials and lead to asbestos exposure among first responders, clean-up crews and nearby residents. Several [PacWastePlus](#) programme supported Pacific island countries are actively working on asbestos management to reduce the risk of environmental pollution, and health issues for their communities.

PacWastePlus has produced an: *Asbestos Contaminated Materials Guide for Disaster Debris Removal, April 2020*, which can be accessed at: <https://www.sprep.org/sites/default/files/documents/publications/asbestos-contaminated-materials-guide.pdf>

The above document is designed to provide guidance on response and management, and to supplement knowledge and skills. Utilising this guide does not imply qualifications, and we strongly recommend undertaking appropriate training and employing necessary protective measures prior to handling asbestos containing materials.

## How Do I Get Tested for Possible Exposure to Asbestos?

If you are concerned that you were exposed to asbestos, visit your nearest health care centre or your primary care physician. The most common test used to learn if you have been exposed to asbestos is a chest x-ray. The x-ray cannot detect the asbestos fibres themselves, but can detect early signs of lung disease caused by asbestos. Other tests, such as lung scanning and computer-aided tomography (CAT scan), are also useful in detecting changes in the lungs.

Asbestos-related conditions are difficult to detect, and not all primary care doctors have the tools and experience to diagnose them. If you know for certain that you were exposed to asbestos, it is a good idea to seek annual screenings from a qualified lung specialist such as an occupational pulmonologist. Most asbestos-related diseases are diagnosed at least 15 years after exposure.

## Asbestos Professionals: Who Are They and What Can They Do?

Asbestos containing materials were widely used in construction materials prior to the year 2000. If you feel you may be living in a property with asbestos, consider seeking a professional assessment to determine if there is an exposure risk to you and your family.

Asbestos removal and abatement should only be carried out by a team of experts who are extensively trained, experienced, and qualified to remove, dispose of, and remediate asbestos-contaminated areas safely without risk to you or your neighbours.

Asbestos professionals are trained to remove, dispose of, and remediate asbestos-contaminated areas safely without risk to you or your neighbours. Asbestos professionals can conduct inspections, take samples of suspected material, assess its condition, and advise on the corrections that are needed, as well as who is qualified to make these corrections.

When engaging the services of asbestos management professionals, check their credentials carefully. Hire professionals who are trained, experienced, reputable and accredited - especially if accreditation is required by local laws. Before hiring a professional, ask for references from previous clients. Find out if they were satisfied. Ask whether the professional has handled similar situations.

Get cost estimates from several professionals, as the charges for these services can vary. Unnecessary removal is a waste of money. Improper removal may actually increase the health risks to you and your family. To guard against this, know what services are available and what procedures and precautions are needed to do the job properly.

To find out more about safe and proper asbestos repair, removal and disposal please get in touch with your local Ministry or Department of Environment, Waste Management Unit or local health authorities who will be able to provide you with more appropriate information that you may require.



### In Summary

Asbestos containing materials only pose a health risk when small airborne particles are released and inhaled.

If you live in a home built before 2000, there is a chance that the building may contain asbestos containing materials. As long as asbestos containing material is intact, you are not likely to inhale any asbestos fibres. However, during remodeling projects and simple renovations, asbestos fibres can become airborne and the risk for inhalation increases.

**You should not attempt to remove asbestos from your home yourself.** It is a specialised process, that requires the use of specific safety protocols to ensure the safe removal of the asbestos.



If your home was built **after 2000**, asbestos is very unlikely to have been used in its construction



**Do not touch**

**If it's left alone and in good condition**, generally it won't be a problem as it cannot release fibres into the air



Asbestos should always be treated with care but **isn't usually a problem unless it's disturbed or damaged**



**Don't disturb anything you think may have asbestos** in it (disturbing it means things like drill, saw, scrub or sand)



**WARNING**  
**Asbestos Hazard.**  
 Do not disturb without proper training and equipment.



Asbestos removal and abatement **should only be carried out by a team of experts who are extensively trained, experienced, and qualified** to remove, dispose of, and remediate asbestos-contaminated areas safely

**ASBESTOSIS  
IS A LONG TERM  
INFLAMMATION  
AND SCARRING  
OF THE LUNGS**  
DUE TO ASBESTOS EXPOSURE.



**IT'S CAUSED BY**  
BREATHING IN  
ASBESTOS FIBRES  
**OVER A LONG**  
TIME PERIOD.



**SYMPTOMS MAY**  
INCLUDE SHORTNESS  
**OF BREATH,**  
**COUGH, WHEEZING**  
AND CHEST PAIN.

**THE SIGNS  
AND SYMPTOMS OF  
ASBESTOSIS  
TYPICALLY MANIFEST  
AND APPEAR  
20 YEARS  
OR MORE AFTER  
THE EXPOSURE.**

**ASBESTOSIS  
IS A TYPE OF  
INTERSTITIAL  
PULMONARY  
FIBROSIS.**

COMPLICATIONS MAY  
**INCLUDE**  
LUNG CANCER,  
MESOTHELIOMA  
**AND PULMONARY**  
HEART DISEASE.



IT IS GENERALLY FOUND  
**IN PEOPLE WHO HAVE BEEN**  
EXPOSED TO ASBESTOS SUCH AS  
BUILDERS, CARPENTERS  
**AND PLUMBERS, WHO WORKED**  
WITH ASBESTOS BOARDS,  
ROPE AND INSULATION.

UNFORTUNATELY,  
**THERE IS  
NO CURE**  
AVAILABLE FOR  
ASBESTOSIS.



WHEN A PHYSICIAN  
**LISTENS WITH**  
A STETHOSCOPE  
TO THE LUNGS OF A  
**PERSON WITH ASBESTOSIS,**  
THEY MAY HEAR  
INSPIRATORY CRACKLES.



RECOMMENDATIONS  
**MAY INCLUDE**  
INFLUENZA VACCINATION,  
PNEUMOCOCCAL VACCINATION,  
**OXYGEN THERAPY,**  
PULMONARY REHABILITATION  
AND QUITTING SMOKING.

IT IS GENERALLY  
**RECOMMENDED**  
THAT CURRENTLY  
**EXISTING  
ASBESTOS  
BE LEFT  
UNDISTURBED.**

**DIAGNOSIS IS**  
BASED UPON  
**A HISTORY OF**  
EXPOSURE TOGETHER WITH  
MEDICAL IMAGING.



**IT AFFECTED**  
ABOUT 157,000 PEOPLE  
AND RESULTED  
**IN 3,600 DEATHS**  
IN 2015 WORLDWIDE.

