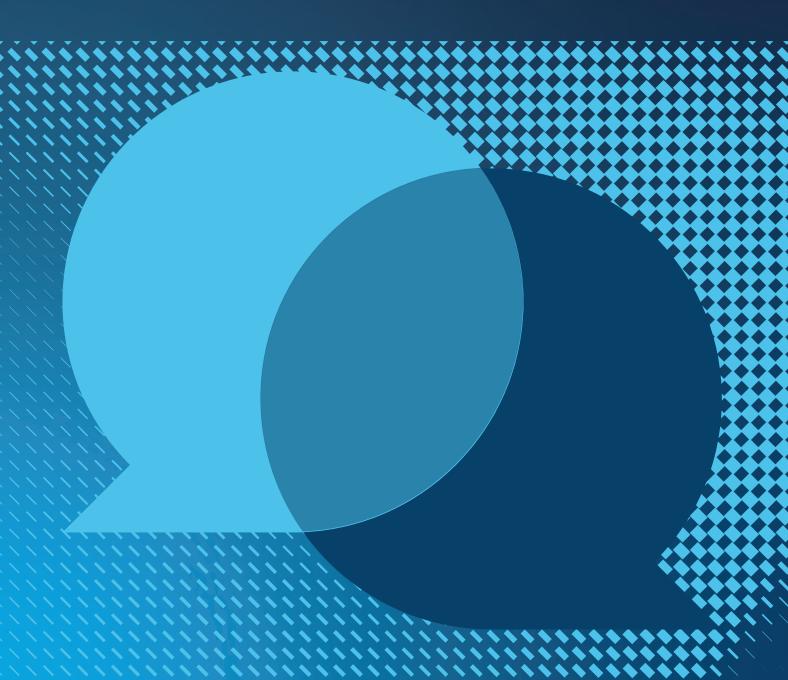




Communicating asbestos facts and figures to the public

March 2025



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Introduction

Who this guide is for?

This guide is for anyone who needs to communicate with the public about asbestos risk. It should be read in conjunction with the <u>Guidelines for communicating asbestos risk to the public</u>.

What is this guide about?

This guide includes model language that can be used to communicate key asbestos facts and figures. Where options exist for what to say, you can choose your preferred statement(s), depending on the circumstances (e.g. raising general awareness or providing advice on what to do). These statements are based on established scientific facts; asbestos safety research; communications and message testing; and legally accepted authoritative information on the Australian history of asbestos mining, manufacture, and use.

Using this guide will help ensure that asbestos information communicated

to the public is clear, consistent and evidence based. It has been developed to remove variations in public information on asbestos, which acts as a barrier to achieving good public health outcomes.

This guide is not intended to replace language used by regulators to communicate legal requirements.

Feedback

This is a living document and will be updated regularly, with evolving research, new information and knowledge.

This guide was developed in consultation with state and territory government agencies, and non-government organisations.

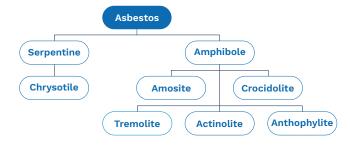
Feedback can be sent to engage@asbestossafety.gov.au
with the Subject line 'Feedback – Communicating asbestos facts and figures.'

Key terms and definitions

The information below will help you understand this guide and therefore terms/phrases are not presented in alphabetical order.

Asbestos

A group of six types of naturally occurring, rock forming silicate minerals made up of thin, microscopic fibres or a mixture that contains one or more of these minerals. 12



Airborne asbestos fibres

Invisible asbestos fibres that are released into the air when asbestos or asbestos-containing material is disturbed.

Asbestos-containing material

Any material or thing that, as part of its design, contains asbestos; there are friable and non-friable (or bonded) asbestos-containing materials.³

Note 1: 'materials' or 'things' that contain asbestos can also be referred to as asbestos 'products' and the terms can be used interchangeably.

Note 2: 'asbestos cement products' are one type of material or thing, and this phrase is not to be used to describe all generic asbestos-containing materials.

Note 3: 'asbestos-containing material' is often abbreviated to ACM.

Friable asbestos

Any asbestos-containing material that is in a powder form or that can be crumbled, pulverised or reduced to a powder by hand pressure when dry.³

Note 4: Friable asbestos has a higher risk of airborne asbestos fibres being released when it is handled, compared with non-friable asbestos. Friability can vary – some asbestos-containing materials are more friable, or fibres more easily released than others.

Non-friable (bonded) asbestos

Any asbestos-containing material that is not friable asbestos, including material containing asbestos fibres reinforced with a bonding compound.³

Note 5: non-friable asbestos may become friable asbestos through deterioration or damage.

In situ asbestos

Any asbestos-containing material fixed or installed in a structure, equipment or plant, but does not include naturally occurring asbestos.³

Asbestos register

A document that lists all identified (or assumed) asbestos and the known locations, or likely presence, of asbestos in a workplace.^{3, 4}

Asbestos management

The process of preventing people being exposed to airborne asbestos fibres so far as is reasonably practicable; after identifying (or assuming) asbestos presence—assessing the risk of exposure to airborne asbestos and then implementing control measures that will eliminate or minimise the risk of asbestos fibres becoming airborne and reviewing the control measures to ensure they are working as planned.⁴

Asbestos volumes: Stocks

An estimate (based on modelling) of the volume (tonnes) of asbestoscontaining materials remaining in the built environment.⁵

Asbestos volumes: Flows

An estimate (based on modelling) of the volume (tonnes) of asbestos-containing materials reaching end of product life, that will go to waste or disuse.⁵

Asbestos hazard

Asbestos fibres—themselves, or from within an asbestos-containing material—that become airborne and inhaled or ingested; asbestos fibres are a hazard because they possess chemical and physical properties that are toxic to human health.⁶

Asbestos risk

The likelihood of disease following exposure to asbestos.⁶

Asbestos-related diseases

The diseases that can arise due to asbestos exposure; the widely accepted asbestos-related diseases are lung cancer, malignant pleural or peritoneal mesothelioma (cancer of the mesothelial cells which cover most internal organs), laryngeal cancer, ovarian cancer, and asbestosis (pneumoconiosis caused by asbestos).^{7,8}

Note 6: avoid abbreviating the term 'asbestos-related diseases' to ARDs, as this acronym is not well understood by the public.

First wave of asbestos-related diseases

Asbestos-related disease due to mining, milling ore and making asbestos products.9

Second wave of asbestos-related diseases

Asbestos-related disease due to working with and using asbestos products.⁹

Third wave of asbestos-related diseases

Asbestos-related disease due to repairing, renovating or demolishing asbestos-containing materials; can relate to both occupational and non-occupational exposure—is largely used to refer to exposure during home maintenance and renovation.^{9,10}

Note 7: data from the Australian Mesothelioma Registry suggests but does not yet establish that home improvement/renovation is resulting in a third wave of asbestos-related disease.

Elimination of asbestos-related diseases

Achieving the aim of the Asbestos National Strategic Plan, which is preventing exposure to asbestos fibres.

Eradication of asbestoscontaining materials

Removing asbestos-containing materials entirely from the built environment.

Note 8: economic modelling shows that improving the regulatory framework and establishing incentive programs to support the safe removal and disposal of asbestos from the residential environment could see asbestoscontaining materials eradicated by 2068. ¹¹

Asbestos safety

Safe handling and management of asbestos, implementation of controls that eliminate or reduce the risk of exposure to asbestos fibres.

Note 9: asbestos itself can never be safe; asbestos products can be removed safely/handled safely/disposed safely if correct procedures are followed.

Asbestos awareness

Changing attitudes and behaviours by providing people with information on the health risks of asbestos to help them understand how to prevent exposure to asbestos fibres.

Note 10: this phrase cannot be used interchangeably with 'asbestos safety'.

How to communicate asbestos facts and figures

Asbestos – general information

Asbestos identification

What to say



- Airborne asbestos fibres are invisible to the naked eye.
- You cannot tell if a material contains asbestos just by looking at it.
- Only scientific testing of a sample can confirm the presence of asbestos.
- Professionals who can assist in identifying asbestos and taking samples include occupational hygienists, licensed asbestos assessors and hazardous materials or environmental health consultants, if they have the relevant training and experience.

Contextual notes



Asbestos fibres are in the low micron (one-millionth of a metre) size range and are only visible to humans with optical aids like microscopes—they are similar in size to dust particles or approximately 1/9th of a human hair.

WHS Regulations require asbestos testing to be undertaken by laboratories accredited by the National Association of Testing Authorities (NATA).

The Australian Standard AS5370:2024 (Sampling and qualitative determination of asbestos in commercial bulk materials (ISO 22262-1:2012, MOD)) describes the use of polarised light microscopy for the qualitative identification of asbestos in bulk samples but acknowledges the limitations of this technique and therefore includes transmission electron microscopy and scanning electron microscopy as optional methods for analysing samples.

The <u>National Guide for Asbestos Surveys</u> provides information on the steps that asbestos surveyors should follow to identify asbestos-containing materials and assess their risks.

14, 15

Asbestos bans

What to say



- Asbestos was completely banned in Australia from 31 December 2003.
- From 31 December 2003, the total ban on manufacture, use, reuse, import, transport, storage or sale of all forms of asbestos came into force.
- During the 1980s, asbestos-containing materials started to be phased out in favour of materials made without asbestos.
- All asbestos mining in Australia was stopped by 1983.
- The complete ban of asbestos in Australia did not apply to asbestos-containing materials already in situ, which means that a significant amount of asbestos still remains in our built environment.

Contextual notes



The May 2001 meeting of the former Workplace Relations Ministers' Council (WRMC) agreed to the imposition of a ban on the import and use of chrysotile asbestos no later than 31 December 2003.

All states and territories implemented the prohibition from 31 December 2003 – check your jurisdiction for details on commencement of relevant laws on 31/12/2003 or 1/1/2004.

Chrysotile asbestos was banned from that date and for other forms of asbestos the bans were clarified. Therefore the word "completely" or "fully" needs to be used.

Bans on the use of crocidolite and amosite were progressively put in place across Australia from the late 1970s onwards.

2, 15

Asbestos laws

What to say



- Work health and safety laws have specific requirements to prevent asbestos exposure in all workplaces.
- Under environment protection laws everyone has a duty not to pollute the environment or to unlawfully dispose of asbestos waste.
- Everyone also has a duty under common law and public health laws to take reasonable care not to cause harm to another person. This includes preventing the release of airborne asbestos fibres.
- People selling homes that contain asbestos may be legally obliged to tell potential buyers.
 Requirements differ in each state, so they should seek advice from their real estate agent or property conveyancer.

Contextual notes



The main laws to protect people from asbestos exposure are:

- Work health and safety laws ensure, so far as
 is reasonably practicable, the safe management
 and removal of asbestos in 'workplaces' a
 place where work is carried out for a business
 or undertaking and includes residential premises
 that become a 'workplace' when a contractor
 is working there.
- **Public health laws** apply to anything that puts at risk or damages public health. By definition this includes asbestos, although only Queensland and Western Australian public health laws contain specific provisions relating to asbestos.
- Environment protection laws have requirements relating to the management and remediation of contaminated sites as well as the transport and disposal of asbestos waste.
- Real estate and consumer protection laws
 have requirements relating to the disclosure of
 asbestos in a property to prospective buyers.

Legacy use of asbestos in Australia

When were friable asbestos products first used?

What to say



Friable asbestos products were used in residential, commercial and industrial settings beginning in the late 1800s.

Contextual notes



Some early friable asbestos applications were in heavy industry particularly for steam-driven machinery.

Friable asbestos products can also be found in homes, such as in thermal insulation, pipe lagging and sprayed coatings.

17, 18

When were asbestos cement materials first used?

What to say



- Asbestos cement materials were first imported to Australia around 1903.
- Asbestos cement products were first manufactured in Australia from around 1917 onwards.

Contextual notes



The vast majority of asbestos-containing materials used in buildings were non-friable (or bonded) asbestos cement products.

19, 20

Asbestos in homes

What to say



- Many homes built before 1990 contain asbestos.
- If a home was built before 1990 and hasn't had a major renovation it is likely to contain asbestos.
- Asbestos can be found inside and outside the home.

Contextual notes



The peak period of use in residential building materials was from the mid-1940s until the late 1980s.

ASSEA's research shows that '1990' is a simple heuristic for the public to remember.

^{17 21} (ASSEA report available on request)

Density in the residential environment

What to say

Across Australia, asbestos is in 1 in 3 homes.



Contextual notes



This statistic reflects average density levels across Australia. This means in some areas the density will be higher (e.g. old buildings), while in other areas it will be lower (e.g. newer developments)), and any building constructed after 2003 is not expected to contain asbestos.

Source of the statistic is unknown but research by ASSEA and the former Latrobe Valley Asbestos Taskforce support this figure.

Asbestos in workplaces

What to say



Under Work Health and Safety laws, an up-to-date asbestos register must be kept for all workplaces where asbestos is present or assumed to be present, unless that workplace is exempt because it is a domestic premise used for residential purposes.

Contextual notes



Under WHS Regulations in Queensland, New South Wales, the Australian Capital Territory, Tasmania, South Australia and Northern Territory an asbestos register must also be prepared and kept for a workplace constructed before 1 January 2004 when no asbestos or asbestos-containing material is identified at the workplace or is not likely to be present from time to time. The register must state that no asbestos is present.

3, 16

Asbestos products

Number of products

What to say

Asbestos was used in over 3,000 products



Contextual notes



Note – this statement should not be changed to "building products" or "industrial products" – it should stand alone as "products" to be accurate.

Age of products

What to say



- Asbestos products in Australian buildings are anywhere between 30-100 years old.
- Many asbestos products still in the built environment have now reached or are nearing the end of their product lifespan
- Ageing asbestos products are starting to degrade, increasing the risk of becoming friable and releasing fibres.

Contextual notes



In the 2021 Stocks and Flows report, product lifespan (the mean lifetime or L_{av}) is an estimate of how long products typically remain in the built environment and is not a direct indicator of product age or life.

5, 21, 23

National asbestos stocks (amount remaining in the built environment)

What to say



- Approximately 13 million tonnes of asbestoscontaining materials were consumed in the Australian built environment.
- In 2021 it was estimated that 6.2 million tonnes of Australia's asbestos legacy remains in the built environment.
- Asbestos cement products make up around 95% of the remaining legacy asbestos in the built environment.

Contextual notes



1980: stocks peaked at approximately 11 million tonnes

2023: estimated stock remaining in the built environment is between 5.5 and 7.1 million tonnes.

2060: without significant intervention, stocks will passively decline to approx. 1 million tonnes.

More than 50% (3.4 million tonnes) of asbestos cement products remaining are asbestos cement water and sewerage pipes.

Australia has approximately 40,000 km of asbestos cement drinking water pipes.

5, 21

Removal and waste

Prioritising asbestos removal

What to say



- Waiting for asbestos materials to deteriorate or become damaged increases the risk of exposure and the cost of removal.
- With current estimates of asbestos being removed from our built environment at around 1 million tonnes each decade, Australians will still be at risk of asbestos exposure into the next century.
- The Asbestos National Strategic Plan 2024-2030, which has been endorsed by the Commonwealth and all state and territory governments, includes actions which could result in asbestos being removed from our buildings by 2068, preventing up to 27,000 deaths from asbestos-related diseases.
- Every dollar spent on increasing the rate of asbestos removal in a safe and controlled manner can return \$1.97 to the economy.

Contextual notes



In 2023, ASSEA commissioned a socio-economic evaluation of asbestos management and removal options to inform the development of the Asbestos National Strategic Plan 2024-2030.

The evaluation showed clear economic and social benefits of increasing the rate of asbestos removal.

The Asbestos National Strategic Plan 2024-2030 provides a roadmap of how this can be achieved, with actions that include making the regulatory framework more effective and establishing incentive programs to encourage the safe removal of asbestos from residential and commercial properties.

Asbestos waste

What to say



- Asbestos waste is increasing annually. Because asbestos per se cannot be separated from the matrices within which it is embedded, all estimates include contaminated soils and rubble.
- The amount of asbestos waste lawfully disposed at licensed waste facilities increased nationally from approximately 315,000 tonnes in 2006-07 to 1.7 million tonnes in 2018-19, with recent figures being 1.2 million tonnes in 2023-24.
- 21% of Australia's hazardous waste is asbestos.

Contextual notes



Asbestos waste data represents an estimate derived from state and territory government hazardous waste tracking systems. It is recorded and reported differently in different jurisdictions.

Most asbestos waste comes from renovation and urban development and goes to landfill. Building and demolition waste can also be contaminated with asbestos.

Illegal dumping

What to say



- It is estimated that over 6,000 tonnes of asbestos-containing materials are illegally dumped in Australia per annum.
- Asbestos waste must be disposed of at a site that is licensed to accept it.

Contextual notes



The estimate in 2016 was that around 6,300 tonnes of asbestos-containing materials were illegally dumped, at a cost of around \$11.2 million per annum.

Although these figures involve several significant assumptions due to limited data, all jurisdictions report that illegal disposal of asbestos is an ongoing problem

²⁵ (ASSEA report available on request)

Asbestos awareness levels

Homeowners

What to say



Homeowners mostly know that asbestos is dangerous, but do not have a good understanding of where asbestos can be found in the home and how they can protect themselves.

Contextual notes



Only 6% of home improvers spontaneously mentioned asbestos as a potential risk when planning a home improvement project.

Only 2 in 3 participants at most could correctly identify each potential source of asbestos when prompted with a list – while 2 in 5 selected at least one incorrect source.

28% of home improvers who have encountered asbestos admit to inappropriate disposal methods – most commonly placing it in their household general waste bin.

Property managers and real estate agents

What to say



- Both real estate agents and property managers are aware of asbestos exposure dangers and are managing asbestos presence in a mostly open and transparent manner.
- Many property managers and real estate agents mistakenly believe that pre-sale property inspections cover the presence of asbestos, potentially relying on them for disclosure purposes.

Contextual notes



Real estate agents and property managers may have obligations to disclose the presence, or potential presence, of asbestos when selling or renting properties.

69% real estate agents and 83% property managers believe that a pre-sale building inspection report will tell you if asbestos is present, when usually it will not.

Most real estate agents and property managers are aware that asbestos may be present in older buildings.

50% of property managers and agents reported that they always inform prospective buyers or tenants that a property they are interested in contains asbestos, 21% reported never or rarely doing so.

Workers in workplaces with asbestos containing materials

What to say



Workers mostly know that asbestos is dangerous, but do not have a good understanding of where asbestos can be found in any workplace setting, how they can protect themselves, and proper disposal methods.

Contextual notes



Workers in key sectors were more likely to choose incorrect potential locations for asbestos, including metal roofing, ceramic or marble benchtops, and glass tiles.

A proportion of workers selected inappropriate disposal methods when presented with hypothetical scenarios where asbestos-containing materials have been found in the home (31%), and in the workplace (29%).

These individuals work in older buildings that are more likely to contain asbestos. With asbestoscontaining materials deteriorating over time, they are at risk to exposure to asbestos fibres.

In the 2022 study, this cohort was proxied by focusing on workers in key sectors with a high prevalence of older, government-owned buildings that are more likely to contain asbestos – in particular, those working in correctional and detention centres, education and training, health care and social assistance, and public administration.

Tradespersons

What to say



- Tradespeople have a strong knowledge about where asbestos-containing materials can be found, what they are and what they look like.
- They can sometimes overestimate what their qualifications allow them to do or are unsure of what they can and can't do when it comes to asbestos management on a work site.

Contextual notes



90% of tradespeople know where asbestoscontaining materials can be found, 84% know what they are, and 83% know what they look like.

While tradespersons demonstrated high levels of knowledge around where asbestos materials could be found, at least one fifth remained unsure or incorrectly believed some risky construction items did not contain asbestos. This was primarily from the responses of the younger population of this cohort, who need reminders about common materials that contain asbestos and where these might be located.

One quarter (26%) agreed that it is okay for a tradesperson of any qualification to remove asbestos from a workplace. While this may be correct under some circumstances, it may also be due to overconfidence in their qualifications, a lack of knowledge, or a more relaxed attitude when dealing with asbestos.

Asbestos and health

What diseases are caused by exposure to asbestos?

What to say



- Asbestos causes a number of diseases which can be fatal, most prominently cancer (of the lung, ovary, and larynx), mesothelioma and asbestosis.
- Occupational exposure to asbestos is the 7th leading risk factor for cancer.

Contextual notes



There is scientific evidence that all forms of asbestos, including chrysotile, cause mesothelioma and cancers of the lung, larynx and ovary. Asbestos is the only cause of asbestosis and is the predominant cause of mesothelioma.

There appear to be causal associations between asbestos exposure and cancer of the pharynx, stomach, colorectum, and bile ducts (liver), although the evidence is not sufficient to identify asbestos as a cause of those cancers.

7, 8, 29

Risk of disease

What to say



- The risk of developing an asbestos-related disease increases with the duration of exposure to airborne asbestos fibres (whether during a single event or multiple events over years), and therefore the number of fibres a person inhales during their life.
- Some people develop disease from minor exposure, and it is not possible to determine who will or will not get disease.
- The only way to eliminate the risk of disease is to avoid exposure to airborne asbestos fibres.

Contextual notes



The health effects of inhaled asbestos fibres are related to the intensity and duration of exposure.

The development of malignant mesothelioma is dependent on the inhaled 'dose' of asbestos fibres, by way of a no-threshold dose-response relationship—as cumulative asbestos exposure increases, so does the probability and frequency of occurrence of mesothelioma.

7, 8, 29

Exposure level

What to say



- The World Health Organisation (WHO) says there
 is no known safe level of exposure to asbestos.
 No threshold has been identified below which
 cancer will not occur.
- Employers must ensure worker exposure to airborne asbestos is eliminated. If it cannot be eliminated, it must be minimised as far possible and the exposure standard for asbestos must not be exceeded.
- The workplace exposure standard for asbestos in Australia is 0.1 fibre per millilitre of air over an 8-hour period.
- Exposure to asbestos at this level has been estimated to cause an additional 125 cases of cancer during a lifetime per 100,000 people.

Contextual notes



The European Chemicals Agency classifies asbestos as a non-threshold carcinogen, which means that no health-based occupational exposure limit (OEL) can be identified. Instead, an exposure-risk relationship is derived which expresses the excess exposure risk (EER) for lung cancer and mesothelioma mortality as a function of the asbestos fibre concentration in the air.

Workplace exposure standards have been established on an 8-hour exposure timeframe, during work of normal intensity, under normal climatic conditions and where there is a sixteenhour period between shifts to permit elimination of absorbed contaminants.

30-33

Risk of exposure

What to say



Asbestos-containing materials that are friable or are damaged, disturbed or deteriorating increase the risk of being exposed to harmful airborne asbestos fibres.

Contextual notes



The <u>National Guide for Asbestos Surveys</u> provides information on how to assess the risk of exposure by assessing the likelihood of various asbestoscontaining materials releasing asbestos fibres due to their condition and potential disturbance.

14, 34, 35

Asbestos in drinking water

What to say



- The weight of evidence of from epidemiological and animal studies does not support the hypothesis that ingesting asbestos from drinking water leads to an increased risk of developing cancer.
- The WHO suggests that due to uncertainties and limitations in the available data, the concentrations of asbestos fibres in drinkingwater should be minimised.
- The WHO also suggests that investigative monitoring to obtain information on the contribution of older asbestos cement pipes to fibre numbers, types, size and shape in drinking water would be useful.

Contextual notes



The Australian Drinking Water Guidelines (NHMRC) do not set a health-based guideline value for asbestos in drinking water in Australia.

The WHO has not set a guideline value because it concluded that there is no consistent evidence for adverse health effects from ingested asbestos.

The United States EPA has established a maximum contaminant level (MCL) for asbestos in drinking water of 7 MFL (million fibres per litre > 10 µm in length).

Annual deaths from asbestos-related diseases in Australia

What to say



- An estimated 4,000 Australians die annually from asbestos-related diseases.
- Approximately 99% of deaths from mesothelioma and 30% of deaths from lung cancer are attributable to past asbestos exposure. Asbestosis is regarded as a disease only attributable to asbestos.

Contextual notes



Estimates of the number of deaths from asbestos-related diseases in Australia are reported from data produced by the Global Burden of Disease (GBD) study.

Deaths from asbestos-related disease are those deaths that the GBD study has attributed to the risk factor of past occupational asbestos exposure only.

The GBD study reports the following number of deaths in Australia in 2021 from diseases attributable to asbestos exposure:

- lung cancer 3,289
- mesothelioma 850
- asbestosis 160
- ovarian cancer 138
- cancer of the larynx 43.

Mesothelioma - Annual deaths

What to say



- At least 600 people die annually in Australia from the aggressive cancer mesothelioma, the cause of which is almost exclusively exposure to asbestos.
- There is no cure for mesothelioma.

Contextual notes



The GBD 2021 Study reports the number of deaths from mesothelioma in Australia in 2021 as 850 (and the global number of such deaths as approximately 29,000). The number of deaths due to mesothelioma in Australia has continued to increase steadily for both men and women between 1990 and 2019 (the period covered by the GBD Study).

The Australian Mesothelioma Registry (AMR), Australian Institute of Health and Welfare, reports the number of deaths from mesothelioma in Australia in 2022 as 685 (a rate of 2.0 deaths per 100,000 population), and the number of mesothelioma cases diagnosed in 2023 as 617.

The AMR produces the most up to date and accurate data on mesothelioma incidence and mortality in Australia. The AMR has collected information on new cases of mesothelioma diagnosed in Australia since 1 July 2010.

Whilst the AMR reports actual recorded incidence and mortality for mesothelioma in Australia, the GBD Study reports estimates of disease based on known risk factors and other available data. For this reason, estimates reported through the GBD Study may differ from year to year to those captured by the AMR. Both data sources are valuable for studying mesothelioma prevalence.

Mesothelioma can be associated with occupational and non-occupational exposure to asbestos.

Mesothelioma - Latency period

What to say



- Mesothelioma has a long latency period with symptoms typically appearing decades after a person has been exposed to asbestos.
- The latency period can range from 20-60 years.
- Even if asbestos exposures were to cease completely, deaths from asbestos-related diseases would be expected to continue for the next four to five decades.

Contextual notes



Because mesothelioma typically develops a long time after exposure, the majority of deaths relate to occupational exposure in workplaces that occurred before current work health and safety laws were in place.

Mesothelioma – Occupational and nonoccupational exposure risk

What to say



- Due to the long latency of mesothelioma, most cases due to asbestos exposure in workplaces occurred before Australia's asbestos ban and current work health and safety laws took effect.
- The highest risk of exposure today is in the home / residential environment. In Australia there are an increasing number of cases of mesothelioma diagnosed that have an associated non-occupational exposure.

Contextual notes



There are several factors that contribute to the risk during from home renovation, e.g. lack of awareness and appreciation of the risk, lack of knowledge of detailed controls in the laws, enforceability of the applicable laws.

Asbestos exposure information related to mesothelioma disease is gathered from a small subset of consenting individuals with mesothelioma via a questionnaire run by the Australian Mesothelioma Registry (AMR).

Most of the information available about asbestos exposure currently, relates to past occupational exposures, and there is a lack of information about non-occupational exposures.

This is why data collected from the AMR suggests, but does not establish, that home renovation is now contributing to mesothelioma.

Of the 1,305 asbestos exposures detected and analysed through the AMR from 2010 to 2023, most involved non-occupational exposure, either solely non-occupational exposure (36%) or a combination of non-occupational and occupational exposure (53%). Only 11% of exposures were for occupational exposure only.

Deaths from asbestos-related diseases worldwide

What to say



In 2024 the WHO estimated that more than 200,000 deaths globally are caused by occupational exposure to asbestos – more than 70% of all deaths from work-related cancers.

Contextual notes



Data from the GBD study estimates that globally 228,833 deaths were caused by occupational exposure to asbestos in 2021 (189,329 male, 39,504 female).

Other than asbestos, major occupational carcinogens are arsenic, benzene, cadmium, diesel engine exhaust, nickel, second-hand smoke, and silica.

41, 43, 44

References

- International Agency for Research on Cancer (IARC), Arsenic, Metals, Fibres, and Dusts - Volume 100C Asbestos (Chrysotile, Amosite, Crocidolite, Tremolite, Actinolite, and Anthophyllite), in IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. 2012, World Health Organization (WHO): Lyon, France. p. 219-309.
- 2. Australian Industrial Chemicals Introduction Scheme (AICIS; formerly National Industrial Chemicals Notification and Assessment Scheme NICNAS), Chrysotile Asbestos Priority Existing Chemical No. 9. 1999, Australian Government.
- 3. Safe Work Australia, Model Work Health and Safety Regulations 2011. updated September 2024.
- 4. Safe Work Australia, How to manage asbestos in the workplace (Code of Practice). 2020, Australian Government.
- 5. Australian Government Asbestos Safety and Eradication Agency (ASEA), Asbestos stocks and flows estimates in Australia Infographic. 2021.
- 6. Australian Government Asbestos Safety and Eradication Agency (ASEA), Guidelines for communicating about asbestos risk to the public. 2021.
- 7. Musk, A.W., et al., Asbestos-related diseases. The International Journal of Tuberculosis and Lung Disease, 2020. **24**(6): p. 562-567.
- 8. International Agency for Research on Cancer, Report of the Advisory Group to Recommend Priorities for IARC Monographs during 2025–2029 (IARC Monographs on the Identification of Carcinogenic Hazards to Humans). 2024: Lyon, France.
- 9. Armstrong, B. and T. Driscoll, Mesothelioma in Australia: cresting the third wave. Public Health Research and Practice, 2016. **26**(2): p. e2621614.
- 10. Landrigan, P.J., The third wave of asbestos disease: exposure to asbestos in place. Public health control. Introduction. Annals of the New York Academy Sciences, 1991. **643**: p. xv-xvi.
- 11. Urbis Pty Ltd, Evaluation of asbestos management and removal options. 2023.
- 12. Standards Australia, AS 5370:2024 Sampling and qualitative

- identification of asbestos in bulk materials (ISO 22262-1:2012, MOD). 2024.
- 13. Agency for Toxic Substances and Disease Registry. Asbestos and health; frequently asked questions. Available from: https://www.atsdr.cdc.gov/asbestos/docs/asbestos_factsheet_508.pdf
- 14. Australian Government Asbestos and Silica Safety and Eradication Agency (ASSEA), National Guide for Asbestos Surveys. 2025.
- 15. Australian Government, Occupational Health and Safety (Commonwealth Employment) (National Standards) Amendment Regulations 2003 (No. 1). updated November 2003.
- 16. The Senate Economics References Committee on Non-conforming Building Products, Interim report: protecting Australians from the threat of asbestos. 2017, Commonwealth of Australia: Canberra.
- 17. Layman, L. and G. Phillips, eds. Asbestos in Australia: From Boom to Dust. 2019, Monash University Publishing.
- 18. Australian Government Asbestos and Silica Safety and Eradication Agency (ASSEA), Asbestos Product Guide. 2025.
- 19. Sydney Morning Herald, Fibrolite advertisement, 2 June 1917, p9. accessed February 2022.
- 20. Queensland Government Department of Environment and Heritage Protection, Technical Note: Conserving Roofs, 2014. accessed February 2022.
- 21. Blue Environment (Donovan S. Pickin J. Edwards C.), Asbestos stocks and flows model. 2021.
- 22. Virta, R.L., Asbestos, in Kirk-Othmer Encyclopedia of Chemical Technology. 2011, Wiley: Hoboken, NJ.
- 23. Victorian Asbestos Eradication Agency (VAEA). Asbestos Lifespan. 2025; Available from: https://www.vaea.vic.gov.au/asbestos-product-lifespan
- 24. Australian Government Asbestos Safety and Eradication Agency (ASEA). 2023-24 Asbestos waste in Australia: DATA Infographic. 2024; Available from: https://www.asbestossafety.gov.au/research-publications/asbestos-waste-data-australia-infographic
- 25. Australian Government Asbestos Safety and Eradication Agency (ASEA) and ACIL Allen Consulting, Discussion paper Illegal asbestos dumping: review of issues and initiatives. 2016.
- 26.Australian Government Asbestos Safety and Eradication Agency (ASEA) and SEC Newgate Research, Asbestos safety and home improvement research 2021.
- 27. Australian Government Asbestos Safety and Eradication Agency (ASEA) and Faster Horses, Real estate agents and property managers asbestos awareness research. 2020.

- 28. Australian Government Asbestos and Safety Eradication Agency, National Asbestos Awareness Survey. 2022.
- 29.GBD Cancer Risk Factors Collaborators, The global burden of cancer attributable to risk factors, 2010-19: a systematic analysis for the Global Burden of Disease Study 2019. Lancet, 2022. **400**(10352): p. 563-591.
- 30.Safe Work Australia, Interpretation of workplace airborne standards for exposure to airborne contaminants. 2024, Commonwealth of Australia.
- 31. European Chemicals Agency, Opinion on scientific evaluation of occupational exposure limits for asbestos (ECHA/RAC/A77-O-0000006981-66-01/F). 2021: Helsinki, Finland.
- 32. World Health Organization Regional Office for Europe, Air Quality Guidelines for Europe, in European Series. 2000, WHO Regional Publications: Copenhagen, Denmark.
- 33. Australia, S.W., Workplace exposure standards for airborne contaminants. 2024.
- 34.Klebe, S., et al., The significance of short latency in mesothelioma for attribution of causation: report of a case with predisposing germline mutations and review of the literature. International Journal of Environmental Research and Public Health, 2021. **18**(24): p. 13310.
- 35. National Cancer Institute. Asbestos Exposure and Cancer Risk.
 2021 [cited 2025 11 January]; Available from: https://www.cancer.gov/about-cancer/causes-prevention/risk/substances/asbestos/asbestos-fact-sheet#who-is-at-risk-for-an-asbestos-related-disease
- 36.NHMRC and NRMMC, Australian Drinking Water Guidelines 6 2011, Version 3.9 Updated December 2024, N.W.Q. Management and Strategy. National Health and Medical Research Council, Editors. 2011, Commonwealth of Australia, Canberra.
- 37. World Health Organization (WHO), Asbestos in drinking water: background document for development of WHO Guidelines for drinking-water quality. 2021.
- 38.U.S. Environmental Protection Agency. National Primary Drinking Water Regulations. Available from: https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations#Inorganic
- 39.Institute for Health Metrics and Evaluation (IHME), Global Burden of Disease 2021: Findings from the GBD 2021 Study. 2021: Seattle, WA.

- 40.Australian Institute of Health and Welfare, Mesothelioma in Australia 2023. 2024, catalogue number CAN 161, AIHW, Australian Government.
- 41. Institute for Health Metrics and Evaluation (IHME). Global Burden of Disease Study 2021 (GBD 2021) Data Resources. 2025 [cited 2025 17 January]; Available from: https://ghdx.healthdata.org/gbd-2021
- 42.Bianchi, C. and T. Bianchi, Malignant Mesothelioma: Global Incidence and Relationship with Asbestos. Industrial health, 2007. **45**: p. 379-87.
- 43.Miao, X., et al., Global, regional, and national burden of non-communicable diseases attributable to occupational asbestos exposure 1990-2019 and prediction to 2035: worsening or improving? BMC Public Health, 2024. **24**(1): p. 832.
- 44.World Health Organization. Asbestos. 2024 [cited 2025 17 January]; Available from: https://www.who.int/news-room/fact-sheets/detail/asbestos#:~:text=Globally%2C%20more%20than%2020%20WHO%20Member%20States

