Asbestos is a broad term for a group of naturally occurring minerals with a crystalline structure and fibrous character. Asbestos has been used in thousands of products including heat resistant materials, asbestos cement products, filters, insulation, brake materials, gaskets and floor tiles.

The three main types of asbestos found in industry are:

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

Each of these materials is harmful to the lungs, and there is a current Australian Exposure Standard of 0.1 fibre/mL set by Safe Work Australia. (See website http://hsis.ascc.gov.au/Default.aspx for more detailed information on Exposure Standards).

Exposure to airborne asbestos occurs primarily during dust forming operations such as handling, sawing, sanding, grinding, drilling or similar operations upon materials containing asbestos. The level of exposure will vary depending on the type of asbestos product and the way it is handled.

Friable asbestos material is any material that contains asbestos and is in the form of a powder or can be crumbled, pulverised or reduced to powder by hand pressure when dry.

Bonded asbestos was made by mixing asbestos with other solid materials to give a hard, durable product e.g. mixed with resin to make a fireproof composite board (like Lebah, Zelemite, Ausbestos) or when mixed with cement to form fibro sheeting, asbestos cement pipes etc.

Who is currently at Risk from Asbestos Exposure?

Individuals at risk from asbestos exposure are those carrying out maintenance, repair or refurbishment work or asbestos removal in buildings built or refurbished before 1985, for example: carpenters, plumbers, electricians, cable installers. Home renovators also have the potential to be exposed to asbestos when working on older homes.

Health Effects

Significant health effects may arise from the inhalation of airborne fibres and interaction in the airways of the lungs. While there may be asbestos containing material in the workplace, if there is no release of fibres then the risk to health is only potent when the hazard becomes airborne and is inhalable. Asbestos is very durable and chemically resistant and the lung clearance mechanisms do not work effectively. Fibres can stay in the body for many years before they are cleared from the lungs.

The three major occupational lung diseases caused by inhalation of asbestos fibres are

- Asbestosis - sections of lung become fibrotic and are no longer able to absorb oxygen into the bloodstream.
- Lung cancer - cancer can form in the lung structures.
- Mesothelioma - cancer of the linings of the lung and closely associated with exposures to blue asbestos.

Occurrence in the Workplace

Industrial use of asbestos has diminished considerably in the last 15 – 20 years and it is now effectively illegal to import asbestos into Australia. Other types of materials are now used as substitutes but there remains a legacy of tonnes of asbestos still in place in workplaces and homes across the country. Asbestos cement products e.g. old fibro, pipes etc are everywhere and will not be removed in the foreseeable future. All workplaces should be inspected for asbestos and appropriate action taken according to relevant government Regulations and Codes of Practice. Each State has its own regulations and system for dealing with asbestos - for both maintenance and removal. See web links listed over page for further information in each State or Territory..

Occurrence at home

Older homes are likely to have some asbestos in them. The exterior wall coverings (like fibro), insulation, gaskets, tiles, pipes etc may contain an amount of asbestos. Homeowners need to be aware but not alarmed by the presence of these materials and learn how to deal with them appropriately. There is guidance on asbestos for householders from the various State Health & Safety Authorities (e.g. NSW and Vic Workcover, WA Worksafe) - see web site links over page or contact these organisations directly for further information.

Respiratory Protection

When it has been identified that asbestos may be present, there are State and Federal Guidelines and Codes of Practice that become applicable.
Persons involved in asbestos work or even in working around asbestos materials need to be aware of the relevant information as it applies in their situation. Each State Health & Safety Authority (see below) has regulations and guidance material relating to the identification, monitoring, care and removal of asbestos. Recommendations of appropriate respirator types to use for various types of asbestos work (e.g. working with asbestos cement products, working with friable asbestos, etc) are also given. Increasing levels of respiratory protection from airborne asbestos fibres are provided by different types of respirators and selection of the appropriate products is critical to achieving suitable protection for specified tasks and conditions.

Asbestos should only be removed by suitably trained and certified workers - there are asbestos removal companies that have the experience, equipment, expertise and certification to do significant asbestos removal work.

For workers, respiratory protection is required when working with asbestos and there is significant exposure, a Respiratory Protection programme must be in place. This should follow the guidance given in Australian Standard AS/NZS 1715:2009 “Selection Use & Maintenance of Respiratory Protective Devices”.

More information on the selection of suitable respiratory protection for asbestos can be found by calling 3M TechAssist on 1800 024 464 during business hours and also at the web addresses listed:

**ASBESTOS INFORMATION SOURCES**

- National Code of Practice for Safe Removal of Asbestos

- NSW Workcover - Asbestos and Fibro

- ACT Workcover - OH&S

- Stop. Think Asbestos. Seek Advice - Northern Territory of Australia

- Queensland WHS - Codes of Practice

- Victorian WorkCover Authority - Asbestos

- Workcover Tas Asbestos
  http://www.wst.tas.gov.au/ Then do a Search for “Asbestos”

- SafeWork SA - Asbestos risks

- WA DCEP - Asbestos