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Guidance

Asbestos: general information

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Overview

Asbestos is a general name given to several naturally occurring fibrous minerals that have crystallised to form fibres. Asbestos fibres do not dissolve in water or evaporate, they are resistant to heat, fire, chemical and biological degradation and are mechanically strong.

Asbestos is generally divided into two sub-groups; serpentine and amphiboles. Serpentine asbestos (chrysotile or white asbestos) was the most commonly used type of asbestos.

Chrysotile asbestos fibres are soft, flexible and curved and far less hazardous than the amphibole type. Amphibole fibres (crocidolite -blue asbestos, amosite- brown asbestos, tremolite, actinolite and anthophyllite) are brittle fibres and are often rod- or needle-like in appearance. It is this form that is more hazardous to health. Crocidolite was the most commonly used amphibole asbestos in the past.

General points about asbestos:

- asbestos is a general name given to several naturally occurring minerals that have crystallised to form fibres
- asbestos fibres are strong, heat and chemical resistant and do not dissolve in water or evaporate
- there are 2 sub-groups; serpentine (white asbestos) and amphiboles (including blue and brown asbestos) of which serpentine was the more commonly used
- prior to use being banned asbestos was used in many products including insulation material for buildings, boilers and pipes; car brakes and floor tiles
- the importation, supply and use of all asbestos has been banned in the UK since 1999; the amphibole type has been banned since 1985
- amphibole (blue and brown) asbestos is much more hazardous than serpentine (white) asbestos
- asbestos is not considered harmful when in large pieces and undamaged
- when damaged asbestos can release smaller fibres that can be breathed in or swallowed
- breathing in asbestos can lead to a condition called asbestosis that leads to an increased susceptibility to cancer
- asbestos has been classified as being carcinogenic to humans

Uses of asbestos

The properties of asbestos made it an ideal material for use in a number of products, including insulation material for buildings, boilers and pipes; car brakes and floor tiles, insulating board to protect buildings and ships against fire; asbestos cement for roofing sheets and pipes.

Due to the risks to health following inhalation exposure to asbestos the importation of blue and brown asbestos has been banned in the UK since 1985. This ban was extended to include white asbestos in 1999.

Asbestos and the environment

Asbestos is widespread in the environment. It may enter the atmosphere due to the natural weathering of asbestos-containing ores or damage and breakdown of asbestos-containing products including insulation, car brakes and clutches, ceiling and floor tiles and cement.

Exposure to asbestos

People may come into contact with asbestos from existing asbestos-containing materials in buildings and products. If they are intact, they pose very little risk. However, if asbestos containing products are damaged in some way, fibres may be released. Caution should be taken when doing DIY work in buildings containing asbestos. Find [further advice on asbestos in the home \(https://www.gov.uk/asbestos-in-home\)](https://www.gov.uk/asbestos-in-home). People are most likely to be exposed to asbestos fibres by breathing in fibres that are suspended in air.

People also may swallow small amounts of the fibres if the asbestos enters the soil or drinking water. Although asbestos does not dissolve, fibres may enter water after being eroded from natural sources, from asbestos-cement or from asbestos-containing filters. However, there is no evidence the ingestion of asbestos fibres is hazardous to health.

Those involved in demolition work, asbestos abatement, building repair and maintenance may be exposed to higher levels of asbestos as disturbing such materials releases fibres into the air.

If you are exposed to asbestos

Intact asbestos materials in a place where they are unlikely to be disturbed should not cause any harm. If you come into contact with asbestos fibres, you should remove yourself from the source of exposure. If you have got asbestos fibres on your skin and clothes do not shake or brush the fibres off as this will make them airborne and prone to being inhaled. Remove all visible dust and fibres from the body, clothing and footwear by wet wiping with a damp cloth using a gentle patting action. Remove any

contaminated clothing (not over the head) and place in a bag with the damp cloth. Contact your [local authority \(https://www.gov.uk/asbestos-in-home\)](https://www.gov.uk/asbestos-in-home) for advice on disposal of the clothing.

If you have any health concerns regarding exposure to asbestos seek guidance from your GP or contact NHS 111.

How exposure to asbestos could affect your health

The presence of asbestos in the environment does not always lead to exposure as you must come into contact with the fibres. You may be exposed by breathing, eating, or drinking the substance or by skin contact. Following exposure to any hazardous chemical, the adverse health effects that you may encounter depend on several factors, including the amount to which you are exposed (dose), the duration of exposure, the way you are exposed, the form of asbestos and if you were exposed to any other chemicals.

All forms of asbestos fibres are hazardous as they can induce cancer following inhalation exposure, but amphibole forms of asbestos (including blue and brown) are more hazardous to health than chrysotile (white).

Breathing in high concentrations of asbestos for a long period of time mainly affects the lungs, causing a disease called asbestosis where breathing becomes difficult and the heart enlarges. Asbestosis may take decades to develop. Asbestosis sufferers are at an increased risk of cancer. Exposure to lower concentrations of asbestos over time may result in a general (diffuse pleural thickening) or localised (pleural plaques) thickening of the lung lining.

Warts and corns may form around asbestos fibres that become embedded in the skin. The World Health Organization (WHO) has stated that there is no consistent evidence that ingested asbestos is hazardous to health.

Cancer risks

The International Agency for Research on Cancer has classified all forms of asbestos as being carcinogenic to humans. Asbestos causes mesothelioma (type of cancer that forms on the protective tissue that covers the lungs or the abdomen) and cancer of the lung, larynx (voice box) and ovary.

Vulnerable people

People with breathing problems such as asthma may be more sensitive to the effects of asbestos.

Pregnancy and children

Several experimental studies have suggested that asbestos does not cause adverse pregnancy outcomes or birth defects.

It is not possible to say whether children are more susceptible to asbestos-related injury. However, due to the increased life expectancy of children compared to adults, there is an increased lifetime risk of mesothelioma as a result of the long period of time this disease takes to develop. They are therefore more vulnerable to developing mesothelioma than an adult exposed to the same amount.

If you find asbestos in your home

Asbestos may be present in any house or building built before the year 2000 as it was widely used in a variety of building materials.

Public Health England (PHE) does not recommend the DIY removal of asbestos without advice. If you find any asbestos which requires removal, you should contact your local council for [more information about asbestos and its disposal](https://www.gov.uk/asbestos-in-home) (<https://www.gov.uk/asbestos-in-home>).

Additional sources of information

- [UKTIS: best use of medicines in pregnancy \(BUMPS\)](https://www.medicinesinpregnancy.org/) (<https://www.medicinesinpregnancy.org/>)
- [Asbestos in your home](https://www.gov.uk/asbestos-in-home) (<https://www.gov.uk/asbestos-in-home>)
- [Health and Safety Executive FAQs](https://www.hse.gov.uk/asbestos/faq.htm) (<https://www.hse.gov.uk/asbestos/faq.htm>)
- NHS.UK [information about asbestosis](https://www.nhs.uk/conditions/asbestosis/) (<https://www.nhs.uk/conditions/asbestosis/>)
- World Health Organization's [Asbestos: elimination of asbestos-related diseases](https://www.who.int/en/news-room/fact-sheets/detail/asbestos-elimination-of-asbestos-related-diseases) (<https://www.who.int/en/news-room/fact-sheets/detail/asbestos-elimination-of-asbestos-related-diseases>)

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