ASK THE

INSPECTOR

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I am doing renovations on my home and my contractor says there is asbestos in my home that has to be removed. Is asbestos really a concern and what types of building materials may contain asbestos?

Asbestos is a naturally occurring mineral (a fibrous hydrated silicate) mined in many countries around the world, including large quantities in Canada. There are two main types of asbestos minerals that are differentiated by their physical characteristics, serpentine and amphibole asbestos. The fibres of the serpentine family are longer, softer, and do not tend to remain airborne for long periods of time. They are therefore not as likely to be inhaled and if they are inhaled, the human body is capable of removing them. The most widely used serpentine asbestos is chrysotile, which is mined in Quebec (among other places world-wide), and is the most commonly used type of asbestos today. Amphibole asbestos fibres are different from serpentine fibres in that they are small and sharp and will remain suspended in the air, making them easy to inhale. Once inhaled, the particles stay in the lungs for long periods of time and can eventually cause asbestosis, lung cancer, and a rare form of cancer (mesothelioma) that affects the linings of the abdominal cavity or chest. Amosite and crocidolite are the most common amphibole fibres, and only about 1% of today's asbestos production is amphibole.

As previously mentioned, when asbestos is used today, it means it is likely chrysotile asbestos which is much less harmful than the type of asbestos used in the past. Until the 1980's asbestos was of the amphibole type and people were not aware of the risks in using this type of material. Due to the biopersistence of amphibole asbestos, workers who were exposed to the dust in large quantities over long periods of time became ill between 10 and 40

years after working with the material. It is important to note that the asbestos particles must be airborne (friable) to be inhaled, and therefore be a health concern.

Due to its unique characteristics, asbestos has been used for a wide variety of materials for approximately 4500 years. It is heat, chemical, and wear resistant, and is an excellent heat and electrical insulator. Today, chrysotile asbestos is mainly used in applications where it is encapsulated, such as in concrete and in vehicle brake lining and clutch facings. During the period from approximately 1930 to 1980 it was widely used in residential applications in insulation (pipe and duct wrap and unintentionally in vermiculite), floor and ceiling tiles, acoustical plaster, shingles and other roofing materials, and exterior siding. Although these types of materials are no longer used in modern construction, they may still be present in older homes. In these types of applications there is the potential for the asbestos particles to become friable. Laboratory testing is required to absolutely confirm or deny the presence of asbestos in building materials. During the home inspection, materials that are suspected to contain asbestos will be highlighted, however testing for the presence of asbestos is outside of the scope of a basic home inspection.

Once testing has been performed and a material is certain to contain asbestos, the material should be examined closely. If the material is in friable (damaged) condition, it should be removed by a professional asbestos abatement contractor. This is typically a very expensive undertaking, however because asbestos is a potential health risk it is necessary. Removing asbestos will cause the particles to become airborne and create a potential health risk and should never be undertaken by a homeowner. A professional contractor will seal and ventilate the area containing asbestos from the rest of the house and wear protective clothing and masks. In some cases asbestos containing materials can be encapsulated with another material so that the risk of damaging the asbestos containing material is minimized. This type of procedure may be a less expensive option to removing and disposing of the asbestos containing materials. All provinces have regulations regarding the removal and disposal of asbestos containing materials; check that the abatement contractor that was hired will follow all applicable regulations. If the asbestos containing material is in good condition (not friable), it should not be disturbed. Leave insulation alone, do not put holes in or damage ceiling tiles, and don't sand or remove floor tiles. If during renovations, however, asbestos containing materials are discovered and will be damaged, they should be professionally removed as described above.

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