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FACTS & details

about Sedgwick County Government

Radium

February 2014

What is radium?

Radium is a radioactive element that occurs naturally in very low concentrations in the earth's crust. The main use of radium has been as a component in luminous paint used on the dials of watches, clocks and other instruments. Because of health and safety concerns it is no longer used for this purpose.

How does radium get into the environment?

Radium exists naturally in low concentrations in virtually all soil, rock, plants, animals, surface and ground water. Higher levels are present in uranium ores and other geologic materials.

How can I determine if radium is present in my environment?

You need special equipment to detect the presence of radium. However, you can check for radon and detection kits for this are available at most hardware stores.

How do people come in contact with radium?

Since radium is present at low levels in the natural environment, everyone has some minor exposure to it. Individuals may be exposed to higher levels of radium if they live in an area where there is an elevated level of radium in the surrounding rock and soil. Private well water in these areas can also be a source of radium. The concentration of radium in drinking water is generally low. People can also be exposed to radium if it is released into the air from the burning of coal or other fuels.

How does radium enter the body?

People may swallow radium with food and water, or may inhale it as part of dust in the air. Most radium that is swallowed will quickly leave the body through feces. The portion that does not leave the body enters the bloodstream and accumulates in the bones. Some of this radium is excreted over a long period of time. A portion will remain in the bones throughout the person's lifetime.

How can radium affect the body?

Radium has been shown to cause effects on the blood (anemia) and eyes (cataracts). It has also been shown to affect the teeth, causing an increase in broken teeth and cavities.

Long-term exposure to radium increases the risk of developing several diseases. Inhaled or ingested radium increases the risk of developing diseases such as lymphoma, bone cancer, and diseases that affect the formation of blood, like leukemia. External exposure to radium increases the risk of cancer to varying degrees in all tissues and organs, however the greatest health risk from radium is from exposure to its radioactive breakdown product: radon. Radon is common in many soils and can collect in homes and other buildings.

What can I do to protect myself and my family from radium?

The most effective way to protect yourself and your family is to test your home for radon. Radon test kits can be obtained from many local hardware and builder's supply stores.

How do I get tested for exposure to radium?

A urine test can be done to determine if you have been exposed to radium, however, the test is not routinely performed because it requires special laboratory equipment.

Another test measures the amount of radon in exhaled air. Neither test can tell how much radium you were exposed to, nor can they be used to predict whether you will develop harmful health effects.

For More Information:

Contact the Sedgwick County Health Department Epidemiology Office at 316-660-7392 or visit the Sedgwick County website at www.sedgwickcounty.org.