

Indoor Air Hazards

The cold winter months in Kansas do not lend themselves to spending a lot of time outdoors. Interestingly though, Americans tend to remain indoors more than outside throughout the year, not just in the winter months. Studies from the United States and Europe show that, on average, persons in industrialized nations spend more than 90% of their time indoors.

For the very young, the aging, persons with serious illnesses, and most of the urban population of any age, the proportion is likely higher. This can have serious health implications due to the concentration of air pollutants that can exist indoors. The locations of highest concern are those involving prolonged, continued exposure such as home, school, and the workplace.

It is important to make sure that all environments, especially those areas previously mentioned, are free of air hazards that can cause serious health risks to families and individuals. Learning about these hazards is our first line of defense against the illness they can cause.

January, 2014 is both Kansas and National Radon Action Month. A public awareness campaign on radon gas poisoning is being launched throughout the state and nation to help the public become more aware of the dangers associated with radon gas and take action to prevent serious illness that can be caused by it.

Radon is an odorless radioactive gas that results from the breakdown of uranium from soil and rock beneath and around the foundation, ground water wells, and some building materials. It can leak into your house through the basement or crawl space – through adjacent or exposed soil and rock – or through well water. Some building materials such as natural stone or rock can emit radon.

Exposure to radon can increase your chances of getting lung cancer. Scientists are more certain about radon risks than risks from other cancer causing substances. It is the second leading cause of lung cancer in the United States. According to the National Cancer Institute, radon causes 15,000 – 22,000 lung cancer deaths a year. Cigarette smoking, which is the leading cause of lung cancer, combined with exposure to radon gas creates a greater risk of lung cancer than either environmental condition by itself.

What can you do to reduce your risk of exposure to radon gas? Test for radon in your home. The Environmental Protection Agency and the US Surgeon General recommend testing for radon and reducing radon levels in homes. A level of 4 picocuries per liter, pCi/L, or higher is considered unacceptable and pose the highest risk of radon gas poisoning. Radon levels below 4 pCi/L still pose a risk, so you may want to use a

reduction system for homes with lower levels. Contact the Geary County Extension office, 785-238-4161 for a test kit and testing guidance. The test kits available at the extension office (\$5.50/kit) will help you identify if there is radon gas present in your home and at what level.

Radon levels can be reduced, most often by the installation of a soil ventilation system that draws the radon from beneath the house exhausts into the air above the house.

In addition to radon gas, another common odorless and colorless gas that can be fatal is carbon monoxide (CO). It is produced when combustion equipment is not working properly. Sources include unvented fossil-fuel space heaters, unvented gas stoves and ovens, blocked chimney's or flues, gas dryer vented into the room, cars or other engines run in garages, and cracked combustion chamber in the furnace, and "backdrafting" from furnaces and water heaters.

The challenge with identifying whether a person is experiencing carbon monoxide poisoning is due to the symptoms mimicking that of the common flu, food poisoning, or allergies – nausea, dizziness, weakness and muscles aches. High levels of carbon monoxide can cause much more significant reactions – impaired judgement, paralysis, coma, and death.

Just as with radon gas, there are ways to detect carbon monoxide in your home. Carbon monoxide alarms can alert you to dangerous levels of the gas. These alarms are readily available at local hardware stores and/or discount stores. Careful consideration of the location of these alarms in the home is important to insure immediate response to the presence of the gas in your home. If you are installing only one alarm in your home, place it close to the sleeping area so that it will wake you while you sleep. If you live in a multi-level home, you should install an alarm on each level for additional protection. Avoid installing alarms close to fuel-burning appliances, keeping them at least 15 feet away from appliances and away from humid areas such as a bathroom, as these areas could cause false alarm activations.

The life span of today's CO alarms is 5 to 6 years, but the batteries that run them will not last nearly that long. If you already have these alarms installed in your house, make sure you put new batteries in every 6 months. You don't want to risk that you and your family are exposed to carbon monoxide without warning due to weak or dead batteries.

An additional measure you should take to reduce the risk of carbon monoxide poisoning is to have your combustion heating system inspected by a trained professional every year. They will look for ventilation blockages or potential sources for CO leakage.

Taking action to make sure the indoor air hazards are reduced or eliminated is a proactive approach to helping you and your family stay healthy during these winter months and throughout the year. Information for this article is based on K-State Research and Extension publication MF2787. If you have questions about keeping your home safe, feel free to contact me at the Geary County Extension office 785-238-4161. Until next time, keep living resourcefully!