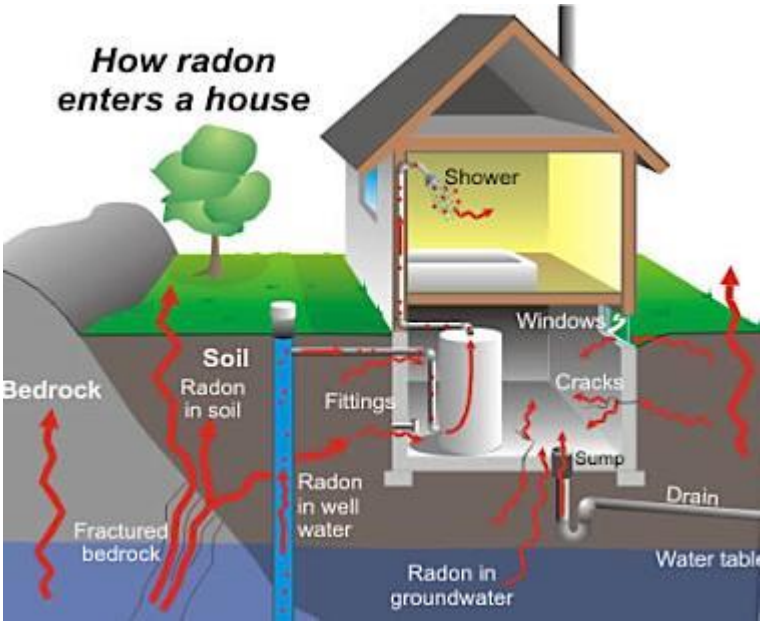
Radon is a naturally occurring radioactive gas that is formed in soil and bedrock and is found all over the United States. Radon is formed by the natural decay of the mineral uranium which breaks down to form radon gas.[1] Radon gas is colorless, odorless and tasteless and is relatively harmless until it begins to break down.

Once radon begins to break down it produces radon decay products that emit radioactive alpha particles. These particles can become inhaled and trapped in the lungs, where they cause irreparable damage to lung cell DNA. Prolonged exposure to these carcinogens causes increased risk of lung cancer. **Radon exposure is the second leading cause of lung cancer among smokers and the leading cause among non-smokers** (BEIR VI).

Radon tests can be purchased from most home supply stores. Findings show the most accurate radon test kits are those that test for 90 days or more. read the instructions completely and avoid placing your test kits near open windows, heat sources or heavily trafficked areas.

Home Maintenance that Improves Your Health

By Lilly Anderson, *MPH, DAFH Director, November 3, 2021*



We don't always associate home maintenance and repairs with our health and wellbeing. Additionally, we normally think of performing maintenance and repairs to our homes in spring or summer months, rather than the dead of winter, but environmental factors that are worsened with winter rains and cold temperatures provide good reasons for homeowners to perform two simple tests in the winter months.

First, test your homes for radon in the winter, when temperatures are coldest, and houses are closed to the outside air. This is the time of the year that the radon concentration in your house will be at its highest. By testing now, you can find out what is the worst radon exposure you and your family are experiencing.

Second, have your well water tested. This is especially important if your property has experienced forest fires or been adjacent to forest fires, seasonal flooding or if you have received other damage to your well or well head.

Bacteria are always present throughout the environment, and wells that are: (1) not properly sealed; (2) become damaged during storms; or (3) are in areas that are overloaded with flood waters are vulnerable to outside bacteria, nitrates (fertilizers), and other contaminants. **The only way to tell if your drinking water is safe is to have it tested at a certified laboratory.** Harmful bacteria, parasites, and viruses are invisible to the naked eye, so water often looks, smells and tastes perfectly fine.

Oregon is not subject to the devasting impacts of hurricanes, but heavy rains are common and can produce high volumes of stormwater runoff, flash flooding or floods from swollen creeks, rivers and reservoirs that can persist from days to weeks, even months[9]. Floods create high volumes of water flow over areas that are normally dry land, allowing contaminants to travel with the floodwater as it courses and accumulates over the landscape. Contaminant laden floodwater can inundate domestic wells, entering through casings and caps, and the force can disrupt or damage the well, directly introducing contaminants[9].

The principal concern is the possibility of well contamination from floodwaters carrying pathogens, but older wells, and wells less than 50 feet deep and those located near surface waters, can be contaminated from underground water sources as well[10]. Another significant issue is the affect flooding has on septic systems. Septic systems are typically not damaged by flooding, but drainage fields can become filled with water and unable to work properly. Also removing flood debris by vehicles may damage drain fields, tanks and distribution boxes[2]. With continued, intense rainfall and flooding, the water level of an aquifer may rise. If the groundwater level rises to or near ground surface, it can hydraulically connect to a septic system and wick contaminated water into the aquifer[2].

So, what can you do to keep you, your family, pets and livestock safe from well water contaminants?

- Have your wells tested, especially wells used to provide drinking water.
- Locate and update your well log. Check with the OSU Well Water Program for more information about well logs.
- Locate and properly disable any abandoned wells on your property.
- Check your septic system for any possible failures.
- Clean areas around well heads and caps to eliminate any surface sources of pollutants.

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