Native Health in the Bemidji Area

Radon

October 2020

What is radon?

Radon is a tasteless, odorless, naturally occurring gas which comes from the ground. It can get into homes through cracks in the floors or walls. It can also contaminate groundwater. Any house can have radon issues but based on an area's geological composition some places are at greater risk (Map 1). In Michigan, 25% of houses are at risk of high levels of radon, in Minnesota 40% are at risk, and in Wisconsin, 10% are at risk.[1,2,3]

Radon and lung cancer

When radon gas is inhaled it can break down into radioactive particles that give off radiation which damages lung cells and can lead to lung cancer. The chance of lung cancer due to radon is based on the amount of radon, the length of exposure, and smoking status (Table 1). Radon is the second-leading cause of lung cancer in the United States and is the leading cause of lung cancer among non-smokers. It is estimated to cause 21,000 deaths annually.[2]

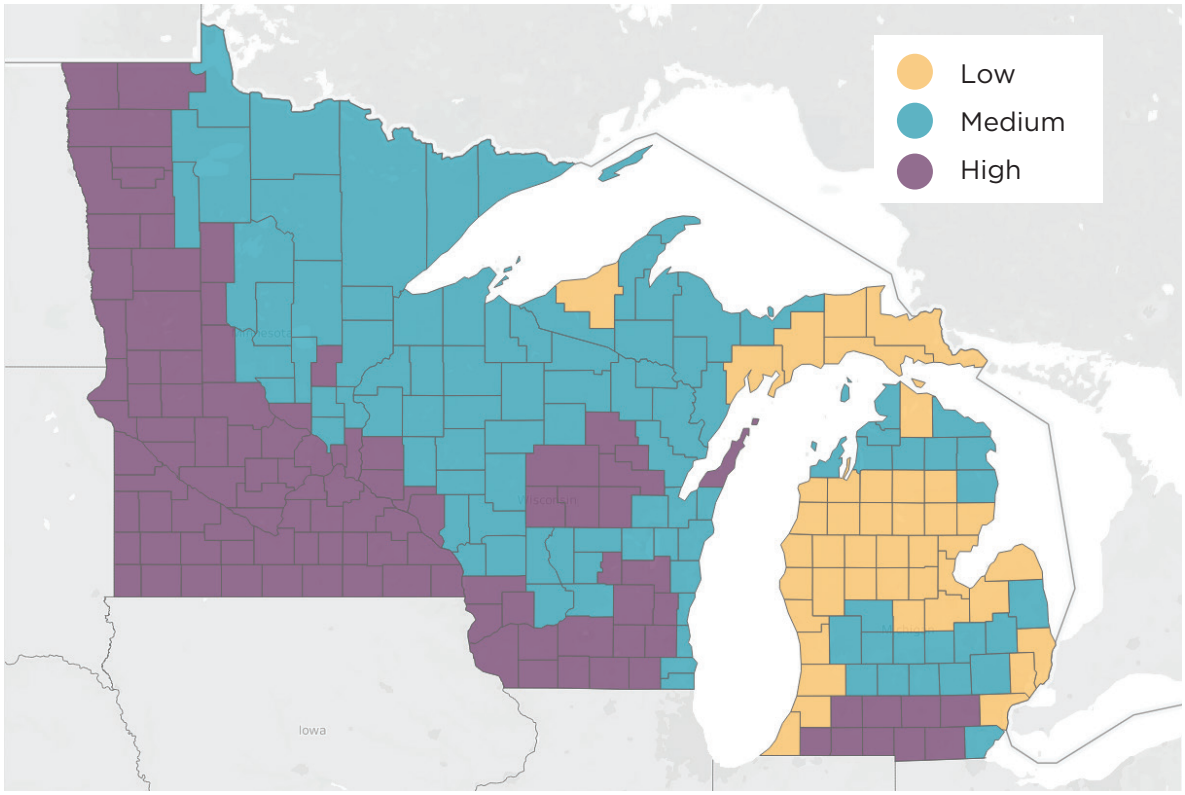
Testing and mitigation

The only way to know if you have a radon problem is to test for it. Because radon can vary from house to house, even if your neighbor doesn't have a problem there may be a problem in your house. Call your local health department or go to a hardware store for a radon test kit. The EPA recommends that if the test indicates that radon levels are less than 4 pCi/L no additional testing or mitigation needs to be done. However, if levels are above 4 pCi/L further action should be taken.[4]

If you discover your home has high levels of radon, a radon mitigation professional can help determine the best mitigation measures. Mitigation systems reduce the amount of radon in a home and are often a combination of venting air from the soil outside and sealing any cracks or openings in the foundation.[4]

The Great Lakes Inter-Tribal Epidemiology Center (GLITEC)'s *Native Health in the Bemidji Area* fact sheet series presents data on various health-related topics for communities in the Bemidji Indian Health Service Area (Michigan, Minnesota, Wisconsin, and Chicago). GLITEC welcomes discussion with Bemidji Area communities' health staff in the use of this fact sheet to support assessment, planning, and evaluation functions. Please contact us to discuss how we may support your community.

Map 1. Predicted Average Indoor Radon Screening Level



Map adapted from: EPA Map of Radon Zones. US EPA.

Table 1. Lifetime Risk (per 1,000 people) of Lung Cancer Death from Radon Exposure[2]

Average Radon Exposure	Never smoked	Current smoker	General population
20 pCi/L	36	260	110
10 pCi/L	18	150	56
4 pCi/L	7	62	23
2 pCi/L	4	32	12

Table adapted from: Radon in Minnesota Homes. Minnesota Department of Health.

National Radon Hotline:
1-800-767-7236

Michigan:
1-800-723-6642

Minnesota:
1-651-201-4601

Wisconsin:
1-888-569-7236

Sources:

1. Michigan Indoor Radon Program Overview. Michigan Department of Environment, Great Lakes, and Energy. Accessed September 15, 2020. https://www.michigan.gov/egle/0,9429,7-135-3312_4120_4196-11722--,00.html
2. Radon in Minnesota Homes. Minnesota Department of Health. Accessed September 15, 2020. https://www.health.state.mn.us/communities/environment/air/radon/index.html
3. Radon and Your Health. Wisconsin Department of Health Services. Published December 18, 2013. Accessed September 15, 2020. https://www.dhs.wisconsin.gov/radon/health.htm
4. Radon Mitigation Systems. Minnesota Department of Health. Accessed September 15, 2020. https://www.health.state.mn.us/communities/environment/air/radon/mitigationsystem.html