

# Uranium

*Owners of private wells are responsible for ensuring that their water is safe from contaminants. The presence of contaminants in water can lead to health issues, including gastrointestinal illness, reproductive problems, and neurological disorders.*

## **What is uranium?**

Uranium is a naturally occurring radioactive mineral present in certain types of rocks and soils found throughout the United States, including Wyoming.

## **Where and how does uranium get into drinking water?**

Uranium occurs naturally in soil and rocks. Uranium dissolves as water passes through soil and bedrock. Groundwater is likely to contain higher levels of uranium than surface water. The amount of uranium in well water varies with the concentration of uranium in the bedrock. Wells most likely to have high levels of uranium are those in areas with granite or alkaline sandstone and shale bedrock.

## **What are the health effects?**

Most ingested uranium is eliminated from the body, but a small amount is absorbed in the bloodstream and carried into the kidneys. Studies suggest that ingesting high levels of uranium may be associated with an increased risk of kidney damage.

## **How can I find out whether there is uranium in my drinking water?**

The only way to know the concentration of uranium is through sampling and testing. If you have a well that is near an area that has or had elevated levels of uranium, you should have the water from your well tested to determine if uranium or other radionuclides are present. The recommended approach is to request that the laboratory first test for gross alpha. If the gross alpha result is less than 5 picocuries per liter (pCi/L) then no testing for radium 226, radium 228, or uranium is needed because the results will be below the public drinking water standards. If the gross alpha result is equal to or greater than 5 pCi/L then testing for radium 226 and radium 228 should be requested. If the gross alpha result is equal to or greater than 15 pCi/L then testing for uranium should also be requested.

As the well owner, you are responsible for sampling and testing your drinking water. DEQ has compiled a [list of laboratories](#) in the state for your convenience.

### **How do I remove uranium from my drinking water?**

Naturally occurring radioactivity can be treated. In general, uranium and radium only need to be removed from water that will be consumed or used in food.

Typically, the most feasible treatment alternative to remove uranium in private water supplies is a point-of-use system (POU). A POU system is usually placed under or near one faucet and treats only the water coming out of that faucet for drinking or cooking. POU systems include reverse osmosis, distillation, special adsorbent media (such as titanium dioxide) and anion exchange remove uranium and a variety of other contaminants. Boiling water is not an effective means of removing uranium. The best treatment system or combination of systems for a given situation will depend on several factors and individuals should work with reliable, competent water treatment dealers to select the best treatment method for a given situation.

### **Additional Resources**

Agency for Toxic Substances & Disease Registry -[Uranium](#)  
EPA- [Radionuclides in Private Wells](#)