# DRINKING WATER

#### *What are the Health and Safety Risks?*

**E**very day, Americans drink more than a billion cups of water and use water to cook and clean. Most people trust that their water is safe, and this is usually true. Public drinking water in the United States is routinely tested for safety, but if a home has a well or other private water supply, it’s the homeowner’s responsibility to test it.

No matter where water comes from, families need to make sure it’s safe. Family members can get sick from drinking, cooking, and bathing in unsafe water even though it may still look, smell and taste fine.

Drinking unsafe water can cause an upset stomach, diarrhea, or more serious problems. It can be worse for children, pregnant women, those who are sick and older people. Unsafe water can be more dangerous for children than adults because children drink more than adults for their size and their bodies are still growing.

Unsafe drinking water often contains bacteria, total coliforms, and viruses that can cause diseases as well as heavy metals and chemicals. Just one sip can make someone sick. Contaminated water can damage kidneys, liver, and other organs. Some chemicals in unsafe water may cause cancer.

Lead can cause permanent learning and behavioral problems in children. Babies who get too much copper can get colic and spit up their formula if these metals are in the water used to make formula. Older children and adults may get upset stomachs or diarrhea from copper.

Nitrates in water may also cause birth defects and miscarriages. Too much nitrate in drinking water can also cause blue baby syndrome in babies less than six months old. Blue baby syndrome is when a baby’s blood doesn’t get enough oxygen and their face can turn blue or purple. If this happens, they need medical attention right away.

#### ***Where Do Drinking Water Risks Come From?***

Nitrates are chemicals that get into water from animal and human waste. It can also come from fertilizers. Nitrates can seep into drinking water from a lawn or a sewage system. Testing tap water for nitrates is important before giving it to babies and children.

Lead and copper are metals that can get into water from plumbing pipes. Other harmful chemicals can get into drinking water such as pesticides that wash off lawns or leak from storage containers, and gas or oil that has seeped into the ground and into wells used for drinking water.

Public Water Supplies

The water in many homes comes from a public water supply. Most public water supplies are local. Public water typically comes from groundwater or from a nearby river or lake. If the drinking water is from a public water supply, it is tested for over 80 chemicals. The water company determines if the water meets EPA safety standards for drinking and they are required to notify customers if it is unsafe.

Every year, water companies are required to give their water test results to customers. Reports are available online or by mail. Families can also call their water company to ask what chemicals are in the water and also ask how they treat it to make it safe. Public water can still be unhealthy and this is possible if the home has lead or copper pipes.

Lead Pipes: Older homes or apartments may have lead pipes. Lead is a dull gray color and scratches easily. Brass fixtures also contain lead.

Copper Pipes: Copper pipes are reddish brown in color.

Private Water Supplies

Nearly 15% of Americans have private water supplies mostly from a well on their property. A well is a deep hole in the ground that fills with water and has a pump and pipes which transport water into a home. There are many different types of wells.

Types of Wells

A dug or bored well has a hole about 2 feet across and are typically less than 50 feet deep. They can be unsafe as chemicals and germs can get into the water through the top and sides. A drilled well has a narrow hole and is 6 to 8 inches around and can be hundreds of feet deep. A driven point or sand-point well is 2-3 inches around and may not be very deep. If a homeowner doesn’t know what kind of well is on the property, a local well driller can be of assistance. If the well is more than 20 years old, it should be checked for contaminants often.

Testing Well Water

Stakeholders should recommend that homeowners and renters have well water tested every year by a state certified laboratory. They should be sure the test includes bacteria and nitrates. Families can go online or call a local or state health department or Cooperative Extension Service ([www.nifa.usda.gov/extension](http://www.nifa.usda.gov/extension)) to find out what tests are needed.



**What can you do to help the families**

**and communities you serve?**

*Actions for Living in a Healthy Home*

Family Health

If the home has lead or copper plumbing with lead solder, family members should be instructed to:

* Never use hot water from the tap for cooking, drinking, or making baby formula. Heat dissolves these metals into the water.
* Use cold water instead of hot water and heat it on the stove or in the microwave to warm it up but test it to be sure it is not too hot before feeding a baby or toddler.
* Let the cold water run for a few minutes when the water hasn’t been used for at least 3 hours. This will help clear out any water that is sitting in the pipes which might collect lead or copper.

Community Health and Safety

Clean water in public water supplies and from private wells requires community-wide outreach so that everyone is doing their part to keep the water safe to drink for all families. In order to help keep local water safe, healthy homes stakeholders should advise families in proper care and disposal of household and yard chemicals to avoid adding contamination to the surrounding groundwater and wells. Families need to:

* Ask the water company for the most recent water quality report.
* Follow all directions on the label when using poisons to kill bugs or weeds.
* Store chemicals safely and be sure containers are labeled and sealed.
* Avoid putting chemicals in the garbage or down the drain and reading labels for disposal instructions.
* Give leftover chemicals to someone who will use them or call a local or state health department to find out how to get rid of them safely.
* Make sure to clean up after pets. Don’t leave droppings on the ground. Rain can wash germs into storm drains, rivers and lakes. Flush pet waste down the toilet, or put it in a plastic bag and throw it in the trash.

Housekeeping and Maintenance

To protect a private water supply, homeowners and renters should be advised to:

* Test their well water every year.
* Have a professional plumber check the well if it is having problems or has high levels of contaminants.
* Make sure the well is not in a low area of the yard where rainwater can collect. Rainwater can carry germs and pollutants into well water.
* Avoid keeping gas, oil, weed killer, or other chemicals near the well or uphill from it.
* Ask the local or state health department how to seal an unused well if it is abandoned. Cap or fill unused wells to prevent ground water contamination.
* Put “back-flow prevention devices” on outdoor faucets to keep water from flowing backwards into the water supply. These devices help keep germs and pollutants from washing back into a home’s drinking water.

When a family moves into a new house or apartment, they should always be advised to find out where the well is located and place a well marker to designate the exact location of the well.