



FACT SHEET

Contaminants in Well Water

Wondering what microorganisms (germs) and chemicals can be found in your well water, and what they can do to your health? Here is a list of some of them. Please see the "Well Water Testing FAQs" sheet for details on how to test your well water.

Microorganisms	Health Effects*
<small>* Healthy individuals may have mild or no symptoms from these infections. They will usually recover without long-term health problems. However, persons with weakened immune systems may have more severe or life-threatening illnesses.</small>	
Bacteria	
<i>Campylobacter</i>	<ul style="list-style-type: none">Diarrhea (sometimes bloody), cramping, abdominal pain, and fever
<i>Escherichia coli</i> (<i>E. coli</i>) O157:H7	<ul style="list-style-type: none">Bloody or non-bloody diarrhea, stomach cramps; little or no feverCan cause hemolytic uremic syndrome (HUS) and kidney failure in young children or the elderly
<i>Salmonella</i>	<ul style="list-style-type: none">Diarrhea, typhoid fever, stomach crampsInfection can spread from intestines to blood and other body sites, causing serious illness
<i>Shigella</i>	<ul style="list-style-type: none">Watery or bloody diarrhea, fever, upset stomachVomiting and stomach cramping may also occur
Viruses	
Enterovirus	<ul style="list-style-type: none">Usually causes mild upper respiratory, "flu-like" symptoms with fever and muscle pains, or a rashMeningitis is less common, and illnesses that affect the heart and brain may occur, but are very rare
Hepatitis A	<ul style="list-style-type: none">Jaundice (yellowing of eyes and skin), dark urine, tiredness, loss of appetite, nausea, vomiting, fever, stomach acheMost infected adults will show symptoms while children often do not have symptoms (but could still pass the virus to others)
Norovirus (Norwalk)	<ul style="list-style-type: none">Upset stomach, cramps, vomiting, and diarrheaHeadache and low-grade fever may also occur
Rotavirus	<ul style="list-style-type: none">Vomiting, watery diarrhea, stomach cramps, fever
Protozoa	
<i>Cryptosporidium</i>	<ul style="list-style-type: none">Diarrhea, loose or watery stool, stomach cramps, upset stomach, and feverUsually causes mild illness, but can be serious or fatal for people with weakened immune systems

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(continued from previous page)

- Giardia*
- Diarrhea, loose or watery stool, stomach cramps
 - Usually causes mild illness, but can be serious or fatal for people with weakened immune systems

Chemicals	Health Effects**
<small>** These health effects are caused by consuming large doses of chemicals.</small>	
Atrazine	<ul style="list-style-type: none">▪ Short-term: congestion of heart, lungs, and kidneys; low blood pressure; muscle spasms; weight loss; damage to adrenal glands▪ Long-term: weight loss, cardiovascular damage, eye and muscle degeneration; cancer
Arsenic	<ul style="list-style-type: none">▪ Stomach pain, nausea, vomiting, diarrhea, numbness in hands and feet, partial paralysis, and blindness▪ Can also cause skin damage, circulatory system problems, and increased risk of cancer
Copper	<ul style="list-style-type: none">▪ An essential nutrient at very low levels▪ High level exposure causes upset stomach, vomiting, diarrhea, and stomach cramps▪ Long-term exposure at high levels can also cause liver and kidney problems
Lead	<ul style="list-style-type: none">▪ Delayed physical and mental development in babies▪ Shortened attention span, hearing, and learning abilities of children▪ Slightly increased blood pressures in adults▪ Long-term exposure at high levels can include stroke, kidney disease, and cancer
Mercury	<ul style="list-style-type: none">▪ Kidney damage
Nitrate	<ul style="list-style-type: none">▪ Methemoglobinemia – a blood disorder that causes shortness of breath and blueness of skin, and can lead to serious illness or death▪ Methemoglobinemia mainly affects infants and pregnant women▪ Long-term effects include increased urination and bleeding of the spleen
Radium	<ul style="list-style-type: none">▪ Increases risk of cancer
Volatile Organic Compounds (VOCs)	<ul style="list-style-type: none">▪ Drowsiness and decreased responsiveness▪ Skin irritation▪ Some cause cancer after long-term exposure

For more information, visit www.cdc.gov/ncidod/healthywater