



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 fever▪ Can 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 cramps▪ Infection 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 stomach▪ Vomiting 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 rash▪ Meningitis 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 ache▪ Most 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 diarrhea▪ Headache 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 fever▪ Usually 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