

Waterborne Illnesses

Most waterborne illnesses are the result of exposure to human and/or animal fecal waste. A small drop of fecal matter can contain millions of microorganisms of many types, some of which are harmless and some of which are disease-causing pathogens.¹

Information from the CDC

According to the Centers for Disease Control and Prevention, “Recreational waterborne illnesses include a wide variety of infections, such as gastrointestinal, skin, ear, respiratory, eye, neurologic, and wound infections. The most commonly reported RWI is diarrhea.

“With recreational waterborne illnesses outbreaks on the rise, swimmers need to take an active role in helping to protect themselves and prevent the spread of germs. It is important for swimmers to learn the basic facts about RWIs so they can keep themselves and their family healthy every time they swim.”

The U.S. Environmental Protection Agency estimates that between 1.8 and 3.5 million people are sickened each year when they are exposed to sewage from sanitary sewer overflows while swimming, boating, or enjoying other water-based activities. Most people recover from these diseases with no long-term effects. However, they can be very dangerous to children, the elderly, and other patients with weakened immune systems.

For more information, please visit <http://www.cdc.gov/healthywater/swimming/rwi/>.

Common Waterborne Illnesses:

Source: Center for Disease Control

TYPE	PATHOGEN	ACUTE EFFECTS	POTENTIAL CHRONIC OR ULTIMATE EFFECTS
BACTERIA			
	<i>E. coli</i> O157:H7	Diarrhea	Adults: death (thrombocytopenia)
	<i>Legionella pneumoniae</i>	Fever, pneumonia	Elderly: death
	<i>Helicobacter pylori</i>	Gastritis	Ulcers and stomach cancer
	<i>Vibrio cholerae</i>	Diarrhea	Death
	<i>Vibrio vulnificus</i>	Skin & tissue infection	Death in those with liver disorders or problems
	<i>Campylobacter</i>	Diarrhea	Death: Guillain-Barré syndrome
	<i>Salmonella</i>	Diarrhea	Reactive arthritis
	<i>Yersinia</i>	Diarrhea	Reactive arthritis
	<i>Shigella</i>	Diarrhea	Reactive arthritis
	<i>Cyanobacteria</i> (blue-green algae) and their toxins	Diarrhea	Potential cancer
	<i>Leptospiriosis</i>	Fever, headache, chills, muscle aches, vomiting	Weil’s Disease, death (not common)
	<i>Aeromonas hydrophila</i>	Diarrhea	

PARASITES			
	<i>Giardia lamblia</i>	Diarrhea	Failure to thrive, Severe hypothyroidism, Lactose intolerance, Chronic joint pain
	<i>Cryptosporidium</i>	Diarrhea	Death in immune-compromised host
	<i>Toxoplasma gondii</i>	Newborn syndrome, Hearing and visual loss, Mental retardation, Diarrhea	Dementia and/or seizures
	<i>Acanthamoeba</i>	Eye infections	
	<i>Microsporidia, (Enterocytozoon & Septata)</i>	Diarrhea	
VIRUSES			
	<i>Hepatitis viruses</i>	Liver infection	Liver failure
	<i>Adenoviruses</i>	Eye infections, diarrhea	
	<i>Caliciviruses, small round structured viruses, Norwalk virus</i>	Diarrhea	
	<i>Coxsackie viruses</i>	Encephalitis, Aseptic meningitis, Diarrhea, Respiratory disease	Heart disease (Myocarditis), reactive insulin-dependent diabetes
	<i>Echoviruses</i>	Aseptic meningitis	
Adapted from chart by Centers for Disease Control and Prevention. Emerging Infectious Diseases, vol. 3, no. 4, Oct-Dec 1997.			

ⁱ Rose, J.B., et al., Microbial Pollutants in Our Nation's Waters: Environmental and Public Health Issues, American Society for Microbiology, Washington, D.C., 1999, p. 8.