

## RECREATIONAL WATER ILLNESSES AT A GLANCE

(updated March 2009)

<b>PATHOGEN</b>	<b>TYPE</b>	<b>METHOD OF TRANSMISSION</b>	<b>SYMPTOMS</b>	<b>REAL WORLD OCCURRENCE</b>	<b>CHLORINATION TIME (1PPM FAC)</b>
Cryptosporidium	Parasite	Swallowing contaminated water. Very contagious, through people-to-people contact.	Dehydration, weight loss, stomach cramps, fever, nausea, vomiting. No treatment.	In 2008, several pools and water parks in the Dallas/Ft. Worth area were contaminated and closed. Hundreds of people were sick, one died	About 255 hours (10.6 days)
E.coli	Bacteria	Swallowing contaminated water.	Severe bloody diarrhea, abdominal cramps, kidney failure. Antibiotics available.	In 1998, 26 children fell ill from an outbreak in a Marietta, Georgia wading pool. Seven had kidney failure; one died.	Less than one minute
Giardiasis	One-celled parasite	Swallowing contaminated water. Cysts can survive in cold water for months.	Diarrhea, gas, greasy stools, stomach cramps, upset stomach, nausea. Prescription drugs available.	In 2003, 55 people were struck at a country club in Milton, Massachusetts. The source believed to be the children's swimming pool.	About 45 minutes
Hepatitis	A Virus	Swallowing water contaminated with feces infected with virus.	Jaundice, fatigue, stomach pain, loss of appetite, nausea, diarrhea, fever. No real treatment. Vaccine available.	The public pools at a campground in Louisiana were the source of a multistate outbreak in 1989. 20 people were infected.	About 16 minutes
Legionnaires' Disease	Bacterium Legionella pneumophilia	Breathing mists from hot tubs infected with the bacteria. Not contagious.	Fever, chills, cough, muscle aches, headache, fatigue, diarrhea, kidney malfunction. Legionnaire's treatable.	50 people reported flu-like symptoms at an Oklahoma City hotel pool in 2004. The cases were Pontiac Fever.	Less than one minute
Naegleria Infection	Microscopic amoeba	Enters through the nose and travels to brain and spinal cord. Feeds on brain tissue. Very rare infections.	Causes primary amebic meningoencephalitis (PAM), a brain inflammation. Drugs available, high fatality rate.	In 1978, a 9-year-old girl in San Francisco was infected in a hot springs pool; she was one of only three known survivors of this disease.	Less than one minute
Norovirus Gastroenteritis	Virus	Swallowing water contaminated with feces infected with virus. Very contagious.	Nausea, vomiting, diarrhea, stomach cramping, fever, chills, muscle aches, fatigue. Most recover in 1-2 days.	In 2004, 53 people fell ill at a swim club in Vermont.	About 30 minutes to an hour
Pseudomonas Dermatitis (Hot tub rash)	Bacteria, Pseudomonas Aeruginosa	Direct skin contact with contaminated water. Usually in hot tubs but also in pools.	Itchy skin, red rash, blisters around hair follicles. Clears up on its own in a few days.	Nine cases were documented at a hotel pool and spa in Bangor, Maine. In January 2009, this bacteria was found in the blood of a Brazilian Model – both hands and feet were amputated – she died	Less than one minute
Salmonellosis	Bacteria, Salmonella	Swallowing water contaminated with bacteria.	Diarrhea, fever, cramps. Antibiotics if infection spreads to intestines; no necessary treatment otherwise.	Three cases were documented at a park pool in 1995.	Less than one minute
Shigellosis Shigella	Bacteria, Shigella	Swallowing water contaminated with bacteria.	Bloody diarrhea, fever, cramps. Antibiotics-though forms of shigella have become resistant.	An un-chlorinated wading pool in Dubuque, Iowa, caused at least 69 cases in 2001	Less than one minute

Courtesy Aquatics International Magazine