

Surprising and Interesting Facts about Water!



It's no secret that life on Earth could not survive without water. It is our most precious resource; supporting humans, animals, plants and so much more! In celebration of the miraculous chemical compound known as H₂O, we have compiled a list of surprising and interesting water facts. Enjoy!

Humans and Water

- The human body is more than 60% water.¹
- A human can only survive about a week without drinking water. Weather, age, and health can influence the survival rate.²
- 85% of the world's population lives in the driest half of the planet.³
- The average woman needs about 2.7 liters of water per day. The average man needs about 3.7 liters per day.¹

Amazing Animals

- Kangaroo rats get all the water they need from just the food they eat.¹
- A very thirsty Dromedary (camel) can drink 30 gallons of water in only 13 minutes.⁴
- Albatrosses have glands in or above their eye sockets, which excrete excess salt taken in by drinking seawater.¹

- An octopus, one of the ocean's most fascinating creatures, has three hearts and blue blood.¹⁴
- Male seahorses give birth.⁴
- Dolphins sleep with one eye open and half its brain awake.¹⁴

Microorganisms and Water

- In 1993, an outbreak of Cryptosporidiosis in Milwaukee, Wisconsin, caused when a water treatment plant malfunctioned, sickened an estimated 403,000 residents of the greater Milwaukee Wisconsin area (a quarter of the residents).⁵
- *Cryptosporidium* is protected by an outer shell called an oocyst. Oocysts can survive chlorine treatment.⁶
- Bangladeshi women have cut the rate of cholera in half by filtering drinking water through a sari folded eight times. Saris are then rinsed in filtered water and dried in the sun.¹
- It is estimated that washing hands with soap and water could reduce diarrheal disease-associated deaths by up to 50%.⁷
- Within the first 15 minutes of bathing, the average person sheds 6×10^6 colony forming units (CFU) of *Staphylococcus aureus*.⁸
- Worldwide, more than 133 million people suffer from intestinal helminths due to lack of adequate sanitation. Helminths include *Ascaris lumbricoides*, *Trichuris*, *Necator americanus*, and *Ancylostoma duodenale*. Severe infections can lead to cognitive impairment, massive dysentery, or anemia.⁷
- In 1900, there were approximately 100 cases of typhoid fever for every 100,000 persons living in the United States. By 2006, the rate had declined to 0.1 cases for every 100,000 persons.⁹
- Usually within the first 15 minutes of entering a pool, the average individual swimmer adds at least 0.14 grams of fecal material to the water. Showering with soap before swimming helps stop the spread of germs by removing fecal material from the body.¹⁰

Science and Engineering

- Water is less dense as a solid than it is as a liquid which is why ice floats.¹
- One acre of broad-leaved forest may release as much as 8,000 gallons of water into the atmosphere every day.¹
- In one day, the Gulf Stream carries twice the amount of heat as one year's worth of coal mined on Earth would generate.¹
- There are now more than 15,000 desalination plants in 125 countries.¹
- More than 60% of the world's largest rivers have been dammed or diverted.¹
- China's Three Gorges Dam has required the relocation of more than 1.2 million people and left more than 1,000 villages.¹

A Little History

- In 1969, the Cuyahoga River which runs through Cleveland, Ohio into Lake Erie caught fire.^{2,11}
- In 1970, President Nixon established the Environmental Protection Agency (EPA) to "protect public health and safeguard the natural environment – air, water, and land – upon which life depends."²

Where is the Freshwater?

- Freshwater makes up only 3% of Earth's water. The rest is salt water.¹
- Freshwater glaciers comprise 68.7% of the freshwater on Earth.¹²
- 70.9% of the earth's surface is covered by water.¹²

Bottled Water

- Bottled water costs as much as \$10 per gallon. Tap water costs less than a penny per gallon.¹
- It takes three liters of water to produce a one-liter bottle of water.¹
- The total estimated energy needed to make, transport, and dispose of one bottle of water is equivalent to filling the same bottle one-quarter full of oil.¹
- An estimated 40% of bottled water sold in the U.S. is just filtered tap water.¹

Waste Not, Want Not

- The average faucet flows at a rate of 2 gallons per minute. You can save water if you turn off the faucet while you brush your teeth.¹²
- Taking a bath requires up to 70 gallons of water. A five minute shower uses 10 – 25 gallons.¹²
- To produce 1 gallon of milk, 1,000 gallons of water is required.¹²
- The average american uses about 151 gallons per day for domestic and municipal purposes. U.K. citizens use about 31 gallons per day. Ethiopians use about 3 gallons per person, per day.¹

Clean Water is Important!

- Around 700,000 children die every year from diarrhea caused by unsafe water and poor sanitation – that's almost 2,000 children a day.¹
- More than 35% of the world's population lack access to improved sanitation.⁷
- 80% of sewage in developing countries is discharged untreated directly into water bodies.¹³
- Industry dumps an estimated 300-400 megatons of polluted waste in waters each year.¹³
- Nitrate from agriculture is the most common chemical contaminant in the world's groundwater aquifers.¹³
- In the Gulf of Mexico, there is a "dead zone" the size of New Jersey. The dead zone was created by runoff of fertilizer from farms. The fertilizer drains into the gulf and feeds algae, robbing the water of oxygen.¹

Want to learn more about water? Check out the resources listed below.

1. American Museum of Natural History, New York City, New York
2. North Dakota Water Science Center/ U.S. Geographical Survey
3. 2013 United Nations International Year of Water cooperation: Facts and Figures
4. National Geographic Society
5. Corso PS, Kramer MH, Blair KA, Addiss DG, Davis JP, Haddix AC. Cost of illness in the 1993 Waterborne Cryptosporidium outbreak, Milwaukee, Wisconsin. Emerg Infect Dis [serial online] 2003 Apr

6. Minnesota Department of Health
7. World Health Organization
8. Elmir SM, Wright ME, Abdelzaher A, Solo-Gabriele HM, Fleming LE, Miller G, Rybolowik M, Shih P, Pillai SP, Cooper JA, Quayed EA. Quantitative evaluation of bacteria released by bathers in a marine water. 2007;41:3-10.
9. Center for Disease Control Achievements in public health, 1900–1999: safer and healthier foods.
10. Gerba CP. Assessment of enteric pathogen shedding by bathers during recreational activity and its impact on water quality. Quant Microbiol. 2001;(2):55-6 and Centers for Disease Control
11. New York Times 2009/06/21 From the Ashes of '69, a River Reborn
12. United States Environmental Protection Agency (EPA)
13. UN Water
14. The PBH Network