

Victory through hydration

The universe's miracle drink, for those in a hurry

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REACTION MEDIUM AND SOLVENT

Due to water's intense polarity, it is able to rip apart and bond with (dissolve) a huge variety of molecules, making it the universal solvent and medium for almost all biochemical reactions.

Water is the essential component of hydrolytic reactions - added to break up larger molecules like glycogen (see left) into smaller, more usable ones (glucose).



THERMOREGULATOR

The strength of special hydrogen bonds between water molecules makes it difficult to add or subtract heat. This high specific heat allows us to keep a relatively constant body temperature between 97.8F and 99.0F.



Blood is 50.6% water, and the ability of our vessels to dilate or constrict allows the blood to carry heat around the body - to the skin to be sweated away evaporatively or closer to the necessary internal organs.

Dehydration



Occurs when the body's renal system (kidneys) can't reabsorb enough water to maintain bodily function.

Symptoms include dry/sticky mouth, dark golden urine, fatigue and tiredness, and cramps - cramps due to an imbalance in the electrolyte (salt) concentrations in the body. Loss of over 20% fluid supply will lead to hypovolemic shock, which can lead to multi-organ failure and death.

How to drink

There are "set" guidelines for daily water intake, but it in reality can vary enormous by person, level of activity, and environment. The soundest medical advice available is to drink when thirsty and have water readily...

SHOCK ABSORBER

Our cells are often composed of as much as 70% water - water that can absorb a significant amount of applied force.

Our brains and spines float in and are cushioned by cerebrospinal fluid, which is largely made up of water.



TRANSPORTER

As the main component of our blood plasma (the fluid part of blood), water facilitates its volume and neutral liquid properties (pH=7.0) to properly circulate through our vessels and deliver nutrients to our cells.



LUBRICANT

The mucous membranes of our bodily orifices are largely made of water and utilize its liquid properties.



Water is the largest component of the synovial fluid in our joints that lubricates the space in between our bones.

Hyperhydration



"Water poisoning" is not a benign condition; overdrinking will cause serious problems.

Too much water in the stomach and small intestine leads to "water belly," characterized by sluggishness and a sloshing sound in the abdomen when moving.

Overhigh water volume will lead to a negative imbalance in electrolyte concentrations - hyponatremia - causing fatigue, cramps, and potential arrhythmias.

...available. Instead of plastic water bottles, which are expensive and wasteful in the long-term, use a dedicated, insulated metal water bottle, and have it with you throughout the day, as STL tap water exceeds EPA standards.