

Water in the Body

By Allison Carter

Water is essential to everyone and everything needs it to survive, but as the old saying goes, “moderation is key.” If you drink too much water this is bad for you and can lead to death and the same exact thing goes if you don’t drink enough water. This leaves us with the question: **how does our body know when we’ve had enough water and what specifically happens when we drink too much water?** We will be exploring these topics in my blog today.



One study was done at the University of California where they tested the question “how does your body know when to stop drinking” on mice. (Saplakoglu, 2019) Before we get started you should know that at the bottom of your brain is a part called the hypothalamus. The hypothalamus is very important as it controls our emotions, sleep cycle, body temperature, and as you guessed, our thirst. From this study they were able to find that the hypothalamus has thirst cells and when you take a drink of something these thirst cells are turned off. Before the brain completely turns off these thirst signals it must make sure that the water that is entering the dehydrated cells receive just the perfect amount of water. If these signals are turned off too fast then the dehydrated cells will not receive enough water. Another interesting find from this study is that not only can our mouth shut off these receptors but also our gut. The neurons in our mouth and gut also take into consideration the amount of salt in a liquid. It was found that the more salt there is in a liquid the faster the thirst signal gets turned off and although the salt turns it off faster, water keeps the signal off longer.

Another study found that something else that triggers thirst is eating. While we eat the thirst signals are triggered causing us to drink something, this is because food requires water in the gut to help break it down. They also found that certain things like carbonated, cold, or salty beverages quenched thirst faster. But more extensively popsicles, especially lemon, quench your thirst even faster (Hewings-Martin, 2017).

If you ignore your thirst, your body's way of telling you that it needs water to maintain a healthy balance inside, then you can become dehydrated. When your body becomes dehydrated it makes it harder for your body to do normal functions like maintaining blood pressure and temperature which are both vital to your existence (Robinson, 2020). But if you drink too much or don’t take in enough electrolytes then your cells will fill up with too much water and burst which ultimately could also kill you. Electrolytes are little minerals in your body that have an electrical charge and they help to balance water inside and outside of the cell.

It is important to understand and listen to your body. When you are thirsty your body is telling you it needs help maintaining homeostasis so you must drink, but don’t be chugging tons of fluid at a time because this is also not good for you. It is important to take in electrolytes to also maintain a healthy balance. Next time you are feeling thirsty and seek immediate treatment try a cool, lemon popsicle.

Citations

Saplakoglu, Y. (2019, March 27). How Does the Body Know When to Stop Drinking Water? Retrieved May 7, 2020, from <https://www.livescience.com/65086-how-brain-knows-stop-drinking-water.html>

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