

The importance of hydration research paper



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The Importance of Hydration Water is the most abundant and yet the most overlooked substance in the human body, the body is nearly 60 percent water, ironically 66 percent of all Americans do not consume the recommended requirement of water. Hydration and dehydration can affect the body in several positive and negative ways depending how you regulate your fluids.

Here are some broad categories how the body and hydration correspond i will be covering them in my research paper, brain function, physical performance, weight loss and disease prevention. First i will cover how hydration and brain function correspond. Have you ever wondered why they give you small cups of water during standardized testing such as the ISAT When your body has a deficiency of water brain cells and other neurons shrink and the nervous-system slows (Kellet). Therefore your brain cannot and will not operate at optimum speed. A drop of as little as 1 to 2 percent of fluid levels can, impair short-term memory, and lower attention spans (Kellet). With proper hydration however, the brain can react faster and concentrate more efficiently.

Many parts of your brain conduct energy from water. ??? Kids think and perform better in school when they drink extra water. A Department of Psychology study in the UK reported that children drinking 10 ounces of water (1 ? cups) in the afternoon showed improved memory compared to those not having extra water.

Another study confirmed that children who stay hydrated do much better on visual attention tasks.??? (Dr. Hart) Another important consideration is that

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water actually holds the cells of your body together. Water keeps the cell membrane together by forming hydronium ions which makes the water sticky and helps bond your cells together. This gives your cells a higher viscosity that helps increase the efficiency of proteins and enzymes (Stiles). Secondly I will discuss physical performance and hydration. There have been several studies conducted to show the effects of hydration and dehydration during physical activities and during intense heat conditions.

If the the body experiences a decrease in fluid levels of 2 percent or greater it significantly decreases performance 2 percent of fluid levels is 1/2 of a quart of water. During physical activities your core body temperature raises to counter act the high temperature, you release sweat to cool the body. Sweat is not just loss of water but also sodium and electrolytes. If a person is engaging in physical activity for more than an hour they should drink a sports drink such as gatorade but salt water does the same thing. Also dehydration decreases blood volume so therefore your heart has to work harder to pump thicker blood throughout the body. Hydration and dehydration are also linked to joint health a flexibility, joints are made up of 70% water, lack of fluid cause the cartilage to become weak and brittle(Dr. Kennedy).

So how do you avoid dehydration during physical exercise Drink plenty of water before your workout, and consume one cup every 15 minutes into your workout. If you wait for the urge to drink to come, chances are, you will already be dehydrated by the time you take in your fluids. Quenching your thirst alone would not be enough to replace all the lost fluids and will not be as effective either. It will take more than a day or so before your body will be

able to regain all the water that you have lost. Any active person should consider drinking more than what they feel is enough for them (Byock). Also cut the caffeine, caffeine is a diuretic which means it actually depletes your fluid levels instead of replacing them, alcohol has the same effect on fluid levels. In a society where so many people are dependent on soda this could be hard for some people.

A good way to test if you are properly hydrated is the urine test. The paler the urine the better. Next I will cover weight loss.

There are many forms of metabolism going on in your body right now, but the one everyone is talking about is the metabolism of fat. This is actually something that the liver does when it converts stored fat to energy. The liver has other functions, but this is one of its main jobs. Unfortunately, another of the liver's duties is to pick up the slack for the kidneys, which need plenty of water to work properly. If the kidneys are water-deprived, the liver has to do their work along with its own, lowering its total productivity. It then can't metabolize fat as quickly or efficiently as it could when the kidneys were pulling their own weight. If you allow this to happen, not only are you being unfair to your liver, but you're also setting yourself up to store fat.

Day 4 The problem is that, many decide to increase their water intake, very few stick with it. During the first few days of drinking more water than your body is used to, you're running to the bathroom constantly. This can be very discouraging, and it can interfere with a normal day. It seems that the water is coming out just as fast as it's going in, and many people decide that their new hydration habit is impossible.

What is really happening is that your body is flushing itself. It takes a while, as you continue to give your body all the water it could ask for, it gets rid of what it doesn't need. It gets rid of the water it was holding onto in your ankles and your hips and thighs. Your body figures it doesn't need to save these stores anymore; it's trusting that the water will keep coming, and if it does, eventually, the flushing will stop, allowing you to return to a normal routine (Appleby). Weight loss will not only occur from the flushing process but, many people also feel a decrease in appetite and hunger, water gives the sense of fullness to the stomach.

Did you know that proper hydration will help prevent against cancer and disease. Water supports a healthy immune system and processes antioxidants to strength your walls against disease and sickness. Dehydration is a major producer of stress in the body and alters the balance of amino acids. This can result in DNA errors during cell division which can lead to many diseases such as cancer and other cell mutation problems. (Stiles)As you can see water is very underrated and is often overlooked. To many people in the world are missing out on the great benefits of being hydrated. If you are having problems whether physical or mental, good hydration may be your cure.

If you're a track star, a brain surgeon, or just a normal John Doe water can help you achieve optimum brain function and physical performance. Being hydrated can solve many problems before they begin, boosting the immune systems and decreasing stress makes for a healthy body and mind. So next you use the bathroom ask yourself "I am I hydrated?"