

Water is a fundamental part of our lives. Human survival is dependant on water – Water has been ranked by experts as second only to oxygen as essential for life. The average adult body is 55 to 75% water. 2/3 of your body weight is water. A human embryo is more than 80% water. A new born baby is 74% water. Since such a large percentage of our bodies are water it is understandable that it should play an important part in the functioning of our bodies. Every process in our body occurs in a water medium. We can exist without food for 2 months or more, but we can only survive without water for a few days!

Water plays a vital role in virtually everything taking place in the body. Water is the medium for various enzymatic and chemical reactions in the body. It moves nutrients, hormones, antibodies and oxygen through the blood stream and lymphatic system. The proteins and enzymes of the body function more efficiently in solutions of lower viscosity. Water is the solvent of the body and it regulates all functions including the activity of everything it dissolves and circulates.

When the body is dehydrated a form of rationing and distribution goes into play to ration the available water. Since the body has no reserve system, it operates a priority distribution system for the amount that has been made available by intake.

Dehydration leads to excess body fat, poor muscle tone, decreased digestive efficiency and organ function, increased toxicity, joint and muscle soreness and water retention. Water works to keep muscles and skin toned.

The digestion of solid foods depends on the presence of sufficient amounts of water. Acids and enzymes in the stomach break the food down into a homogenized fluid state which can pass into the intestine for the next phase of digestion. An 'acid stomach' will respond to hydration. It also helps move food along the gastrointestinal tract. Constipation is a frequent symptom of dehydration. Gastritis, duodenitis, pain from ulcers (as long as the ulcer is not perforated) and heartburn all decrease with increased water elimination. Water eliminates toxins and waste from the body.

Water helps regulate our body temperature through perspiration which dissipates excess heat and cools our bodies. We need water to breath because as we take in oxygen and excrete carbon dioxide our lungs must be moistened by water. We loose about 1 to 2 pints of water each day just exhaling.

The kidneys remove wastes such as uric acid, urea and lactic acid, all of which must be diluted in water. When there isn't sufficient water, those wastes are not effectively removed, which may result in damage to the kidneys.

Water lubricates our joints. The cartilage tissues found at the end of long bones and between the vertebrae of the spine hold a lot of water, which serves as a lubricant during the movement of the joint. When the cartilage is well hydrated, the two opposing surface glide freely, however if the cartilage is dehydrated the rate of abrasive damage is increased, resulting in joint deterioration and increased pain. This is also due to the fact that the actively growing blood cells in the bone marrow take priority over the cartilage for the available water that goes through the bone structure. Rheumatoid joint pain frequently decreases with increased water intake and flexing exercises to bring more circulation to the joints.

75% of the upper body is supported by the water volume that is stored in the spinal disc core. 25% is supported by the fibrous materials around the disc. The spinal joints are dependant on different hydraulic properties of water which is stored in the disc core. Back pain is frequently alleviated with hydration.

Brain tissue is 85% water. Although the brain is only 1/50th of the body weight, it uses 1/20th of the blood supply. With dehydration, the level of energy generation in the brain is decreased. Depression and chronic fatigue syndrome are frequently results of dehydration. Migraine headaches may be an indicator of critical body temperature regulation at times of "heat stress" Dehydration plays a major role in bringing on migraines. Dehydration causes stress and stress causes further dehydration.

In pregnancy morning sickness is a thirst signal of both the foetus and the mother. During the intrauterine stage of cell expansion, water for the foetus cell growth has to be provided by the mother. Water helps carry nutrients through the blood to the baby. It helps prevent bladder infections, constipation and haemorrhoids. Dehydration can trigger contractions and early labour. Amniotic fluid (mostly water) is replaced continuously throughout the day, so more water is needed to replenish the body. Hydration is also essential to good breast milk production.

By the time you are actually feeling thirsty, you are already in much need of extra fluid and you should drink some as soon as possible however it is much better for you to drink at least eight glasses a day spread out throughout the day rather than say 4 glasses twice a day. The "dry mouth" signal is the last outward sign of extreme dehydration. As our bodies try to adjust to being deprived of water, our thirst mechanism becomes disabled. In addition the thirst sensation decreases with age. The result is increasing dehydration. As we start to give our bodies more water, the thirst mechanism begins to work again.

The body loses 1.5 litres of water a day through the skin, lungs and gut via the kidneys as urine. We also make about a third of a litre of water per day when glucose is "burnt" for energy. Therefore our minimum water intake from food and drink needs to be more than one litre a day. The ideal daily intake is 2 litres. The body usually excretes any fluid that is surplus to requirements so drinking too much water is rarely a problem. There are however certain conditions which may effect the bodies mechanism for regulating water balance such as severe vomiting, diarrhoea, excessive bleeding, high fever, burns and excessive perspiration, under these circumstances large amounts of fluids and minerals are lost. The treatment of these conditions should be advised by your own doctor or a medical practitioner.

We need to be sure that the water we are taking is fit for us to drink especially if we are going to drink at least 8 glasses a day. In this modern age it is a sad fact that water quality can often be quite poor. More and more reports come out in the mainstream press about impurities in water such as nitrates, trihalomethanes, lead, aluminium chlorine, farm fertilisers and now even more dangerously man made drugs such as female contraceptives, chemicals and even Prozac. The long term side affects have not been studied well enough yet. Many people enjoy fizzy water but fizzy drinks contain carbon dioxide in the bubbles. Carbon dioxide is considered by the body to be a waste product to be eliminated (as the body regards it as poison) so it's not very healthy to drink. Natural water should provide you with significant amounts of minerals. 8 glasses of a good mineral water should supply you with a 6th of your daily calcium intake. However not all bottle water is the same so it is wise to check the source and contents on the label.