

## Is Water Enough? – Hydration

**There is no more important nutrient for the human body than water.** No other substance is as widely involved in the processes and constitution of the body. The body is about 60% water, the blood is 83% water, while the brain is comprised of about 75% water.

### Some of the functions of water include:

1. **Transportation** – nutrients and wastes
2. **Protection** – particularly the joints and maintenance of mucous barriers
3. **Chemical reactions** – such as pH regulation and digestive processes
4. **Electrolyte balance** – such as sodium and potassium
5. **Temperature regulation**
6. **Cell respiration** – energy production

### Thirst:

Our brains signal thirst when the fluid levels of the body become too low or the osmolyte levels (like salt) become too high. The urge to drink is naturally frequent and if ignored becomes increasingly urgent. Nevertheless, many patients will declare that they do not drink much water and are rarely thirsty. Why? The body will tend to adapt to a state of dehydration and the desire to drink recedes. **It is important to reactivate thirst and reawaken the urge to hydrate.**

### The Hypothalamus and Thirst:

The hypothalamus is known to secrete a peptide hormone called ADH (anti-diuretic hormone), also known as vasopressin, which is responsible for direct control of water balance. ADH plays a key role in the regulation of water and sodium in the blood. Without ADH, little water is reabsorbed and dilute urine is excreted. **Anything that stimulates ADH secretion also stimulates thirst.**

### The Adrenals, Stress, and Hydration:

The adrenals have an important role, along with the thyroid, in creating the energy that is essential in maintaining fluid balance. The adrenals also secrete key hormones, including aldosterone. Aldosterone regulates water levels and the body's concentration of minerals, such as sodium and potassium, which assist with hydration.

The adrenals are also responsible for regulating the stress response. Stress is so common today that it has become chronic for many people, creating a state of adrenal fatigue. When the body is stressed, more aldosterone and sodium circulate in the system. Once the stress subsides, aldosterone levels fall and sodium must leave the bloodstream. The sodium passes through the kidneys and exits the body in urination, removing water with it. This may occur even if the water is still needed in the body. **Experiencing high stress levels on a regular basis, can weaken the adrenals and consequently dehydrate the body.** Replacing water alone may not provide the hydration that is needed!

