

## How Does the Body Maintain Water Balance?

Keeping a healthy water balance in the body requires one to drink an appropriate amount of water. Drinking more than the needed amount will lead to annoying frequent bathroom trips to eliminate excess water. Additionally, excessive water drinking can cause serious problems (see water intoxication section below). Nature has provided all living beings with two highly effective mechanisms to maintain healthy water balance:

1. **Thirst.** When the body's water content goes down (dehydration), the desire for water kicks in immediately. Nature has bestowed all living beings with the essential survival instinct of thirst. However, this survival instinct can get compromised when:
  - One eats foods rich in salt, sugar, and chemical preservatives—these make the body hold an excess of fluid in the wrong places, causing swelling of body tissues. Everyone has experienced swollen hands and feet, and a feeling of the bloated body following a salt-rich meal. Excess of sugar in the body pushes kidneys to produce more urine by the process called osmotic diuresis even if the water content of the body is low. That is how diabetic patients get dehydrated. It is critical to manage thirst with plain water and not sugary drinks as these drinks will further lower the water content of the body.
  - Older age and children—after the age of 70 years, the feeling of thirst gets subdued. The elderly are, therefore, more susceptible to dehydration. The children are good at ignoring their thirst feeling when they get preoccupied with play and activity; they need to be reminded to drink water.
2. **Urination.** When there is excessive water in the body, the kidneys increase urine production to get rid of the excess. When the water content is low, the urine output decreases to conserve water. This delicate balance maintained by the kidneys gets disrupted when one consumes too much salt, sugar, chemical preservatives in the food, and sugary or alcoholic drinks. Finally, the feeling of thirst, the color, and frequency of urine are sensitive indicators of water balance in the human body; that is only if the food and water intake are healthy.