

Facts about Dehydration

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COMMENTARY

Dehydration occurs when water intake is not enough to replace free water lost due to normal physiologic processes, including breathing, urination, and perspiration, or other causes, including diarrhea and vomiting. Dehydration can be life-threatening when severe and lead to seizures or respiratory arrest, and also carries the risk of osmotic cerebral edema if rehydration is overly rapid. Dehydration happens when your body doesn't have as much water as it needs. Without enough, your body can't function properly. You can have mild, moderate, or severe dehydration depending on how much fluid is missing from your body. Thirst is the most obvious sign of dehydration. Other signs include fatigue, lethargy, dizziness, headache, and muscle cramps. You may also urinate less often than you normally do, or have dark urine. In addition, your skin may be drier and less elastic than usual, and you may be prone to confusion and feeling faint.

Dehydration is a deficit of total body water, with an accompanying disruption of metabolic processes. It occurs when free water loss exceeds free water intake, usually due to exercise, disease, or high environmental temperature. Mild dehydration can also be caused by immersion diuresis, which may increase risk of decompression sickness in divers.

Most people can tolerate a 3-4% decrease in total body water without difficulty or adverse health effects. A 5-8% decrease can cause fatigue and dizziness. Loss of over ten percent of total body water can cause physical and mental deterioration, accompanied by severe thirst. Death occurs at a loss of between fifteen and twenty-five percent of the body water. Mild dehydration is

characterized by thirst and general discomfort and is usually resolved with oral rehydration.

The hallmarks of dehydration include thirst and neurological changes such as headaches, general discomfort, loss of appetite, decreased urine volume unless polyuria is the cause of dehydration, confusion, unexplained tiredness, purple fingernails and seizures. The symptoms of dehydration become increasingly severe with greater total body water loss. A body water loss of 1-2%, considered mild dehydration, is shown to impair cognitive performance. While in people over age 50, the body's thirst sensation diminishes with age, a study found that there was no difference in fluid intake between young and old people. Many senior citizens suffer symptoms of dehydration. Dehydration contributes to morbidity in the elderly population, especially during conditions that promote insensible free water losses, such as hot weather.

The treatment for minor dehydration that is often considered the most effective is drinking water and stopping fluid loss. Plain water restores only the volume of the blood plasma, inhibiting the thirst mechanism before solute levels can be replenished. Solid foods can contribute to fluid loss from vomiting and diarrhea. Urine concentration and frequency will customarily return to normal as dehydration resolves.

It's normal to lose water from your body every day by sweating, breathing, peeing, and pooping, and through tears and saliva. Usually you replace the lost liquid by drinking fluids and eating foods that contain water. If you lose too much water or don't drink and eat enough, you can get dehydrated.

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