

Water & Electrolyte Imbalance

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The human body is composed of up to 60 percent water. Our bodies need adequate fluid and electrolyte levels to regulate body functions. Physical activity, medications, illnesses and environmental factors can cause dehydration or hyper hydration and corresponding electrolyte imbalances. It is important to recognize the symptoms and causes of electrolyte imbalance, and try to avoid them.

Water

- The human body needs water to produce blood and digestive fluids, transport and absorb nutrients and eliminate waste. The average healthy adult uses approximately 10 cups (2.5 liters) of water performing basic bodily functions. The foods and liquids you consume replenish the water and electrolytes in your body.

Electrolytes

- Electrolytes--particularly calcium, potassium and sodium--help fluid levels in the body. Each electrolyte performs a specific function and must stay at the right levels. The body typically regulates the amounts of fluid and electrolytes in the body, utilizing what it needs and excreting excess fluids and electrolytes. Dehydration, insufficient fluid levels and hyper hydration--excessively high fluid levels--can cause imbalances of specific electrolytes and result in potentially dangerous health conditions.

Dehydration

- When your body uses more water and electrolytes than you replace, you can become dehydrated. Common causes of dehydration include vomiting, diarrhea, fever, excess sweating and intense physical activity. Young children, seniors and people with chronic illnesses are at higher risk for dehydration. In some cases, dehydration can result in high levels of calcium (hypercalcemia), potassium (hyperkalemia) and sodium (hyponatremia). Increasing fluid intake can treat most cases of dehydration and high electrolyte levels. Severe cases may require medical treatment.

Hyper Hydration

- Drinking excessive amounts of water, known as hyper hydration, can flush the body of necessary electrolytes, resulting in low levels of calcium (hypocalcaemia), potassium (hypokalemia) and sodium (hyponatremia). Hyper hydration is usually associated with athletes who overestimate their need for fluids and consume water faster than their body can process it. Individuals taking medications or suffering from medical conditions that cause them to retain fluids can also suffer from low electrolyte levels. Low electrolyte levels are usually treated by taking supplements or eating foods rich in the missing electrolyte. Severe cases may require medical treatment.

Avoiding Electrolyte Imbalance

- Healthy adults can maintain healthy water and electrolyte levels by drinking adequate amounts of water and eating a balanced diet. Individuals with chronic medical conditions and those taking medications that affect fluid and electrolyte levels should regularly consult a physician to monitor their conditions. Athletes may be able to avoid dehydration and hyper hydration by choosing sports drinks fortified with electrolytes over plain water.