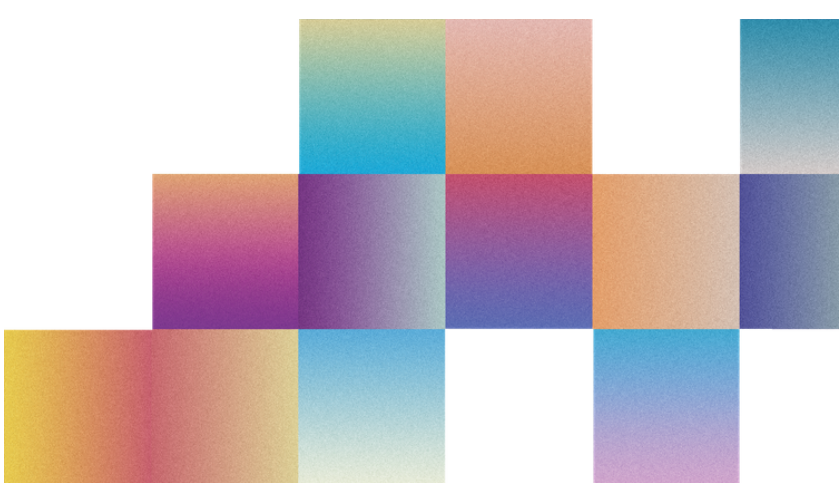




Understanding Hydration Loss: Types, Stages & Impact

Not all dehydration is the same - even low levels of body fluid loss can affect how you think, move and stay safe. Recognizing types and stages of dehydration is essential for effective hydration strategies, whether you're an athlete, a shift worker, or anyone exposed to heat or physical strain.

WHAT IS DEHYDRATION?

Dehydration happens when fluid loss exceeds fluid intake, leading to a water deficit in the body. It impacts every major system - including your brain, muscles and heart. However it differs depending on how much water versus sodium (salt) is lost.

Keeping body water and salts (electrolytes) well balanced is key to good hydration.



TYPES OF DEHYDRATION:

ISOTONIC

When water and salts (electrolytes) are lost in equal amount. It is the most common type of dehydration.

- Blood sodium remains in normal range
- Common in; exercise, moderate sweating, vomiting or diarrhea

Symptoms: Fatigue, thirst, low urine output, decreased physical / mental performance

HYPERTONIC

When more water is lost than sodium (electrolyte), leading to high blood sodium/salt concentration.

- Common in; heat exposure, fever, dry climates

Symptoms: Intense thirst, dry mouth, irritability, dizziness. High danger in infants and elderly.

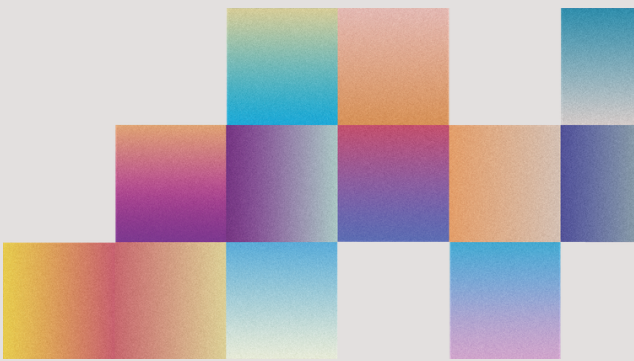
HYPOTONIC

When more sodium is lost than water, leading to low blood sodium

- Common when drinking water-only during long periods of exercise, excessive sweat loss, low sodium diets.

Symptoms: Nausea, cramps, confusion, muscle weakness. In severe cases leads to hyponatremia - seizures, coma

Hydration loss doesn't just make you thirsty - it impacts on your ability to perform, your reactions and endurance.



STAGES OF DEHYDRATION:

Hydration level can be measured by % loss body mass (weight) lost in fluid:

STAGE:	% Body mass Loss:	Symptoms:	Performance & Health Effects:
Mild	1-2%	Thirst, dry mouth, fatigue	Drop in endurance, decline in focus, early cognitive decline.
Moderate	3-5%	Dizziness, headache, reduced alertness	Increase injury risk, decrease in strength & decision making
Severe	>5%	Rapid heartbeat, confusion, fainting	Risk of heat stroke, organ stress, hospitalisation

Even 1-2% loss impacts mental focus and performance - especially in high-heat, high-stakes environments^{1,2}

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