

# Hydration & Performance Guide

Optimal fluid intake for cognitive and physical output

## WHY HYDRATION MATTERS FOR PERFORMANCE

Even mild dehydration (1–2% body weight) reduces cognitive performance by up to 20%.

A 2012 study in *J. Nutrition* found 1.4% dehydration impaired mood, concentration, and working memory in women. Physical output declines with as little as 2% fluid loss.

## DAILY INTAKE TARGETS

General baseline (European Food Safety Authority guidelines):

- Women: 2.0 L total fluid daily (including food sources ~20%)
- Men: 2.5 L total fluid daily
- Active individuals: add 500–750 mL per hour of moderate exercise
- High heat / high altitude: increase baseline by 500 mL minimum

## TIMING PROTOCOL

- Morning: drink 400–500 mL within 30 min of waking (overnight deficit)
- Pre-work block: 250 mL 20–30 min before sustained cognitive work
- Pre-exercise: 400–600 mL 2 hours before training
- During exercise: 150–250 mL every 15–20 min
- Post-exercise: 1.5x fluid lost (weigh before and after if precise)
- Evening: taper fluid 90 min before bed to avoid sleep disruption

## ELECTROLYTE CONSIDERATIONS

Plain water is sufficient for sessions under 60 min. For longer sessions or high-sweat conditions, electrolyte replacement is warranted.

- Sodium: primary electrolyte lost in sweat (500–700 mg/L sweat)
- Potassium: supports fluid balance, found in whole foods (banana, potato)
- Magnesium: involved in 300+ enzymatic reactions; often depleted in athletes
- Avoid: high-sugar sports drinks during low-intensity work (insulin spike)

## COGNITIVE PERFORMANCE CHECKLIST

- Start each work day with a full glass of water before coffee
- Keep water visible at desk (out of sight = out of mind)
- Check urine color: pale yellow = well hydrated; dark = drink now
- Set hourly reminders if you routinely forget to drink during focus blocks
- Note: coffee/tea counts toward fluid intake (mild diuretic effect is minor)
- Headache, fatigue, difficulty concentrating: consider dehydration first

## PHYSICAL PERFORMANCE CHECKLIST

- Pre-session: urine should be pale yellow before you start