BEVERAGE COMPOSITION & HYDRATION POTENTIAL

Reference: Maughan et al. IJNSEM 2019

Designed by @YLMSportScience

3 cohorts, each of 12 men, ingested 1 L of beverages containing 4 different concentrations of a single component (sucrose, sodium, or caffeine) to evaluate the influence of these components on the hydration potential of beverages.

**SUCROSE**
- Net fluid balance (g)
- Predrink: 1000
- 0, 1, 2, 3, 4 hours after drink intake:
  - 20%
  - 10%
  - 5%
  - 0%

**SODIUM**
- Net fluid balance (g)
- Predrink: 1000
- 0, 1, 2, 3, 4 hours after drink intake:
  - 1.2g/L
  - 0.6g/L
  - 0.3g/L
  - 0.2g/L

**CAFFEINE**
- Net fluid balance (g)
- Predrink: 1000
- 0, 1, 2, 3, 4 hours after drink intake:
  - 0-400mg

Beverage carbohydrate & sodium content influence fluid delivery & retention in the 4 hr after ingestion, but caffeine up to 400 mg/L does not.

Key drivers in the fluid retention:
- Energy density
- Electrolyte content

Athletes can use this information to guide their daily hydration practices.