Nutritional Strategies to Improve Performance

P -_____
A -_____
C - _____
C - _____
C - _____

Protein

Protein is used for muscle repair and adaptation to training.
Protein should be consumed STRAIGHT after intense exercise as it reverses the negative protein balance.
Protein can be in the form of protein shakes and bars or in food such as steak and chicken.

Apply the Glycemic Index

Carbohydrates provide fuel to restore muscle glycogen levels.

High GI = Digested Quickly
Low GI = Digested Slowly

First 15-30 minutes post exercise are considered to be vital in terms of carbohydrate replenishment.
50-100g High GI Carbs in first 15-30min and 25-50g every 15min for next 2 hours.
Low GI food for next 24 hours.

Carbohydrate Loading

Train less and eat more!
1-4 days of tapering and following high carbohydrate diet = extra glycogen stores to use.

Carbohydrate Gels

Concentrated source of carbs.
Only for use in events longer than 90 min.
Helps replenish carbs so they last longer than 2 hours results in glycogen sparing.
MUST be taken with water
- to reduce the CHO concentration to avoid gastric upset.
- Increases absorption rate
- reduces the risk of dehydration.

Caffeine

- Speeds up Central Nervous System and react quicker to outside stimulus
- Glycogen sparing effect
- improved muscle contractility
- Increased alertness/concentration/aggressiveness/competitiveness
- Decreased perception of fatigue

Protein + Carbs = AWESOME

When added together carbs also stimulate insulin that stimulates the muscle to take up the amino acids (Protein) for rebuilding.

Hydration

Water

- Replaces fluid
- Any event up to an hour water is best.

Before 200—600mL prior to event

During: 500-1000mL during the event

After: 1.5L x every kg lost.

Water vs Sports drinks

- Sports drinks more palatable (tastier)
- Water may affect sodium levels
- Water may inhibit thirst mechanism

Sports Drinks

Isotonic
- Medium 6-8% CHO concentration (same osmolality as human body)
- Helps retain fluids
- Refuel CHO
- Replace electrolytes

Hypotonic (Low)
- Low level of CHO
- Absorbed fastest by the body
- Replace electrolytes
- replace fluids without excess CHO
- Good for athletes who need to keep weight down e.g jockeys

Hypertonic (High)
- High level of CHO
- Absorbed slowest by the body
- Great for us during and after an endurance event
- Replace electrolytes.

Intravenous Rehydration (IV)

Administration of fluid via a needle into a vein.

+ Positives
- Hydrate at the same rate as water
- Useful for people who are unconscious

- Negatives
- Requires medically trained person
- Time consuming
- risk of infection
- banned unless for medial reasons
- No real benefit over water.

Weight at the start - scales

Pre-game
- Caffeine (throw stuff at them?
- Sports Drink
- Water

Play multi-sport - dice

1. Basketball
2. Netball
3. Ultimate Frisbee
4. Soccer
5. Hockey
6. Handball/dodgeball?

- Drinks breaks
- Carb Gels

Recovery
- Protein Shake and Bar
- High GI food = Lollies
- Low GI food = Bread?

Equipment
Scales
Dice
Basketball
Netball
Frisbee
Soccer ball
Hockey puck
Hockey sticks
Handball/dodgeballs
Goals