When it comes to nutrition, it's not only what your athletes eat and drink but when they eat and hydrate is equally as important.

**ASSESSING THE STUDENT-ATHLETE**

Performance nutrition is the study of nutrients and their timing to support physiological processes that occur in the body. **When assessing the student-athlete, everything must be individualized. Things to consider include:**

- Demographics that have shaped current lifestyle habits including family dynamics, racial and cultural background, and home location
- Personal preferences
- Allergies and intolerances
- Finances and food security
- Gameday routines
- Needs based on sport, gender, age, weight, composition, position/event within sport

If available, utilize technology to better assist in assessments of student-athletes. Examples include:

- Metabolic cart
- Polar
- Body composition tools (DXA, BodPod, BIA, Skinfold calipers)
- Stadiometer/scale

**WHY “WHEN” MATTERS**

Frequent meals and snacks support availability of nutrients involved in exercise metabolism by:

- Increasing energy availability
- Improving overall performance
- Reducing lean mass loss during hypocaloric states
- Increases anaerobic power and lean mass
- May aid in body fat reduction
- Increasing nutrient availability, specifically carbohydrates, proteins, and fluids to improve performance and facilitate recovery
- Ingestion of larger meals immediately before exercise may lead to GI distress

**NUTRIENT TIMING**

Delivery of nutrients at specific times can be utilized to support training adaptations related to muscular development, glycogen replenishment and recovery.

- **Fat:** Limited data in timing of dietary fats for exercise performance
- **Micronutrients:** Limited data related to micronutrient timing and derived ergogenic benefits
- **Carbohydrates:** The closer we approach practice/competition, the simpler and less complex is favorable
  - **Special timing considerations:** Carbohydrate loading
    - 24 hour protocol: 3-minute bout of intense exercise followed by 10g/kg of carbohydrates for the next 24h
    - 72 hour protocol: 48 hours of tapered training while consuming 10-12 g/kg of carbohydrates; 24 hours of rest while consuming 10-12g/kg of carbohydrates
- **Protein:** Protein turnover occurs throughout the day due to varying metabolic needs and training stimuli
  - In athletes, goal is to maintain positive net protein balance or positive nitrogen balance to support glycogen replenishment
  - Due to varying digestion of protein sources, types of protein may be recommended at specific times based on goals
- **Fluid:** Like carbohydrates, suboptimal hydration levels can limit performance
  - Reduced GI distress related to ingestion of larger meals

**Macronutrient ranges based on body weight which vary according to training period, intensities, goals:**

- Carbohydrates: 3-12 g/kg
- Protein: 1.2-2.4 g/kg
- Fat: 1g/kg
YOU ARE WHEN YOU EAT: TIMING IS EVERYTHING

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