



Performance Nutrition: Fuel the PAUSE

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“

Nutrition can make an average athlete GREAT, or a great athlete AVERAGE. ”

Academy of Nutrition Dietetics

NOW MORE THAN EVER!



OBJECTIVES



HOW DO ATHLETES GET ENERGY

Energy (ability to work) comes from food (calories) found in macronutrients: Carbohydrates, Protein, Fat

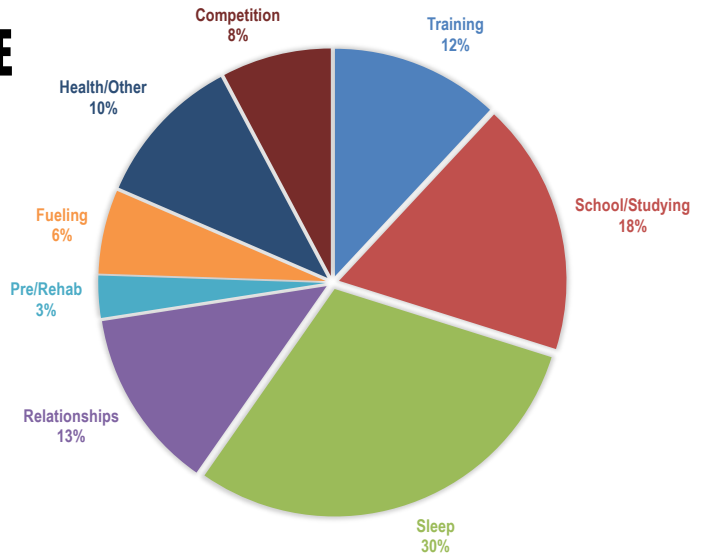
Energy needs and macro. periodization depend on the demand of the sport, time of season, environment and athlete's goal.

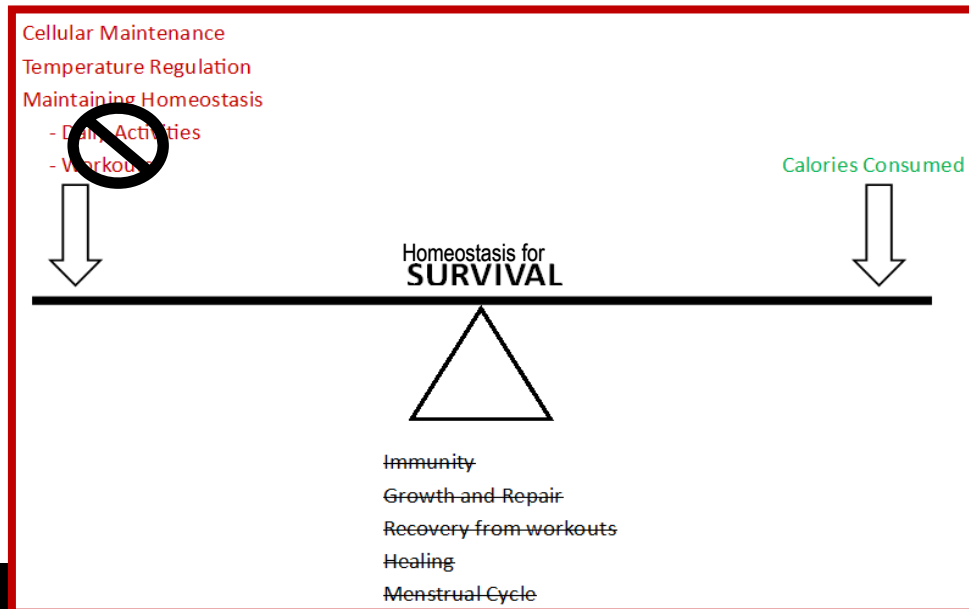


STUDENT-ATHLETE TIME

Managing energy levels is a daily priority for student-athletes to stay healthy & to perform in the classroom as well as in your sport!

- Energy available to support:
- performance
 - body's health
 - daily activity
 - training
 - recovery
 - growth





BE AWARE: SIGNS & SYMPTOMS OF LEA

- Rapid and unsustainable **weight loss** ($\geq 5\%$ in 1 month = malnutrition)
- **Training hard, but not improving performance**
- Inability to gain or build muscle or strength
- Decreased muscle strength & performance decrements
- **Stress fractures or repeated bone injuries**
- Always being hurt or injured, **not healing as expected**
- **Frequent Illness**
- Chronic fatigue with or without anemia
- **Absent or irregular menstrual cycles (females)**
- Increased Irritability, Depression
- Decreased Competitive and Sex Drive (males)
- Gastrointestinal problems
- Disordered-eating thoughts such as skipping meals, or avoiding certain foods, fad/crash dieting



LOW EA

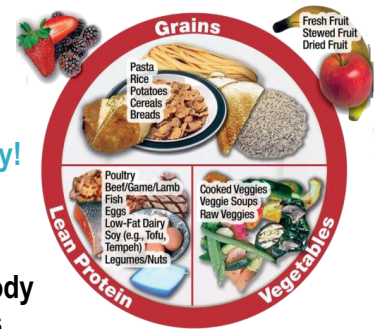
- › Impair your body's ability to use stored energy → **poor performance**
- › Increase fat stores in the body → **poor metabolism** → **poor performance**
- › Decrease your production of growth hormone (growth & recovery) → **poor performance**
- › Steals nutrients from your bones → **stress fracture, fatigue, and decreased bone density** → **POOR PERFORMANCE**



ENERGY GOALS



- › Honor hunger and fullness cues AND remember: appetites are artificially suppressed after training, and not refueling your body can lead to a slow recovery, overuse injuries, and stress fractures
- › Develop a realistic, performance-oriented, health-minded weight and body composition goal
- › Performance-driven motivation in relation to nutrition - **PURPOSEFUL FUELING**





CARBOHYDRATES – FUEL

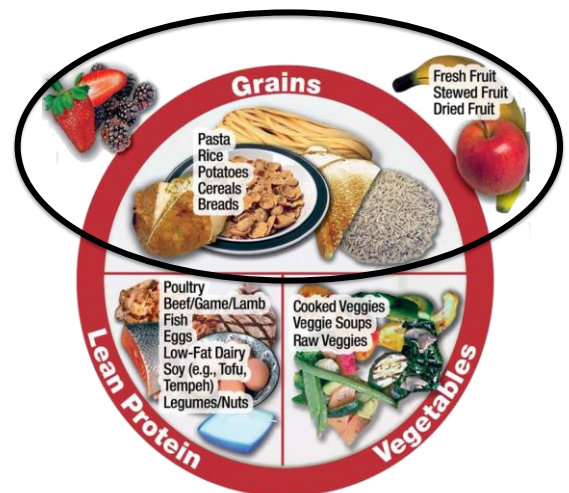
NECESSARY FOR PERFORMANCE

- **Key fuel** source for maximal exercise, especially prolonged continuous or high-intensity exercise
- Delivers protein to muscles after training
- Best brain functions – stay in the zone!

Limited storage: stored in liver and muscles (glycogen)!

Inadequate stores result in:

- Fatigue
- Increased perceived exertion
- Impaired competition
- *Reduced immune system function*
- Increased risk of injury



HOW MUCH: 50-65% total intake

CARBOHYDRATE TYPES

COMPLEX (slow)

- Whole grains
 - Oats, quinoa, brown rice, whole wheat products
- Starchy vegetables
 - Peas, corn, carrots, potatoes
- Beans and legumes
 - Pinto beans, kidney beans, lentils



SIMPLE (quick)

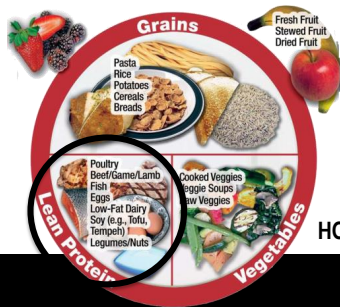
- Fruits
- Milk products
- Gatorade/energy chews
- Refined grains
- *Sugary processed foods*



PROTEIN – REPAIR

Role in the body:

- Building blocks for tissue maintenance, repair, and growth with training
- Hormone production and *immune support*
- Feel satisfied and control blood sugar
- Energy source (lesser degree)



What Protein is NOT:

- NOT an efficient energy source and will not provide fuel during training
- More ≠ Better!

Spread protein throughout the day

~ 30 g at a time

- Include at every meal & snack

-Protein supplements not necessary, but can fill gaps

Breakfast 30g Pro → Snack 10g Pro → Lunch 30 g Pro → Recovery 20g Pro → Dinner 30g Pro → Snack 10g Pro

HOW MUCH: ~10-25% of total intake

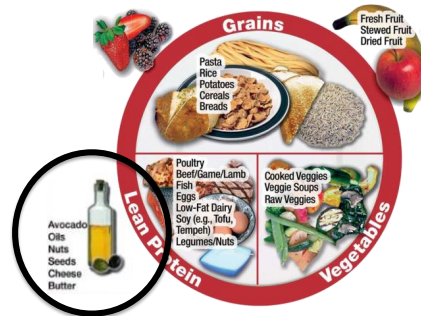


✂ FAT – PROTECT

Fat is essential

- Thermoregulation – SWEAT CONTROL
- Supports *immune function*
- Hormone Production
(muscle recovery and menstrual regulation)
- Provides essential vitamins and minerals (Vitamins A, D, E, and K)
- Helps feel full and control blood sugar
- Fuel for low intensity & trained endurance work

HOW MUCH: ~20% of total intake



↑ Functional Fats

Monounsaturated & Polyunsaturated Fats

Salmon, tuna, cod, canola & olive oil, avocado, hummus, nuts, nut butters, coconut, flax, chia; fat in dairy and meat

↓ Unfunctional Fats

Trans & Saturated Fats

fried foods and fried snacks, cakes, pies, cookies, margarine, doughnuts, frozen pizza; fat in dairy and meat

→ **DECREASED RECOVERY!**



PILLARS: FUELING THE “PAUSE”



1. FINE TUNING YOUR PLATE

Energy needs and macronutrient distribution depend on the demand of the position, time of season, environment and your goal.

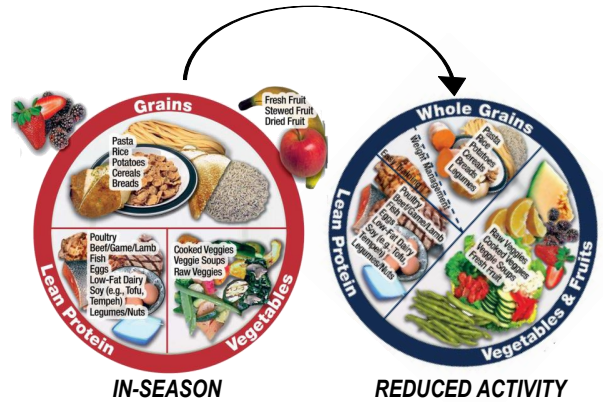


PAUSE = lower intensity training period = Need for NUTRITION TRANSITION



CARBOHYDRATE TRANSITION

- Needs are typically *lower* in periods of decreased training load to prevent excess weight gain, **NOT CUT OUT!**
 - Used for fuel so the protein eaten can be used to build and repair muscle!
- Focus on **COMPLEX CARBS** (whole grains, beans, starchy vegetables)
- Choose no-sugar-added beverages
- Save sports nutrition products (Gatorade, cliff bars, energy chews) for when you are back to high intensity training

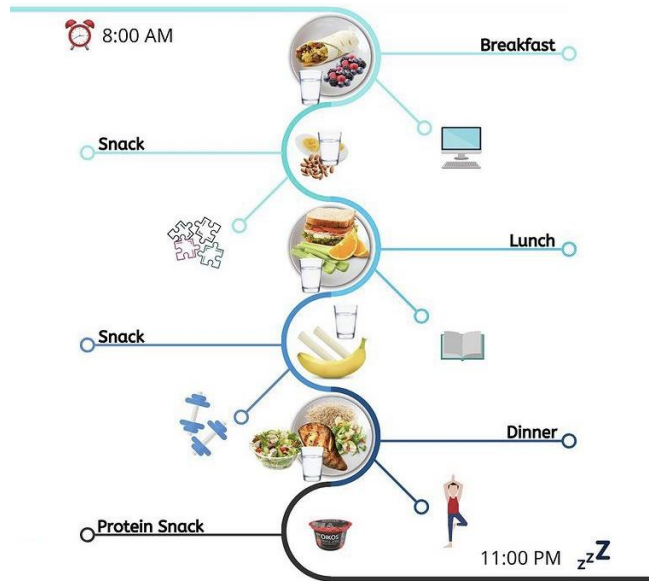


- Mostly vegetable & fruit
- Add protein & functional fats
- Finally, add fiber rich whole grains



2. RAPTOR ROUTINE

- Maintain a consistently *FUELED* schedule
- Eat every 3-4 hours
- *Snack with purpose: fiber and protein rich snacks to feel full and satisfied*



PURPOSEFUL SNACKS

Pick 1 Carb	<table border="0"> <tr> <td>Berries</td> <td></td> <td>Cereal</td> <td></td> </tr> <tr> <td>Banana</td> <td></td> <td>Pretzels</td> <td></td> </tr> <tr> <td>Apple</td> <td></td> <td>Popcorn</td> <td></td> </tr> <tr> <td>Bread</td> <td></td> <td>Carrots</td> <td></td> </tr> <tr> <td>English Muffin</td> <td></td> <td>Granola Bar</td> <td></td> </tr> </table>	Berries		Cereal		Banana		Pretzels		Apple		Popcorn		Bread		Carrots		English Muffin		Granola Bar		+	<table border="0"> <tr> <td>Yogurt Cup</td> <td></td> <td>Hummus</td> <td></td> </tr> <tr> <td>Peanut Butter</td> <td></td> <td>Trail Mix</td> <td></td> </tr> <tr> <td>Turkey Slices</td> <td></td> <td>Cheese Stick</td> <td></td> </tr> <tr> <td>Cheese Slices</td> <td></td> <td>Cottage Cheese</td> <td></td> </tr> <tr> <td>Milk</td> <td></td> <td>Protein Bar</td> <td></td> </tr> </table>	Yogurt Cup		Hummus		Peanut Butter		Trail Mix		Turkey Slices		Cheese Stick		Cheese Slices		Cottage Cheese		Milk		Protein Bar		Pick 1 Protein
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ALL SNACKS = CARB + PROTEIN

Carb = Fuel & Energy | Protein = Repair & build muscle mass





TRAINING & FUELING SCHEDULES

AM TRAINING

5:30 AM – **Pre-Workout Fuel:** Banana/fruit/ granola bar + water + pre-workout hydration
 6:00 AM – PRACTICE/TRAIN
 7:15 AM – **Recovery:** protein shake
 8:00 AM – **Breakfast:** eggs, oatmeal or wheat toast, fruit, greens + water
 10:30 AM – **Snack:** apple + protein bar
 12:00 PM – **Lunch:** Turkey and cheese deli sandwich on wheat bread (2 sandwiches) + cucumbers & ranch + 1 fruit + milk
 3:00 PM – **Snack:** grapes + bag of jerky/tuna
 6:00 PM – **Dinner:** 2 fist of rice/pasta/potato + 2 palms of meat + spinach salad + fruit + milk
 9:00 PM - **Snack:** Berry smoothie with Greek yogurt + milk + 1 scoop protein powder
 10:30 PM – SLEEP

AM & PM TRAINING

5:30 AM – **Pre-Workout Fuel:** Toast with PB and banana + water + pre-workout hydration
 6:00 AM – PRACTICE/TRAIN
 7:15 AM – **Recovery:** protein shake
 8:00 AM – **Breakfast:** eggs, oatmeal or wheat toast, fruit, greens + water
 10:30 AM – **Snack:** fruit + protein bar
 12:00 PM – **Lunch:** Turkey and cheese deli sandwich on wheat bread (2 sandwiches) + carrots and hummus+ 1 fruit + milk
 2:30 PM – **Pre-practice Snack:** oatmeal or granola bar + banana or energy chews + water
 3:30 PM – PRACTICE/TRAIN
 5:30 PM – **Recovery:** protein shake
 6:30 PM – **Dinner:** 2 fists of rice/pasta/potato + 2 palms of meat + spinach salad + fruit + milk
 9:30 PM - **Snack:** Greek Yogurt + 1 scoop protein powder + 1/3 cup granola
 10:30 PM – SLEEP

PM TRAINING

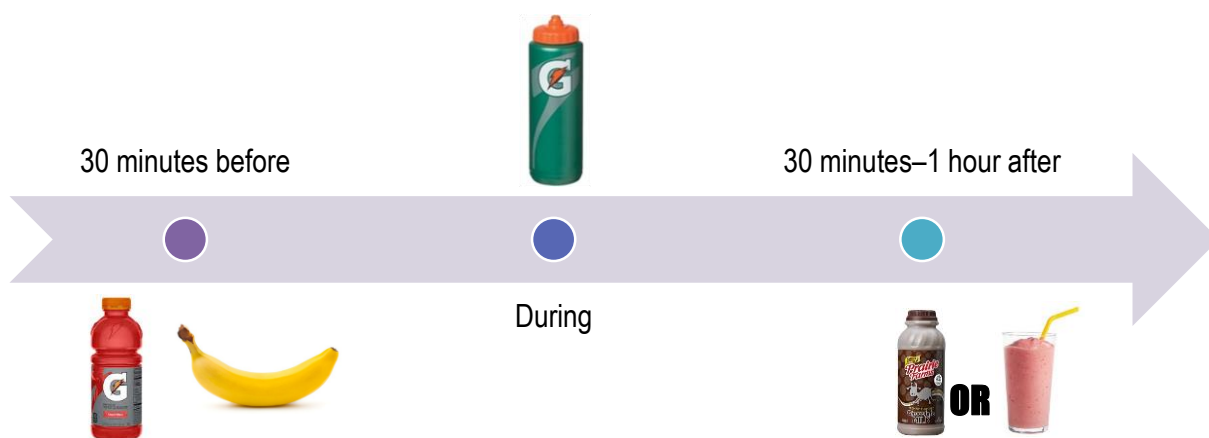
7:00 AM – Wake up
 8:00 AM – **Breakfast:** eggs, oatmeal or wheat toast, fruit, salad + water
 10:30 AM – **Snack:** fruit + protein bar
 12:00 PM – **Lunch:** Turkey and cheese deli sandwich on wheat bread (2 sandwiches) + side salad + 1 fruit + milk
 2:30 PM – **Pre-practice Snack:** oatmeal or granola bar + banana or energy chews + water
 3:30 PM – PRACTICE/TRAIN
 5:30 PM – **Recovery:** protein shake
 6:30 PM – **Dinner:** 2 fist of rice/pasta/potato + 2 palms of meat + spinach salad + fruit + milk
 9:00 PM - **Snack:** 3 eggs + 1 slice toast+ milk
 10:30 PM – SLEEP



These are sample meal plans for someone in **MAINTENANCE** phase. If you are trying to **GAIN** or **LEAN**, adjust portions at meals.



3. PRACTICE YOUR FUELING & RECOVERY ROUTINE



PRE-EXERCISE FUELING

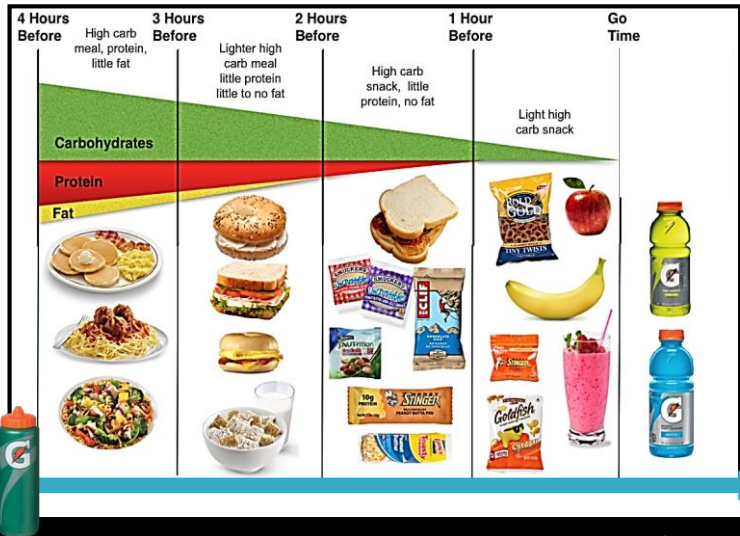
Purpose: to provide adequate carbohydrate energy and optimal hydration for peak performance and injury prevention

• **Best Choice:**

- 3-4 hour: eat a meal with complex carbohydrates and lean protein
- 1-2 hours: simple carbohydrates and some lean protein
- 30 minutes to 1 hour: simple carbohydrates in quick digesting or liquid form

• **Bad Choice:**

- High fat
- High fiber
- GI distressed foods



POST-EXERCISE (RECOVERY) FUELING

Purpose:

- **REPLENISH** energy stores
- **REPAIR** and rebuild muscle
- **REPLACE** fluid and electrolytes

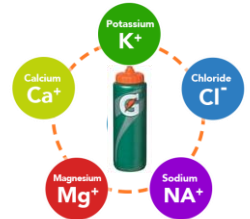


Should:

- Eat within first 30 minutes
 - Replace fluids and electrolytes
 - High-carbohydrate foods – 30-60 g
 - With Protein – 15-30 g
 - Examples: Fruit and Greek yogurt, Clif bar and milk, turkey wrap, protein smoothie, protein shake, chocolate milk and protein granola bar
- Eat within 2 hours
 - Drink 2-3 cups fluid for every pound lost
 - Eat a high-carbohydrate meal with lean protein
 - Examples: Turkey sub, Stir-fry, Chicken Burrito



3:1
Carbs : Protein



4. FUEL YOUR IMMUNE SYSTEM

Immune System – the bodies defense mechanism against foreign invaders like bacteria, parasites, and viruses.

Factors the weaken:

- Older age
- Environmental toxins
- Poor diet
- Chronic disease
- Chronic mental and physical stress
- Lack of sleep

Factors that strengthen:

- Younger age
- **Balanced Diet**
- Hydration
- Proper rest and sleep
- Healthy mental health practices
- Exercise



NUTRITION FOR IMMUNITY



FOCUS

Energy Balance

ALL nutrients and adequate energy are needed for proper immune function

FOODS

Natural fruits and vegetables, lean protein, functional fats, high fiber whole grains

ACTION

- Do NOT skip meals
- Limit fried, greasy foods

Antioxidant Additions

Vitamins (C, E, A, D) and minerals (Selenium, Zinc) with our colorful foods!

Tomatoes, oranges, pineapple, kale, berries, eggplant, cashews, seeds, yogurt, beans

- Eat a REAL food from every color of the rainbow this week!

Gut Health

Strengthen gut microflora with pre- & probiotics

Probiotics: yogurt, kombucha, miso soup, kimchi, sauerkraut, tempeh
Prebiotics: jicama, onion, garlic, asparagus, oats, wheat, barley, mushrooms

- Choose one of these foods intentionally each week to try!



5. MONITOR YOUR MENTAL HEALTH

Nutrition plays a strong role in both **physical** and **mental health**



- People who eat a diet high in whole foods such as fruits, vegetables, nuts, whole grains, legumes, fish and unsaturated fats (like olive oil) are up to **35% less likely to develop depression** than people who eat less of these foods



- Highly processed, fried and sugary foods have little nutritional value and should be limited.
- Research shows that a diet that regularly includes these kinds of foods can **increase the risk of developing depression by as much as 60%**.



NUTRIENTS TO KEEP IN *MIND*



FOCUS

Omega-3 Fatty Acids

Essential to brain health; People who eat diets rich with Omega 3 fatty acids have up to 30% reduced risk of depression

FOODS

Albacore tuna, salmon, sardines, flax seeds, chia seeds, walnuts

ACTION

- Intentionally choose 1 Omega-3 source per day
- Discuss supplementation with a Sports RD

Sleep

Essential in supporting hormonal health for mental health AND athletic performance

Tart cherries, casein rich proteins (Greek yogurt, cottage cheese), walnuts

- Aim for 7-9 hours restful sleep per night
- High protein bed time snack!

Vitamin D

Important for optimal brain functioning, including mood and critical thinking.

**Fatty fish, eggs, milk, fortified foods, cod liver oil
SUMMER sunlight**

- Choose one of these foods intentionally each week to try!
- Discuss supplementation with a Sports RD



MENTAL HEALTH DURING THE PANDEMIC

Stress eating?



Stick to your Raptor Routine

- If you think you want to eat but it is not mealtime, wait 10-15 minutes to see if you are still hungry.
- If you are typically hungry at a certain time between meals, plan a proactive time for a purposeful snack

Hydrate!

- If you think you really are hungry, but it is not mealtime, drink some water and see if you feel better. Thirst is often mistaken for hunger..
- Avoid drinking a sweetened beverage as that spikes your blood sugar without a performance purpose

Portion Control

- Portioning out meals and snacks ahead of time will help. Buying snack-size bags can be very helpful to avoid overeating.
- Double check your balanced meals! Undereating throughout the day can increase cravings.

REACH OUT FOR SUPPORT



KEY FUELING TIPS

Aim to fuel every 3-4 hours within your Raptor Routine, being mindful of hunger and fullness cues

Stay on track with at home workouts, practicing your fuel boosting and recovery snack

Fill plate with mostly vegetables and fruit, lean protein and functional fat; then add fiber-rich whole grains

Experiment with recipes and meal prepping to get ready to fuel for busy schedules ahead

Snack with purposeful choices, pairing your carbohydrate with protein and save sports products for sport

Make an intentional choice to fuel your immunity and mental health – reach out for support

EVERYDAY



**RAPTOR
READY**



RELIABLE RESOURCES



Training HAUS

- 952.456.7650
- TrainingHAUS.com



CPSDA
COLLEGIATE AND PROFESSIONAL
SPORTS DIETITIAN ASSOCIATION

Collegiate and Professional Sports Dietitian Association

- Sportsrd.org



United States Olympic Committee

- Teamusa.org/nutrition



Eat2Win

- Sports Nutrition App



The Female & Male Athlete Triad Coalition

- <https://www.femaleandmaleathletetriad.org/>

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QUESTIONS?

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