

A close-up photograph of a baseball and a leather baseball glove resting on a dark, weathered wooden surface. The baseball is in the upper left, showing its white leather cover and red stitching. The glove is in the upper right, showing its brown leather material and metal grommets. The lighting is dramatic, highlighting the textures of the leather and wood.

Performance Nutrition for Umpires

Carrie Mullin Innes, MSc, RD, IOC Dip Sports Nutr

Outline

Physical & Mental Demands

Fueling for Performance

Recovery after & between
games

Hydration



Physical Demands

- ? Predictability work required
- Baseball/Softball - sprinting, pivoting, static squat position, fast reaction time
- Tournaments - multiple games in a day/weekend
- Outdoor temperature/environmental conditions
- Stress/strain on joints

Mental Demands

QUICK JUDGEMENT

FOCUS

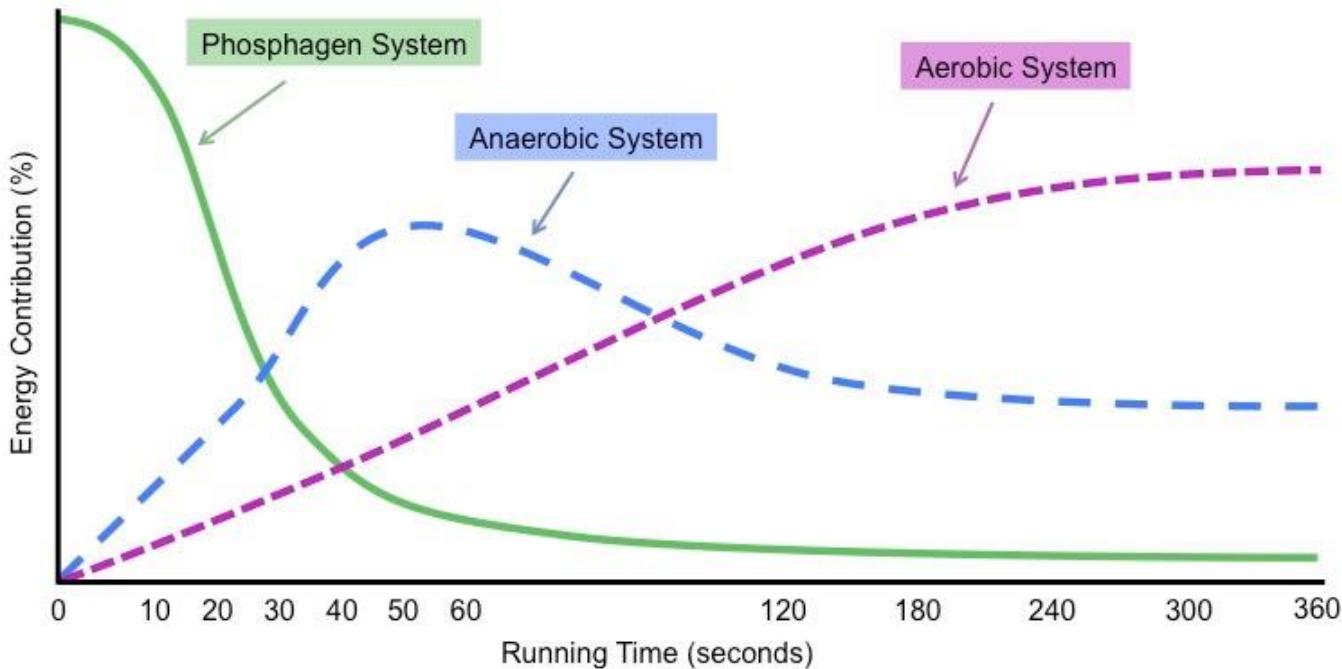
REMAIN SHARP

MAINTAIN
CONCENTRATION

Nutritional Factors that affect Performance

- Lack of energy
- Lactic Acid Accumulation
- Dehydration
- Micronutrient deficiencies

Energy Systems During Exercise



Phosphagen System
• 8 – 10 seconds
• 100 m sprinter

Creatine



Anaerobic System
• 1 – 2 minutes
• 400 m swimmer

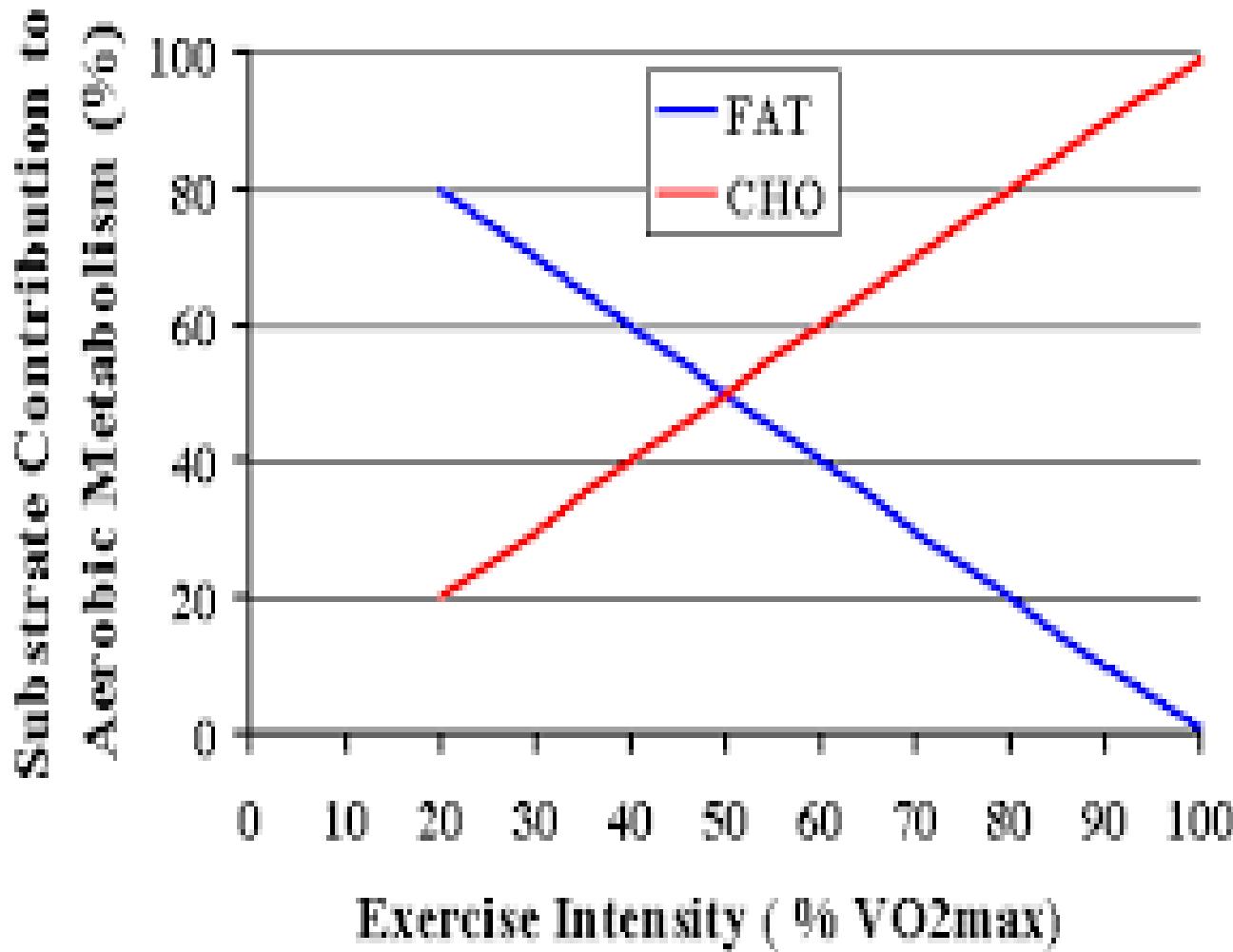
Carbohydrates



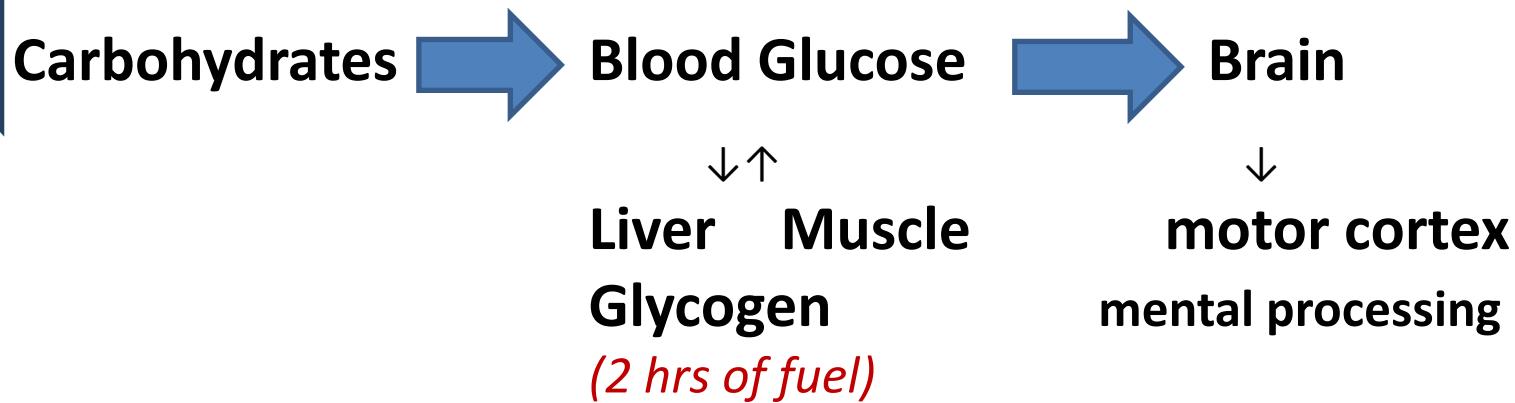
Aerobic System
• Unlimited time
• Marathon cyclist

Carbohydrates & fat

Fuel source for exercise

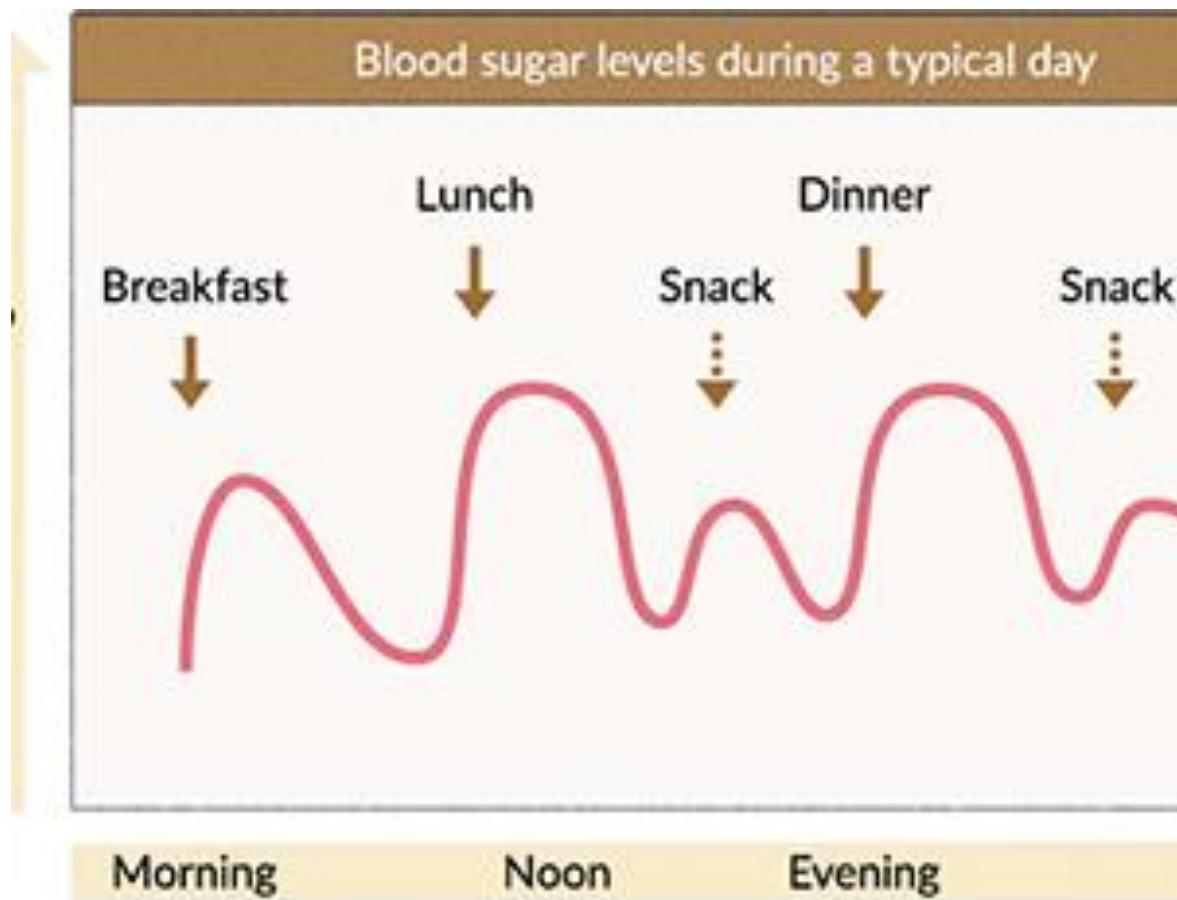


Carbohydrate Metabolism



20-22 hours to restore glycogen levels after depletion

Daily blood sugar/energy levels



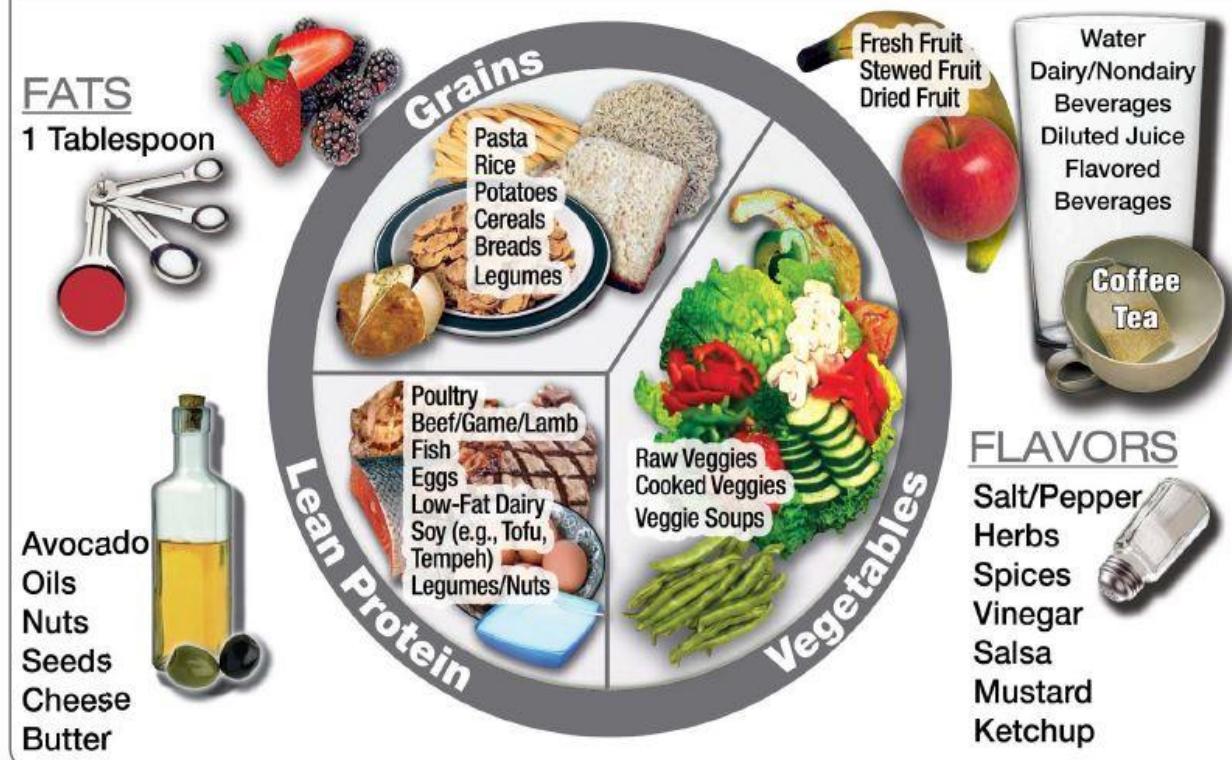


Balanced Meals

- Carbohydrates – starches/grains
- Fruits & vegetables
- Protein
- Healthy fats

ATHLETE'S PLATE

MODERATE TRAINING:



The Athlete's Plates are a collaboration between the United States Olympic Committee Sport Dietitians and the University of Colorado (UCCS) Sport Nutrition Graduate Program.
For educational use only. Print and use front and back as 1 handout.

ATHLETE'S PLATE

EASY TRAINING / WEIGHT MANAGEMENT:

FATS

1 Teaspoon



Avocado
Oils
Nuts
Seeds
Cheese
Butter



Water
Dairy/Nondairy
Beverages
Diluted Juice
Flavored
Beverages



FLAVORS

Salt/Pepper
Herbs
Spices
Vinegar
Salsa
Mustard
Ketchup



ATHLETE'S PLATE

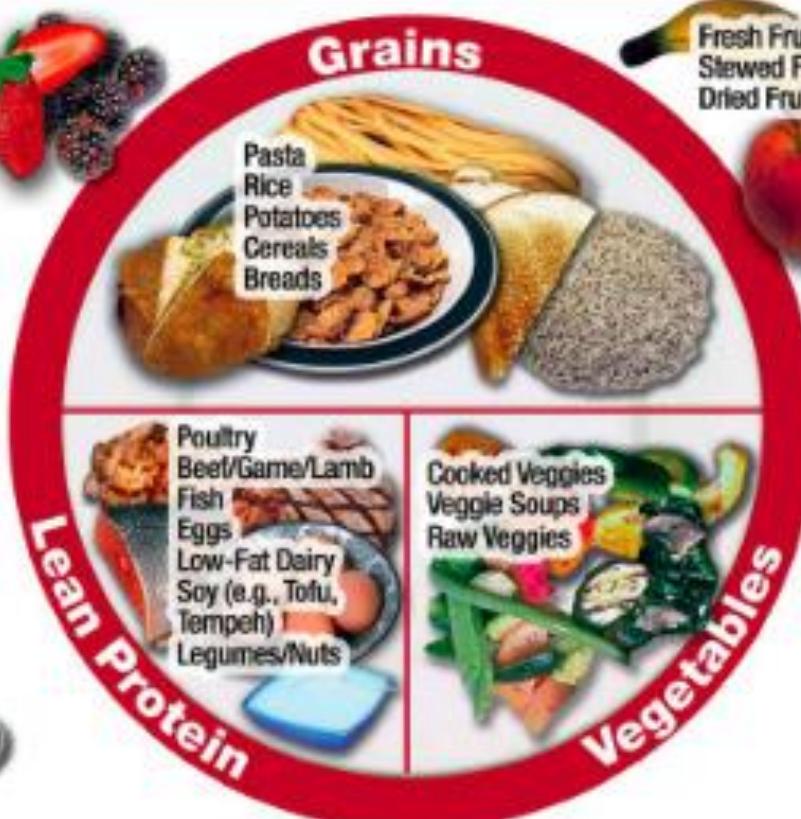
HARD TRAINING / RACE DAY:

FATS

2 Tablespoons



Avocado
Oils
Nuts
Seeds
Cheese
Butter



Water
Dairy/Nondairy
Beverages
Diluted Juice
Flavored
Beverages



FLAVORS

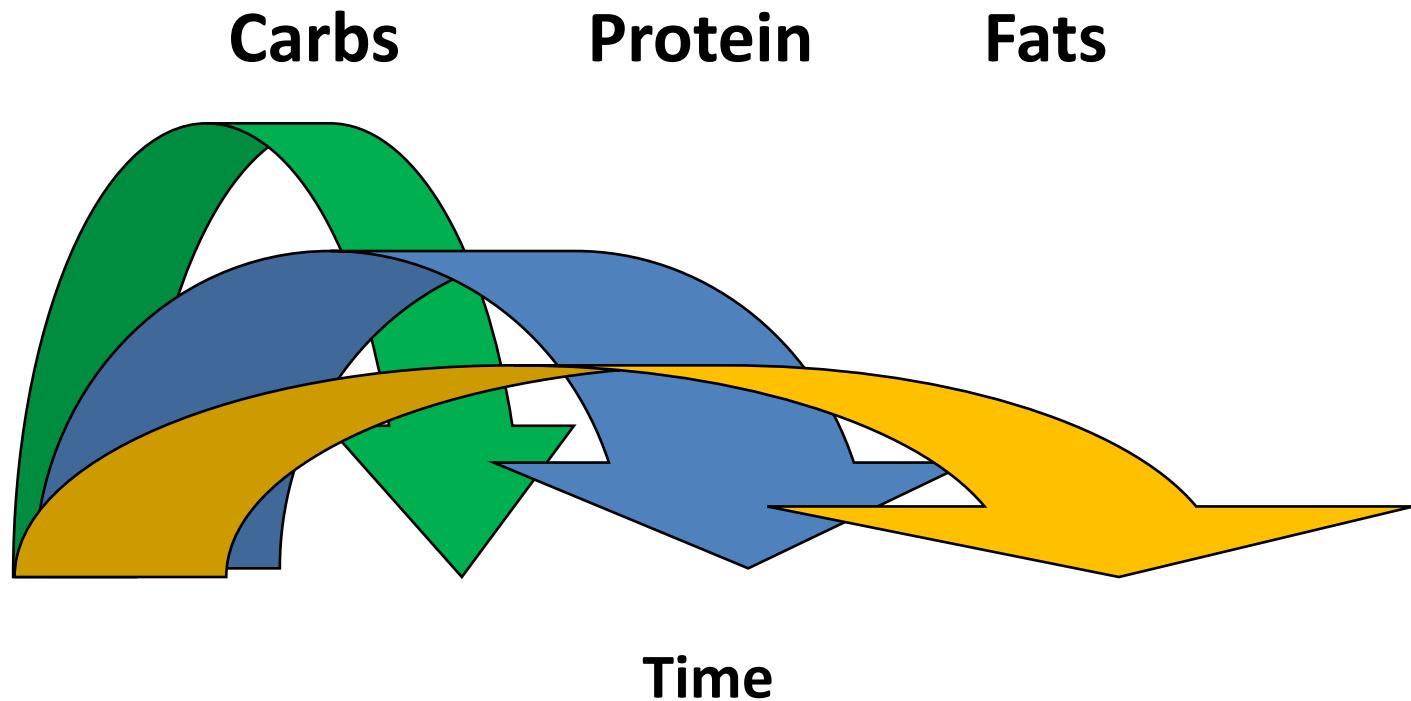
Salt/Pepper
Herbs
Spices
Vinegar
Salsa
Mustard
Ketchup



Balanced Meals

- Stir fry – chicken/beef/shrimp, vegetables, rice or noodles
- Rice bowls – rice/rice noodles, protein & veggies
- Tacos/fajitas/burritos/enchiladas
- Quesadillas – cheese, beans or chicken, peppers
- Homemade pizza – lean protein, light cheese, veggies & salad
- Turkey/chicken sausage with perogies & kale slaw
- Chicken, pasta, roasted vegetables
- Curry dishes on rice with veggies
- Salmon, quinoa & roasted veggies
- Flank steak or pulled pork/chicken in a bun with coleslaw

Digestion of Nutrients



Fueling before games



Consider meal size



Consider nutrient content



High carbohydrate, moderate protein, lower fat



Meals: 2-3 hours ahead



Snacks: 1 hr ahead

Portable meals

- **Cooler or insulated lunch bag or thermos**
- Sandwich/wrap/shwarma + fruit & veggies
- Cold pasta, vermicelli, potato/sweet potato or quinoa salad
- "Bento box"- crackers, cheese, lean meat, fruit, veggies, pita, hummus, veggies
- Homemade pizza (lean toppings)
- Sushi – make sure it's cold!
- Salad bowls with protein + bread/bagel
- Quesadilla

Concession or Fast Food

- High in fat
- Hot dog with fruit or veggies instead of fries
- Bagel instead of muffin
- Pizza with veggies
- Single Hamburger + fruit instead of fries



Portable snacks

- Granola or sport bars
- Homemade granola
- Power/energy balls
- Fruit/fruit cup/applesauce
- Fruit leathers
- Pepperoni sticks
- Hard boiled eggs
- Cheese cubes, Baybel
- Veggies – baby carrots, sugar snap peas, mini-cucumbers
- Trail mix or cereal trail mix
- Popcorn
- Pretzels
- Pita/naan/bagels/rolls/ homemade muffins/breakfast cookies/biscotti
- Rice Krispie or cereal bars
- Crackers
- Milk to Go Sport
- UHT milk or chocolate milk
- Protein powder (mix with water)



Recovery Nutrition

- Restore energy
- Repair muscle
- Rehydrate fluid
- Replenish sodium

Recovery Nutrition

Consume within
30 minutes

Most important
for exercise less
than 8 hrs apart



Recovery snacks or meals

- Amount required depends on body weight
- Recovery snack + meal
- Recovery balanced meal

Recovery snack ideas:

- Protein shake & granola bar
- Protein bar
- Sandwich
- Sports drink + protein powder

Importance of Hydration on Performance



Enhances ability to regulate temperature and avoid rising heart rate



Improves ability to recover quickly from training and competition



Minimizes muscle cramps



Enhances mental function

Brain, Muscle = 75% Water

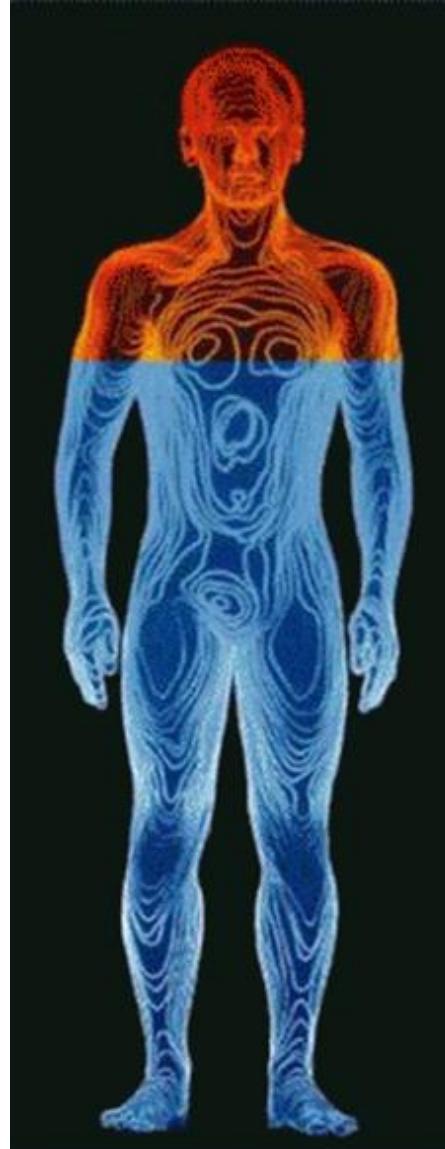
Your Body is at Least 60% Water

Fluid Losses: urine, respiratory, bowel, skin, ***sweat***

****sweat rates very
* sodium content of sweat
varies***

2-3% loss of BW from sweating affects performance

80 kg – 1.6 kg (3.5 lbs) = 2% BW loss



Hydration Requirements



Intensity of
exercise



Duration of
exercise



Frequency of
exercise



Environmental
conditions



Fitness level

Signs/Symptoms of Dehydration



Decreased concentration



Early fatigue



High perceived exertion



Trouble tolerating heat



Muscle cramps



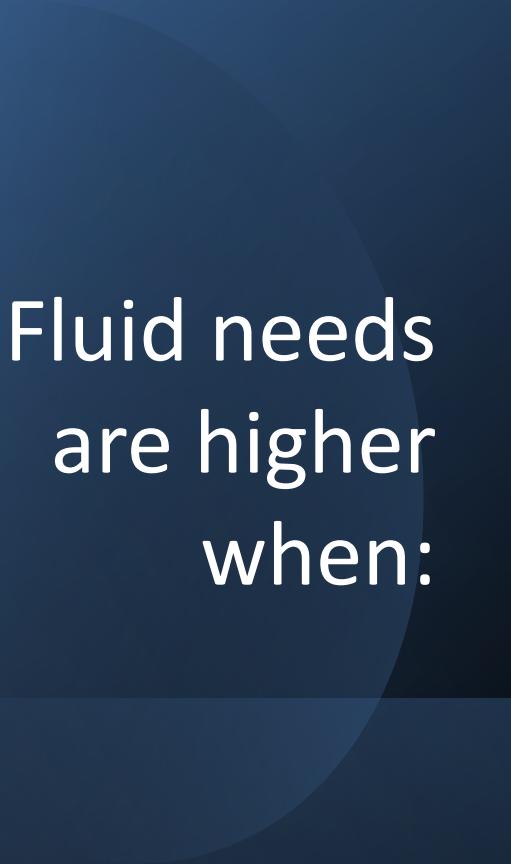
Headaches



Nausea



Elevated heart rate



Fluid needs
are higher
when:

- Heat
- Humidity
- Hard exercise
- Travel
- Altitude
- Illness

3 Indicators of Dehydration

If 2 or more are outside
normal range:

1. Color of morning urine
(dark)
2. Waking body weight
(lower than usual)
3. Thirst (greater than usual)

Ways to increase fluid intake



- Carry a water bottle
- Drink on a schedule
- Drink at every opportunity
- Aim to drink 2 cups of water/fluid at meals
- Eat fluid rich fruit and vegetables
- Flavoured drinks improve consumption

Hydration guidelines



Drink 2 cups (500 ml) 2 hours
before exercise (5 ml per kg)



During – sips every 15
minutes or at every
opportunity



After – 3 cups for
every 1 lb loss of BW

Sports Drinks



- Fluid, electrolyte and energy source
- Sugar concentration is lower than juice, soft drinks, energy drinks
- “zero” versions contain no sugar, electrolytes only
- Sugar blends: dextrose, maltodextrin, sucrose, glucose, etc.
- Retain more fluid than water
- Homemade sports drinks

Homemade Sports Drink



1. Squeeze 2 lemons, add 3-4 tbsp sugar, $\frac{1}{4}$ tsp salt in 1 liter water
2. Dilute 500 ml orange juice with 500 ml water (1:1) add $\frac{1}{4}$ tsp salt

Or

Summary

1. Usual diet - eat 3 balanced meals per day spaced 3-4 hours apart
2. Vary plate proportions based on activity levels
3. For games, pack ample portable and easy to consume foods and fluids
4. Between games - immediate recovery nutrition
5. Arrive to games well hydrated, hydrate at every opportunity and between games



Questions?

Thank You!

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