

# NUTRITION FOR THE ATHLETE

## Helpful Resources:

- <https://www.myplate.gov/>
- <https://www.eatright.org/for-teen>
- <https://sportsrd.org/downloadable-resources/>

## Nutrition Overview

- Athletes require proper nutrition to fuel their bodies for the demands of physical activity and aid in the recovery and growth of muscles. Building a foundation of healthy food choices can greatly impact overall health, performance, and reduce injury risk.
- A well balanced diet consists of carbohydrates, proteins, and fats. An athlete should prioritize whole grain carbohydrates and protein food sources. Research suggests an athlete needs 1.0-2.0g of protein per kilogram of bodyweight.

## CARBOHYDRATES:

- Serve as the primary source of energy during activities of higher intensity. Healthy carbohydrate food sources include fruits, vegetables, whole-grain cereals, breads and pastas.

## PROTEIN:

- Plays a key role in muscle repair and growth. Preferred sources of protein include lean meats, eggs, dairy (non-fat yogurt, milk, cottage cheese) and legumes.

## FATS:

- Plays a key role in helping individuals meet their energy needs as well as supporting healthy hormone levels. Healthy sources of fat include nuts, nut butters, avocados, olive and coconut oils.

## Nutritional Recommendations

- Choose whole grain carbohydrates sources & limit the refined grains and sugars.
- Choose healthy sources of protein such as chicken, turkey, fish, peanut butter, eggs, nuts and legumes.
- Avoid processed food and foods high in saturated fats.

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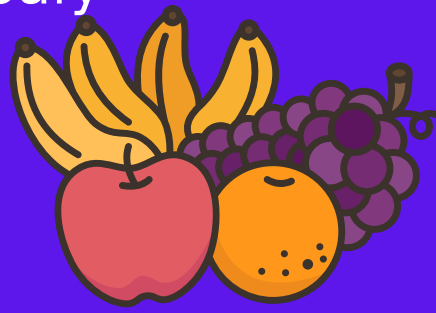
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## Food Sources

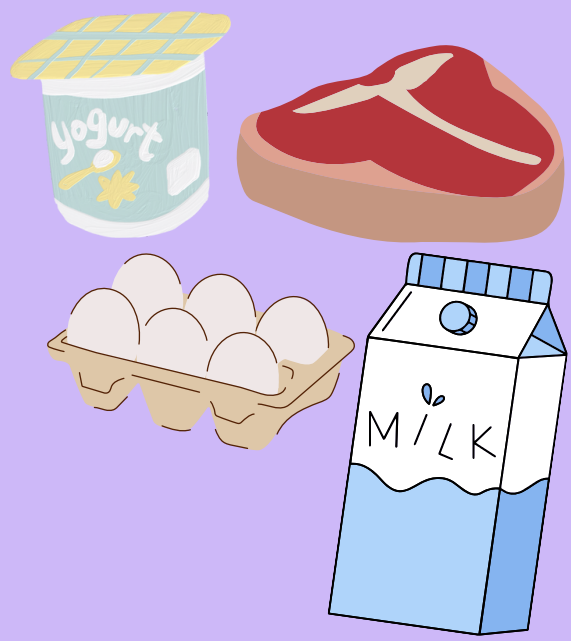
### Carbohydrates

- Fruit
- Oatmeal
- Starchy vegetables (sweet/white potatoes, jasmine/brown or wild rice)
- Non-starchy vegetables (broccoli, leafy greens)
- Whole-grain bread or crackers
- High-fiber, non-sugary cereals



### Protein

- Whole eggs (white and yolk)
- Greek yogurt
- Milk
- String cheese
- Lean red meats
- Poultry
- Fish
- Hummus



### Healthy Fats

- Avocado
- Peanut butter
- Nuts and seeds
- Olive or canola oil (the latter, if baking)
- Coconut oil



# Nutritional Recommendations

## Healthy Choices

- Grilled chicken, turkey or fish
- Lean beef or pork
- Fruits, vegetables, salads, veggie-based soups
- Nuts, trail mix, seeds or peanut butter
- Eggs or egg substitutes
- Whole grain breads, rice and pasta
- Dairy products

## Not so Healthy Choices

- Fried chicken or fish
- Burgers, sausage, bacon
- French fries, fried rice, alfredo or cheese sauce
- Chips, cheese curls, pork rinds
- Omeletes loaded with cheese, hash browns and sausage
- Highly-processed white bread, rice and pasta
- Dairy products with excessive added sugars, like ice cream

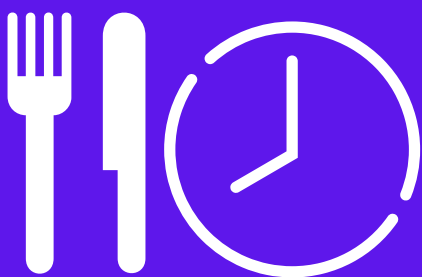
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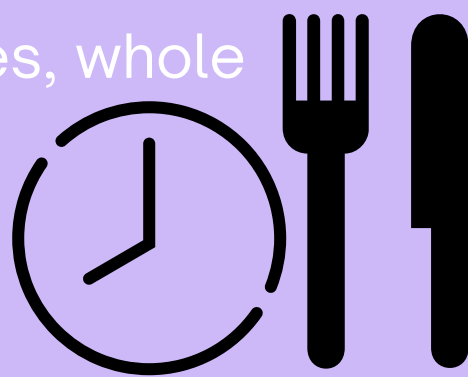
## MEAL TIMING PRE-WORKOUT

- Eat a combination of high carbohydrates and moderate protein. Drink water!
- 3-4 Hours BEFORE exercise
  - Sandwich (Peanut Butter, Turkey & Cheese) with side of fruit
- 30-60 Minutes BEFORE exercise
  - Granola bar, pretzels, trail mix, fruit, gatorade



## MEAL TIMING POST- WORKOUT

- Eat a combination of moderate carbohydrates and high protein. Drink water!
- 15 - 60 min AFTER exercise
  - Non-fat greek yogurt, chocolate milk, fruit, peanut butter, pretzels, string cheese
- 3 - 4 hours AFTER exercise
  - Eggs, chicken breast, lean ground turkey/beef, rice, pasta, potatoes, whole wheat tortilla



## CREATING A MEAL

### 1. Pick two carbohydrate sources (~1/2 - 3/4 Plate)

Vegetable and a Starch source

### 2. Choose a lean protein source (4oz ~ 1 cup ~ 1/4 Plate)

Grilled Chicken, Lean Ground Turkey, Lean Beef, Salmon

**\*Optional: Add a low-fat dairy source**

## SNACK IDEAS:

Nutri-grain bar & Fruit  
Peanut Butter Whole Grain Toast & Banana  
Low Fat Chocolate Milk & Graham Crackers  
Low Fat Cheese Stick & Granola Bar  
Non-sugary Trail Mix  
Pretzels & Carrots/Apple  
Low Fat Popcorn  
Greek Yogurt

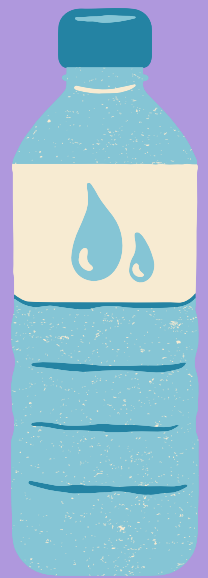
# HYDRATION

## Hydration Resources

- [https://www.nata.org/sites/default/files/fluid\\_replacement\\_for\\_the\\_physically\\_active.pdf](https://www.nata.org/sites/default/files/fluid_replacement_for_the_physically_active.pdf)
- <https://www.mshsaa.org/SportsMedicine/>

## How to Hydrate: (Before & During Activity)

- Drink 16-18oz of water 2 hours before activity.
- Drink another 8-16oz of water 15 minutes before activity.
- During activity, drink 4-8oz of water every 15-20 minutes.
- 16-20oz = 1 plastic water bottle; 1 gatorade water bottle



## What is Dehydration ?

Dehydration occurs when you use or lose more fluid than you take in. When the normal water content of your body is reduced, it upsets the balance of minerals (salts and sugar) in your body, which affects the way it functions.

\*Tip: If you begin to feel thirsty, you are already dehydrated.

## Signs & Symptoms of Dehydration:

- Extreme Thirst --> Dry mouth
- Decreased frequency of urination & dark colored urine
- Fatigue
- Dizziness/ Light headedness
- Confusion
- Muscle Cramps



## How to Re-Hydrate: (After Activity)

- Drink 16-20oz of water for every pound lost.

## Drinks to AVOID

- Energy Drinks such as: Red Bull, Monster, Bang, Rockstar, 5-Hour Energy
- Sport Drinks with caffeine and higher than 8% carbohydrate ingredients

## Drinks to Encourage

- WATER
- Sport Drinks such as: Gatorade, Powerade, Liquid IV, Nuun
  - NO caffeine and
  - 6-8% carbohydrate ingredients
  - Sodium, potassium, calcium, and magnesium ingredients

# CONCUSSIONS

MSHSAA Concussion Resources  
<https://www.mshsaa.org/SportsMedicine/>

## What is a Concussion?

A concussion is a traumatic brain injury that interferes with the normal function of the brain. A direct or indirect force can cause chemical changes within the brain leading to physical, behavioral, emotional, and cognitive changes.



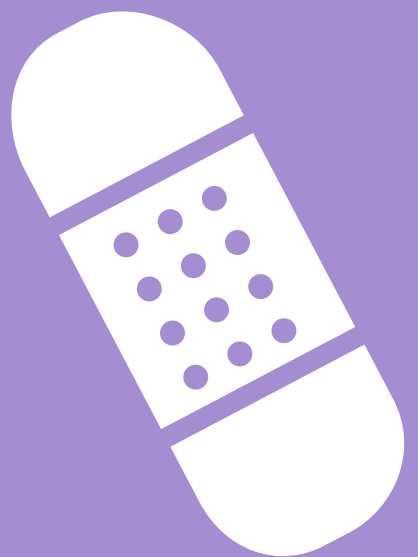
## How is it diagnosed?



Diagnostic tools such as a SCAT5, VOMS assessment, and symptom checklist are used to help clinicians diagnose a concussion. These tools assess a student-athlete's cognition, balance, and eye movements. A medical doctor, physician's assistant, or an athletic trainer is qualified to diagnose a concussion.

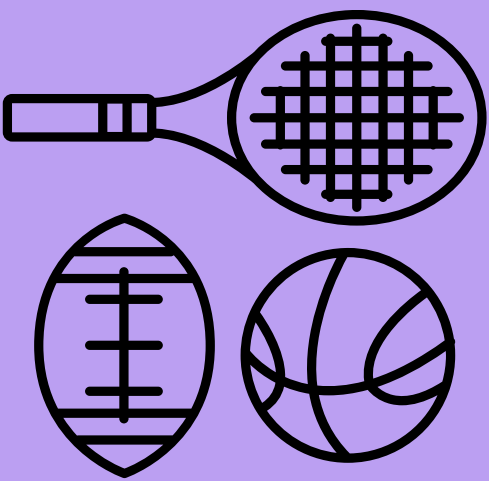
## How do you treat a concussion?

Concussion symptoms may last from a few days to several months. The most important treatment for a concussion is to avoid activities that increase symptoms. Performing light intensity exercise (walking) for 15-30 minutes and rehab exercises for eye movement and balance can help relieve concussion symptoms.



## Return to Play Process

MSHSAA and Mercy Sports Medicine have implemented "Return to Play" protocols based on research to ensure student-athletes are safe to return to their sport. The Return to Play protocol is a 5-day physical activity progression that begins when the athlete has been symptom free for 24 hours.



## Common Signs & Symptoms:

- Headache or Pressure In Head
- Feeling Slowed Down or "In a Fog"
- Dizziness or Blurred Vision
- Balance Problems
- Sensitivity to light or noise
- Fatigue, Drowsiness, Sleep Disturbance
- Difficulty Concentrating or Remembering





# HEAT ILLNESS

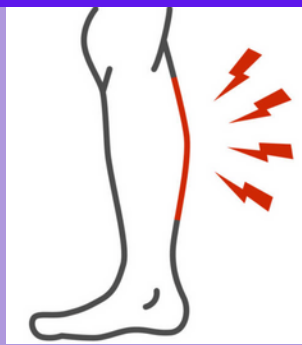


## Heat Illness Resources

- <https://www.mshsaa.org/SportsMedicine/>
- [https://www.nata.org/sites/default/files/exertional\\_heat\\_illnesses.pdf](https://www.nata.org/sites/default/files/exertional_heat_illnesses.pdf)

## Heat Syncope

- Dehydration in hot temperatures
  - Signs/Symptoms: Dizziness, headache, muscle cramps, tunnel vision, pale & sweaty skin, fatigue, decreased heart rate



## Heat Exhaustion

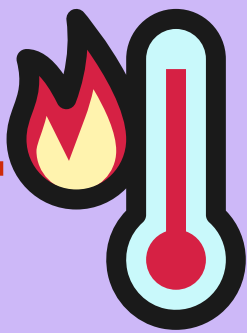
- Inability to function at increased heart rates in heat due to dehydration, lack of energy (poor eating habits), decreased fitness levels



- Signs/Symptoms: Dizziness/headache, lightheaded, nausea/vomiting, skin is warm & dry to touch, slowed movements, low blood pressure, elevated core body temperature

## Exertional Heat Stroke\*

**\*911**



- Medical Emergency
- Loss of ability to control bodily functions with significant increase in core body temperature
  - Signs/Symptoms: hot & wet skin, confusion, lightheaded, vomiting, slurred speech, sluggish movements, elevated core body temperature, collapse/loss of consciousness

## How to treat heat illness:

### Step 1:

- Remove from physical activity & hot environment , re-hydrate, lay flat on back with legs elevated

### Step 2:

- Begin to cool using ice towels/bags

### Step 3 - Exertional Heat Stroke:

- Immediate whole-body cold water immersion & Activate EMS

\*Exertional Heat Stroke is considered a medical emergency that requires advanced medical care. Heat stroke can lead to internal organ injury and completely shut down body functions.

## How to Prevent Heat Illness?

- HYDRATE - Before, During, and After Activity
- PROPER NUTRITION
- Follow MSHSAA Heat Acclimatization requirements
- Daily Weigh-Ins - monitor weight loss and fluid replenishment