



# OPTIMIZING BASEBALL NUTRITION

IMPROVING YOUR PERFORMANCE  
THROUGH FOOD

# Baseball & Nutrition

## Keys to Success

### Baseball Introduction

- Baseball is a skill based sport requiring each athlete to have...
  - Coordination, Motor Skills, Agility, Speed, Power
- When it comes to nutrition, there are two main key components
  - Keep up with energy demands
  - Adequate hydration
- Specific macronutrient and calorie requirements will depend on
  - athletes position, body composition goals, & activity level
- Baseball is one sport that does not have a time limit
  - This creates a unique nutrition challenge for the athletes

### Meal Timings

- Optimal timing of meals will vary depending on trainings and games
- Starting a practice or game hydrated and fueled will be key to the players performance.

### Example Day

- Breakfast
- Morning Snack
- Lunch
- Pre-training snack
- Recovery snack (optional)
- Dinner
- Evening snack

### Hydration

- Hydration is key! Improves cognition, regulates body temp, lubricates joints, helps deliver nutrients to the body
- Easy way to determine hydration? Color of your urine. you want pale lemonade not dark yellow/orange

### Learn More On SportsIQ App

- How to fuel Pre Games
- Fueling During a Game
- Optimizing Post Game Meal
- Importance of Hydration

# Pre Game Fuel



## Keys to Success

### Timing is Everything

#### 2-3 Hours Prior

- Mixed meal of Carbohydrates & Protein
- Low fiber & Low Fat to digest easily
- Carbs to provide energy, protein to keep you full
- HYDRATE

#### 30-60 min Prior

- To provide your body with quick energy
- Simple Carbohydrates
- Small Portions
- HYDRATE

### Meal Examples (2-3 hr)

- Eggs, toast, fruit, low fat milk
- Greek yogurt + blueberries + granola + hard boiled egg + water
- Hard boiled eggs + nut butter w/ banana + water/ low fat milk
- Peanut butter & jelly sandwich + fruit side + water or low fat milk
- Turkey & low fat cheese sub + carrots + water
- Chicken + sweet potato + steamed green beans + low fat milk/ water
- Chicken + white rice + carrots + low fat milk

### Why low Fiber & fat prior to a game?

- Fiber and fat are difficult to digest
- Eating too closer to a game could cause gas/bloating/lethargy
- These symptoms could affect performance

### Snack Examples (30- 60min)

- 1 Applesauce cups + nuts
- A piece of fruit , banana , apple, cup grapes, mandarin orange
- Saltines + nut butter
- 20-30 Pretzels
- Trail mix : Dried fruits + nuts

# During Game Fuel

## Keys to Success

- Simple carbohydrates to "top off" your muscles with energy
- Small amount of protein can be useful during long games to decrease hunger
- Sip on water throughout
- Sports Drinks useful to replenish electrolytes lost in sweat

## Snack Examples

- Fresh fruits : banana , apple, orange
- Dried Fruit ( Be mindful it is easy to over consume dried fruit)
- Trail mix
- Cereal bars
- Pretzels
- light sandwiches (low sodium cold cuts , cheese)

## Foods to Avoid

- Greasy or Fried Food
- Donuts, candies , baked goods
- High Fiber foods: Raw Vegetables, Beans
- Cheese
- Sugar Alcohols :sugar free candies, sugar free protein bars

## Tips For Fueling During a Game?

- Remember when you are playing blood flow is mainly going to your muscles and not stomach
  - Keep snacks light and quick carbohydrates for eay digestion and less risk for stomach gas/ bloat
- Protein is good tool when a game is lasting longer to keep athlete from becoming lethargic, which can reduce performance

# Post Game or Hard Training Fuel

## Keys to Success: Your plate should include

- 1/2** **Whole Grains & Starches** to provide energy for your muscles
- 1/4** **Protein** to help strengthen & rebuild your muscle
- 1/4** **Fruits** and /or **vegetables** to help strengthen your immune system and improve gut microbe
- 3-4** Cups of **water** to Rehydrate your body
- Fats** **Unsaturated fats** when cooking, Improves heart health; olive oils, nuts, avocados, fish etc

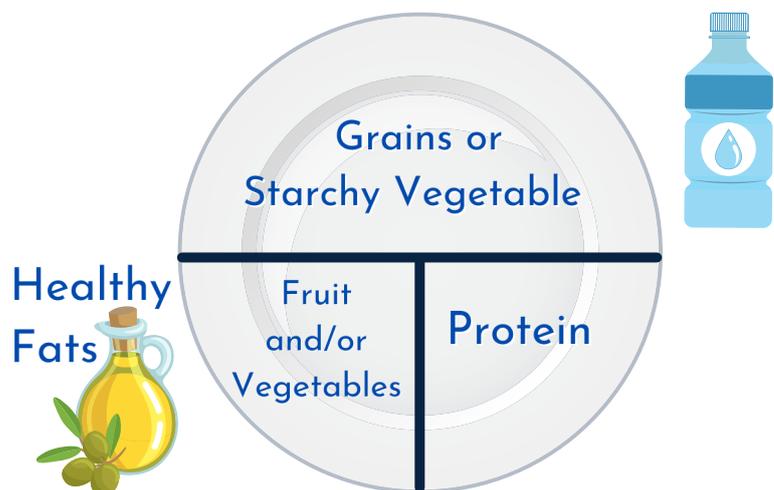
## Meal Examples

- Baked Chicken + Rice & Beans + asparagus
- Salmon + Brown Rice + Roasted Brussels
- Pork Loin + Baked Potato + Green Beans
- Grain Bowls : chicken + quinoa + corn + shredded cheese + salsa
- lean ground beef meatballs + whole grain pasta + marinara sauce + side salad
- Turkey or Lean Beef Burger + Baked sweet potato Fries + Broccoli

## When Should I Eat after a Game or Practice?

- Goal is to eat within 45 minutes to optimize recovery and muscle building
  - Can be a snack or meal
- Max within 2 hours
  - Make it a meal

## Athlete's Plate



# Hydration

## Keys to Success

### Importance Of Hydration

- Regulates body temperature
- Replaces sweat losses during exercise
- Lubrication for body joints
- Muscles are 75% water
- Dehydration can lead to
  - Headaches, Dizziness
  - Heat Stroke
  - Decrease exercise performance
  - Decrease cognitive performance
  - Poor Recovery

### Easy Ways to Drink More Water

- Have a glass of water by bedside to drink in the morning
- Have a glass of water with meals and snacks
- Carry a reusable water in school/ training bag to easily refill
- Drink a glass of water with each meal

## Guidelines to help stay properly hydrated

| Time Frame                | Amount of water            |
|---------------------------|----------------------------|
| 2- 3 hours Prior Training | 16-24 fl oz ( 2-3 cups)    |
| 15-30 min Prior Training  | 8-16 fl oz (1-2 cups)      |
| During Training           | Sip on water throughout    |
| After Training            | 16-24 fl oz per pound lost |

*If you can't weigh yourself pre/post workout.*

*Drink 3-5 cups of water & monitor urine color to be light yellow - clear*



# Keys of Nutrition



## Success 9-13 yr old

### Goals

- About 50% percent of adult body mass as well as skeletal mass is achieved during puberty. IMPORTANT TO FUEL
  - Estimates ~ 2200-3000kcal / day
  - Calories may vary based on height, weight, training intensity ,etc
- Make sure to not skip meals
  - Aim for 3 meals & 2 snacks
- During puberty fat consumption is important for hormone regulation
  - 20-35% of daily intake
  - < 10% from saturated and trans fats

### Carbohydrates

- Carbohydrates are the main source of energy for your body, muscles and brain
- Too low in carbs could lead to
  - Break down of muscles, or you may feel
  - Fatigued quicker
  - Decrease in performance
  - Slower Recovery
  - Increased Risk of injury

### Do I need a Protein shake

- Short answer , No
- More beneficial for athlete to have protein from a food form (animal or plant based)
- Goal to eat protein 3-5 times a day for best absorption
  - aka with meals & snacks
- Eat 0.6-0.8g / pound body weight

### Important Vitamins

- Calcium & Vitamin D
  - Important for bone health
  - Foods: Salmon, mackerel, red meat , egg yolk, milk, cheese, yogurt, broccoli, calcium fortified soy product
- Iron
  - Important to help transport oxygen from lungs to the rest of the body
  - Foods: red meat, pork, chicken, dried fruits , fish, fortified cereals, baked beans
  - Ask a physician prior to supplementation

# Keys of Nutrition

## Success 14-18 years

### Goals

- Eat to meet energy demands
  - Estimate 3000-4000kcal/day
  - Calorie needs may vary with height weight, training intensity ,etc
- Protein 1.2-2.2 g/ kg
  - (athlete's weight in pounds/ 2.2 = kg)
- Carbohydrates are the main source of energy for your body, muscles and brain
- Too low in Carbs & Calories could lead to
  - Break down of muscles, Fatigue quicker, Decrease in performance, Increased Risk of Injury , Prolonged Recovery
- Hydrate, Hydrate, Hydrate

### Important nutrients

- VitaminD : Beef, Egg Yolk, Salmon, Fortified Foods
- Calcium : Milk, yogurt, cheese, kale, broccoli
- Iron: beef, chicken, lentils, dried fruit (apricots) , soy bean flour, nuts , Beans
- Zinc: oysters, Beef, pumpkin seeds, cashew, baked beans
- Magnesium: legumes, nuts, seeds, green leafy veggies
- B Vitamins : whole grains, nuts, fortified cereals, eggs, banana, leafy grains, broccoli , multivitamins

## What to Eat when Traveling

### What to Choose at Restaurant

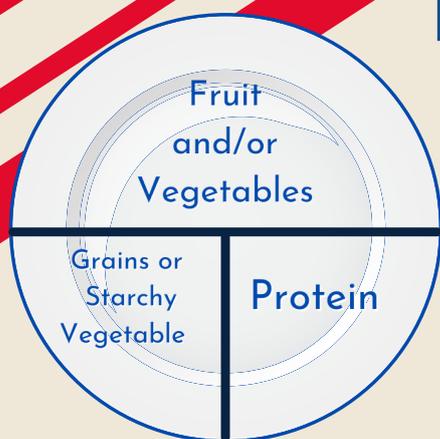
- Grilled Protein vs Fried
- Sub sandwiches or wraps with veggies
- Pasta dishes w/ red sauce , veggies & chicken or fish
- Wraps w/lean meat & veggies
- Fish Dishes with whole grains
- Pizza with veggies & cheese (limit meat pizza toppings)
- When picking beef or pork look for : loin or lean

### What to Pack

- Pack
- Trail mix
- Dried fruit (low sugar added) & Nuts
- Whole grain crackers & nut butters
- Fruit & Raw Vegetables
- Nitrate Free Jerky
- Nut Butter packets
- Ready made Tuna Packs
- Extra water

# ATHLETES PLATE

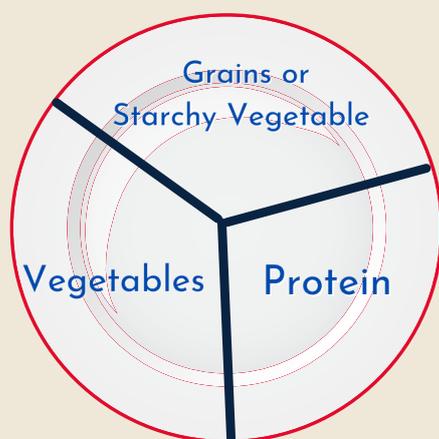
## Easy Training Day



- + Fat 1-3 teaspoons
- + Beverage ( water , low fat dairy/nondairy milk, etc)
- + Flavor (seasonings, condiments)

Includes:  
Low intensity training days  
or rest days

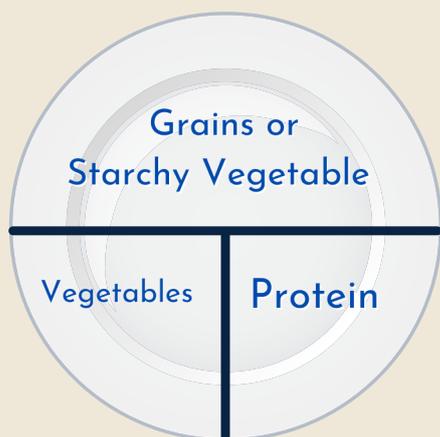
## Moderate Training Day



- + Fat 1-3 teaspoons
- + Beverage ( water , low fat dairy/nondairy milk, etc)
- + Flavor (seasonings, condiments)
- + Additional Fruit Side

Includes:  
more intense training days,  
longer duration, double trainings

## Hard Training Day



- + Fat 1-3 teaspoons
- + Beverage ( water , low fat dairy/nondairy milk, etc)
- + Flavor (seasonings, condiments)
- + Additional Fruit side

Includes:  
High intensity training days,  
endurance workouts  
Dual practices, or competition  
days

# Grocery Store Guide

## Grains

- To have grains prepared quickly purchase pre cooked/quick cook grains listed below
- Brown rice
- Jasmine rice
- Quinoa
- Faro
- Barley
- Oatmeal
- Wild rice
- 100% whole wheat bread
- Xtreme Wellness Wraps
- 100% whole wheat wraps

## Fruits & Veggies

- Any and all fruits / vegetables the athlete likes
- Reds/Purple/Blues will have high antioxidants that may help decrease muscle soreness
- All fruits and Vegetables are great sources of micronutrients to keep the body working optimally

## Fats

- Extra Virgin Olive Oil
- Nuts/ Seeds
- Nut Butters
- Avocados
- Butter- Made with extravirgin olive oil (omega 3s's)

## Proteins

### *Seafood*

- Fish - overall healthy
- Canned tuna in water or extra virgin olive oil
- Salmon
- Shrimp
- Crab (avoid Crab with a K)

### *Poultry*

- Chicken sausage - look for lean
- Ground chicken > 90% fat-lean
- Chicken breast
- Chicken thighs
- Chicken leg - skinless
- Chicken tenderloin
- Ground turkey Breast

### *Beef/Pork*

- Look for words (Round, Loin)
- Top round
- Top sirloin
- Tenderloin
- Roast Beef- extra lean
- >95% lean ground beef

### *Plant Based*

- Tofu - extra firm organic
- Edamame
- Beans - any kind
- Tempeh
- Nuts/seeds (almond, pumpkin, sunflower, cashews, peanuts , etc )

# Meal Ideas Prior to Game

## Breakfast to eat 3+ hours prior to game/ practice

- Turkey Florentine omelet : eggs, spinach, tomato, reduced fat mozzarella cheese
- Ham & cheese omelette : egg, ham , reduce fat cheese. Side of fruit
- Egg sandwich : English muffin, 2 eggs , extra lean chicken sausage, tomato. Side of fruit
- Greek yogurt , 1/2 cup granola , cup fruit
- Oatmeal with milk, berries , peanut butter
- Egg frittata: mushrooms, spinach, tomato
- Avocado toast w/ eggs and side of fruit

## Lunch Ideas 3+ hours Prior

- Chicken burrito Whole wheat tortilla, low fat cheese, salsa, avocado , black beans lettuce
- Whole wheat sandwich with cold cuts (roast beef, turkey, ham ) vegetables
- Salad : spinach , lettuce , lean steak, tomatoes , cucumber, onion ,etc veggies side of whole wheat toast
- Grilled chicken , baked potato, asparagus, side of fruit
- Roasted veggies , chicken , hummus, pita
- Shrimp fried rice : shrimp , brown rice , snap peas, carrots, broccoli, mini corn
- Grain bowl : brown rice/quinoa , grilled chicken, sweet potato, broccoli, grape tomatoes reduce fat cheese, avocado
- Whole wheat pasta with marinara sauce , zucchini , eggplant, lean turkey meatballs, low fat mozzarella

## AVOID These Foods Prior to game as they can decrease performance

- Italian subs
- Fast food (ie McDonalds, chick fil a, Wendy's)
- Fried foods
- Mac and cheese
- Bacon
- Beans
- Candy
- Raw Broccoli/cauliflower

- Be mindful how your body feels during practices and games
  - Feeling lethargic or "out of gas" quickly into activity , may need to increase calories
  - If your stomach feels bloated, you feel sluggish decrease fat/ fiber intake