Performance Nutrition
Nutrition to fuel your body and keep your mind sharp

A successful athlete maximizes genetic potential with physical and mental training to prepare for competition. Proper nutrition must be included in an athletes’ routine for top performance.

Why is nutrition important?

Nutrition is eating strategies to promote good health, adaptation to training, quick recovery, and performing optimally during exercise. Nutrition aids with elite athletes goals of physical power, mental strength, and mechanical edge.

✓ Fuel for body and mind
✓ Reduce fatigue
✓ Maintain body composition
✓ Improves recovery time
✓ Building and repairs muscles
✓ Benefits now and later

The Basics

- Eat breakfast EVERYDAY! It is the most important meal especially for athletes! It is the fuel for your workouts.
- Don’t skip meals - eat smaller meals throughout the day and eat healthy snacks.
- Stay hydrated - 10+ cups of water a day
- Eat a wide variety
- Eat whole-grains
- Eat “real foods”! NOT processed ones (the items in boxes)
- Don’t let yourself get hungry - leads to overeating
- Everything in moderation

DRINKING FOR HYDRATION

Dehydration is the #1 nutritional cause of poor performance – and if you’re thirsty, you are already dehydrated!

How to stay well hydrated:

- Drink plenty of fluids even when you’re not training - At least 8 cups a day, aim to drink with every meal and snack
- Drink even when not thirsty
- Carry a water bottle around throughout the day
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DRINKING FOR HYDRATION

Before training:
Drink an extra cup of fluid ½ hour before training to ensure positive water balance before training, most athletes will not be able to replace 100% of water loss while active.

Short periods:
For workouts less than one hour only water is fine to drink

Long periods:
• Drink ½ up to 1 cup of water or sport drink at every break or 15 to 20 minutes
• Start sipping on a sports drink before the end of the first hour
• Avoid concentrated drinks like sodas or fruit juices during workout
• Look for a sports drink that contains no more than 6% carbohydrates

Rehydration after exercise:
If training at high intensity in a warm climate, you will finish with a mild degree of dehydration, so it is important to re-hydrate as soon as possible.
• Water is ok if nothing else is available
• Sports drinks which contain electrolytes will help your body absorb water quicker
• Drinks that contain some carbohydrate to help refuel

Hydrating In the Heat

The #1 barrier to great athletic performance is being dehydrated. These 4 steps will help prepare you:
1. Start every workout and practice fully hydrated (consume >16 oz. fluids 2 hours prior).
2. Hydrate every time your coach gives you a break – thirst is not a good indicator of hydration.
3. For every pound lost during a workout, drink 24 ounces of fluid to replace lost water weight.
4. Maximize intake of electrolytes (fruits/veggies) and eat foods with salt.

Top Tip: Check out your pee! It should be a faint yellow color – if it’s darker, you need to drink more fluids.

The best hydration choices include:
✓ Water
✓ 100% Fruit Juice
✓ Low-Fat Or Fat-Free Dairy/Non-Dairy Drinks
✓ Muscle Milk/Protein Shakes
✓ V8 Juice
✓ Sports Drinks (I.E. Gatorade)
# Nutrient Components

## Protein
- Builds and Repairs body tissue; Major component of enzymes, hormones and anti-bodies
- **Examples:**
  - Animal Proteins: Beef, chicken, fish, pork, eggs, dairy
  - Vegetable Proteins: Tofu, beans, lentils, seeds, nuts

## Carbohydrates
- Provides a major source of fuel to the body; Provides dietary fibers
- **Examples:**
  - Fruits and vegetables: Fresh, canned or dried fruit, fruit juice, fresh, frozen or canned vegetables
  - Whole Carbs: Whole wheat bread, pasta, cereals, corn, quinoa, brown rice, potatoes
  - Refined Carbs: White bread, pasta, sugary cereals, white rice, bagels, crackers, cookies, chips

## Fat
- Chief storage form of energy in the body; Insulate and protect vital organs; Provide fat-soluble vitamins
- **Examples:**
  - Unsaturated fats: Olive and canola oils, peanut butter, fatty fish, avocado
  - Saturated fats: Butter, cheese, mayonnaise, cream cheese, sour cream, beef, whole milk
  - Trans fats: margarine, baked goods, packaged foods

## Vitamins
- Help promote and regulate various chemical reactions and bodily processes; Do not yield energy themselves, but participate in releasing energy from food
- **Important vitamins for athletes:** B vitamins: increase energy; D vitamins: important for bone health; Vitamin C: aids in iron absorption and a healthy immune system

## Minerals
- Enable enzymes to function; A part of bone and nerve impulse
- **Important minerals for athletes:** Iron: important for transporting oxygen to muscles; Calcium: important for bone health; Sodium: regulates the total number of water in the body; Potassium: regulates heartbeat and muscle function

## Water
- Enables chemical reactions to occur; About 60% of the body is composed of water; Essential for life as we cannot store it.
- **Good sources:** Water, sports drink, fruits and vegetables, fruit and/or vegetable juices
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ATHLETE’S PLATE

EASY TRAINING / WEIGHT MANAGEMENT:

FATS
1 Teaspoon
Avocado
Oils
Nuts
Seeds
Cheese
Butter

Whole Grains
- Fats
- Rice
- Potatoes
- Corn
- Sweet Potatoes
- Legumes

Lean Protein
- Lean Meat
- Fish
- Beans

Vegetables & Fruits
- Fruits
- Vegetables
- Legumes
- Nuts

Water
Dairy/Romany
Beverages
Flavored Beverages

Soda/Poppy
Herbs
Spices
Vinegar
Salsa
Mustard
Ketchup

The Athlete’s Plates are a collaboration between the United States Olympic Committee Sport Dietitians and the University of Colorado (UCO) Sport Nutrition Graduate Program.

ATHLETE’S PLATE

Training volume and intensity vary from day to day and week to week along your training/competition plan. Eating your meals and fueling your workout or race should also be cycled according to how hard or easy it is. Consult with your sport dietitian to put the Athlete’s Plate into practice!

The Athlete’s Plates are tools for you to better adjust your eating to the physical demands of your sport!

EASY
An easy day may contain just an easy workout or tapering without the need to load up for competition with energy and nutrients. Easy day meals may also apply to athletes trying to lose weight and athletes in sports requiring less energy (calories) due to the nature of their sport.

MODERATE
A moderate day may be one where you train twice but focus on technical skill in one workout and on endurance or strength in the other. The moderate day should be your baseline from where you adjust your plate down (easy) or up (hard/race).

HARD
A hard day contains at least 2 workouts that are relatively hard or competitive. If your competition requires extra fuel from carbohydrates, use this plate to load up in the days before, throughout, and after the event day.

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GETTING THE MOST FROM GRAINS

When choosing food think of it as fuel. You are NOT going to put regular gasoline into an expensive sports car; you are going to fuel it with premium gasoline. Think of yourself as an expensive sports car.

Maximize your PREMIUM grains by reducing the amount of REGULAR grains, such as fried foods, refined flours (the white stuff), and refined sugars (pastries, baked goods, and candy). Remember – you spend a lot of time and energy training – so why fuel yourself to get reduced results?

Top Tip: Aim for at least 50% of your grains to be whole grains.
EXAMPLES OF PREMIUM GRAINS

✓ Brown rice,
✓ Oatmeal,
✓ Whole-wheat pasta,
✓ Whole-grain crackers,
✓ Whole-wheat bread/bagels,
✓ Quinoa,
✓ Oatmeal,
✓ Sweet potatoes,
✓ Potatoes,
✓ Whole grain cereals (Cheerios/Raisin Bran/Kashi) and corn.

PICKING A PROTEIN

The majority of athletes like to eat protein, so the biggest concern isn’t the quantity of protein, but rather the frequency of consumption. Athletes need to pay more attention to eating foods with protein throughout the day, and especially in the morning. Pick lean, high quality (i.e. a whole protein = all essential amino acids) proteins. If you are a vegetarian or vegan – you need to pay even more attention to your protein choices by matching complementary plant proteins to ensure all amino acids.

Top Tip: Aim to spread protein choices into 5-6 meals/snacks throughout the day.

High quality protein choices:

✓ Lean Meats
✓ Chicken
✓ Poultry (Less Than 10% Fat)
✓ Fish
✓ Eggs
✓ Low-Fat Milk
✓ Yogurt
✓ Cheese
VARIETY WITH FRUITS & VEGGIES

Some athletes forget to eat them, while others think they are gross, but for the majority, you get them in, but just not enough! Fruits and vegetables are packed with vitamins, minerals, and antioxidants – all things that help keep an athlete’s immune system high, inflammation low, and overall performance unbeatable.

Top Tip: Every meal and snack should contain a fruit, veggie, or both.

When choosing fruits and vegetables, nearly all of them are great choices. Aim for the rainbow by picking at least one dark green and one bright red/orange veggie each day. As for fruit, switch it up and try to consume at least 3 servings each day (and yes, 100% fruit juice does count).

FIGURE OUT WHICH FATs

All athletes need a little fat in their diet, but some need more. If you lose weight in-season or need to gain weight right now – look to eat more fats (and vice versa – if you need to lose weight – eat fewer fats). Keep in mind, not all fats are created equal. Therefore, regardless of weight gain or loss, limit the amount of fried foods, sugary fats (ice cream, candy, cookies, and cakes), and processed fats (things that come in boxes or bags). Read the ingredients label and stay far away from foods containing “hydrogenated” or “partially hydrogenated oils.”

Top Tip: Meet your needs by maximizing your unsaturated fats.

Not sure which ones? The best unsaturated fats include:

✓ Avocados
✓ Canola/Olive Oils
✓ Nuts
✓ Seeds
✓ Fish Oils
✓ Vinaigrette (Oil-Based) Dressings
PRE-GAME EATING

The evening before:
Your evening meal the night before is an ideal time to prepare nutritionally. This meal is especially important if you have a morning competition. This is the time to make your plate at least half carbohydrates, below are some ideas:
- Chicken, grilled or baked with vegetables and rice
- Pasta with tomato sauce and lean beef, chicken, or fish with very light cheese
- Fish, grilled or baked, with mashed potatoes and vegetables
- Stir-fry (minimal oil) made with lean meat or shrimp with vegetables
- Baked potato with tuna, chili, or cottage cheese, plus mixed salad - go easy on butter, cream cheese, sour cream
- Sub with lean protein (turkey, ham, tuna, or egg) and vegetables (minimal fat spreads)

Overall, choose a HIGH carbohydrate, MODERATE in protein, and LOW in fat

GAME DAY

The goals of your pre-competition meal:
- Provide adequate energy (carbohydrates are especially important)
- Help avoid fatigue
- Allow the stomach to feel relatively light at the start of the game, but avoid hunger pains
- Minimize gastrointestinal distress

The timing of your pre-game meal should be based on the time of your game. If your game is in the:
- Morning - breakfast is your main source of fuel
- Mid-afternoon - eat a substantial breakfast and lunch
- Late afternoon - eat breakfast, lunch, and a snack
- Evening - Eat breakfast, lunch, and your pre-game meal as dinner
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Timing and composition is crucial:
• Eat your main meal 3-4 hours prior to game time
• Eat high in carbohydrates, low to moderate in protein, and low in fat
• Avoid sugar-loaded food, bulk food (very high in fiber), gas formers like beans, and spicy foods

Examples of pre-game breakfast:
❖ Cereal (not frosted) with low-fat/fat-free milk
❖ Toast with an egg
❖ Oatmeal with raisins and honey
❖ Lean breakfast meat with a bagel
❖ Wheat pancakes with yogurt or fruit
*Pair all with fruit or fruit juice*

You can always add toast, low-fat yogurt, or have a large portion depending on game time and your body size.

A lunch option could include:
1 bagel or turkey or ham sandwich/sub
1 oz. of turkey breast w/ apple slices
1 banana granola bar
1 cup of low-fat yogurt
1/2 cup of raisins
*Make sure to include water with any meal option!*

Pre-game snack:
Sometimes, it is needed. If you are hungry make sure to include it.

ALWAYS TEST OUT FOOD OPTIONS DURING PRACTICE FIRST.

Example of pre-game light snacks:
❖ granola bar
❖ low-fat yogurt
❖ banana
❖ dried fruit
❖ cereal with low-fat milk
❖ bread or roll with jam or small amount of peanut butter
❖ fresh fruit
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**DURING COMPETITION**

Hydration is the key during competition. Make sure you are drinking water at every break. If you are playing over an hour then you need to include a sports drink (ex: Gatorade) to replace salt loss and support blood sugar.

In general, if you planned your pre-game meals well you should not need to eat solid foods during the game, if you do need something the best options are:

- Bananas
- Granola bars
- Plain crackers
- Bread

*TRY THEM OUT IN PRACTICE FIRST!*

**AFTER COMPETITION**

Have a snack or drink containing carbohydrates and protein within 30 minutes of playing. Good options include:

- Low-fat chocolate or strawberry milk
- Granola bar and banana
- Low-fat yogurt and fruit
- Trail mix and fruit
- Cereal with milk

Aim to eat a main meal within 2-3 hours after the competition. Follow the main meal guidelines for proper recovery.

**REMEMBER TO RECOVER**

**When Should I Eat My Recovery?**
For maximum results, consume a recovery within 30 minutes post-training. This will help restore glycogen stores, repair and build lean body mass, and aid in electrolyte and hydration restoration.

**How Much Do I Need to Eat Post-training?**
A mini-meal is okay as long as you consume a full meal within 2 hours post-training. The mini- meal should include both a carbohydrate and a protein source. As a rule of thumb, an athlete should aim for ~0.5 grams of carbohydrate per pound of body weight and at least 15-25 grams of protein.

**How Do I Know I’m Getting Enough Protein?**
Ensuring that you consume a recovery within 30 minutes is more important than consuming tons of protein. A female athlete should aim for at least 15 grams of protein, while a male athlete should consume at least 25 grams of protein. The heavier the athlete, more protein needed, but consuming more than 40 grams of protein at any one time is probably unnecessary.
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Remember...
Eat for the weight you are aiming to become, not for the weight you currently are. You don't gain weight by eating for your current weight, likewise, eating like you are 20 pounds overweight will only ensure you remain overweight.

Good Choices:
- Muscle Milk/ Protein Shake
- Greek Yogurt with Granola
- Protein Bar
- String Cheese with Pretzels
- Trail Mix
- Low-fat Chocolate Milk
- Fruit with Cottage Cheese
- Peanut Butter & Jelly Sandwich
- Egg, Tuna, or Turkey Sandwich
- Banana with Peanut Butter
- Cereal with Milk
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GROCERY SHOPPING LIST IDEAS

- LOTS of fruits and vegetables
  - Any and all – EAT LOTS OF THEM!
- Brown (not white)
  - 100% Whole wheat bread/wraps/pitas
  - Wheat pasta and noodles
  - Brown Rice
- Lean meats (protein)
  - Chicken, fish, lean ground beef, deli meats
    - Freeze if not using in a few days
  - Beans
    - Tofu (chop it up, cook it with rice, you won't even know it's there)
- Low fat yogurt
- Fat-free/Low-fat milk or soy milk
- Nuts, dried fruit, trail mix
- Tomato Sauce
- Low-sugar cereal (Great and quick before AM practice!)
- Hummus, corn, peas

Best cooking methods:
Baking Broiling Grilling Steaming
Microwaving

Worst methods:
Frying
SAMPLE GROCERY LIST

Use this list as a guideline when navigating the grocery store. A best practice would be to take an inventory of your kitchen pantry and refrigerator, create some meal ideas for the following week, and then check-off which foods you will need to purchase while at the store.

Vegetable and fruit aisle:
- Bananas
- Oranges
- Spinach or other leafy greens
- Onions
- Broccoli
- Tomatoes
- Apples
- Berries
- Sweet potatoes/baking potatoes
- Red grapes
- Red peppers
- Baby carrots
- Portobello mushrooms

Snack aisle:
- Baked chips
- Salsa
- Almonds or walnuts
- Whole-grain baked crackers
- Graham crackers
- Granola Bars

Baking goods aisle:
- Nonstick cooking spray
- Muffin mix
- Whole-wheat flour
- Maple syrup
- Olive oil
- Bisquick
- Raisins
- Vinegar
- Old-fashioned oats
- Lemon pepper seasoning
- Cinnamon
- Black pepper
- Italian seasoning
- Garlic Powder

Grain aisles:
- Whole grain pasta
- Brown rice
- Couscous
- English muffins
- Whole wheat tortillas
- Bagels
- 100% Whole Wheat Bread
- Quinoa

Canned food aisles:
- Stewed tomatoes
- Spaghetti sauce
- Beans
- Canned tuna
- Peanut butter
- Broth-based soups
- Corn

Condiment aisle:
- Soy sauce
- Olive oil Mayonnaise
- BBQ Sauce, Ketchup, Mustard
- Oil-based salad dressings (i.e. Balsamic Vinaigrette)

Frozen food aisles:
- Vegetables
- Black-bean burgers or other "meat" products
- Whole-grain waffles
- Berries
- Pizza dough
- Bagels

Meat, poultry, fish, and deli counters and aisles:
- Frozen salmon patties (wild Alaskan)
- Grilled chicken strips
- Lean beef or pork cubes for stir-frying
- Deli turkey or lean ham
- Turkey or chicken breast cutlets
- Extra lean ground beef

Dairy case:
- Plain Greek Yogurt (use as Sour Cream)
- Eggs
- Skim or 1% milk
- Part-skim cheese
- Feta or blue cheese
- Parmesan cheese
- Low-fat yogurt
- Cottage cheese
- Tofu

Beverage aisle:
- 100% real fruit juice
- Tea
- Vegetable juice
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**WHAT IS A REAL PORTION SIZE?**

**Breads, Cereals, Rice, Pasta, and other Grains Group**
- 1 slice bread or 1/2 bagel the size of a hockey puck
- 1/2 cup cooked rice equals a cupcake wrapper
- 1/2 cup pasta equals an ice cream scoop
- 6 whole-wheat crackers
- 3/4 cups of unsweetened cereal

**Fruit and Vegetable Groups**
- One fruit and vegetable serving is equal to one piece the size of a tennis ball or 1/2 cup the size of a light bulb
- 1 cup of raw leafy vegetables
- ½ cup of 100% fruit juice
- ¼ cup of dried fruit

**Meat, Chicken, Fish, Dry Beans and Peas, Eggs, and Nuts Group**
- 3 ounces lean meat, chicken, or fish measures up to a deck of cards
- 1 egg
- ½ cup of beans or legumes
- 1 ounce of nuts about the size of your thumb

**Dairy Group**
- 1 ounce cheese equals about 4 dice
- 1 cup of low-fat, fat-free milk

**Fats, Oils, and Sweets Group**
- Use sparingly, for a teaspoon of fat, look to the tip of your thumb

<table>
<thead>
<tr>
<th>Three ounces of meat is about the size and thickness of a deck of playing cards or an audiotape cassette.</th>
<th>One-half cup of ice cream is about the size of a racquetball or tennis ball.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A medium apple or peach is about the size of a tennis ball.</td>
<td>One cup of mashed potatoes or broccoli is about the size of your fist.</td>
</tr>
<tr>
<td>One ounce of cheese is about the size of four stacked dice.</td>
<td>One teaspoon of butter or peanut butter is about the size of the tip of your thumb.</td>
</tr>
</tbody>
</table>

*Think about the number of portions you have throughout the day more than at one meal. Portion control is especially important for an athlete trying to lose weight.*