Nutrition for Runners

A Guide to Eating Right

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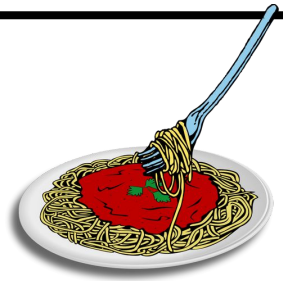
Introduction

- Athlete's needs are different and can vary depending on the sport and the season.
- Adequate nutrition can help you compete at your top level, but can also help you to avoid some injuries, such as fractures.
- When athletes do not take in enough nutrients and calories their bodies are unable to compete as well and risk your body using your muscles for energy.
- You can nourish your body by eating a balanced diet that is full of variety.
- Remember all foods fit in moderation into a healthy diet. How much and how often are KEY!

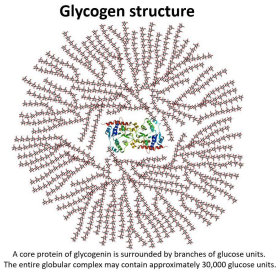
Carbohydrate Loading



Myth:

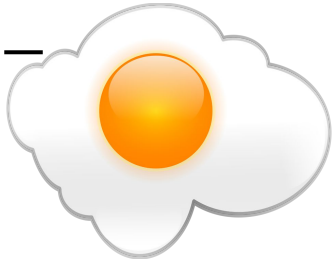
- Many athletes, especially runners used to carb load the night before or morning of a race.
- Carb loading is eating a meal the night before and/or the morning of a race that is high in simple carbohydrates, low in fiber, low in fat, and low in protein.
- Simple carbs are carbs that can be easily and quickly digested by the body to be used as energy or stored.
- The thought was that by doing this you would replenish your glycogen stores with the simple carbs.

Carbohydrate Loading



Explanation of glycogen:

- Carbohydrates digest in our body to a simple form of sugar (ENERGY) called glucose.
- Glucose is then either used by the body/organs/brain as energy or if that energy is not needed at that time, then it is stored.
- Glucose can be stored in many different forms in the body. One of those forms is called glycogen.
- Glycogen stores can be found in some of our large muscles like our quadriceps (quads). These stores are what helps our body fuel long runs, long workouts, and other lengthy activities.



Carbohydrates

Fact:

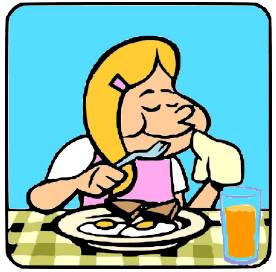
- So, you can see why runners wanted to carbohydrate load. They wanted to ensure their glycogen stores were full in order to get them through their race.
- Today, we know that we do not need to carb load to that extent anymore.
- Many runners were eating too many carbohydrates when carb loading, causing the extra glucose to be stored as triglycerides, which is a storage form of fat.
- We still need carbohydrates before and after a race, but what is more important to focus on is eating a balanced meal or snack that is nutritious.
- This includes eating lean sources of protein, plenty of non-starchy vegetables, fruit, dairy/non-dairy, and whole grains.

Sports Drinks

- Non-diet sports drinks can be helpful to replenish glycogen stores and hydrate. However, please dilute with water.
- Most people do not need to consume 12-16 ounces of just sports drink.
- Please dilute half with water and half with sports drink in a 16 ounce bottle if using a sports drink to rehydrate.
- They should not be relied on as a fuel source.
- They are mostly sugar and most humans unless you are a professional athlete, marathon runner, training for the Olympics, or running many miles in intense heat, you do not need the electrolyte boost sports drinks supply.
- Water will do just fine.
- Always remember to stay hydrated throughout the day and re-hydrate with water during and after practice.
- Be prepared on hot days.

Protein Powders

- Most Americans consume plenty of protein to meet their needs each day.
- Protein powders and protein drinks are not necessary for most people.
- Many can be expensive and full of sugar.
- When able it is best to choose whole food sources of protein, such as meat, poultry, fish, nuts, seeds, eggs, and legumes



Meal Pattern

When you eat is important to keep your energy levels up for practice or a meet. In order to meet your nutrient and calorie needs it is important to eat balanced meals and snacks throughout the day. This may change depending on if you are in school or if it is summer or a weekday, but below are 2 meal patterns that could be used to ensure adequate energy consumption throughout the day.

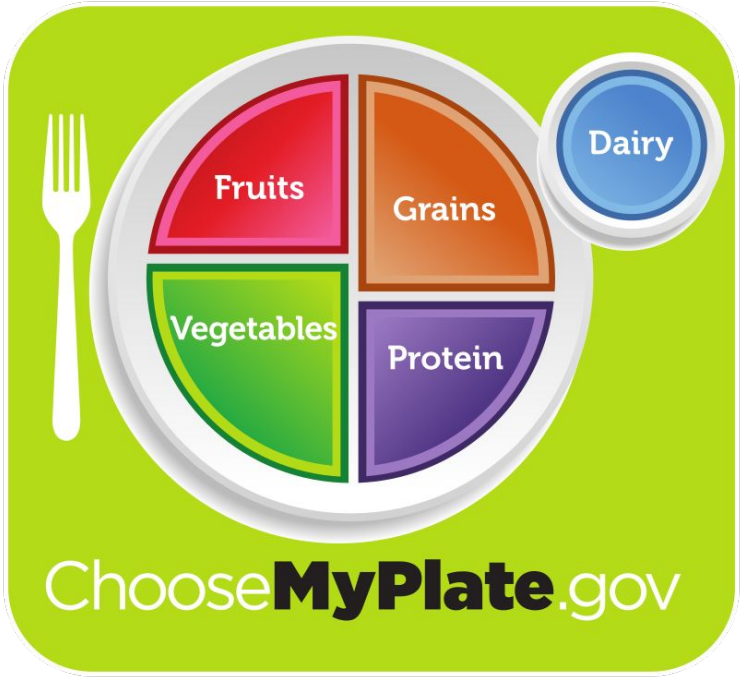
A. Breakfast, Lunch, Afternoon Snack, Dinner

B. Breakfast, Lunch, Snack, Snack, Late Dinner

Meal Pattern

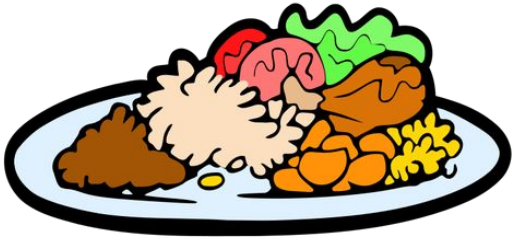
- A balanced breakfast includes carbohydrate (preferably high fiber) and a protein.
- Lunch should include carbohydrate (fiber), a protein, and a non-starchy vegetable.
- Dinner should be similar to lunch.
- Snacks, like breakfast, should balance smaller portions of a carbohydrate (fiber) and a protein.

Meal Pattern



****½ plate vegetables and ¼ plate protein! ****

Meal Pattern



The night before a race your dinner should include

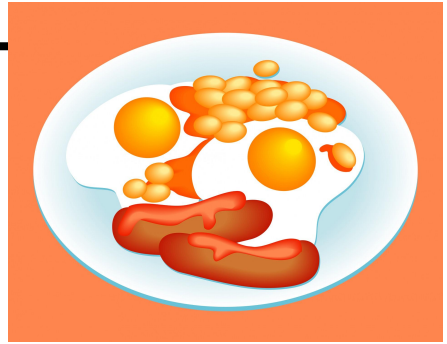
- 2-3 servings of carbohydrate
- a palm sized portion (3-4 ounces) of protein
- half your plate should be non-starchy vegetables (examples: leafy greens, green beans, broccoli, cauliflower, carrots, cucumbers, zucchini, yellow squash)
- The slightly larger portion of carbohydrates will help to ensure your glycogen stores are full.

Examples: *3 ounces of roasted chicken + 1 cup cooked brown rice + ¼ cup cooked black beans (optional) + 1 cup cooked broccoli

*3-4 lean meatballs + 1 cup cooked whole wheat pasta + 2 cups leafy greens salad + 1 piece of fruit (optional)

*4-5 ounces cooked tofu + 1 cup brown rice + 1 cup cooked stir fry vegetables + 1 small piece of fruit (optional)

Meal Pattern



On the morning of a race.

- If you have about 3-4 hours before your race try to eat a breakfast that includes about 2 servings of carbohydrates (up to 3 depending on body size),
- moderate protein, and lower in fat.
- It takes our body longer to digest fat, which could cause an upset stomach or a feeling of sluggishness during your race.

Examples:

1 cup of cereal + ½ cup milk + 1 piece of fruit + ½ ounce nuts + 1 piece of toast (optional)

½ of a regular bagel + ½-1 cup milk + 1Tbsp of peanut butter

1 piece of toast + 1-2 Tbsp. peanut butter + 1 large banana

1 medium to large apple (or 1 cup unsweetened applesauce) + 1-2 hard-boiled eggs

Meal Pattern

Also, on the morning of the race if you only have 1-2 hours before start time having a higher carbohydrate and moderate protein snack can be beneficial. You don't want to eat anything too high in fat or sugar as this can once again cause an upset stomach or feelings of sluggishness.

Examples:

6 ounces flavored Greek yogurt (non-dairy option: Kite Hill Almond milk Greek yogurt) + ½ cup dry cereal

½ cup dry cereal + ¼-1/2 cup dried fruit + ½ ounce almonds

1 granola bar: kids Rx bar, lara bar, kashi bar

5-10 whole grain crackers + 1 Tbsp. nut butter

1 piece of fruit + 1 Tbsp. peanut butter OR 1 cheesestick OR 1/2-1ounce nuts

Meal Pattern

- Depending on the food in the cafeteria, it may be in your best interest, if able, to pack your lunch on meet days.
- A good lunch could include a grain bowl (grain, vegetable, protein), such as brown rice + stir fry vegetables, and chicken with a piece of fruit on the side.
- A peanut butter and jelly or turkey sandwich with ¼ -1/2 of an avocado with a side of carrots and a piece of fruit would also make a great lunch.
- Good options at the cafeteria can include a sandwich (not a chicken patty sandwich), a peanut butter and jelly sandwich with a piece of fruit and vegetable (if available), or even the spaghetti with a side salad.
- Try to eat some non-starchy vegetables at lunch to balance your meal.

Meal Pattern

If practice or a meet is more than 3 hours from the last time you ate, pack a snack.

Examples: *can be similar to the small breakfast options

*1/2 – 1 whole nut butter and jelly sandwich on whole wheat bread

*1-2 cups of plain popped popcorn + ¼-1/2 cup dried fruit + ½-1 ounce almonds

*1-2 clementine's (cuties/halo's) + 1 cheese stick

*1 kids Clif bar

* 1lg banana + 1 Tbsp nut butter

*1/2 – 1 whole turkey sandwich on whole wheat bread

Meal Pattern

- Once practice or the meet is over, if you know it will be greater than 45 minutes until you get to eat a meal, try to have another balanced snack option with you.
- When eating for recovery after practice or a meet we want carbohydrates to replenish your glycogen and energy stores and protein for your muscles. (See above snacks).
- Chocolate milk is also great for after practice due to its carbohydrate:protein ratio.

Vegetarians/Vegans

- If you eat a vegetarian or vegan diet, as mentioned above, make sure to eat a protein source with each meal and snack.
- This will help you meet your protein needs throughout the day.
- Many vegetarian and vegan foods/meals are lower in calories, so make sure you are planning snacks throughout the day that incorporate nutrient and calorie dense foods, such as nuts, seeds, nut butters, and/or dried fruits.

Vegetarians/Vegans

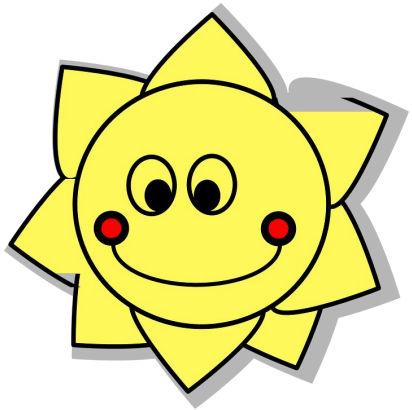
- Make sure to choose calcium fortified versions of alternative milks, yogurts, and cheeses to ensure you meet your calcium needs.
- You may want to discuss calcium in your diet with your parents and doctor to ensure you are getting enough from diet alone. If not, they may consider adding a calcium vitamin.

Vegetarians/Vegans

- B12 and a vegan diet.
- Most people are able to consume enough B12 in their diet.
- However, vegans can struggle as B12 is most abundant in animal food sources.
- Make sure to include nutritional yeast in your diet for B12.
- Once again you may want to discuss your diet with your parents and doctor to ensure you are getting enough B12 in your diet.
- If not they may consider adding a B12 vitamin. B12 plays many roles in our bodies.
- If you are low/deficient in B12 you may feel tired/fatigued more often.

Vegetarians/Vegans

- Vitamin D is often fortified in diary alternatives.
- You may want to discuss your vitamin D labs with your doctor/parents along with your diet to make sure you are getting enough Vitamin D through your diet and sunlight.
- Vitamin D helps with calcium absorption, our mood, and our immune system.

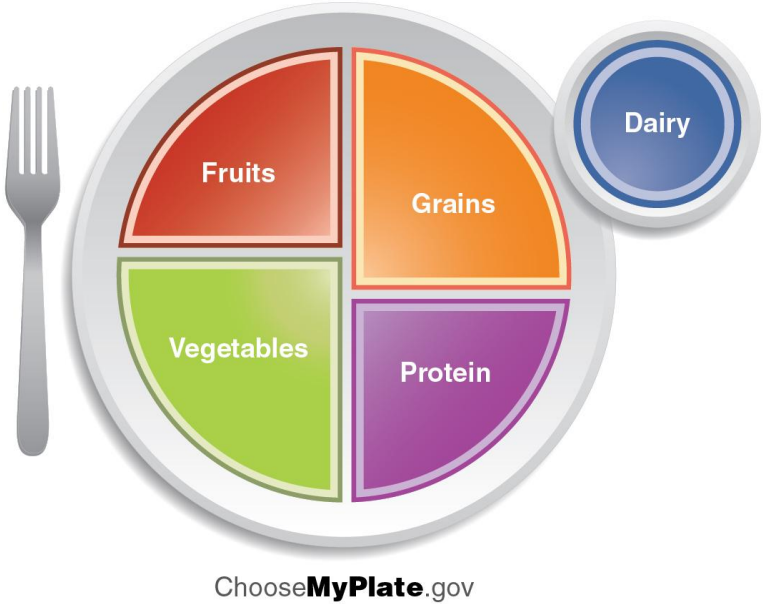


Vegetarian/Vegan

- The most absorbable forms of iron come from animal sources, called heme iron.
- However, many plant sources have iron in non-heme form.
- Make sure to include a variety of iron containing foods throughout your day.
- Plant sources of iron include whole wheat breads, cereals, whole wheat pastas, quinoa, oatmeal, avocado, cooked spinach, cooked mushrooms, baked potatoes, legumes (beans/peanuts), soybeans, tofu, and lentils.
- Nuts also contain small amounts of iron.
- Cooking the spinach and mushrooms makes the iron more available to our bodies than when they are eaten raw.
- Iron is also better absorbed when eaten with foods that are high in vitamin C.
- Foods high in vitamin C include citrus fruits (oranges, grapefruit, lemons, and limes), chard, broccoli, bell peppers, kiwi, strawberries, tomatoes, cantaloupe, and papaya.
- Some finds can decrease your body's ability to absorb iron, such as coffee, tea, soda, dairy, calcium fortified non-dairy alternatives, and calcium supplements.

Servings of Food

Click here



Questions

Fill out the form if you have questions.

Resources

https://kidshealth.org/en/teens/eatnrun.html

Runners World

MyPlate.gov

Stanford Medicine

https://www.smore.com/qbsmy