Nutrition for High School Athletes - Quick Guide

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Mindset: Every summer, I speak to a room full of 100+ elite teen athletes. Towards the beginning of the talk, I ask them to take a minute and think back for me. When was the last time you went out to the driveway, climbed into your car, noticed the gas gauge was on empty, and thought, I'm gonna just dig down into this driveway dirt, fill my tank with it, and hope for the best?

Maybe you didn't have much money, and there in the driveway was a bunch of free dirt. Maybe you were short on time and didn't have enough to stop at the gas station - you know, sort of a grab-and-go situation. Maybe you recently saw a celebrity or influencer say it was the best option. Maybe it's what your friends do.

Ridiculous, right?

You'd NEVER put dirt in your car's gas tank.

YET, these same reasons are given by both teens and adults as to why they put junk in their bodies. Money, time, influencers, friends. Tradition. How they grew up.

Your body is infinitely more valuable than a car. Infinitely. Your health. Energy. Performance.

So today, let's think about what your body needs to run its best and when it needs it. What nourishes, what fuels, and how to "time" these nutrients for optimal sports performance.

First things first: There are 2 distinct pieces of nutrition for athletes. They are:

- Everyday Nutrition
- Performance Nutrition (or training nutrition)

Everyday nutrition is the nutrient-packed foods you give your body, every day, within healthy meals and snacks. The goal of this part of nutrition is to keep your body healthy and energized with adequate calories and nutrients for everyday life and growth (if you're still growing). This means your normal breakfast, lunch, dinner, and snacks. For now, what's important is that you understand and recognize these 2 distinct parts of nutrition. This is the CRUX of it all.

Performance nutrition, on the other hand, is all about giving your body the exact nutrients it needs to perform its best, immediately before, during, and after your training or race. As you can imagine, these foods and drinks are very different than the "healthy" foods you give yourself in everyday nutrition. Performance nutrition needs to be efficiently digested (low fiber), high carb, and in forms that are logistically easy to consume. They need to be quickly digested, metabolized, and utilized. For example, a "gel" can be great for performance nutrition, especially if it contains carbohydrates and electrolytes. But, I would not

recommend sitting on the couch on your off-day and downing a bunch of sugary gels. Moreover, an apple is great when sitting on the couch. But, if you eat an apple at half-time of a basketball or soccer game, it's still gonna be in your stomach when the games over. It is not an "efficient fuel." Make sense?

Let's optimize both types of nutrition.

Everyday Nutrition - Optimize Your Everyday *Pattern of Eating* and Healthy Foods for Health and Energy

The first part to nail down is the *pattern of eating*.

The pattern of eating is the timing of your meals and snacks during the day. Do you wake up, skip breakfast, barely grab lunch, and then head to practice dehydrated and undernourished? Are you STARVING when you get home? If so, you will NOT perform optimally, reach your potential or get better day after day. The fuel must be in your system when you need energy.

So, for daily nutrition, focus on:

Breakfast, optional snack, lunch, optional snack, dinner every day.

What makes good meals and snacks?

First, make sure every meal includes:

Healthy protein (I believe every meal should include proteins from animals, but it doesn't have to be meat). Complete proteins include: eggs, milk, yogurt, cheese, cottage cheese, meats from animals (any type). Other good protein choices include beans, nuts, seeds, nut/seed butters, qunioa, etc.

Healthy whole carbohydrates: Fruits, good-quality grain products such as whole grains, oats, and sourdough, beans, dairy, and starchy vegetables such as sweet potatoes, potatoes, corn, etc.

Healthy fats: Use fats such as butter, extra-virgin olive oil, avocado oil, coconut oil, and ghee. Avoid processed foods with soybean oil or seed oils (at least most of the time), margarines, etc.

Vegetables: Make sure to have vegetables at at least 2 meals per day. They are a great choice at dinner.

Treat: Try to avoid processed junk food treats as much as possible. However, if you'd like to include a high-quality (homemade, if possible) treat each day, that's fine!

Hydration: In daily nutrition, aim for 80 oz. water per day. Sure, this may be more than you absolutely "need." But it's nowhere near a waterlogged, harmful amount. And you'll feel great.

Of note, this does not take into consideration the fluids you need to add for performance nutrition.

Examples: How does this look in real *life? Something like:*

- *Breakfast: Eggs, sourdough, avocado + water*
- *Snack: Fruit + nuts+ water*
- *Lunch: A sandwich with turkey, cheese, lettuce/tomato, etc or a PB & J + fruit + a carrot + water*
- *Snack: Greek yogurt + water*
- *Dinner: Chicken + Sweet Potato + Salad with olive oil dressing + water*
- *Dessert: Homemade brownie*

Of course, this is just an example, but notice the pattern of eating PLUS the balance in every meal with protein, adequate carbohydrates, and healthy fats, fruits throughout the day, and vegetables in meals.

There are more energizing carbohydrate foods during the day when you're most active, and an emphasis on protein & vegetables at dinner. Dinner is an opportunity to nourish your body after the day, and protein and antioxidant-dense vegetables are perfect for this.

Now, What You're Really Interested In...Performance Nutrition

Mindset: Imagine you're on the field, ready to start a game or practice. You look down, and oh-my-gosh, you've forgotten your cleats. This is a problem. Now imagine instead you've forgotten to eat lunch and didn't have a chance to hydrate or grab a snack before practice. And there you are on the field. While it may not seem as crucial, it's still a problem - just like forgetting your equipment. Never "waste" a practice, or feel low-energy in a game because you skipped nutrition. Instead, make it a priority AND your new secret weapon.

This is the part most teen athletes get excited for: Performance Nutrition! Just remember, it means little without a foundation of healthy everyday nutrition.

There are 3 parts of Performance Nutrition:

1. **Immediately before any training, race, game, or event**
2. **During any training, race, game, or event**
3. **Immediately after any training, race, game, or event**

If you have a goal to improve as an athlete, you should fuel your body to do so. It's rather simple: your body needs usable fuel to perform its best. So, let's discuss what fuel works best.

Luckily, this part is simple as well. In this section, we are going to cover what your body needs *and can use* **before** and **during**:

fluid, carbohydrates, and electrolytes

Why?

Fluid & Hydration

First, your body's cells, tissues, and systems are directly affected by hydration. This means your performance is directly affected by dehydration.

Of note, most high school athletes BEGIN their training already dehydrated because they do not drink enough water throughout the day.

Carbohydrates

Next, your body's preferred source of fuel to convert into energy is glucose. Glucose comes from carbohydrates primarily. It can be found in a few places: the bloodstream, liver, glycogen stores in muscles, and stored in cells (but not immediately usable). For quick energy demands, the body turns to the bloodstream and glycogen.

Beware: You only have a few minutes worth of glycogen (the easy-to-convert-energy-in-your-muscles) available. So, you MUST replenish carbs during training and games. I recommend a quick pre-training snack before trainings and games, more carbs from a sports drink and fuels during the game (when on sideline, time-outs, half-time). Refueling carbs will give your body the ability to sprint at the end of a game.

Electrolytes

If I had a dollar for every time I've heard a coach or parent lobby for drinking pure water ONLY as a source of hydration, I'd have quite a few dollars.

Sure, water can work great, IF THE ATHLETE IS GETTING ELECTROLYTES AND CARBS IN ADEQUATE AMOUNTS ELSEWHERE. Spoiler: Athletes are NOT getting adequate amounts of electrolytes and carbs elsewhere.

Performance Nutrition: How Much, What & When?

In the scenario of being at school all day and eating regular meals and snack with an afternoon practice/competition after school.

DURING DAY: Breakfast in morning, optional snack, lunch 3-4 hours before practice, optional snack, then…

BEFORE TRAINING or Competition: 15-30 minutes before training/competition:

- **~30-60 grams of easy-to-digest carbohydrate snack**
- **10-16 oz. fluid in hour before practice**

Real-life examples (see also the full meal plan at the end):

12-16 oz. water or sports drink +

1. 2 fig bar cookies (~25 grams carbs, 160 calories)
2. 1 homemade cookie (20-30 grams carbs, 150 calories)
3. 1 slice banana bread (20-30 grams carbs, 150 calories)
4. 1-2 PB stuffed dates (30 gm carbs, 220 calories)*
5. 1-2 Energy Bites (can use peanuts, sunflower seeds, etc in place of cashews)**
6. 2 Small That's it bars OR 2 Real Fruit Strips (such as Stretch Island) (22-30 grams carbs, 90-150 calories)
7. 3-4 mango strips, dates, dried plums, raisins, or dried figs (20-30 grams carbs, 150 calories)
8. ½ peanut butter and jelly sandwich (20-30 grams carbs, 150 calories)
9. 1 medium banana or 1.5 cups fruit such as grapes, mangos, etc. (30 grams carbs, 120 calories)
10. Honey Stinger Waffle or other sport fuel 20-30 grams of carbs (20-30 grams carbs, 150 calories)
11. ½ -1 bar such as Lara, Bobo, Organic Food Bar, Clif Bar, etc. (20-30 grams carbs, 150 calories)
12. ½ bagel + ½ tablespoon jelly or honey + 8 ounces water (30 grams carbs, 155 calories)
13. 2 Tbsp honey (like honey sticks) (30 grams carbs, 120 calories)

*__Peanut Butter Stuffed Salted Dates:__ Cut open 3 pitted dates length-wise. Spread 1 teaspoon of nut butter in each. Sprinkle ⅛ teaspoon salt over all 3.

**__Power-Punch Cocoa Energy Bites:__ Place 1/4 cup chopped nuts in your food processor & process until finely ground (almost like flour but not like nut-butter). Remove nuts from processor and set aside. Add 16 pitted dates to processor & process until they're stuck together in a mass. Empty dates into a bowl. Add 2 Tablespoons of cocoa powder, mix well. Add 1 teaspoon vanilla, mix well. Add ¾ cup chopped nuts and sea salt – mix well. Roll the cocoa-date-nut mixture into small balls about 1-inch in diameter. Then roll each in the finely chopped nut meal processed at the beginnin and set aside. Enjoy immediately or store in the refrigerator for up to 10 days. If using for fueling, spinkle with ⅛ - 1/12 tsp sea salt for 200 mg sodium.

DURING TRAINING or Competition: When training/competing >40 minutes total, you will perform better with the following per hour:

- **40-60* grams of easy-to-diest carbohydrates* (that's a big range and highly dependent on tolerance)**
- **400-600 mg sodium**
- **10-16 oz. fluid per hour**

Real-life examples PER HOUR (see also the full meal plan at the end):

~12-16 oz. Sports Drink (with 400+ mg sodium = 20-30 grams carbs, 80-120 calories)* PLUS

1. 2 fig bar cookies (~25 grams carbs, 160 calories)
2. 1 homemade cookie (20-30 grams carbs, 150 calories)
3. 1 slice banana bread (20-30 grams carbs, 150 calories)
4. 1-2 PB stuffed dates (30 gm carbs, 220 calories)*
5. 1-2 Energy Bites (can use peanuts, sunflower seeds, etc in place of cashews)**
6. 2 Small That's it bars OR 2 Real Fruit Strips (such as Stretch Island) (22-30 grams carbs, 90-150 calories)
7. 3-4 mango strips, dates, dried plums, raisins, or dried figs (20-30 grams carbs, 150 calories)
8. ½ peanut butter and jelly sandwich (20-30 grams carbs, 150 calories)
9. 1 medium banana or 1.5 cups fruit such as grapes, mangos, etc. (30 grams carbs, 120 calories)
10. Honey Stinger Waffle or other sport fuel 20-30 grams of carbs (20-30 grams carbs, 150 calories)
11. ½ -1 bar such as Lara, Bobo, Organic Food Bar, Clif Bar, etc. (20-30 grams carbs, 150 calories)

12. ½ bagel + ½ tablespoon jelly or honey + 8 ounces water (30 grams carbs, 155 calories)
13. 2 Tbsp honey (like honey sticks) (30 grams carbs, 120 calories)

If you elect to drink water instead of a sports drink, double up on carb choices and consider adding ¼ tsp salt to foods.

*If your sports drink does not have enough sodium to reach this amount, you can add 300 mg of sodium with just ⅛ tsp salt (don't worry, it will taste great!)

These are OPTIMAL AMOUNTS. Even if you can't quite reach them, any added amount will help.

Sports Drink Notes:

- **Home Recipe:**

10 oz. Simply Lemonade + 10 oz. water + 1/4 tsp salt

- **Good commercial Sports Drink Options**: There are many! Some I recommend are Skratch Labs and Carborocket. If Gatorade, either use the powdered form OR a clear (no-dye) option such as Arctic Cherry.
- **A note on drinks like Gatorade/Powerade**: In terms of the nutrition numbers, the carbs, the electrolytes, etc., I think Gatorade is an okay choice. It delivers the fluid, carbs, and electrolytes needed before, during, and after exercise. In terms of the *quality* of nutrition, including the quality of the ingredients used and not just the "numbers" produced, I personally do not recommend drinks with added colorings and flavorings when possible. Not only are these sometimes hard on the stomach, but they may produce unwanted results in our bodies (unknown, but why put them in there?). This is why I recommend more natural drinks like my lemonade/water/salt homemade recipe, Carborocket, UCANN, clear Gatorade, Skratchlabs, or others. These get the job done without dyes and colors.
- **A note on electrolyte powders, typically in tablet or stickpacks like Nuun & "zero" carb drinks like Gatorade Zero**: While electrolyte powders that are low in carbs can be good for daily nutrition if you live in a hot environment and/or increasing sodium the day before a race, they are not the best option for performance nutrition. **These do not contain meaningful carbohydrates**. It's better to give your body the carbs it can use before, during, and after training.

Prioritize Recovery - After Every Training

After you stop training or competing, your body is still in an "amped up" state. It can absorb and utilize nutreints better than it will once it's "wound down" again. Your enzymes are amped, and your ability to utilize blood sugars for energy is "amped." This physiological state starts the moment you begin being in an active state and ends about 30 minutes after you're done (it takes a bit of time to wind down). During this amped up time, you have an incredible opportunity, or "recovery window" to:

1) Nourish your body

2) Recoup the fluids and electrolytes you've lost

3) Recoup the carbohydrates you've used up from your bloodstream, liver AND muscle glycogen stores

4) Provide the protein and amino acids needed to repair and heal muscle fibers that are stressed, strained, and torn during training and performance (yes, they are 100% always stressed, strained, and or torn - this is okay).

What does your body need after training to recover optimally?

Within 30 minutes of finishing your workout, give your body:

- 20-32 oz. fluid per hour you've worked out
- 30+ grams carbohydrates
- 20+ grams protein (including added amino acids)
- 300+ mg sodium (especially if you've been sweating)

Real-life examples (see also the full meal plan at the end):

~32 oz. water PLUS

1. 8-12 oz. Chocolate Milk + 10 gm protein powder, amino acid powders, or collagen (180-220 calories, 30 grams carbs, 18-22 grams protein)
   a. Homemade Raw Cacao Recip: 1 gallon milk + 1 cup raw cacao + 1 cup raw honey.
2. Smoothie with 8 oz. Greek yogurt) + 1 small banana OR 1 cup berries + 1 Tbsp nut butter or 2 Tbsp nuts (peanut butter, almond butter, etc). (240 calories, 30 grams carbs, 24 grams protein)
3. 10 oz. orange juice + 1 scoop 20-gram protein powder (250 calories, 35 calories, 20 grams protein)
4. Sandwich w/ 2 slices bread, ½ can tuna, 1 Tbsp mayo/mustard (250 calories, 30 grams carbs, 24 grams protein)
5. Clif Protein Bar, RX Bar or Power Protein Bar (220 calories, 25 grams carbs, 20 grams protein)
6. ½ cup cottage cheese, 1 small banana, 1 Tablespoon honey or maple (230 calories, 35 grams carbs, 20 grams protein)
7. 2 scoops of Carborocket Rehab, Recoverite OR Endurox R4 Recovery Drink with water (170-200 calories, 39 gm CHO, 15 gm protein)

Addins: Add ⅛ tsp salt AND 3-5 grams l-glutamine powder to recovery snack. This is my #1 recommended amino acid to add to recovery. I also like 3-5 grams BCAAs and 3-5 grams micronized creatine.

Nutrition is an amazing opportunity to quickly improve your energy and performance.

If you want more support, check out my website, podcast, etc. at
🌐 Kick Butt Kitchen - Nourishing Realistic Plans for Athletes & Families .

Or, if you'd like to contact me with questions, I'm at 970-209-1444.

Let's go Titans!


APEX NUTRITION
FLOOD YOUR BODY WITH NUTRIENTS