



Fueling for ACA Varsity MTB Racing

These are guidelines aimed to help coaches and varsity-level student-athletes understand the basics of sports nutrition to maximize their performance on race-day. Or, for any student-athlete who takes more of an interest in the science behind sports performance and nutrition.

Keep in mind, we are still just covering the basics and there isn't one way to achieve results or maximally perform. Each student-athlete is different, and there can be dramatic variation between how one rider responds to a certain fueling strategy versus another.

This is a good place to start, and we strongly recommend testing out your fueling strategy during practices before trying anything new on race day.

Key Points

- Fueling days prior to and race morning is important. 'Carbo-loading' for one meal isn't an adequate approach.
- Factor in all your race-day riding into your fueling plan (warm-up, race, and cool-down).
- Stay consistent with hydration during the week and through your race weekend.
- Keep your race fueling plan simple.

Fueling For All Race-Day Riding

Varsity ACA races typically last between an hour and fifteen and an hour and forty-five minutes, and all races require a 100% effort from the get-go. Additionally, it's key to factor in your warm-up and cool-down time. We recommend 20-30 minutes of time for a warm-up, and a short 5-10 minute cool-down. *In all, a Varsity racer should prepare to fuel up to two and a half hours of physical exertion per race.*

The Days Before

The goal: replenish muscle and liver glycogen—this is how you'll fuel most of your efforts on race day. Your body can store about an hour and half of fuel for high intensity efforts in the form of muscle and liver glycogen. The rest of your fuel comes from a combination of calories you're consuming on the bike and fat stores.

To achieve this you simply need to maintain consistency with your meals during the week, and consume a nourishing, balanced diet. In particular, the day before your event is key.

Eat a sensible meal with some lean protein and a quality carbohydrate—and don't forget your veggies! Lean protein may include white chicken meat, fish, quinoa, beans, pork chops with fat trimmed, or ground turkey to name a few. Good carbohydrate options include rice, potatoes, quinoa, and pastas. Try some different options other than wheat (e.g. pasta) as it's not uncommon for some riders to feel bloated from wheat.

There is no need to stuff yourself or eat more than normal. Just make sure you're adequately fueling your activities (so pay attention to your hunger cues). The idea that you need to eat unusually massive amounts of carbs before your race is outdated and diminishes how incredibly efficient the human body is at making sure you will have the energy available that you need for your event.

If you've ever experienced G.I. issues around your racing (e.g., stomach cramps, morning diarrhea) you may want to look at the sources of fiber in your diet and cut back in the days leading up to your race.

A top priority for athletes of all ages should be to get sufficient sleep leading up to an event. To optimize sleep, make sure you have some time to digest your dinner before bedtime (ideally, 2-3 hours).

The Pre-Race Meal

The goal: top off your fuel stores after a night of fasting (i.e., sleeping!). This is especially important if your event will require more than 90 minutes of activity.

As a varsity racer, you should have adequate time to eat a pre-race meal before your event. This meal is typically breakfast—although some racers prefer non-traditional breakfast foods.

You should time your meal so you finish 3 hours before you begin your race warm-up. Once again, there is no need to stuff-yourself. Aim for 300-500 calories. The key to a good pre-race breakfast is keep it simple to prepare, and something you'll want to eat. The meal should consist of mostly carbohydrates with a little protein and fat. It's also a good idea to limit fiber this close to your event.

Here are some examples of popular pre-race meals:

- Oatmeal with a little milk, almond butter, or peanut butter for protein and fat
- Pancakes with yogurt or peanut butter
- Granola with yogurt
- White rice and a fried egg (recommended for those with a sensitive stomach)
- [Overnight oats](#) with fruit

After your meal, switch to water only, or [Hammer Fizz](#) if you like. You can prepare a small bike bottle with [Heed Sports Drink](#) to consume during your warm-up and finish while staging.

10 Minutes Before Race Start

The goal: consume just enough simple carbs to wake up your brain and prime your body for the intensity of the start.

We recommend one of the following:

- 1 serving [Hammer Gel](#) + water (22 grams of carbs)
- ½ banana + water (20 grams of carbs)
- ½ small bike bottle with [Heed Sports Drink](#) (15 grams of carbs)

During the Race

The goal: to provide an alternate fuel source to your glycogen stores that's readily available.

Since your race is over an hour, plan on fueling during the race with 50-80 grams of carbohydrate per hour. Smaller athletes can get away with less, while higher intensity efforts for larger riders will require more. This fueling plan could be as simple as 20 grams every 20 minutes, or one Hammer Gel per lap of racing (consumed with water-only).

Option 1:

- 2x small bike bottles with Heed Sports Drink (30 grams per bottle)
- 3x Hammer gel (start of laps 2,4, final) (20 grams per gel)

Option 2:

- 2x small bike bottles with water
- 5x Hammer gel (start of all laps, with first consumed 5-10 minute before start)

Recovery

The goal: begin replenishing your glycogen stores immediately after your event.

Timing is key. Within 30 minutes of your finish, it's important to get in a meal and begin refueling. If real food isn't an option—or a rider simply doesn't feel like eating so soon after their finish—a recovery drink like [Recoverite](#) is a great option. If there's an ideal time to indulge, this is it!

It's important to include a bit of protein with recovery meal, and recent research suggests getting in some probiotics is good for your gut health (think yogurt!) after a large amount of simple sugars from racing.

Coaching Notes

It is always beneficial to teach the importance of food quality, and on combining foods. That is, to combine protein, fiber (fruit, vegetable, whole grain), and fat at most every meal and snack. This will improve blood sugar stabilization and improve concentration for school, and of course help on the bike as well.

Keep in mind that what kids have access to varies widely, and we want to avoid labeling foods as 'bad'. Instead, offer suggestions for simple foods that are inexpensive, widely available, and unprocessed. We want kids to enjoy their meals, take an interest in ingredients, their own food preparation, and ask questions.

When working with youth and young athletes, it is never appropriate to equate performance with 'leanness' or suggest dieting or caloric restrictions. In particular, for developing girls and young women, weight gain is normal, healthy, and expected.

Nervousness on race day is normal. Nerves often make us less interested in foods we typically like, and can also lead to multiple trips to the bathroom race morning. *These responses are normal.* If nerves progress to severe so that a student-athlete refuses to eat, gets sick, or is unable to sleep, those responses can remove fun from the experience and need to be addressed on a case-by-case basis.

References / Resources

- [The use of carbohydrates during exercise as an ergogenic aid](#)
 - [What your body actually needs during different types of endurance exercise](#)
 - [In the Kitchen with Hammer Nutrition](#)
 - [5 Secrets of Success by Hammer Nutrition](#)
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