

NUTRITIONAL GUIDE

EGR CREW

It doesn't matter whether you drive a Ferrari or a Geo Metro, if you don't put the right fuel in the tank, the car won't run. Of course, high-end cars require more refined fuel, which is often more costly, both in money as well as effort. While this is a cliché analogy, it is still the best way to understand why endurance athletes need to watch what they eat, especially rowers, and most importantly teenagers. This guide is designed to help you focus on how to put the right fuel in your tank, so the Ks you end up pulling this year will be as beneficial as possible when it comes to competition.

Five Simple Steps to Better Eating

1. Junk the Junk!

The first, and hardest, thing you have to do is cut out all the junk food you consume. This means no:

Fast Food	Pop
Ice Cream	Greasy/Fried Foods
Candy, Cookies, etc.	Frozen Meals/Snacks

All of these foods are excessively high in sugar, salt, and saturated fat; these are empty calories which do more harm than help to an endurance athlete. You will also want to reduce CAFFINE consumption, as it is a diuretic (it dehydrates the body by stopping the absorption of water into the muscle tissue) as well as an unnecessary stimulant. I know it's easy to grab a can or bottle for a quick pick-me-up, but with proper rest and nutrition, it isn't necessary.

2. It's a Balancing Act!

After getting rid of unnecessary calories, the next hardest thing to do is to keep track of what is going into your body. This gets a little more difficult with a growing endurance athlete, so I'll try to keep this simple.

- A) The average person should have a diet of approximately 2000 calories. You will have a diet of somewhere between 3000 and 6000, depending on weight and metabolism. You can figure that you will need approximately 20 calories for every pound of body weight. It sounds like a lot, I know, but with two hours a night of solid activity, your body is going to be starved.
- B) The basic breakdown of the calories you consume should essentially be a 70/20/10 breakdown. That means that 70% of your food source should be carbohydrates, 20% from lean proteins, and 10% from fat. While the 10% may be surprising, the body still needs some fat in order to muscles to work properly. Saturated fat, however, is something to stay away from, as that's the "bad" fat that leads to higher cholesterol and other health-related problems. Carbs, of course, are the basic source of fuel, while protein aids in muscle growth and other "building" processes of the body.
- C) Make sure you're getting the vitamins and minerals you need. In order for your body to function properly, athletes often need more of select vitamins and minerals than the average individual. There is a separate section on some specifics later in the guide.

It wouldn't be a bad thing to begin monitoring some basic intake information – carbs, proteins, fats – as well as keeping track of the amounts of vitamins and minerals you're consuming. Everyone's body functions differently, and it's important to know how much you need, and when you need it.

3. Fresh is Best!

When looking at the overall nutritional value of any food, the fresher, the better – any manner of cooking or preserving food often detracts from the natural quality of the food, and usually adds some “extras” which might not be necessary. When in the grocery store, think about “periphery shopping,” or beginning with the perimeter of the store first, as this tends to be where the freshest food is kept. The inner isles are normally all of the canned, frozen, and otherwise preserved food that will not be as beneficial to your body, regardless of the ease and convenience it provides. Whole-grains and less-processed foods will always be more nutritious than their counterparts!

4. Snack Attack!

There's no sense in trying to pack 4000 calories into 3 meals, so don't. It's actually better to control the amount you eat throughout the day rather than “load” at specific times. However, this does not mean that “snacks” are anything you can find – it often takes a little more preparation for an athlete. When you get a craving, eat fresh fruit, dried fruit, or a granola bar. Nuts and trail mix are good, too. Try to create small “parcels” of food that you can eat quickly, but are filling and give you the energy you need for a while – quick-fix snacks like candy will not help you. When meal times do finally arrive, make sure that you're balancing out the caloric intake with whatever snacks you've consumed during the day. Also, try to plan for carb-heavy meals after practice, rather than early in the day. Your body will be much more likely to function properly by establishing a pattern and sticking to it.

5. Hydrate, Hydrate, Hydrate!

You can eat as healthy as you like, but if your body is dehydrated, it still will not perform. As you're already cutting out pop, coffee, and hot cocoa, try replacing it with good ol' fashioned H₂O. Sports drinks are OK, but don't overdo it – water is still king. In order to be well-hydrated, you should consume half of your body weight in ounces of water (150 lbs = 75 oz) a day. You'll know you're hydrated when your urine is clear (and you'll probably have plenty of opportunity to check, as you'll start frequenting the lavatory on a more regular basis). While you may not need to be quite that hydrated during practice days, competitions will require you start hydrating the day before and continue up until the time you actually race – if you want to do well, that is...

Vitamins and Minerals

Here is the run-down on some of the important supplements you need as an endurance athlete. Remain vigilant on your consumption of these often overlooked items:

1. Iron

Iron is important for the transportation of oxygen in the body, as it helps build and strengthen red blood cells. Iron-rich foods include: red meat, eggs, and leafy greens.

2. Sodium

Despite what you might have heard, sodium is important, as it assists in the process of water-transfer into cells and muscle tissue. Too much sodium, however, can cause hypertension issues (high blood pressure) which can be detrimental to an endurance athlete. Try to stay between 500-1000 mgs.

3. Calcium

While everyone knows you need calcium for strong bones, this mineral also helps muscles contract properly. Women are more likely to suffer from low calcium than men, so be mindful. Calcium-rich foods include: milk and other dairy products, broccoli.

4. Potassium

Potassium, working with sodium, is a key mineral for the proper transfer of water to muscle tissue. If you have sore muscles, its usually from a deficiency in potassium and magnesium. Potassium-rich foods: apricots, bananas, potatoes, and tomatoes.

5. Magnesium

This mineral is essential in the regulation of muscle contraction and the construction of proteins in the body. If you want to develop stronger muscles, make sure you're getting enough magnesium – magnesium deficiency is one of the leading causes of early fatigue and muscle cramping. Magnesium-rich foods include: spinach, nuts (almonds, cashews), and beans (black, pinto, navy, white).

6. Vitamin B

B Complex (B1-12) have multiple functions in the body, and B3, B6, and B12 are incredibly important for athletes. Vitamin B(s) help to break down proteins efficiently as well as construct red blood cells necessary for oxygen transfer. Most "energy" issues in the body can be helped by increasing B Complex in your diet. Vitamin B-rich foods include: tuna, turkey, bananas, potatoes, and avocados.

7. Vitamin D

Vitamin D is important as it helps absorb calcium and other electrolytes (most of the minerals listed above). If you increase minerals without Vitamin D, you're wasting your time. Vitamin D-rich foods include: most seafood, eggs, and milk.

8. Vitamin E

This vitamin acts as an antioxidant (stops the breakdown of certain tissues and cells in the body). Vitamin E-rich foods include: most nuts, tomatoes, and sweet potatoes.

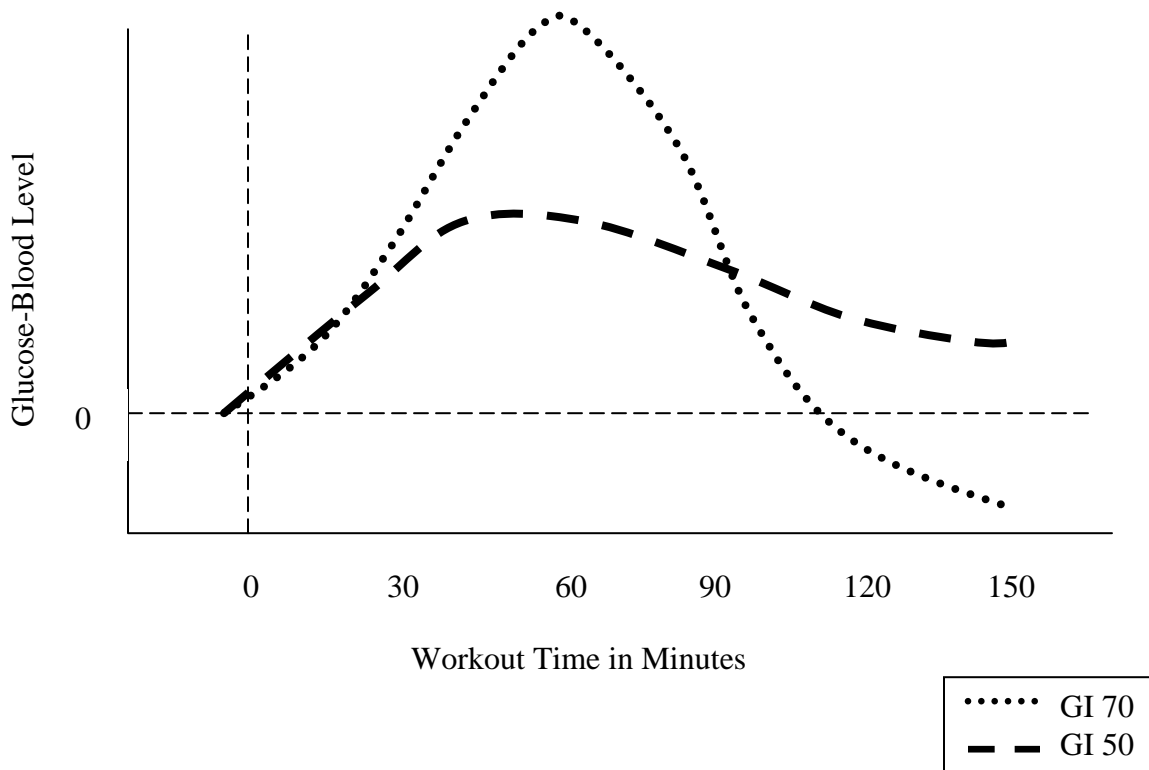
9. Omega-3 Fatty Acids

Omega strands are not naturally produced by the body, but reduce inflammation of tissue and increase brain functions. Omega-rich foods include: whole grains, fish, and fresh fruit and vegetables.

The Glycemic Index

The Glycemic Index, to begin simply, is a rating system which categorizes how quickly food – specifically carbohydrates which break down into simple sugars – breaks down in the body to supply energy. Foods high on the index break down quickly, and dissipate quickly; foods lower on the index do not give you the immediate spike in blood sugar, but last much longer. Why is this important? For endurance athletes, the knowledge and maintenance of the proper amount of energy required power your body through the strenuous workouts we do is essential for maximizing the efficiency with which you work, and the results you see because of working efficiently.

The Glycemic Index (GI) is a scale of 100, separated into three categories: high (100-70), moderate (69-50), and low (49-0). As previously stated, foods with simple molecular bonds – those that break down more quickly in the body – give a more immediate spike in blood sugar, but also last a more limited time. These foods are the ones that give you a “sugar high” for about an hour, after which you crash (hard). Moderate and low foods have more complex molecular bonds and take a longer period of time to break into simple sugars, providing a lower but more stable base of energy for endurance workouts. Essentially, it looks something like this:



OK, while this is pretty cool looking graph, here's why its important: if you don't eat properly before you come to practice, you're going to crash, and the last half of your workout will be much less useful as it could be. That, of course, means that you're really only training up to half of your potential, while other teams are training harder for longer periods of times. In order to combat this, you need to base your diet off of low GI foods before you come to practice (but I wouldn't recommend eating anything much prior to 30 minutes to workout, as you'll most likely suffer abdominal muscle cramps – I always give myself an hour buffer time). Eating moderate

and low GI foods will help ensure you have the energy to “hack” a two-hour workout and maximize the time you are putting into your training.

After your workout, you should focus on eating something higher on the GI to put lost sugar back into the bloodstream (I would suggest dates). Higher GI foods would also be acceptable before races, although we must take into account time spent lining up at the start (depending on how well the coordinators are marshalling boats and sending them down the river). Base levels of low/moderate GI foods, however, is always the safest bet before an endurance event; adding high GI foods will help increase energy while maintaining some semblance of energy stability for events later in the day.

So, this means a few things: 1) What you eat and when you eat it is important, especially during regatta days – don’t expect that I’m going to allow you to hit the chow line as soon as it opens up in the tent, and I don’t expect any attitude about moderating your eating during competition. 2) You’re going to have to moderate your diet during training to best suit your own body’s needs for energy – you will have to make that call yourself, and expect you to do so. 3) Get to know the following chart, as it will help you to have a “go to” list of foods to eat before and after workouts and regattas.

