

Nutrition 101

Daily vs. Race Nutrition

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The amount of information on nutrition can be quite overwhelming so I am going to stick to what I feel are the most important yet commonly overlooked principles. Some of this may seem simple and even obvious but when it comes time to put them to work these principles often get left behind while we are out searching for some other “magic bullet”. The last nutrition seminar I attended the Dr. summed up the *entire* day with 5 words..... “Eat Whole Food Some Fish”. While I will go into more detail than that, daily nutrition can really be that simple if we let it. Race nutrition can be a bit more complicated since it is highly individual. However, there are some things that will be the same across the board and those are the concepts I will go over in more detail.

Daily Nutrition Guidelines-

- 1. Do NOT skip breakfast.** I know....you are thinking “duh?” but listen to why. When you skip breakfast it causes a large cortisol release. Cortisol can be a destructive stress hormone which suppresses recovery and immune function by breaking down muscle tissue back into an amino acidic state. This is the exact opposite of the anabolic muscle building state you want to be, not in the catabolic breaking down state. (*by the way...inadequate sleep does the same thing*).
- 2. Avoid being too full or too hungry.** By spacing meals throughout the day you will deter drastic peaks in blood sugar and in turn keep insulin release moderate. Also, chew your food! We are in such a culture where it’s possible to eat a meal and be so busy we didn’t chew or taste anything. Don’t make your body do what your teeth should have done. This allows for less nutrient absorption and an unsatisfied appetite so then what do you do.....?? You eat more! Chew, chew, chew!
- 3. Protein-** The big question here is always “how much?” The most accurate way to figure this out is if you know your % body fat. Athletes need .65-.85g per pound of lean body mass. To calculate multiply your weight x your % body fat then subtract that from the total weight, which is your lean body mass. Then take your lean body mass x .65 and .85 to get your range. Keep in mind your body can not absorb more than about 30g at a time so it’s best to have a little protein with every meal.

Example: Someone who weighs 180lb with 15% body fat

$180 \times .15 = 27\text{lbs}$

$180 - 27\text{lbs} = 153\text{lbs}$ of lean body mass

$153 \times .65 = 99.45$ $153 \times .85 = 130.05$

His protein intake range would be 99-130g per day

Protein sources- in order of bio-availability or the order in which your body breaks them down into a more useable state:

*egg albumin protein (egg whites)

*whey protein isolate (bars, powders, mixes)

*lean meats, chicken, fish, milk

*soy based proteins

*Of course it’s always best to get your protein from a variety of sources.

4. **Carbs-** Complex carbs always trump simple sugars. The problem with simple sugars (check labels for sucrose & fructose) is the blood sugar spike that happens followed by a crash that in some studies show can sink to *below* fasting levels. Complex carbs (maltodextrin) are better able to pass through the stomach at higher concentrations, thereby delivering the maximum amount of calories without causing extreme blood sugar spikes. **There is a saying that eating simple sugars is like trying to heat your house with a few newspapers on the stove while eating complex carbs is equivalent to putting a big log in the fire- it will last longer and burn more consistently.** Some favorites of mine are brown rice, whole wheat pasta and oatmeal.
5. **Fats-** Fat usually gets a bad rap because the saturated fats are too complex to be broken down and our body chooses to store them. But the poor neglected “good fats” serve a big purpose. The unsaturated (liquid at room temperature) fats balance meals, help with immune function and regulate anabolic processes that allow you to recover more efficiently. Canola, extra virgin olive oil, avocado, flaxseed can be very beneficial and even negate some of the ill effects of the “bad” fats. Omegas 3’s have many benefits, one of which is its anti-inflammatory effects. This can come in handy with all that pounding we put our body through. A couple great sources if Omega 3’s are fish oil capsules and walnuts. Read labels and avoid trans fats, hydrogenated & partially hydrogenated oils.
6. **Race Nutrition-** Sprint distance racing doesn’t normally require too much fuel during the race, depending on the heat, when you start and how long it takes you to complete the race, depends on how much you put in your body. Breakfast 2-3 hrs before racing, maybe a gel 15-30 min prior to your race start, water/sports drink on bike.

Most will complete an Olympic distance event somewhere between 1:55-3:50hrs. Two hours has been proven to be the point where most will be affected by *performance-affecting* low blood sugar....or when you “hit the wall”. Much will depend on how much over that magic 2hr. time frame you will be out there. During the race a drink containing complex carbs is preferential. Most people will need around 20-24oz of fluid per hour while the maximum amount of calories most can absorb while racing is about 280kcal per hour after the first hour. After about 2 hrs of racing it is advisable to include a protein source as your body will start to need it as fuel at that point. If you do not ingest it your body will take it anyway.....from guess where...*your own muscle tissue*. So it’s best to give it what it wants by ingesting some protein at about the 1.5-2hr mark by either amino acid tablets or as part of your premixed fuel drink. It should be in a ration of 4:1 carbs to protein. After the race you will need to get in about 30g of protein and a sports drink within 30min to aid in your recovery. Lastly, **the crucial thing about race nutrition is timing & practice.** Many races have gone in the tank due to lack of nutrition preparation. Use your long rides and bricks to practice what you plan to do.

If you only remember one thing about daily nutrition remember the 5 words- Eat Whole Food Some Fish. (Whole foods being those that our ancestors would recognize and that God created for us). Not sure they would recognize a pop tart! Keep it simple and try not to overcomplicate things and above all have fun!!