A Nutrition Plan for the Long Haul

By Elizabeth B. Rahavi, RD and Holly O'Connor, RD

It's that time of year when you start your long bike rides and runs for the upcoming season. Whether you are training for a sprint or an Ironman distance triathlon, nutrition is going to play a key role. Set your races—and training—up for success by remembering this rule: if you are exercising longer than one hour, you need a nutrition plan to replenish your energy stores.

What happens if you don't have a nutrition plan during exercise?

- **Dehydration**-carbohydrates are mostly made up of water and can contribute to your hydration status. In addition to carbohydrates, water and sports drinks are also part of a good hydration plan.
- **Performance Fatigue**-this happens when your body subtly begins to lose the stamina it needs to continue training.
- **The bonking effect**-may be the result of a dramatic drop in blood sugar that is brought on by inadequate nutrition—mainly a lack of carbohydrates.

During and after training, carbohydrates are the foundation of a good nutrition plan. Our bodies want to use carbohydrates as a preferred energy source to keep moving. This is especially true during training, because glycogen stores in muscles need to be replaced. Fat, fiber, and protein should also be consumed, but at a minimum, because they may be harder for they body to process during intense training.

Everyone is different, and the only way to really fine-tune your nutrition plan is to practice during training to find out what will work best on race day. Here is a general rule of thumb for carbohydrate intake:

For every hour of activity approximately 60-65 grams of carbohydrates are needed; however, this will differ based on an individual's size and muscle mass. The average is approximately 250-300 cal/hour for the average athlete, 180-200 for a lighter athlete, and a little over 300 for heavier athletes. Some athletes could be burning up to 800 calories an hour or more; unfortunately, it can be difficult for the body to take in the amount of calories that the body is expending at that level.

But, racer beware: taking in too many carbohydrates can cause excess stress on the body that can result in vomiting, diarrhea, bloating, and stomach cramps. These happen because our bodies are only able to hold and absorb a certain amount of carbohydrates and nutrients during exercise, and more is not necessarily better. The key is to practice what you are going to eat and drink during training, so that you can be at your best when racing.

Nutrition Products PROS and CONS:

Gels: Are known to be easy on the stomach and quick to consume because chewing is not required. The down-side — you can grow tired of the flavors and consistency very quickly. Some of these products contain caffeine. If you choose these caffeinated gels, you need to con-

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for each muscle. If more muscles are doing the same amount of work, each muscle is working more easily.

The hamstring muscles are unusual in that they cross two major joints. The hamstrings attach above the hip, cross both the hip and the knee joints, and attach below the knee. Due to this unique attachment, they serve two major functions: extending the hip joint and flexing the knee joint. The gluteus maximus muscles, on the other hand, cross only one major joint, the hip. The glute muscles' only major action is hip extension.

The pull-through method of propulsion creates nearly horizontal propulsion, but it fails to engage the largest and strongest muscle in the body, the glutes. Which do you think would be stronger, your hamstring muscles, or your hamstring muscles and your glutes working together? That answer is obvious. If knee flexion is the primary producer of propulsion, the hamstrings have to create the force by themselves. By using hip extension instead of knee flexion to create propulsion, the hamstrings work in conjunction with the glutes and therefore each muscle is required to produce less force. Obviously, this minimizes fatigue.

Pull-through runners frequently have extremely tight hip-flexors, preventing correct hip extension. Stretching these muscles will enable you to incorporate better technique for developing propulsion, allowing you to create high levels of horizontal propulsion without local muscular fatigue.

Developing a stride which uses hip extension as the primary method of propulsion will enable you to move more horizontally and to use large muscle groups to do the work. This will allow you to run farther and faster than ever before.

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tinue consuming them through the remainder of your workout.

Bars: You have to chew, but you can get the most calories in for the bite. Bars are great when you are out on long bike rides. The downside - if you are training at a high intensity, you may have a harder time breathing and chewing.

Electrolyte Chews: Again, chewing can be an issue, but the electrolytes and calories can do your body good.

Liquids: Includes sports drinks, protein dinks, and a mixture of both. The downside for protein drinks - you must have some sort of electrolyte replacement if you are going to be training longer than 90 minutes. The good news is that there is a wide range of products available that have varying calorie, fat, carbohydrate, and protein ratios. You will need to try different products to see what works best for you.

"Real Food:" Can spoil, depending on what you are using; then you would really have problems. However, a good peanut butter and jelly sandwich may help break up the monotony between the gels and bars. The downside - they can be hard to carry with you. Buying food at a gas station stop is one option, or store food in a sag vehicle, if you are lucky enough to have one during your ride.

Tablets - salt, electrolytes: These products are not going to provide any calories, but can aid in replacing lost salt and potassium. The downside - they may cause adverse reactions in some people, including stomach cramps, weakness, and nausea.

Holly O'Connor, RD and Elizabeth Rahavi, RD are both Registered Dietitians and members of the American Dietetic Association. To find a nutrition professional in your area, go to the Association's web site: www.eatright.org. ★

I'd Pick More Daisies

If I had my life to live over,
I'd dare to make more mistakes next time.
I'd relax, I'd limber up.
I would be sillier than I've been this trip.
I would take fewer things seriously,
take more chances, take more trips.
I'd climb more mountains,
and swim more rivers.
I would eat more ice cream
and less beans.
I would perhaps have more actual troubles,
but I'd have fewer imaginary ones.
You see,
I'm one of those people who lived seriously,
sanely, hour after hour,
day after day.

Oh, I've had my moments,
and if I had it to do over again,
I'd have more of them.
I've been one of those persons
who never goes anywhere without a thermometer,
a hot-water bottle, a raincoat, and a parachute.
If I had to do it again,
I would travel lighter than this trip.
If I had my life to live over,
I would start going barefoot earlier in the spring,
and stay that way later in the fall.
I would go to more dances,
I would ride more merry-go-rounds.
I would pick more daisies.
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