Eating For Health and Performance

This article is broken into two parts, first a discussion about healthy eating habits for a cyclist to help you stay healthy long term and to try to avoid chronic diseases of old age. The second part is specifically focused on nutritional practices for training and racing, which differs considerably from eating for long term health.

Eating For Health:

1) Eat your fruits and veggies! You heard your mother say this and she was right. Fruits and veggies contain lots of vitamins, minerals, fiber, and water. They also contain things called anti-oxidants, which help combat free radicals which are generated through living, exercising and from products in our environment. Free radicals are implicated in aging. Plant foods also contain phytonutrients, such as anthocyanins, lutein and many other compounds, some still unknown, which help the body thrive and combat disease and aging. So select the most colorful fruits and veggies you can find. These have the most nutrients. Plus fruits and veggies keep you feeling full because they are bulky which helps you from gaining weight.

2) Lean protein is important to continually provide for your body. The body does not store protein so it needs a constant supply. Lean proteins are the best as they don't contain the highly saturated fats of fatty meats and dairy products. Examples of lean protein are: Chicken, fish, turkey, lean cuts of beef and pork, non-fat dairy products, beans, whey and soy protein and nuts. Most foods, with the exception of fruits and vegetables, have protein. Even wheat is 10% protein. By having a small amount of protein with each meal and snack, you will minimize hunger as protein keeps you feeling full. But don't overdo it. Because your body doesn't store protein, if you eat too much, it gets converted and stored as fat. A good rule of thumb is to eat 1.5 grams of protein per day for every kilogram of body weight. So if you weigh 150 pounds that is 68 kilograms, so you should aim for 102 grams of protein per day. To convert pounds to kilograms, divide your weight in pounds by 2.215.

3) Complex carbohydrates are those carbohydrates that are in the form of starches and somewhat in their natural state. Complex carbs are used by the body for energy. The body breaks these starches down into sugars (glucose mainly) and the body uses that for its energy in the form of glycogen (blood sugar). The most concentrated complex carbs come from grains, potatoes and beans. It is best to eat these products as whole foods: whole wheat bread and pasta, rolled oats, brown rice, whole potatoes with the skin, sweet potatoes, and yams. By eating these foods in the whole form, you get all the vitamins, minerals and fiber they have to offer. If you eat the 'white' versions: white bread, white potatoes, white rice, you are losing out on all the good nutrients and taste the whole versions have to offer. So develop a taste for whole grains. Someday you won't be able to stand white bread. Plus refined starches hit your bloodstream very fast whereas complex carbs are more of a constant, more steady source of energy.
I'd suggest eating your fruits, veggies and protein first and then fill up to satisfaction with carbs and fats/oils. This way you get all your nutrients in and then can fill in with the energy sources. Most Americans to it the other way around – they fill up on refined carbs and fats and don't have room for the fruits, veggies and lean proteins.

Try to avoid sugars and refined flours. Sugars have no requirement in your diet – you can get all your blood sugar needs from complex carbs. Sugars are truly empty calories. Refined flours aren't really any better than plain sugar. They actually hit the blood faster and cause a larger blood sugar/insulin response and crash.

4) Oils are also important in your diet. You body requires a couple of fatty acids which it cannot make. Fats are solid at room temperature, while oils are liquid. Oils are more healthy for the body than are fats. Try to get your oils from olive, canola, and sunflower oils; and nuts and peanuts which have a high proportion of oleic acid, which is a monounsaturated fatty acid and other healthy polyunsaturated oils, and only a small amount of saturated fats. These are implicated in good health. People living in the Mediterranean region eat about 35% of their calories from fats and oils, mostly olive oil, yet they are some of the healthiest people on earth. (They also eat a lot of fruits, veggies and lean protein). But oil itself isn't bad as long as you don't eat too much and get too many calories from it. It's also good to get Omega-3 oils, which come primarily from fish oil and a little from flaxseeds. These omega-3's are linked to all sorts of health effects: heart health, joint health, mental effects, etc. So try to get 2-3 servings of fish each week and/or take fish oil capsules. Fats and oils also keep your stomach feeling full and fights hunger. Saturated fats are associated with heart disease so it's good to minimize these. These are found in fatty cuts of meat and dairy products.

Trans fats, also known as hydrogenated oils, are terrible for you. These are man-made fats that are viewed as at least as unhealthy as saturated fats, perhaps more so. These are found in margarine (but not butter), shortening, French fries and other deep fat fried foods, and in almost all baked goods such as cakes, pies, cookies, doughnuts and muffins. Avoid these for the sake of your heart. Learn to read labels and avoid food which have the words 'hydrogenated' or 'partially hydrogenated' in the ingredients, even if the front of the package says 'Trans Fat Free'. Many aren't.

5) I'm not big on taking supplements. I believe in getting most nutrients from food. Plus it's more fun to eat them as food rather than a pill. Because I am active and stress my body, I do take a multivitamin three times a week as insurance. I also take fish oil capsules. That's it. There are a lot of nutrients in food that we know about that aren't in vitamin pills and a lot more we don't even know about, so play it safe and try to get nutrients from food. Aim for putting a nutritious food in your mouth every time you eat.

Here's a few other tips for healthy eating and maintaining your weight. Eat frequently, 3-5 small meals and/or snacks during the day. Eating smaller amounts more frequently will keep your blood sugar more constant and keep you from being ravenous and overeating at meals. It will also keep you more energetic and alert. Try to eat 5-9 servings of fruits and veggies per day, and have a little protein at each meal. Eat your larger meals in the morning and at noon. Taper off with smaller meals and snacks for supper and in the evening. It takes a few hours for food to digest and hit your bloodstream. You don't need a gusher of sugar hitting your blood just as you go to bed.

Eating for Performance:

Because you train and race bicycles, you have a much higher energy demand than sedentary or moderate exercisers. Therefore you need to proactively eat to provide your body with enough

energy. Here are some thoughts on how to prepare nutritionally for training and racing. Your body burns primarily fat for fuel at low intensities. As you increase your intensity, you continue to burn the same amount of fat but you begin burning blood sugar (glycogen) to supplement the energy need. Blood sugar comes from the food we eat, primarily carbohydrates. You get these from fruits, veggies, grains, potatoes and beans. Your body converts the starch and sugars from these foods into blood sugar. Your body can store about 1800 calories worth of blood sugar, mostly in the muscles and liver. This is enough for about 2-3 hours of hard exercise (which is why marathoners 'hit the wall', or bonk, at 20 miles).

<u>Eating the day prior to a big ride:</u> Before a long ride or race, you need to be sure your energy reserves are full. You need to eat some good sized meals during the day before a big ride. Make sure these meals are rich in complex carbohydrates but light on fats and oils. You will top off your glycogen stores with these meals.

<u>Pre-ride meal:</u> The meal prior to a big ride or race needs to be more carefully chosen. Ideally you want to eat your last big meal about four hours before you ride. This works well for an afternoon ride/race but not so well for an early morning one. If your ride or race is in the early morning hours, your best bet is to eat a good big dinner the evening before. You won't use up too much of this energy overnight. What you burn off overnight you can easily replace with a small meal in the morning. Try to make this meal primarily an easily digestible. This is a time when it is acceptable to eat refined starches. You should aim for 3-400 calories in your morning meal as far ahead of the start as you can. Bananas, energy bars, energy drinks, bread, cereals are all good. Try to avoid eating fats/oils, fiber, or too much protein prior to the start. These take a while to leave your stomach and can cause indigestion when you start riding hard. The hour or two before the start, you can continue to sip a sports drink or nibble on an energy bar. This will ensure you have a steady stream of energy entering your blood as you start your ride.

<u>Eating during the ride:</u> *If your ride/race is an hour or less in length,* all you need on your bike is water. You have plenty of energy in your body to last an hour even at very intense effort levels.
***If your ride/race is 1-2 hours in length*, then you should consider having at least one of your bottles filled with a sports drink. Drink this one first! That way the energy and electrolytes in it will have a chance to get into your body to be used prior to the end of the ride. Subsequent bottles can be filled with just water to finish up with. You don't need a lot of additional energy for a two hour ride, you just want to maintain that trickle of sugar going into your blood in that second hour.**
***If your ride/race is 2 or more hours long,* then you need to start eating solid food or gels. Because you risk running out of blood sugar after 2 hours of strenuous energy, you had better have something going through your digestive system. Your body can absorb up to about 250 calories a hour, so you don't need more than this, but this is more than you can probably get from just sports drinks unless you are drinking a lot. Therefore, bring along some gels, energy bars, bananas, or whatever your favorite on-the-bike food is. For me, it's fig bars. Start eating these in the first hour to again have that trickle of sugar moving into your blood as your ride. Just don't eat too much at any one time. It's better to eat a little often than to eat a lot at once. It will be easier on your stomach. Continue to drink as you eat solid food as this will help it move through your stomach faster. Whatever your choice of solid food, make sure it is primarily an easily digestible carbohydrate and that it is something you enjoy eating. For sports drinks and bars, look for ones that contain maltodextrin in place of sugars (sucrose, corn syrup, fructose) as maltodextrin digests**

extremely fast and is easily absorbed by the body. If your ride is several hours long, consider adding a protein source as well. This will help spare using muscle tissue for energy during your ride and may help keep you alert. Some energy drinks come with protein for this purpose.

<u>Eating right after the ride/race:</u> Once the event is finished you need to begin immediately replacing water, carbohydrates and protein. If you are hot and tired, you may not feel like eating right away, so drink something with carbs and protein instead. There are recovery sports drinks just for this purpose that contain carbs and protein. You can also eat a peanut butter sandwich, yogurt, or chocolate milk. Be sure to think ahead and bring these with you to races or know where you can buy them. You have a 2 hour window when your body is craving food after a hard workout (the glycogen window). Take advantage of this by eating to speed your recovery. The carbs you eat during this time should again be readily digestible. It's okay to eat refined starches at this time as you want them to get into your blood quickly to speed recovery. Your insulin receptors are active and respond well to food eaten shortly after exercise. This is just the opposite of the rest of the time when you want a slow steady stream hitting your bloodstream. Then when you feel like it, have a regular meal with complex carbs, protein and healthy oils. From this point on resume your regular diet as described in the Eating for Health section above.

Hopefully this brief summary will help you eat a more healthy diet and also help fuel you properly for your intense cycling workouts and races.

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