Staying Fueled During Long Rides

I cycled for 10 years before I realized that I ate way too little and not often enough!

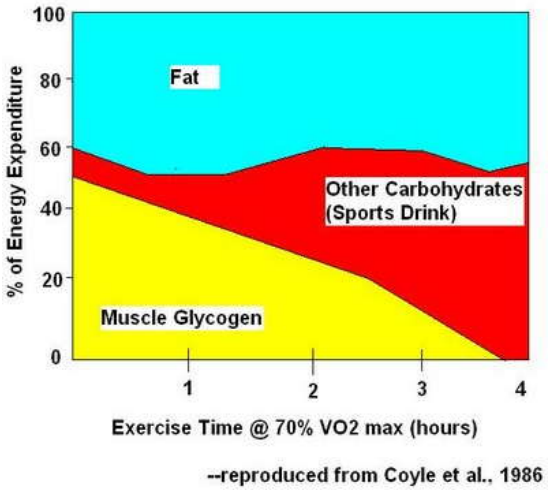
Worse yet, I ate too little while riding and pigged out when I stopped. That combination never maximizes fitness, health, and performance.

Once I became used to carrying and eating food while riding, my performance (and mood) increased for the better! This camp is a good time to learn how to get in the calories that you may have been missing while you ride.

Glycogen Depletion On-The-Go

Muscle glycogen is necessary for endurance training. In fact, when training for bouts of 3 hours or more your body needs muscle glycogen to function properly through the entire exercise period.

This graph depicts how various fuels are used to attain 100% of your energy when exercising:



--reproduced from Coyle et al., 1986

As you can see muscle glycogen (yellow) starts off providing nearly 50% of your fuel at time zero and is almost depleted after 3 hours. It is important to note that the exercise bout is 70% of VO2 Max as well, which many of us would consider a "recovery" pace. The graph makes an excellent point of showing that you can substitute the energy loss from depleted glycogen with carbohydrate ingestion (red).

For marathon runners, the term for depletion of muscle glycogen is "the wall." A marathoner who is out there for more than 3 hours, most likely will have spent all of their muscle glycogen. Running, as compared to cycling, is much harder to keep ingesting carbohydrates.

Cyclists can fend off "the wall" or "the bonk" more readily than runners, especially at endurance paces, because cyclists can simply cruise and eat. This is not always the case though—at high intensities, for example, or when out for more than 4 hours of endurance. In these instances, you have to "train yourself to eat" before exercise, during exercise, and after exercise.

The following are some tips I learned along the way, which require a little commitment and foresight:

Breakfast

Ensure you are getting plenty of carbohydrates to fuel your daily rides. I like plain oatmeal myself,

because it is a high-carbohydrate, moderate-protein, high-fiber food.

Ensure you are getting some protein. Protein satiates your morning hunger, provides nutrition to rebuild your muscles for a long day of riding, and provides an energy source if you run out of other sources of fuel in times of desperation.

Drink plenty of water or even include small amounts of juice or sports drink (calories, hydration, electrolytes).

Try not to load up on fat because it takes longer to digest and requires more water to help with absorption. Please note that restricting too much fat is also not a good idea, because fat is necessary for normal bodily function.

Reminder: Most Cycling Camp San Diego host hotels provide a continental breakfast each morning.

On the Bike

Consume 200-300 calories per hour. Energy bars eaten with energy drinks will usually give a complete nutrition profile—carbohydrates, proteins, electrolytes, even a little fat. I believe "real" food is always a better choice, though.

Eat "real" food. I bring along sandwiches—eg, PB&J, or ham and cheese—and healthy, savory cookies, like Fig Newman's (ie, Paul Newman's brand, which is wheat- and gluten-free, moist, and delicious). I'll have some for everybody and hopefully get some converts!

Eat a little at a time and use water to help dissolve and digest the food. In this manner, it is more palatable and leaves one feeling less heavy.

Lunch

Don't eat very little while you ride, then sit down at lunch and gorge yourself. It will make the return ride much less enjoyable, as you will feel heavy and sluggish.

Eat slowly at lunch and if you are still hungry when you have finished your meal, wait 5 minutes for your food to digest before hurrying to order more food. Your stomach may be slightly upset from riding, and eating quickly usually increases discomfort.

Don't restrict calories, but try not to make choices that will leave you feeling heavy and bloated—ie, fatty and salty—because we will still have to ride back to the host hotel. Bad choices might be heavily fried food, extremely salty food, corn syrupy sodas, and large amounts of processed bread.

Eat lunch. This may seem like a no-brainer, but sometimes the brain tells the body after exercise, "Don't eat." That's just a nervous system response to heavy exercise. Don't avoid lunch because you may not be feeling very hungry—you will pay the price later on down the road when you run out of fuel.

Post-Ride Recovery

Eat about 300 calories upon returning to the host hotel. Choose a well-balanced snack (ie, mostly carbohydrates and a little protein).

Drink plenty of water.

Eat on the return journey to the host hotel. There is no rule that states that a recovery meal must be eaten once all exercise has ceased. Daily rides heading toward the host hotel will either be downhill or at an extremely easy pace for the last few miles. Start recovery eating at this time before you get back to your room and become distracted by showering, changing clothes, e-mailing, talking on the phone, processing digital pictures, etc.

Eat about another 300 calories, 1 hour after you eat your immediate post-ride snack.

Dinner

Eat dinner and eat well.

Don't be picky. You just rode many miles and climbed many feet. A little sinful eating, while not recommended every night, may make you feel better mentally.

Enjoy the other campers' company!

DISCLAIMER: Robert Panzera is an ASCM-Certified Personal Trainer, NSCA Certified Strength and Conditioning Specialist, Level 2 USA Cycling Coach, and NASN Licensed Sports Nutritionist. He does not hold a university degree in nutrition nor does he claim to be a registered dietician or registered nutritionist. This handout is an instructional guide on caloric intake and expenditure and is based on information from "Nutrition" by Donna Israel from ACSM's Resource Manual for Guidelines for Exercise Testing and Prescription. Full reference located at end of this text. It is not a guide on how to lose or gain weight, nor does it suggest meals plans or foods people should or should not consume.

Reference: Israel, Donna. Nutrition. In ACSM's Resource Manual for Guidelines for Exercise Testing and Prescription, Fourth Edition. Jeffrey L. Roitman, Senior Editor. Lippincott Williams & Wilkins, Philadelphia: 2001.