

BCETS TRAINING SEMINAR
FEB. 23, 2009
NUTRITION AND FUEL FOR YOUR TRAINING

OBJECTIVE

To provide information and direction to properly fuel your body during training and the day of your event.

- * Nutrition can be just as personal as what you like to wear
- * General guidelines to follow

INTRODUCTION

My background as a trainer, coach, participant.

Background of participants?

Proper fueling should start NOW. Treat your body like the finely tuned machine you want it to be.

1. Lean Protein
2. More Fruits and Vegetables. Whole Grains.
3. Low Fat/Good Fat.
4. Water/Fluids

SCIENCE OF NUTRITION - Protein, Carbohydrates, Fats, Water

PROTEIN - 4 k/cal per gram

- * Repairs muscle damage
 - * helps to maintain the immune system
 - * is necessary to manufacture hormones and enzymes
 - * replaces red blood cells that carry O₂ to muscles.
 - * stimulates the secretion of a hormone that allows the body to use fat for fuel more efficiently.
- * produces up to 10% of the energy needed for long intense workouts.

RDA for endurance athletes is 0.02-0.04oz of protein per pound of body weight.

ie: someone who weighs 150 lbs should have 3-6 oz (or 84-168g) of protein /day
336-672 calories of protein

25% daily calories should come from protein

(2000 cal diet = 500 cal per day, 125g)

CARBOHYDRATES - 4 k/cal per gram

* carbs consist of fruits, vegetables, pasta, rice, bread, potatoes

* provide most of the fuel in endurance events

* don't over-carb

When you eat carbs your pancreas releases insulin. This insulin can stay in your system for up to 2 hrs. The effects of this can be: 1. preventing the body to use stored fat. 2. converts carbs and protein to body fat. 3. moving fat in the blood to storage sites, thus preventing from being used as fuel.

Glycemic Index of Common Foods

High	Moderate	Low	Very Low
Bread (french), corn flakes, grapenuts, molasses, parsnips, pasta, potatoes bakes & instant, rice cakes, white rice tapioca	All Bran cereal, apricots, bagels, bananas, barley, beets, black bean soup, bread-(pita, rye, wheat, white) corn chips, corn, crackers, doughnuts, icecream, mango, muffins, oatmeal, OJ, pineapple, popcorn, potatoes (boiled, mashed, sweet) PowerBar, raisins, brown rice, soft drinks, watermelon, yams	Apple (whole, juice, sauce), Beans (baked, black, lima, pinto) chocolate, grapes oranges, pasta pears, rye, tomato soup, yogurt	Barley, kidney beans, cherries, grapefruit, lentils, milk, peaches, peanuts, plums, soy beans

Eating mod-high glycemic index foods during long and intense training sessions and events is necessary to replace carb stores in the muscles and liver. Eating High glycemic foods is beneficial 30 mins immediately following your training session. Combine with some protein and it effectively boosts recovery.

55% of your daily caloric needs should come from Carbohydrates
(2000 cal diet = 1100 cal from carbs, 275g)

FATS - 9 k/cal per gram

* good fats - monounsaturated, polyunsaturated, and omega 3

* good sources are:

almond spreads, avacodo, hazelnuts, macadamia nuts, pecan, cashews, olives, tuna, salmon, mackerel, flax seed oil, canola oil

20% of daily calories should come from FAT
(2000 cal diet = 400 cal from fats (44g)

WATER - 0 calories

Drink, Drink, Drink

150 lb adults loses about 2 litres (8 cups) of water per day - without training.

8-12 8oz cups per day

For every pound lost during exercise another 2 cups (or about every hour)

Don't be fooled by the cold weather - you can still dehydrate!

Drink more on hot humid days, or if training inside with the heat on!

Dehydration causes a reduction of plasma in the blood, which then makes the blood thicker, which then forces the heart and body to work harder to move the blood.

Slight dehydration has negative affects on intensity and duration. A big sip of water every 7-10 minutes will help keep your energy up. (I try to drink about every 2-3 miles, depending on where I am in the hill)

Bathroom breaks should happen about every 2 hours, and you should have clear-ish urine

BUT WHAT DO I EAT OR DRINK WHILE RIDING???

Sports drinks?

* will get to the muscles more quickly than water

* contain 4-8% carbs and sodium which speed the passage of H₂O through the stomach

* failure to replace fluids risks shutting down cooling system and eventually muscles.

Gatorade, Powerade, Heed, Accelerade, Perpetuem?

Gels? Goo? shot blocs?

Endurolytes?

Food - bananas, sandwiches, granola bars, fruit rolls, pretzels, gummies

****make sure you have some protein with your carbs and lots of fluids****

TIE-IN TO PHIL'S TALK ON TRAINING PROGRAMS

You can go No/Low/High Tech with your eating/fueling. It all depends on how hard core you are about your riding. Are you hoping to cross the finish line? Or are you hoping to finish with a personal best?

This is where it becomes personal and you have to figure out what you like, don't like, and can tolerate on those long rides. The last thing you want is to be on the side of the road either not able to go on, or bringing up the pepperoni pizza you thought would be a good idea to eat as a snack. (your riding partners don't want this either!)