Nutrition for Cycling

Cindy Milner, MSEd, CSSD, RD, CDN
Sports Dietitian

Cayuga Medical Center at Ithaca
Cayuga center for Healthy Living
Goals of Sports Nutrition

- Prevent (or delay) fatigue
- Stay healthy (no colds, flu, etc.)
- Enhance Training
Delay Fatigue

- Adequate calories
- Adequate carbohydrates
- Adequate fluids
- Adequate sleep
Inadequate Calories?

- Hungry
- Crave sweets
- Less effective training
Adequate Energy to Delay Fatigue?

- Energy Needs -
- RMR (wt X 10 calories/lb)
- Daily activities (1/2 RMR)
- Purposeful exercise (400-600 calories/hour)

Source- Nancy Clark, MS, RD, Sports Nutrition Guidebook
General Estimates

- 120 lb women - 1,800 - 2,800+ cal/day
- 180 lb male - 2,700 - 3,600+ calories/day
## Calorie Burn Rate*

<table>
<thead>
<tr>
<th></th>
<th>12mph</th>
<th>14mph</th>
<th>16mph</th>
<th>19mph</th>
</tr>
</thead>
<tbody>
<tr>
<td>110 lb</td>
<td>293</td>
<td>348</td>
<td>448</td>
<td>662</td>
</tr>
<tr>
<td>130 lb</td>
<td>338</td>
<td>402</td>
<td>521</td>
<td>773</td>
</tr>
<tr>
<td>150 lb</td>
<td>383</td>
<td>534</td>
<td>593</td>
<td>883</td>
</tr>
<tr>
<td>180 lb</td>
<td>459</td>
<td>540</td>
<td>702</td>
<td>1048</td>
</tr>
<tr>
<td>200 lb</td>
<td>495</td>
<td>595</td>
<td>774</td>
<td>1159</td>
</tr>
</tbody>
</table>

*assumes upright position, flat terrain, no wind.
Adapted from Girard Eberle, Suzanne. Endurance Sports Nutrition.
Considerations for Cycling

- Rides > 2 hours – need to get calories while on the bike
- Calorie needs affected by road surface, terrain, weather, wind resistance, speed or intensity and rider’s fitness level
Adequate Carbohydrates

- The fuel for intense and endurance exercise is carbohydrate

- Glycogen stores = Carbohydrate stores
Carb Goals for Cyclist

- 55 – 65% of total calories from Carb
- 3 – 4 gm/lb for most athletes
Eating to Prevent Fatigue

- Quality carbohydrate at each meal
- Fruit and vegetables
Depleting Liver and Muscle Glycogen

- Diet inadequate
- High intensity or prolonged exercise
Glycogen Stores

- Successive days of hard training
  - gradually deplete carbohydrate reserves
- Training more difficult
- Depleted Glycogen = Overtraining syndrome
Are all Carbs the same?

- Simple Carbohydrate
- Complex Carbs

Complex carbohydrates provide vitamins, minerals, and fiber.
More CARBOHYDRATES!
And STILL More Carbs...
Summary: Carbohydrate Recommendations

- 55 to 65% of calories from Carbs
- 3-4+ grams of carbohydrate per pound body weight
- Make carbs the focus of meals
- Choose nutrient dense carbs – mostly…
- Periods of Intense training – up carbs
Fluid Goals

- Drink before thirsty
- Watch for signs of dehydration
  - Dark urine, small volume of urine
  - not urinating every 2-4 hours
  - Irritability, headache, fatigue
  - Weak, dizzy, nausea
Fluid Guidelines to Delay Fatigue

- Hydrate before, during, and after the ride or race.
- Pay attention to fluid intake the day before ride.
- Every 15 minutes while exercising - 4-5 oz or ~16 oz every hour (assuming normal conditions)
- Extreme conditions – may need up to 32 oz/hour
- Include sports drinks for carb and sodium – if using juice/soda, try in training first.
Be Mindful that..

- Cyclists may fuel or hydrate inadequately due to:
  - Rapid evaporation of sweat
  - Wind chill
  - Little feedback from ankles or legs from pounding (compared many other sports)
  - Drafting may give false sense of ease
Some Tips..

- Fuel before you go
  - Eat breakfast or meal (~2 hours before race/ride)

- Riding longer than 1 ½ to 2 hours – fuel early and often
  - Sports drinks and gels
  - Sports bars (i.e. Power Bars, Cliff bars)
  - Powders (i.e. Spiz, Hammer Sustained Energy)
  - PB sandwich, bagels, fruit, cookies, mini candy bars, granola bars
What do you do?

- How do you meet your nutrition and hydration needs on the bike?
- What’s worked? What hasn’t worked?
To Stay Healthy

- Eat wholesome meals
- Enjoy abundant Fruits and Vegetables
- Maintain appropriate weight
Rest

- Muscles need time to heal and refuel
- Mind needs time to rest and recharge
- Won’t “get fat” on rest days
- Will be hungry to refuel glycogen
- Weight gain = sign of being well-fueled
Post-Exercise Recovery

- Exercise again within 6 hours, refueling very important
- Carbohydrate and Protein source
Recovery Snacks Ideas

- Carb + Protein
- Recovery Fluids –
  - Chocolate milk
  - Commercial products (Hammer Recoverite, etc.)
- Snacks
  - Sports bar (Cliff bar, PowerBar Performance)
  - Banana + PB, sandwich with meat/PB)
  - Crackers with PB
  - Yogurt
  - Cottage cheese + fruit
Recovery Meal Ideas

- Sandwich on whole grain bread with turkey, lettuce, tomato, and onion + pretzels + 1% milk
- Beans and rice with cheese, salsa, avocado and a whole wheat tortilla
- PBJ sandwich + banana + 2 cookies
- Spaghetti and meatballs, salad and slice of bread
Happy Trails