I. Goals of session
   A. Increase awareness of the growing population of gastric bypass athletes who
      1. Aspire to be marathoners, triathletes, and century bike riders
      2. Become compulsive exercisers (walkers, “gym rats”)
   B. Address sports nutrition concerns of the gastric bypass athlete
      1. Help these novice athletes reach their athletic goals
      2. Keep these athletes safe and out of the medical tents!

II. Background: About 6% of GB patients become “highly active”

III. Standard nutrition advice for GB patients:
   A. Target 1,200-1,600 kcal/day in many small meals and snacks
   B. Eat slowly (30 minutes per meal)
   C. Do not drink when eating or for 30-60 minutes after eating
   D. Avoid concentrated sweets (to avoid dumping syndrome)
   E. Sip 8-12 oz. fluid each waking hour (~12 cups/day)
   F. Target 60 to 80 grams of protein per day
   G. Take vitamin and mineral supplements

IV. GB athletes confront many challenges:
   A. Standard challenges of a very low calorie diet:
      1. Fatigue, feel cold, mood changes, dry skin, hair loss
   B. Additional challenges for bypass athletes:
      a. Intolerance to certain foods (sugar/refined carbs)
      2. Dehydration
      3. Hypoglycemia
      4. Vitamin and mineral deficiency (iron, calcium)
      5. Biggest challenge: Dumping syndrome

V. GB athletes want to know:
   A. What should I weigh?
      1. Hard to determine an appropriate weight
         a. Distorted body image
b. Excess flesh  
c. Unrealistic weight loss expectations  
2. Focus on health, not weight  

B. How much should I eat?  
  1. Estimate energy needs of obese person using Mifflin-St. Jeor equations  
  2. Appetite Increases with distance from surgery  

C. Should I eat before I exercise?  
  1. Fears about eating  
  2. Learn through trial and error to find tolerable carbs  

D. What should I eat during extended exercise?  
  1. Learn through trial and error to find tolerable carbs  
  2. Swishing: a “safe” fueling tactic?  

E. How can I keep myself from getting dehydrated?  
  1. Learn sweat rate  
  2. Drink on a schedule  
  3. Monitor urine  
  4. Experiment with a variety of fluids to learn what is best tolerated  
  5. Hyponatremia - a potential concern  

F. Am I getting enough protein?  
  1. Athletes require about 1.2-1.7 g Pro/kg  

G. Do I need extra vitamins?  
  1. Common nutritional deficiencies include iron, B-12, D  

IV. Unanswered questions  
A. What are the most effective fueling and hydration tactics/protocols--  
   1. for GB patients less than one year post-surgery?  
   2. for GB athletes 1 to 2 years post-surgery?  
   3. for GB athletes more than two years post-surgery?  

B. Carbohydrate needs: How much glycogen depletion occurs in GB patients--  
   1. with low intensity exercise?  
   2. with moderate intensity exercise?  
   3. with high intensity exercise?  

C. What are the sodium needs during endurance exercise for GN athletes?  

D. Is anyone collecting data from medical tents?
V. Case study #1: Aspiring bike racer

“I want to race better as a cyclist. I now place in the top 70% at races. I want to lose 10 pounds to change my power to weight ratio, but I’ve hit a plateau.” ... “I’m not feeling right. I feel tired and run down. I’m getting cold sores and I’ve never had them before. I’m wondering if I’m not absorbing certain nutrients due to the bypass? Maybe I’m not eating enough protein?”

Teaching points:
--- Food is fuel, not the “fattening” enemy
--- The lightest athlete may not be the best athlete
--- The cost of losing more weight might hurt his performance
--- Perhaps his body is “good enough” the way it is?
--- Is his fatigue related to iron-deficiency anemia?

VI. Case study #2: Ultra-distance runner and cyclist

“My fitness is no longer the issue with my performance. My limiting factor is nutrition. I have continued to treat food as a reward for my hard workouts.” ... “I have intense cravings for sweets. I’ve always loved to eat. Food has a magnetic pull.” ... “I knew my eating was wrong so I started tracking my food. I’m eating about 2,300 calories and am exercising vigorously at least 1 hour every day.” ... “My current eating plan is hard to maintain. I don’t want to white-knuckle my self through the rest of my life.”

Teaching points

• The purpose of exercise should be to train to improve performance, not to burn calories.
• Food should be consumed for fuel; what non-caloric ways could he reward himself?
• Hunger is physiological—and very powerful
• Would he be able to perform better at a higher weight if that meant being better fueled?
• Is this eating-style conducive to sustained fat loss?

VII. Time for questions and discussion