Case study: For this case study, you ideally will need to recruit a healthy adult competitive athlete. This person can be a recreational sports athlete, college athlete, or other type of active athlete. Alternatively, you can even use yourself. Note that this is just an academic exercise, so the person you are working with does not need to follow the program. Go through Steps 1 to 8 from Unit 17, provided below, and develop nutritional guidelines for your subject, dependent on the season that he/she is in. Then provide a discussion as to why you made your recommendations. Show all calculations that may apply, using the methods in the course textbook related to the Steps. Make note of the person’s age, gender, sport, and athletic season. Step 1: Determine body composition. Step 2: Determine daily caloric expenditure range for training days and non-training days and for competition days. Step 3: Define the bioenergetics the sport primarily demands for peak athletic performance; Athlete- Type; Anaerobic - Immediate Energy System; Anaerobic Glycolytic; Anaerobic Glycolytic - Oxidative Glycolytic; and Oxidative. Some examples of sports are included below. Step 4: Determine daily protein intake estimate and the foods and supplements to achieve it. Remember from your lessons that protein requirements can differ among different Athlete-Types and among individual athletes. This gives a scientific reason for making protein intake a priority for sports nutrition programs, in addition to other factors. Step 5: Determine daily carbohydrate estimate and the foods and supplements to achieve it. Remember to plan for carbohydrate beverage intake before, during, and after practice and for sport events as appropriate. Modulate carbohydrate type and amount with meals and snacks to meet specific nutrition goals. Step 6: Determine fat (essential fatty acids) intake estimate and plan, and select foods and cooking methods to achieve it. Keeping fat intake under 30 percent of total daily calories will be an ongoing skill to master. For certain sports, maintaining low fat intake during the season—between 15 and 20 percent of total daily calories—can be challenging and requires extra effort to make sure athletes are ingesting adequate amounts of the essential fatty acids: linoleic and alpha-linolenic acids. Add healthy sources of essential fatty acids in addition to EPA and DHA as required for health. Step 7: Maintain proper fluid intake estimate to meet daily requirements, as determined by amount of physical activity, environmental factors, and specific athletic training, performance, and health needs. Step 8: Determine the needs for using special sports nutrition and dietary supplement products.