



I. Is Your Diet Measuring Up to the Numbers?

In Chapter 11, several key nutrients were discussed in relation to exercise performance. The following guidelines were mentioned, not only for athletes but for everyone maintaining generally good fitness.

- Eat a moderate to high amount of carbohydrates (generally 60% or more of total calorie intake).
- Athletes generally should eat a minimum of 1.2 grams of protein per kilogram of body weight.
- Consume the recommended amounts of vitamins and minerals, making sure iron and calcium intakes are adequate (especially for women).
- Consume enough fluid, to maintain weight during prolonged exercise or in hot conditions.

Review the results of the dietary assessment you completed in Chapter 2. Remember that you analyzed a 1-day food intake. Now answer the following questions, whether or not you consider yourself an athlete.

1. What percentage of your calorie intake came from carbohydrate? Was your carbohydrate intake 60% or more of your total calorie intake?

2. Did you eat at least 0.8 grams of protein per kilogram of body weight? If you are an athlete, did you consume at least 1.2 grams per kilogram of body weight? Did intake exceed 2 grams per kilogram of body weight or 35% of total calorie intake?

3. Did you consume your estimated needs of all vitamins and minerals, especially iron and calcium? Which ones were below the current nutrient standards?

4. For nutrients low in your diet, list one rich food source for each nutrient (see Chapters 8 through 9).

5. Did you consume sufficient fluid—about 9 cups (women) to 13 cups (men) is a good starting point?

6. What can you do to improve your dietary intake to aid general fitness and, if you are an athlete, to promote maximal performance in your chosen event(s)?



II. Evaluating Protein Intake—A Case Study

Mark is a college student who has been lifting weights at the student recreation center. The trainer at the center recommended a protein drink to help Mark build muscle mass. Answer the questions below about Mark's current food intake and determine whether a protein drink is needed to supplement Mark's diet.

- The following is a tally of yesterday's intake.

Breakfast	Frosted Mini-Wheats cereal, 2 oz 1% milk, 1½ cups Orange juice, chilled, 6 oz Glazed yeast doughnut, 1 Brewed coffee, 1 cup
Lunch	Double hamburger with condiments, 1 French fries, 30 Cola, 12 oz Medium apple, 1
Dinner	Frozen lasagna w/meat, 2 pieces 1% milk, 1 cup Looseleaf lettuce, chopped, 1 cup Creamy Italian salad dressing, 2 tsp Medium tomato, ½ Whole carrot, raw, 1
Evening snack	Vanilla ice milk, 1 cup Hot fudge chocolate topping, 2 tsp Soft chocolate chip cookies, 2

Evaluate Mark's diet—is he meeting the minimum recommendations of the Food Guide Pyramid? _____

- Mark's weight has been stable at 70 kilograms (154 pounds). Determine his protein needs based on the RDA (0.8 grams per kilogram).
 - Mark's estimated protein RDA: _____
 - What are the maximum recommendations for protein intake for strength-training athletes (see p. 391)? _____
 - Calculate the maximum protein recommendation for Mark. _____
- An analysis of the total calorie and protein content of Mark's current diet is 3470 kcal, 125 grams of protein (14% of total calories supplied by protein). This diet is representative of the food choices and amounts of food that Mark chooses on a regular basis.
 - What is the difference between Mark's estimated protein needs as an athlete (from number 2) and the amount of protein that his current diet provides? _____
 - Is his current protein intake inadequate, adequate, or excessive? _____
- Mark takes his trainer's advice and goes to the supermarket to purchase a protein drink to add to his diet. Four products are available; they contain the following label information.

	Amino Fuel	Joe Weider's Sugar-Free 90% Plus Protein	Joe Weider's Dynamic Muscle Builder	Victory Super Mega Mass 2000
Serving size	3 tbsp	3 tbsp	3 tbsp	¼ scoop
Kcal	104	110	103	104
Protein (grams)	15	24	10	5



The trainer recommends adding the supplement to Mark's diet two times a day. Mark chooses Joe Weider's Dynamic Muscle Builder.

- a. How much protein would be added to Mark's diet daily from two servings of the supplement alone (prior to mixing it with a beverage)?
 - b. Mark mixes the powder with the milk he already consumes at breakfast and dinner. How much protein total would Mark now consume in 1 day? (Add the protein amount from the nutrition analysis to the value from question 4a.)
 - c. What is the difference between Mark's estimated protein needs as an athlete and this total value?
5. What is your conclusion—does Mark need the protein supplement?

Answers to Calculations

- 2a. Mark's estimated protein RDA: $70 \text{ kilograms} \times 0.8 \text{ grams per kilogram} = 56 \text{ grams}$.
- 2b. Maximum recommendation for protein intake for athletes = 1.8 grams per kilogram.
- 2c. Applied to Mark: $1.8 \times 70 = 126 \text{ grams}$.
- 3a. Difference between Mark's estimated maximum protein needs if an athlete and the amount of protein provided by his current diet: $126 - 125 = 1 \text{ gram protein}$.
- 3b. Mark's current diet is adequate.
- 4a. Two servings of protein supplement alone = 20 grams of protein.
- 4b. Mark's total protein consumption: $125 \text{ grams} + 20 \text{ grams} = 145 \text{ grams protein}$.
- 4c. Difference between Mark's estimated maximum protein needs as an athlete and total value (from above): $145 \text{ grams} - 126 \text{ grams} = 19 \text{ grams protein}$.