Math

Science, Mathematics

Are you sure it’s fat free Teacher Question Gather three of your favorite packaged foods; perhaps one from each: breakfast, lunch and dinner. Use the model explained in the “ Are You Sure It’s Fat Free?” to analyze, through the mathematical formula explained the fat content and protein content from your foods. To analyze the protein content use 4 calories per gram of protein, rather than the 9 calories for grams of fat.

Interpretation

The reason that a 97% fat free food is too good to be true is that the food industry bases its figures on the weight of the product and not the calories the product contains. For example, suppose a 10-ounce serving of a food contains 240 calories, and the label sates that it contains 9 grams of fat. The food industry then converts 10 ounces to grams by multiplying each ounce by 29 grams. Hence the total weight of the products is 290 grams. And if there are 9 grams of fat the percentage of fat is 9/290×100%= 3. 1%

The procedure used by the food industry is misleading. The correct way to calculate the fat content is to multiply the number of grams of fat by 9 to get the calories. (Each gram of fat is converted to 9 calories).

In this case , 9×9= 81 calories.

Next divide the fat content by the total calories and multiply by 100% to get the percentage of calories derived from fat. In this case the label stated that 10 ounce serving contained a total of calories.

81/240×100%= 33. 75%

Hence, 33. 75%of the calories come from fat, as suggested.

Introduction

Most of the people are health conscious and want to eat food items that are

fat free. They get inclined towards the fat free label on the food item that they purchase and regard that they are consuming the products that are useful for fat reduction. But this may be misleading and the fact is that despite what their labels say, actually do contain some amount of trans- fat per serving. (“ 10 Surprising Foods That Contain Trans Fat”, 2012)

The use of terms like “ low fat” can be misleading: “ 90 per cent fat free” means 10 per cent fat, not that it contains 10 percent of the fat that a competitor’s products might have. (Reynolds, p. 207)

Let us take the examples and analyze the fat and protein content of the breakfast, lunch and dinner related packaged food items.

Breakfast

Cereal: Let us take the cereal Ambrosial Venetian Vineyard Granola which has 230 calories and 7 g of fat per 1/2 cup serving, it contains 5 g of fiber, 6 g of protein, and 10% of your daily dose of iron.(Benner, 2011)

This is labeled on the packet and we would calculate the fat content and protein content on this food item.

Calories = 230 for the cereal

Fat content= 7 g

1 gram of fat has 9 calories.

▙7 g of fat= 7×9= 63 calories

The fat content is (63/230)×100%= 0. 274×100%= 27. 4%

Protein content= 6 g

1 gram of protein has 4 calories.

▙6 g of proteins= 6×4= 24 calories

The protein content is (24/230)×100%= 0. 104×100%= 10. 4%

Conclusion

The fat content is 27. 4%. The protein content is 10. 4% in the breakfast packaged food Cereal Ambrosial Venetian Vineyard Granola.

Lunch

Soup: 100 calories, 3. 5 g fat, 140 mg sodium, 2 g each fiber and protein, 10 percent of your vitamin A.(Benner, 2011)

This is labeled on the packet and we would calculate the fat content and protein content on this food item.

Calories = 100 for the soup

Fat content= 3. 5 g

1 gram of fat has 9 calories.

3. 5 g of fat= 3. 5×9= 31. 5 calories

The fat content is (31. 5/100)×100%= 0. 315×100%= 31. 5%

Protein content= 2 g

1 gram of protein has 4 calories.

2 g of proteins= 2×4= 8 calories

The protein content is (8/100) ×100%= 0. 08×100%= 8%

Conclusion

The fat content is 31. 5%. The protein content is 8 % in the lunch packaged food Soup.

Dinner

Pasta: 200 calories, 1 g fat, 4 g fiber, 4 g protein. (Benner, 2011)

This is labeled on the packet and we would calculate the fat content and protein content on this food item.

Calories = 200 for the soup

Fat content= 1 g

1 gram of fat has 9 calories.

1 g of fat= 9= 9 calories

The fat content is (9/200)×100%= 0. 045×100%= 4. 5%

Protein content= 4 g

4 gram of protein has 4 calories.

4 g of proteins= 4×4= 16 calories

The protein content is (16/200) ×100%= 0. 08×100%= 8%

Conclusion

The fat content is 4. 5%. The protein content is 8 % in the dinner packaged food Pasta.

Summary

From the above calculations it is clear that the customers shall have fair knowledge on the food items that they purchase and we can see that according to the Food Standards Code, “ it is proposed that all claims will have to be scientifically substantiated and not misleading. Foods will also have to meet certain criteria to be eligible to carry health claims.” (“ Nutrition and health related claims”, 2012)

The learning of this would really help me to find the right fat content and the protein content in the packaged food and apply in the real world situations like buying the food items that are labeled “ fat free” with caution.

Reference

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