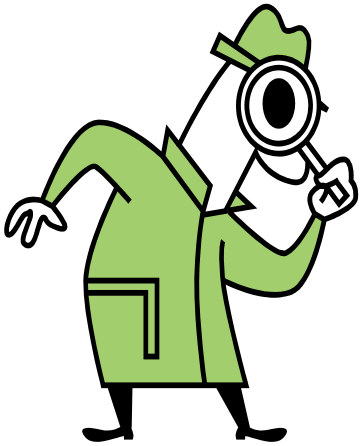

Nutritional Facts Label

Module Prototype

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ETEC 603
Dr. Peter Leong
Spring 2009

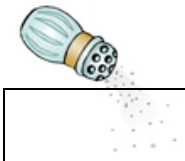


Table of Contents

Pre-test

1. Which of the following food serving sizes best describes the amount of food consumed?

   A. Half of a potato chip
   B. 1-1/2 cups of rice
   C. 1 plate of salad
   D. 2 scoops of potato salad

2. Which of the following is a serving size?

A.

B.

C.

D.

3. The amount of food being eaten is 3 cups. Which of the following is the correct calculation for the number of servings if the serving size is 1/2 cup?

   A. 1/2 cup per serving + 3 cups = 3-1/2 cups
   B. 1/2 cup per serving x 3 cups = 1.5 cups
   C. 3 cups – 1/2 cup per serving = 2-1/2 cups
   D. 3 cups / 1/2 cup per serving = 6 servings

4. If the per servings sodium amount is 5 mg, which of the following calculations correctly determines the total amount of sodium to be consumed for 4 servings?

   A. 4 servings x 5 mg = 20 mg
   B. 5 mg x 1 servings = 5 mg
   C. 5 mg / 4 servings = 1.25 mg
   D. 4 servings + 5 mg = 9 mg

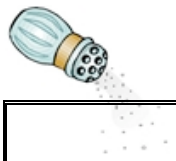
5. Which of the following components determine the total amount of sodium to be consumed?

   A.
   - serving size
   - servings per container
   - amount of sodium per serving
   - amount of food to be consumed

   B.
   - serving size
   - units of measurement per serving
   - amount of sodium per serving
   - amount of food to be consumed

   C.
   - servings per container
   - amount of sodium per serving
   - percentage of sodium per serving
   - amount of calories per serving

   D.
   - servings per container
   - units of measurement per serving
   - amount of potassium per serving
   - amount of food to be consumed



Pre-test Key and Feedback

1. Which of the following food serving sizes best describes the amount of food consumed?

A. Incorrect	"Half of a potato chip" is not an accurate or measurable unit.
B. Correct!	"1-1/2 Cups" is an accurate and measurable unit.
C. Incorrect	"Plate" is not a unit of measurement.
D. Incorrect	"Scoops" is not a unit of measurement.

2. Which of the following food serving sizes best describes the amount of food consumed?

A. Incorrect	"Servings Per Container" does not identify the serving size.
B. Incorrect	"Calories" do not identify the serving size.
C. Correct!	Serving Size on this package estimates one serving to be about 15 chips.
D. Incorrect	"Calories from Fat" does not identify the serving size.

3. The amount of food being eaten is 3 cups. Which of the following is the correct calculation for the number of servings if the serving size is 1/2 cup?

A. Incorrect	This calculation involves addition of figures using incorrect units of measurement; addition is not the correct mathematical formula.
B. Incorrect	This calculation involves multiplication of figures using incorrect units of measurement; multiplication is not the correct mathematical formula.
C. Incorrect	This calculation involves subtraction of figures using incorrect units of measurement; subtraction is not the correct mathematical formula.
D. Correct!	This calculation involves division of figures with correct units of measurement.

Pre-test Key and Feedback

4. If the per servings sodium amount is 5 mg, which of the following calculations correctly determines the total amount of sodium to be consumed for 4 servings?

   A. Correct! 5 mg is the "per serving amount" and must be multiplied by 4, which is the number of servings.

   B. Incorrect 5 mg is the “per serving amount” and must be multiplied by the number of servings; multiplication is the correct formula, but an incorrect unit of measurement is used.

   C. Incorrect This calculation involves division of figures using the correct units of measurement, but division is not the correct mathematical formula.

   D. Incorrect This calculation involves addition of figures using correct units of measurement, but addition is not the correct mathematical formula.

5. Which of the following components determine the total amount of sodium to be consumed?

   A. Incorrect Servings size, servings per container, amount of sodium per serving, and amount of food to be consumed are not the components used to determine the total amount of sodium consumed.

   B. Correct! Serving size, units of measurement per serving, amount of sodium per serving, and amount of food to be consumed are the components used to determine the total amount of sodium consumed.

   C. Incorrect Servings per container, amount of sodium per serving, percentage of sodium per serving, and the amount of calories per serving are not the components used to determine the total amount of sodium consumed.

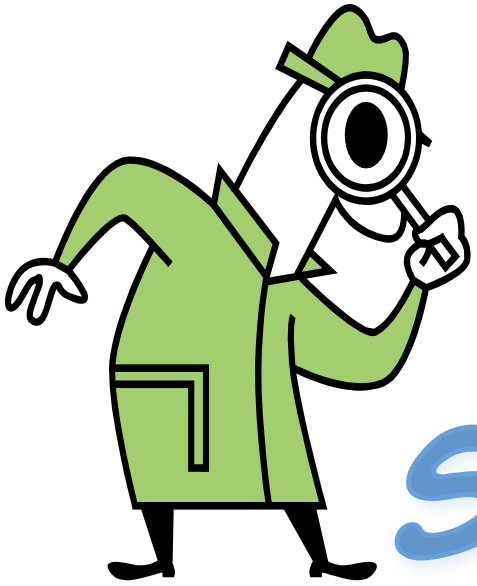
   D. Incorrect Servings per container, units of measurement per serving, amount of potassium per serving, and the amount of food to be consumed are not the components used to determine the total amount of sodium consumed.

Introduction to Module 2

GREAT JOB SO FAR!

YOU HAVE STEPPED UP

TO THE CHALLENGE…



TO TAKE A CLOSER

LOOK AT

SODIUM

Are you a student who does a lot of juggling? Juggling a full time schedule of classes, a job, family, and maybe a significant other? Oh, and don't forget the class deadlines, group meetings, reading times, hours at the computer, and visits to the library!

The juggling sometimes leaves you little time to find a nutritious meal, as Mom's words echo in your ear, "Eat three nutritious meals a day," or "THAT'S your dinner?"

DO YOU . . . Eat a nutritious dinner every evening? What about your snacks?

- **Read 10 pages in your book, then snack.**
- **Read 10 more pages, snack again.**
- **Nothing to do? Snack again!**
- **Frozen pizza, spam musubi, yogurt with toppings, or a cup of cappuccino**

We tend to know what we should eat. We need to be aware of what we DO eat! One way we can do that, is to read the Nutrition Facts Labels of the food we eat.

One nutrients listed on a Nutrition Facts Label is sodium.

Sodium comes from various sources, not just table salt.

Sodium is found in meat, fish, poultry, dairy foods, eggs, olives, various seasonings, additives, condiments, baking soda, monosodium glutamate (MSG), and pickled foods.

The body needs a small amount of sodium to help maintain normality of blood pressure, muscles, and nerves.

High sodium intake contributes to high blood pressure, and most Americans consume more than the recommended daily intake of 2,400 mg (milligrams) of sodium, or about 1 teaspoon of table salt.

For those with high blood pressure, your doctor may recommend a diet low in sodium.

Did you know?

- **1 small package of Crunchy Cheetos (2oz) contains 590 mg of sodium**
- **1 Microwave Singles cup of Hamburger Helper contains 620 mg of sodium**
- **2 cups of No Bean Zippy's Chili contains 1320 mg of sodium**
- **1 serving of Libby's Canned Corn Beef Hash contains 490 mg of sodium**
- **2 oz. (1/6 of a can) of Hormel Spam Lite contains 580 mg of sodium**

In the first module, you learned about the Nutritional Facts Label and locating the amount of sodium per serving from the label.

In this module, you will learn how to determine the total amount of sodium you consume from food.

How much sodium do <u>you</u> consume?

Section 1: How Much Food Will I be Consuming?

In this lesson, you will learn to identify the amount of food you will be consuming by unit size.

At the end of the lesson, you will be able to identify the amount of food you will be consuming in the same unit of measurement as that used in the serving size listed on the Nutrition Facts Label.

Measuring Food:

The amount of food that you will be consuming must be measured in the same unit as the unit listed for serving size on the label. By measuring your consumption this way (serving size measurement), you will be able to easily figure out how many servings you'll be eating. The unit amount must always be a measurable unit.

Examples:

Your daughter wants to eat chicken nuggets for an after school snack. As you take the box out of the freezer, you see that the serving size on the Nutrition Facts Label is listed by the NUMBER OF PIECES. You identify the amount of food you give her as 5 PIECES.

Your after dinner snack is Lay's Potato Chips. You look at the Nutrition Facts Label and see that the serving size listed on the label is by the NUMBER OF CHIPS. You identify the amount of chips you eat at 20 CHIPS.

⇒ In both examples, the unit you used to identify the amount of food is exactly the same as the unit listed on the Nutrition Facts Label. It is also a measurable unit.

Non-Examples:

You saw that the serving size listed for your daughter's chicken nuggets was listed on the Nutrition Facts Label by the NUMBER OF PIECES. You identify the amount of food you gave her as ONE POUND.

Looking at the Nutrition Facts Label for the Lay's Potato Chips, you saw that the serving size was listed by the NUMBER OF CHIPS. You identified the amount of chips you ate as one SANDWICH BAG FULL.

⇒ In both non-examples, the units you used to identify the amount of food is NOT the same as the units listed on the Nutritional Facts Label. It is also not a measurable unit.

Remember: The unit must be the same as that listed on the Nutritional Facts Label, and it must be a measurable unit.

Section 1: Practice Test

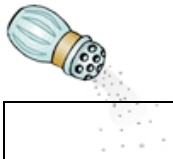
1. **Which of the following food servings sizes best describes the amount of food consumed?**

   A. **Half of a potato chip**

   B. **1-1/2 cups of rice**

   C. **1 plate of potato salad**

   D. **2 scoops of potato salad**



Section 1: Practice Test Key

1. Which of the following food servings sizes best describes the amount of food consumed?

A. Incorrect **Half of a potato chip is not an accurate or measurable unit.**

B. Correct! **1-1/2 cups is an accurate and measurable unit.**

C. Incorrect **"Plate" is not a unit of measurement**

D. Incorrect **"Scoops" is not a unit of measurement**

CONGRATULATIONS!

You have successfully completed Section 1, "How Much Food Will I Be Consuming?"

You are now ready to continue on to Section 2, "Is That A Serving Size?"

Section 2: Is That A Serving Size?

In this lesson, you will review how to identify a serving size.

At the end of the lesson, you will be able identify the serving size from the Nutrition Facts Label.

Identifying Serving Size:

The Nutrition Facts Label identifies the serving size of a food based on an amount that is usually eaten each time that specific food is consumed. The Food and Drug Administration specifies that the serving size of a food be based upon a "reference among customarily-consumed per eating occasions".

Whenever laulau is eaten, everyone usually eats 1 whole laulau. The serving size would probably be shown in the number of laulau.

All Nutrition Fact Labels for products identify a serving size. It is located right below "Nutrition Facts" and it is a standardized amount, usually followed by a metric amount. Standardized amounts mean cups, tablespoons, quarts, and amounts we use in the United States. Sometimes, a volume amount is also included.

If there is more than one serving per container, the number of servings in the container is listed below the serving size. The “servings per container” is NOT the serving size.

Example:

Frito Lay's Tostitos Corn Chips

⇒ The servings size is located right below the "Nutrition Facts" and is shown in a standard and metric amount.

Nutrition Facts

Serving Size 1 oz. (28g/About 24 chips)
Servings Per Container 13

Amount Per Serving
Calories 140 Calories from Fat 70

	% Daily Value*
Total Fat 8g	12%
Saturated Fat 1g	5%
Polyunsaturated Fat 4.5g	
Monounsaturated Fat 2g	
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 110g	5%
Total Carbohydrate 18g	6%
Dietary Fiber 1g	4%
Sugars 0g	
Protein 2g	

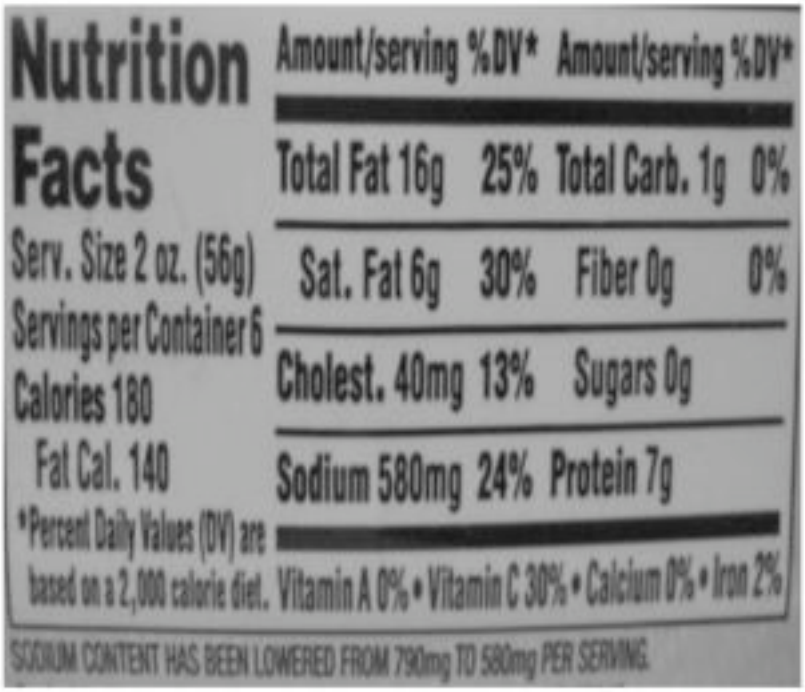
Vitamin A 0%	•	Vitamin C 0%	
Calcium 2%	•	Iron 2%	
Vitamin E 4%	•	Thiamin 2%	
Niacin 2%	•	Vitamin B_6 4%	
Phosphorus 4%	•	Magnesium 4%	

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300mg	375g
Dietary Fiber		25g	30g

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

Non-example:



Nutrition Facts

Serv. Size 2 oz. (56g)
Servings per Container 6
Calories 180
Fat Cal. 140
*Percent Daily Values (DV) are based on a 2,000 calorie diet.

Amount/serving	%DV*	Amount/serving	%DV*
Total Fat 16g	25%	Total Carb. 1g	0%
Sat. Fat 6g	30%	Fiber 0g	0%
Cholest. 40mg	13%	Sugars 0g	
Sodium 580mg	24%	Protein 7g	

Vitamin A 0% • Vitamin C 30% • Calcium 0% • Iron 2%

SODIUM CONTENT HAS BEEN LOWERED FROM 790mg TO 580mg PER SERVING.

⇒ The Serving Size is NOT the Servings per Container. The Servings Size is located BELOW "Nutrition Facts" and ABOVE "Servings per Container'

Section 2: Practice Test

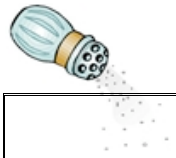
Which of the following is a serving size?

A.

B.

C.

D.



Section 2: Practice Test Key

2. Which of the following food serving sizes best describes the amount of food consumed?

A. Incorrect	"Servings Per Container" does not identify the serving size.
B. Incorrect	"Calories" do not identify the serving size.
C. Correct!	Serving Size on this package estimates one serving to be about 15 chips.
D. Incorrect	"Calories from Fat" does not identify the serving size.

CONGRATULATIONS!

You have successfully completed Section 2, "Is That A Serving Size?"

You are now ready to continue on to Section 3, "What Is My Serving?"

Section 3: What Is My Serving?

In this lesson, you will learn to divide the amount of food you will be eating by the serving size.

At the end of the lesson, you will be able to correctly divide the amount of food you will be eating by the serving size in order to calculate the NUMBER of servings you will be eating.

Computing Serving Size:

As you learned in the previous section, all Nutrition Labels identify serving sizes. Many boxes or packages hold more than one serving.

If you will be eating more than one serving, you will need to identify the amount of food you will be eating in terms of a multiple of the number of servings. To do this, divide the amount of food you'll be eating (measured by the serving size unit), by the number in the serving size unit.

Sound difficult and confusing? Not at all, look at the examples:

Your favorite snack is Mini Oreos. Looking at the Nutrition Label on the package, you see that the serving size is 9 cookies. You can eat more than 9 cookies! You will be consuming 18 cookies. Divide 18 cookies (the amount of food you will be eating listed in the serving size unit) by 9 cookies (the amount of the serving size unit). 18 divided by 9 is 2. You will be consuming 2 servings.

It's been a long day of surfing, and you come back to the dorm famished. The serving size for pasta is 2 cups, and the amount you will be eating is 3 cups. 3 divided by 2 is 1.5. You will be consuming 1.5 servings.

⇒ In both examples, you divided the amount to be consumed by the serving size.

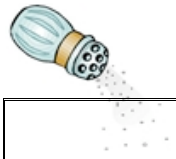
Non-Examples:

You saw that your Mini Oreos serving size was 9 cookies as shown on the Nutrition Facts Label. You were planning on eating 18 cookies. You carefully counted 18 cookies and identified the amount you were going to consume as 18 servings.

Ono Pasta. As you were preparing pasta, you saw that the serving size was 2 cups, and you were planning to eat 3 cups. You identified your serving size as 3 servings.

⇒ In both non-examples, you did not divide the amount to be consumed by the serving size. For more than one serving, you MUST divide the amount to be consumed by the serving size.

Remember: The unit of measurement you use and the unit of measurement listed on the serving size must be the same.



Section 3: Practice Test

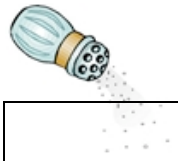
The amount of food being eaten is 3 cups. Which of the following is the correct calculation for the number of servings if the serving size is 1/2 cup?

A. 1/2 cup per serving + 3 cups = 3-1/2 cups

B. 1/2 cup per serving x 3 cups = 1.5 cups

C. 3 cups – 1/2 cup per serving = 2-1/2 cups

D. 3 cups / 1/2 cup per serving = 6 servings



Section 3: Practice Test Key

The amount of food being eaten is 3 cups. Which of the following is the correct calculation for the number of servings if the serving size is 1/2 cup?

A. Incorrect **This calculation involves addition of figures using incorrect units of measurement; addition is not the correct mathematical formula.**

B. Incorrect **This calculation involves multiplication of figures using incorrect units of measurement; multiplication is not the correct mathematical formula.**

C. Incorrect **This calculation involves subtraction of figures using incorrect units of measurement; subtraction is not the correct mathematical formula.**

D. Correct! **This calculation involves division of figures with correct units of measurement.**

CONGRATULATIONS!

You have successfully completed Section 3, "What Is My Serving?"

You are now ready to continue on to Section 4, "Ok, So How Much Sodium Am I Consuming?"

Section 4: Ok, So How Much Sodium Am I Consuming?

In this lesson, you will learn to multiply the number of servings to be consumed by the amount of sodium per serving.

At the end of the lesson, you will be able to correctly multiply the number of servings to be consumed by the amount of sodium per serving to determine how much sodium you will be consuming.

Adjusting for Servings:

As you learned in module 1, all Nutrition Facts Labels list the amount of nutrients per serving. This includes sodium.

You also learned that sodium is a component of salt, and it is a substance that may increase your risk for high blood pressure. The current recommendation is for Americans to consume less than 2,400 milligrams of sodium a day; that equals about 1 teaspoon table salt.

If you will be eating MORE than one serving, you must calculate the TOTAL amount of sodium you will consuming. To do this you must multiply the number of servings by the amount of sodium per serving indicated in the Nutrition Facts Label.

Example:

Your favorite Mini Oreos list the servings size as 9 cookies with the sodium content of 160 mg per serving. You were planning on eating 2 servings (18 cookies) so you multiply 160 mg by 2 servings. The total amount of sodium you will consume is 320 mg.

In the example, the listed amount of 160 mg sodium was the PER serving amount, so:

160 mg sodium per serving x 2 servings = 320 mg of sodium

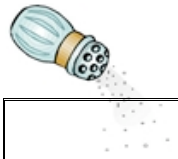
Non-Example:

Your sister loves Cheese RITZ Bits and she ate 24 of them. The serving size is 8 crackers, and the sodium content is 240 mg per serving. She tells you the sodium she consumed was 240 mg because all the crackers came from the same package.

In the non-example, the listed amount of 240 mg sodium was the PER serving amount. Your sister ate 24 RITZ Bits, which was 3 servings. The correct amount of sodium she consumed was:

240 mg sodium PER servings x 3 servings = 720 mg of sodium

Remember: The listed amount of sodium is the PER serving amount



Section 4: Practice Test

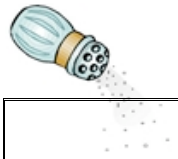
If the per serving sodium amount is 5 mg, which of the following calculations correctly determines the total amount of sodium to be consumed for 4 servings?

A. 4 servings x 5 mg = 20 mg

B. 5 mg x 1 serving = 5 mg

C. 5 mg / 4 servings = 1.25 mg

D. 4 servings + 5 mg = 9 mg



Section 4: Practice Test Key

If the per serving sodium amount is 5 mg, which of the following calculations correctly determines the total amount of sodium to be consumed for 4 servings?

A. Correct!	**5 mg is the per serving sodium amount and must be multiplied by 4, which is the correct number of servings.**
B. Incorrect	**5 mg is the per serving sodium amount and must be multiplied by the number of servings; multiplication is the correct formula, but an incorrect unit of measurement is used.**
C. Incorrect	**This calculation incorrectly involves division of figures using the correct units of measurement, but division is not the correct mathematical formula.**
D. Incorrect	**This calculation involves addition of figures using correct units of measurement, but addition is not the correct mathematical formula.**

CONGRATULATIONS!

You have successfully completed Section 4, "Ok, So How Much Sodium Am I Consuming?"

You are now ready to continue on to Section 5, "I Can Do This!"

Section 5: I Can Do This!

In this lesson, you will learn to determine the amount of sodium to be consumed given a measurable portion of food and its Nutrition Facts label.

At the end of the lesson, you will be able to correctly determine the total amount of sodium you will be consuming using a measurable portion of food and its Nutrition Facts Label.

Putting the Steps Together: **To calculate the total amount of sodium in an amount of food you will be consuming, you must:**

1. Measure the amount of food you wish to eat using the same unit of measurement as the unit listed for serving size on the Nutrition Facts label.

2. Determine the amount of food you will be eating in terms of the number of servings. If it is more than one serving, you will need to DIVIDE the amount of food you will be consuming by the NUMBER in the serving size unit to find the total NUMBER of servings.

3. **Calculate the total amount of sodium you will be consuming by MULTIPLYING the number of servings you will be eating by the sodium amount PER serving listed on the Nutrition Facts Label**.

Examples:

Frito Lay Tostitos Chips

Nutrition Facts

Serving Size 1 oz. (28g/About 24 chips)
Servings Per Container 13

Amount Per Serving
Calories 140 Calories from Fat 70

	% Daily Value*
Total Fat 8g	12%
Saturated Fat 1g	5%
Polyunsaturated Fat 4.5g	
Monounsaturated Fat 2g	
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 110g	5%
Total Carbohydrate 18g	6%
Dietary Fiber 1g	4%
Sugars 0g	
Protein 2g	

Vitamin A 0%	•	Vitamin C 0%
Calcium 2%	•	Iron 2%
Vitamin E 4%	•	Thiamin 2%
Niacin 2%	•	Vitamin B_6 4%
Phosphorus 4%	•	Magnesium 4%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300mg	375g
Dietary Fiber		25g	30g

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

In Module 1, you learned to locate the Nutrition Facts Label on food products. You also learned about the different nutrients listed, including sodium.

In this Module, you learned to look at the sodium content and determine the total amount of sodium you would be consuming.

1. You read the Nutrition Facts Label and determine the unit of measurement for the Corn Chips is "chips". You decide to eat 36 chips.

2. You look at the label again and determine that the serving size is 24 chips. You divide 36 by 24. You will be consuming 1.5 servings.

3. According to the Nutrition Facts Label, the amount of sodium per servings is 110 mg. You multiply 110 mg by 1.5. The sodium amount you will be consuming is 165 mg.

1. **Looking at the Nutrition Facts Label, you determine that the serving size unit is "crackers". You decide to eat 32 crackers.**

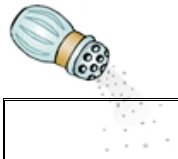
2. **You look at the label again and determine that 16 crackers is one serving. Since you are eating 32 crackers, and 16 crackers is one serving, You divide 32 by 16. You will be eating 2 servings.**

3. **The Nutrition Facts Label lists the sodium amount per servings as 260 mg. Since you will be consuming 2 servings, you multiply 260 mg by 2. You will consume 520 mg of sodium.**

⇒Remember: The amount of food you will be eating MUST be measured in the same unit as the serving size unit

⇒Remember: Servings size is NOT the same as the number of servings per container

⇒Remember: Not all foods have a Nutrition Facts Label. Fresh produce, meats, and fruits may not have a Nutrition Facts Label, but all prepackaged foods do. If the prepackaged food does not, it will be listed on the outside of the original packaging or the outside label.



Post-Test

1. **Which of the following is a measureable unit of measurement?**

   A. **Dash**
   B. **Half**
   C. **Lump**
   D. **Tablespoon**

2. **Select the best description of a serving size on a Nutrition Facts label.**

   A. **0.08 mg/5%**
   B. **1 oz. (42g/15 sticks)**
   C. **1 and ½ Packages**
   D. **250 Calories**

3. **The amount of food is 3 cookies, and the serving size is 4 cookies. Which of the following mathematical formulas correctly determines the number of servings?**

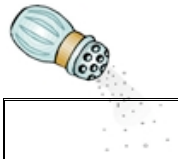
   A. **Food quantity per serving / Food quantity**
   B. **Food quantity / Food quantity per serving**
   C. **Food quantity per serving + Food quantity**
   D. **Food quantity - Food quantity per serving**

4. **Which of the following mathematical formulas correctly determines the total amount of sodium to be consumed ?**

   A. **Number of servings / Sodium amount per serving**
   B. **Sodium amount per serving / Number of servings**
   C. **Number of servings + Sodium amount per serving**
   D. **Number of servings x Sodium amount per serving**

5. **In the following list, select the item that is not required to determine the total amount of sodium to be consumed.**

   A. **Amount of sodium per serving**
   B. **Amount of calories per serving**
   C. **Servings per container**
   D. **Serving Size**



Post-Test Key and Feedback

1. D. Tablespoon

2. B. 1 oz. (42g/15 sticks)

3. B. Food quantity / Food quantity per serving

4. D. Number of servings x Sodium amount per serving

5. B. Amount of calories per serving

Way to go Nutrition Facts Label Reader!!

You're ready to move on to Module 3!

In Module 1, you learned about the Nutritional Facts Label and how to locate the amount of sodium per serving from the label.

You learned that excess sodium intake can lead to serious health problems such as heart attack, stroke, heart failure, and kidney failure. Although most people are aware of that, many people do not take adequate steps to regulate their sodium intake.

In this module, you learned how to determine the total amount of sodium you consume from food using a Nutrition Facts Label.

Sodium comes from many food sources in your diet, but just learning to use a Nutrition Facts Label to determine sodium intake is a major step towards helping you make better food choices, and in turn, minimize your risk of serious health problems.

In Module 3, you will learn how to determine whether to adjust the amount of food consumed according to sodium intake. You are already off to a great healthy start!!

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