

Child Nutrition & Wellness
Kansas State Department of Education
Presents

Sock It to Sodium



Training Manual

A Lesson for School Food Service Employees

New 2012

This class was developed by Child Nutrition & Wellness, Kansas State Department of Education. Class content and activities were adapted from the following sources:

- *Sodium Quiz and facts*. American Heart Association, (n.d.). Retrieved March 2012 from <http://www.heart.org>.
- *Choose My Plate*. United States Department of Agriculture. (2010). Retrieved March 2012 from <http://www.choosemyplate.gov>
- *Dietary Guidelines for Americans*. United States Department of Agriculture. Retrieved March 2012 from <http://www.health.gov>
- *Dietary Reference Intakes: Electrolytes and water*. Institute of Medicine. Retrieved March 2012 from <http://www.iom.edu/Global/News%20Announcements/~media/442A08B899F44DF9AAD083D86164C75B.ashx>
- *Salt FAQs*. Salt Institute. Retrieved March 2012 from www.saltinstitute.org
- *Sodium Intake Stats*. Center for Disease Control and Prevention. Retrieved on March 2012 from www.cdc.gov
- *Be Salt Savvy*. United States Department of Agriculture – Team Nutrition. Retrieved on March 2012 from http://www.fns.usda.gov/tn/Resources/DGfactsheet_sodium.pdf

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Sock It to Sodium



Administration

* Sock It to Sodium*

Administration

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Signs (Welcome, Restroom, Arrow)	Page 9
- <i>copies can be made as needed</i>	
Test Your Sodium Smarts Quiz (Answer Key).....	Page 10
- <i>1 black and white copy printed on colored paper (provided by KSDE)</i>	
Lab Station Labels.....	Page 11
- <i>1 copy of each page, black and white copies on colored paper, makes 1 set of 4, put in sleeve protector so can be reused, put in back of trainer manual (provided by KSDE)</i>	
Lab Notes	Page 17
- <i>1 copy of each page, black and white copies on colored paper, makes 1 set of 4 (provided by KSDE)</i>	
Lab Product Labels	Page 21
- <i>1 copy, black and white copy on colored cardstock, cut on solid lines, fold on dashed lines, makes 1 set of 8 (provided by KSDE)</i>	
Participant Booklet	Separate Word File
- <i>black and white copies, copy cover and Acknowledgments/Discrimination Statement page back-to-back on colored paper and remaining pages back-to-back on white paper, put blank colored page at end of packet, staple in top, left corner, one booklet per participant (provided by KSDE)</i>	
Recipes Booklet	Separate Word File
- <i>black and white copies, copy cover and Acknowledgments/Discrimination Statement page back-to-back on colored paper and remaining pages back-to-back on white paper, put blank colored page at end of packet, staple in top, left corner, one booklet per participant (provided by KSDE)</i>	

Lesson Outline

Topic	Estimated Time
Welcome and Introduction Activity 1: What's Your Sodium IQ	30 minutes
My Plate and Dietary Guidelines	15 minutes
Sodium 101 Activity 2: Sodium Matching Game Activity 3: Test Your Sodium Knowledge	45 minutes
Break	15 minutes
Alternatives to Sodium Activity 4: Grow a Herb Garden	30 minutes
Reducing Sodium in School menus Activity 5: Recipe Modification	30 minutes
To the Kitchen Activity 6: Cooking Laboratory – 1 hour Activity 7: Taste Testing – 30 minutes Activity 8: Lab Reports – 30 minutes	2 hours
Summary	15 minutes
TOTAL TIME	5 hours

Facility Requirements

Classroom:

- Comfortable chairs and tables for all participants arranged in pairs or groups of three
- Blank wall or space for a screen at the front of the room
- Table located near the blank wall or screen for the trainer's materials

Kitchen:

- School kitchen with counter space for 4 groups
- At least 1 oven (conventional, convection or combo)
- At least 1 counter stand mixer or hand mixer
- Assorted small equipment – see detailed list provided

Audio-Visual Equipment:

- Data projector/computer
- Screen (if the classroom does not have a blank wall at the front of the room)

Supplies Needed

Item	Description	Amount Needed
Optional: Herbs & Spices	Variety of fresh or dry for display	5-6 to pass around
Herb Seed packets	Cilantro, Chives, Oregano, Basil and/or Parsley	Variety to plant for Activity 3
Disposable Cups	White, Styrofoam	1 per class participant
Potting Soil	Any Brand	1 small bag per class
Marker	Any dark color – to label Grow an Herb Garden cup	1
Masking tape	Any thickness, to use for flip chart paper, lab signs	1 roll
Hairnets	Any type for those who forget them	3-6
Pens or pencils	Any full size for participants who forget to bring one	At least ½ the number of participants
Aprons	Any cloth or disposable aprons for participants who forget to bring one	2-4
Calculators	Any small, inexpensive	4
Lab Station Labels	See Administration	1 set
Lab Notes	See Administration	1 set
Lab Product Labels	See Administration	1 set
Prizes	Activity 1-6 – Optional small prizes	# of participants
Provided by Participants		
Apron, calculator, closed toe shoes, hairnet, timer, copy of school menu(s)		

Preparation and Set-Up Instructions

For Organizer

- Gather supplies needed
- Copy Participant Booklets

For Host Site

- Ensure that the classroom is clean and meets the requirements.
- Ensure that the audio-visual equipment is in good working condition.
- Put up signs if class participants are not sure where to go for class.
- Provide extra pencils and/or pens for participants who forget to bring one.
- Instruct the participants to bring an apron, a calibrated thermometer, a kitchen timer, a calculator and to wear closed toe shoes.
- Make sure that the kitchen meets requirements and that all equipment, food and supplies described on the additional pages are available.

For Site Assistant

- See additional page of instructions.

For Trainer

- Review lab recipes, food and supply list and equipment list. Talk to site host and ensure that all required items have been obtained. If any modifications have been made, make notes on the lab notes for the lab group members prior to class to keep lab running smoothly.
- Purchase potting soil, seeds and Styrofoam cups for herb garden activity.

Instructions for Site Assistant

Assist with Classroom Activities:

- ❑ Be prepared to demonstrate the use of equipment in the kitchen (ovens, mixers, scales).
- ❑ Assist trainer as needed and time allows (with taste testing, etc.).

Prepare for Lab:

Whenever possible, the kitchen should be prepared for lab the afternoon prior to class so that the trainer can review the preparations.

- ❑ Purchase all food and supplies as listed on attached page. To keep costs down (especially for seasonings and spices) obtain as much as possible from the school's inventory. List all products used so that the school can be reimbursed for the cost of those supplies.
- ❑ Separate and label food and supplies for this class so that items purchased for this class and only used for and by this class. Do not weigh or prepare any food or ingredient unless specifically instructed to do so.
- ❑ Ensure that all equipment is available when needed. Put in one central location unless instructed by the trainer to do otherwise.
- ❑ Put dry ingredients in one central location. Participants should take their measuring utensils to the ingredients and leave the ingredients in place.
- ❑ Turn two ovens on prior to lab (Two - convection oven at 325°F or conventional at 350°F).
- ❑ Prepare 4 buckets of sanitizing solution (e.g. 1 gallon of warm (not hot) water + 1 Tbsp bleach) immediately prior to lab.
- ❑ Assist as needed during lab and supervise clean-up. The class participants will wash most of their equipment but due to time constraints, you may be asked to help.
- ❑ Ensure that the kitchen is clean.

Equipment List

There will be four groups of participants. Each group should have a separate work station. The trainer will provide signs to label each station.

	Total	Group 1		Group 2		Group 3		Group 4	
		Spaghetti & meat sauce	Spaghetti & meat sauce Low NA	Tacos	Tacos Low NA	Fruit & Oatmeal Bars	Fruit & Oatmeal Bars Low Na	Ranch Dip	Ranch Dip Low NA
Cutting Boards	3	X						X	X
French Knife	1		X					X	
Paring Knife	2							X	X
Stainless Steel Bowl, large (1 gal)	4					X	X	X	X
Stainless Steel Spoon	4	X	X	X	X				
Can Opener	1	X	X	X	X				
Medium Mixing Bowl	2					X	X		
Colander	2	X		X					
Wire Whip/Whisk	2							X	X
Rubber Spatula	4	X	X				X		X
Tongs	1								
2" Steamtable Pans	4	X	X			X	X		
Sanitizer Bucket	4	X		X		X		X	
Dry Measuring Cups	3			X	X	X			
Measuring Spoons	4	X		X		X		X	
Liquid Cup Measure	2	X		X					
Hot Pads	3	X		X		X			
#16 Disher	2			X	X				
Oven	2					X	X		
Range/Burners	4	X		X					
#8 Disher	2					X	X		
8 oz. Spoodle	2	X							
Baking Sheet	2					X	X		

Food and Supply List

Ingredients	Total	Spaghetti & Meat Sauce	Spaghetti & Meat Sauce Low NA	Taco Meat	Taco Meat Low NA	Mexican Seasoning Mix	Fruit & Oatmeal Bar	Fruit & Oatmeal Bar Low NA	Ranch Dip	Ranch Dip Low NA
Brown Sugar	9 oz.			1 ½ tsp.	1 ½ tsp.		¾ cup	¾ cup		
Quick Oats	1 lb. 8 oz.						12 oz.	12 oz.		
Canola Oil	1 lb.		4 oz.				6 oz.	6 oz.		
Mixed Seeds with salt	1 cup						1 cup			
Mixed Seeds without salt	1 cup							1 cup		
Honey	1 lb. 8 oz.						12 oz.	12 oz.		
Maple Syrup	1 1/3 cup						2/3 cup	2/3 cup		
Cinnamon	4 tsp.						2 tsp.	2 tsp.		
Beans, Great Northern, canned	2 - #10 cans								6 lbs.	6 lbs.
Salt	3 ½ tsp.			¾ tsp.	¾ tsp.		½ tsp.		1 ½ tsp.	
Yogurt, low fat, plain	3 lbs. 4 oz.								1 lb. 10 oz.	1 lb. 10 oz.
Garlic, powder	6 ½ tsp.								3 ¼ tsp.	3 ¼ tsp.
Ground Beef, 80/20	7 lbs. 8 oz.	2 lbs. 2 oz.	2 lbs. 2 oz.	1 lb. 10 oz.	1 lb. 10 oz.					
Garlic, cloves minced	5 cloves		5 cloves							
Pepper, cayenne	2 tsp.								1 tsp.	1 tsp.
Pepper, black	4 ½ tsp.		½ tsp.	½ tsp.	½ tsp.				1 ½ tsp.	1 ½ tsp.
Cheddar Cheese, shredded	12 oz.			6 oz.	6 oz.					
Lettuce, shredded	1 ½ lbs.			12 oz.	12 oz.					
Onion, dehydrated flakes	1 Tbsp.			1 ½ tsp.	1 ½ tsp.					
Taco Shells	24			12 ea.	12 ea.					
Chives, fresh	¾ cup								6 Tbsp.	6 Tbsp.
Parsley, fresh	¾ cup								6 Tbsp.	6 Tbsp.
Parsley, dried	1 Tbsp. + 2 tsp.		1 Tbsp. + 2 tsp.							
Tarragon, dried	1 Tbsp.								1 ½ tsp.	1 ½ tsp.

Food and Supply List, *continued*

Ingredients	Total	Spaghetti & Meat Sauce	Spaghetti & Meat Sauce Low NA	Taco Meat	Taco Meat Low NA	Mexican Seasoning Mix	Fruit & Oatmeal Bar	Fruit & Oatmeal Bar Low NA	Ranch Dip	Ranch Dip Low NA
Fruit, dried mixture (cranberries, raisins, pineapple, cherries, apricots, etc.)	2 lb.						1 lb.	1 lb.		
Lemon Juice	¾ cup								6 Tbsp.	6 Tbsp.
Taco Seasoning	3.25 pkg			½ of pkg						
Chili Powder	1 ¾ cup					1 ¾ cup				
Cumin, ground	1 ⅓ cup					1 ⅓ cup				
Paprika	¼ cup + 3 Tbsp.					¼ cup + 3 Tbsp.				
Onion Powder	¼ cup + 3 Tbsp.					¼ cup + 3 Tbsp.				
Sugar, granulated	2 ½ tsp.		2 ½ tsp.							
Spaghetti Sauce, canned	3 lbs. 6 oz.	3 lbs. 6 oz.								
Spaghetti, whole wheat, dry	2 lbs. 8 oz.	1 lb. 4 oz.	1 lbs. 4 oz.							
Tomato Paste, no added salt	1 lbs. 5 oz.		15 oz.	3 oz.	3 oz.					
Tomatoes, diced, no added salt	4 lbs. 12 oz.		4 lbs. 12 oz.							
Marjoram, dried	1 Tbsp. + 2 tsp.		1 Tbsp. + 2 tsp.							
Oregano, dried	2 ½ tsp.		2 ½ tsp.							
Basil, dried	2 tsp.		2 tsp.							
Onion, chopped	2-3 large		2 ½ cups							
Celery, chopped	1-2 stalks		¾ cup							
Green Sweet Pepper, chopped	1-2 peppers		1 ¼ cups							
Fresh Veggies (carrot sticks, broccoli, cauliflower, etc.)	4 lbs.								2 lbs.	2 lbs.

Food and Supply List, *continued*

Ingredients	Total	Spaghetti & Meat Sauce	Spaghetti & Meat Sauce Low NA	Taco Meat	Taco Meat Low NA	Mexican Seasoning Mix	Fruit & Oatmeal Bar	Fruit & Oatmeal Bar Low NA	Ranch Dip	Ranch Dip Low NA
Disposable Plates, large	# in class									
Plastic Forks	# in class									
Disposable Cups, large	# in class									
Napkins	# in class									
Hand Soap ^c	1 sm bottle									
Dish Soap ^c	1 sm bottle									
Sanitizer ^c	1 sm bottle									
Gloves ^c	1 box									
Pan Release Spray ^c	1 can	As needed								

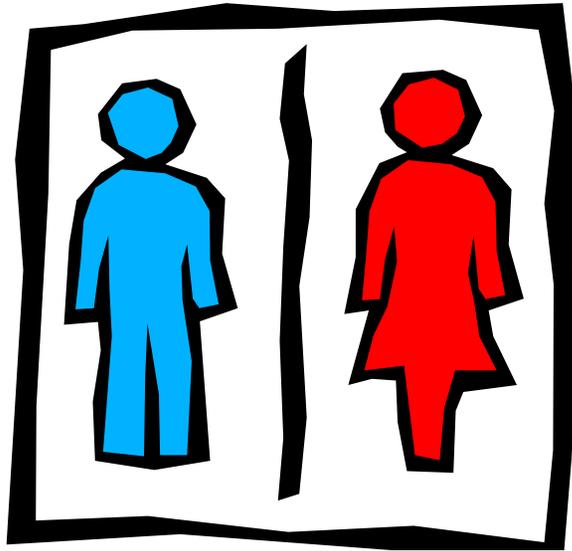
^c Only purchase if not available in the kitchen.

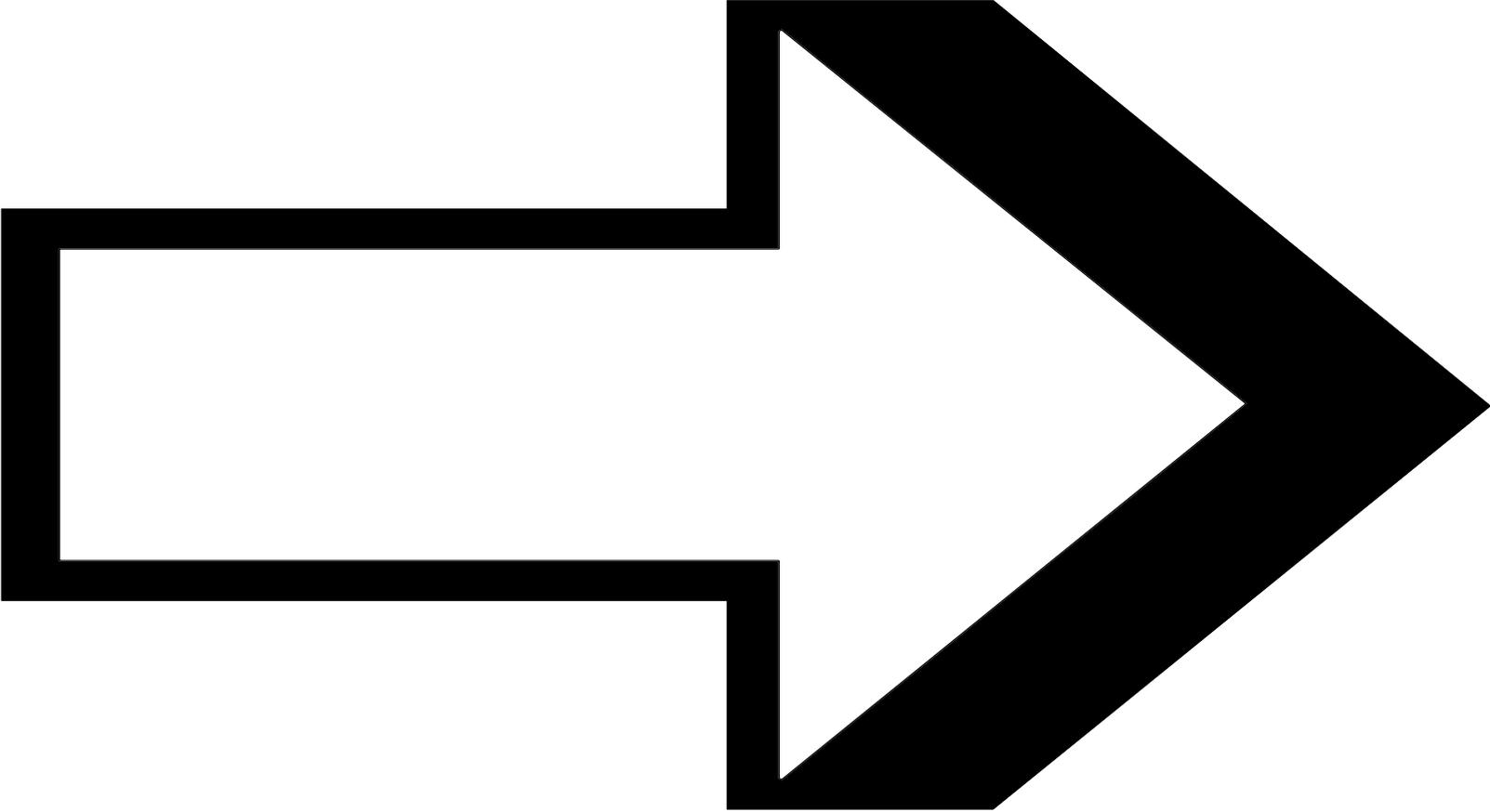
Welcome to



Sock It To Sodium

Restrooms





Test Your Sodium Smarts Quiz (Answer Key)

Q1. The correct answer is: **B.) 1 small slice of French bread has more sodium.**

No matter how you slice it, bread is one of the most common sources of sodium. Sodium is added to bread to help with the texture and rising action of the dough. The amount of sodium differs by bread type and can add up quickly when you eat more than one slice.

- | | |
|--|---|
| A.) Raisin bread (enriched)
1 large slice (32g); Sodium – 125 mg | B.) French or Vienna bread (including sourdough)
1 small slice (32g); Sodium – 208 mg |
|--|---|
-

Q2. The correct answer is: **A.) 1 slice of American cheese has more sodium.**

American cheese is a highly processed "cheese-like" product. Highly processed foods tend to be high in sodium because food manufacturers use salt or other sodium-containing compounds to preserve food and to improve their taste and texture.

- | | |
|--|---|
| A.) American cheese (pasteurized process, low-fat)
1 slice (21g); Sodium – 300mg | B.) Swiss cheese (low-fat)
1 slice (28g); Sodium – 73mg |
|--|---|
-

Q3. The correct answer is: **A.) 1/3 cup of potato salad has more sodium.**

Salt is often added to commercially prepared (e.g., store-bought) potato salad for taste. You can make potato salad with a low-sodium recipe that uses herbs and spices.

- | | |
|--|--|
| A.) Potato salad
1/3 cup (95g); Sodium – 312mg | B.) Mashed potatoes (fast-foods)
1/3 cup (80g); Sodium – 182mg |
|--|--|
-

Q4. The correct answer is: **A.) 1 cup of raisin bran cereal has more sodium.**

Since raisin bran tastes "sweet," it may come as a surprise as to how much sodium can be in commercial breakfast cereals. Salt is added to sweet foods in processing to enhance their flavor, so even sweet-tasting cereals like raisin bran can have lots of sodium.

- | | |
|--|--|
| A.) Raisin bran flake cereal
1 cup (59g); Sodium – 342mg | B.) Raisin-cinnamon English muffin
1 (57g); Sodium – 189mg |
|--|--|
-

Q5. The correct answer is: **B.) 1 ounce (28g) of hard pretzels has more sodium.**

Don't get the facts twisted — Hard pretzels can have more sodium for the same total weight than potato chips, because salt is added to hard pretzels for texture, not just for taste. For potato chips, salt is added at the end of food processing and applied on the surface to enhance the flavor. To limit your sodium consumption, buy unsalted potato chips and pretzels. But remember that unsalted potato chips have virtually no sodium, while unsalted pretzels can pack 82 mg per ounce.

- | | |
|--|--|
| A.) Potato chips (plain, salted)
1 ounce (28g); Sodium – 149mg | B.) Pretzels (hard, plain, salted)
1 ounce (28g); Sodium – 385mg |
|--|--|
-

Q6. The correct answer is: **A.) 2 tablespoons of Italian salad dressing has more sodium.**

Prepared salad dressings can be high in sodium, depending on the dressing type, other ingredients and taste preference. Be sure to select low-sodium salad dressings or use a low-sodium recipe to whip up a salad dressing at home.

- | | |
|---|---|
| A.) Reduced-fat Italian salad dressing
2tsp (30g); Sodium – 410mg | B.) Reduced-fat ranch salad dressing
2 tbsp (30g); Sodium – 273mg |
|---|---|
-

Q7. The correct answer is: **A.) 2 slices of regular ham has more sodium.**

Sodium in processed meats like ham, bacon and hot dogs can come from salt added for taste and sodium-containing ingredients used as preservatives to enhance the color or retain moisture. The American Heart Association recommends that you limit the consumption of processed meats to no more than two servings a week.

- | | |
|--|---|
| A.) Ham (sliced, regular)
2 slices (56g); Sodium – 730mg | B.) Turkey breast (oven roasted)
2 slices (56g); Sodium – 540mg |
|--|---|
-

Q8. The correct answer is: **B.) ½ cup of Alfredo pasta sauce has more sodium.**

Alfredo sauce has more sodium, calories and fats than spaghetti/marinara sauce. Prepared pasta sauces are traditionally very high in sodium, although the sodium content can vary greatly depending on the brand and flavor. Several food manufacturers have offered products with less sodium.

- | | |
|---|--|
| A.) Pasta sauce (spaghetti/marinara)
½ cup (128g); Sodium – 525mg | B.) Pasta sauce (Alfredo)
½ cup (124g); Sodium – 760mg |
|---|--|
-

Q9. The correct answer is: **B.) 1 cup of chicken noodle soup has more sodium.**

Salt may be more necessary to provide taste for traditional canned chicken noodle soup than tomato soup, but here is the scoop on soup: All canned varieties can have high amounts of sodium. In recent years, tasty soups with less sodium have become available — pick these whenever you can.

- | | |
|---|---|
| A.) Tomato soup (ready-to-serve)
1 cup (245g); Sodium – 789mg | B.) Chicken noodle soup (ready-to-serve)
1 cup (245g); Sodium – 840mg |
|---|---|
-

Q10. The correct answer is: **A.) 1 tbsp of soy sauce has more sodium.**

Not surprised? The big surprise may be how high in sodium both soy sauce *and* teriyaki sauce can be. The 1,006 mg of sodium per 1 tablespoon (tbsp) of soy sauce is almost equivalent to that contained in ½ teaspoon (tsp) of salt (1,150 mg). Choose low-sodium or light soy sauce at grocery stores and restaurants.

- | | |
|---|---|
| A.) Soy sauce
1 tbsp (18g); Sodium – 1006mg | B.) Teriyaki sauce
1 tbsp (18g); Sodium – 690mg |
|---|---|
-

Group #1

Group #2

Group #3

Group #4

Lab Notes - Group 1

Lab Notes - Group 2

Lab Notes - Group 3

Lab Notes - Group 4

Spaghetti & Meat Sauce
Regular

Spaghetti & Meat Sauce
Low Sodium

Tacos
Regular

Tacos
Low Sodium

Fruit & Oatmeal Bar
Regular

Fruit & Oatmeal Bar
Low Sodium

Ranch Dip
Regular

Ranch Dip
Low Sodium