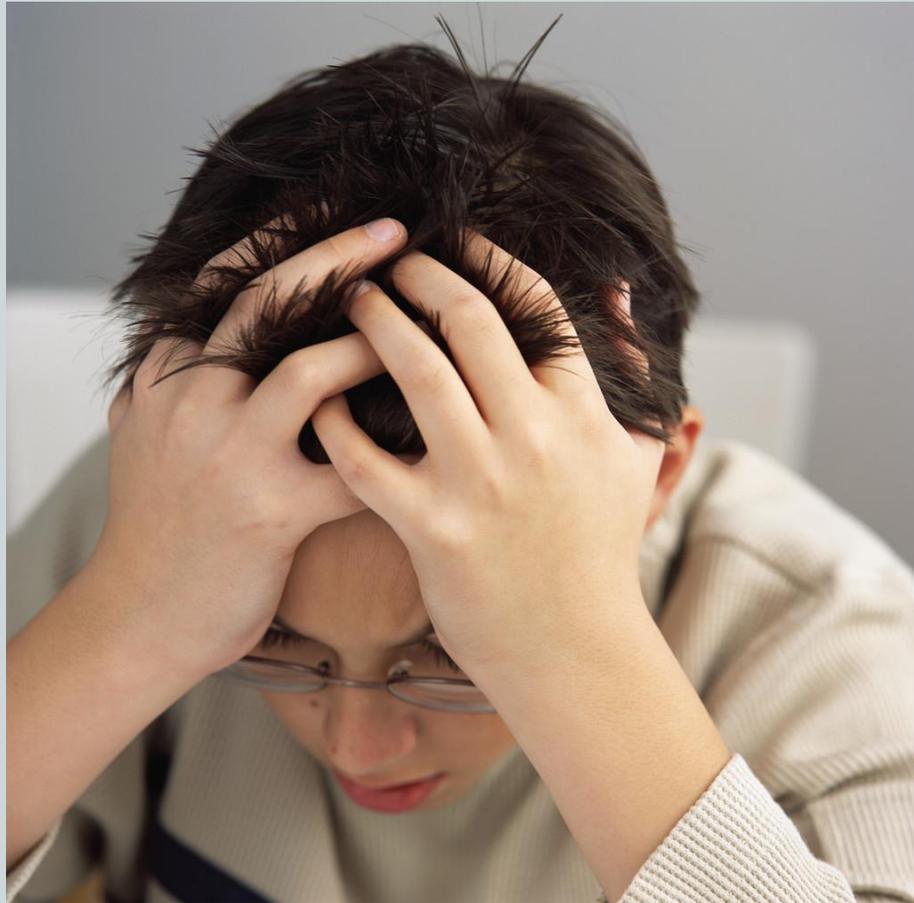


# Welcome to



# SOCK IT TO SODIUM

# WHAT'S YOUR SODIUM IQ?



# AND THE ANSWER IS....

**1. B - French toast**

**2. A - Am. Cheese**

**3. A - Potato salad**

**4. A - Raisin bran**

**5. B - Pretzels**

**6. A - Italian dressing**

**7. A - Ham**

**8. B - Alfredo sauce**

**9. B - Chicken noodle soup**

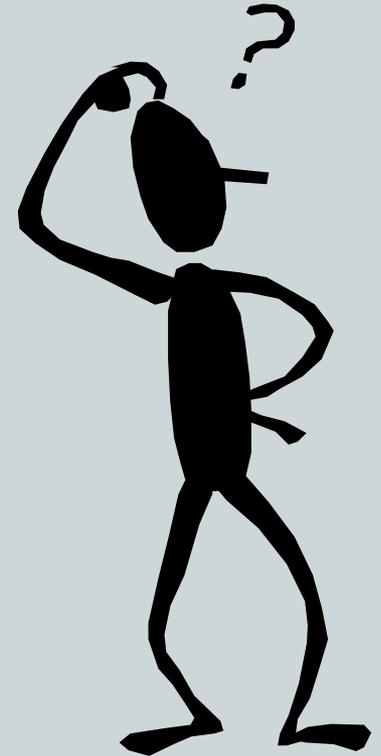
**10.A - Soy Sauce**

**NO PHONE ZONE**

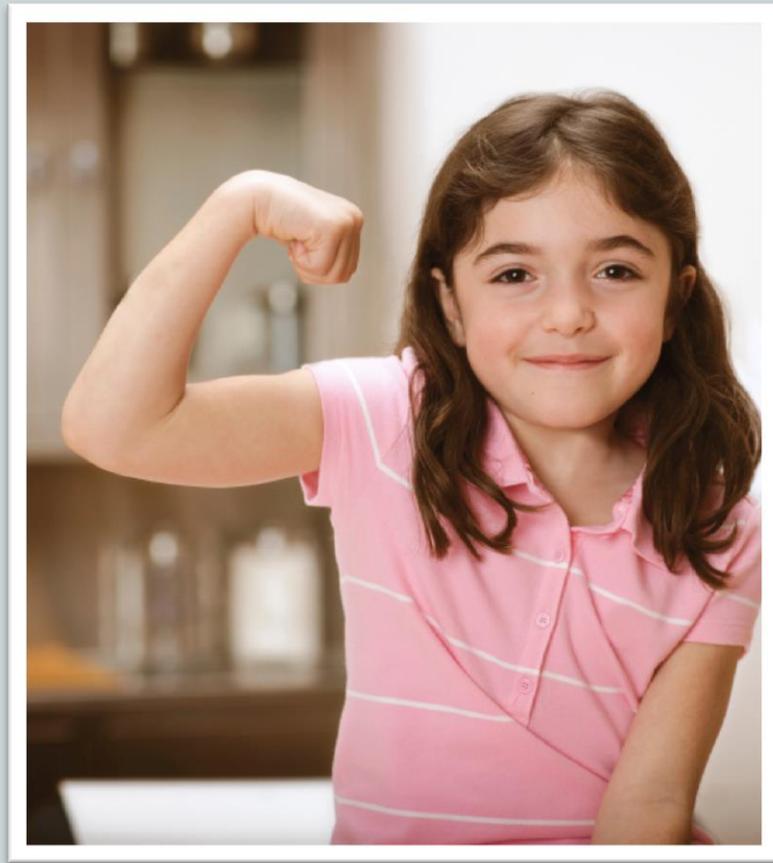


# WHAT ABOUT...

- Ending time
- Break time
- Lunch time and arrangements
- Restrooms and smoking areas
- Participant materials

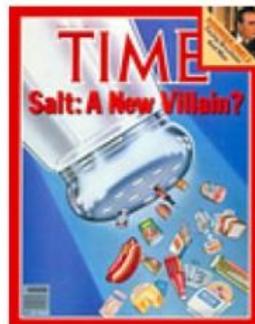


# SOCK IT TO SODIUM



# OBJECTIVES

- Identify sources of sodium in recipes and meals
- Find simple procedures to reduce sodium in recipes and school meals
- Describe how school nutrition programs can incorporate current guidelines on sodium to contribute to students' health and wellness.



# LET'S TALK ABOUT FOOD & NUTRITION



# MYPLATE RECOMMENDATIONS

## ■ **Balancing Calories**

- Enjoy your food, but eat less.
- Avoid oversized portions.

## ■ **Foods to Increase**

- Make half your plate fruits and vegetables.
- Make at least half your grains whole grains.
- Switch to fat-free or low-fat (1%) milk.

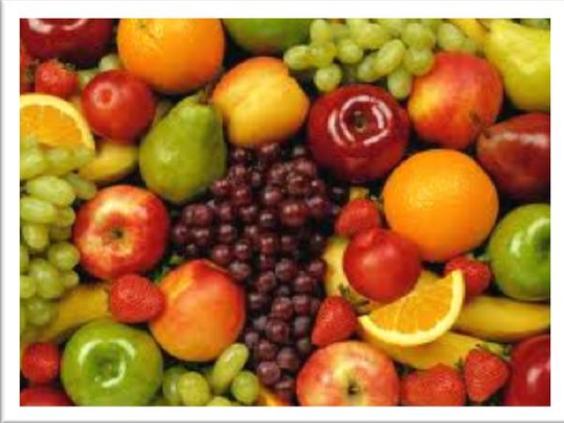
## ■ **Foods to Reduce**

- Compare sodium in foods like soup, bread, and frozen meals — and choose the foods with lower numbers.
- Drink water instead of sugary drinks.



"All natural, no fat, no cholesterol,  
no sodium, no calories, high fiber,  
no chemical additives, and we spiced  
it up so you'd never know it was sawdust!"

# WHAT TO ENCOURAGE



- Fruits
- Vegetables
- Whole-grains
- Fat-free or low-fat milk

- Vitamins/Minerals
- Fiber
- Calcium
- Potassium
- Physical Activity!



# NUTRIENTS TO LIMIT

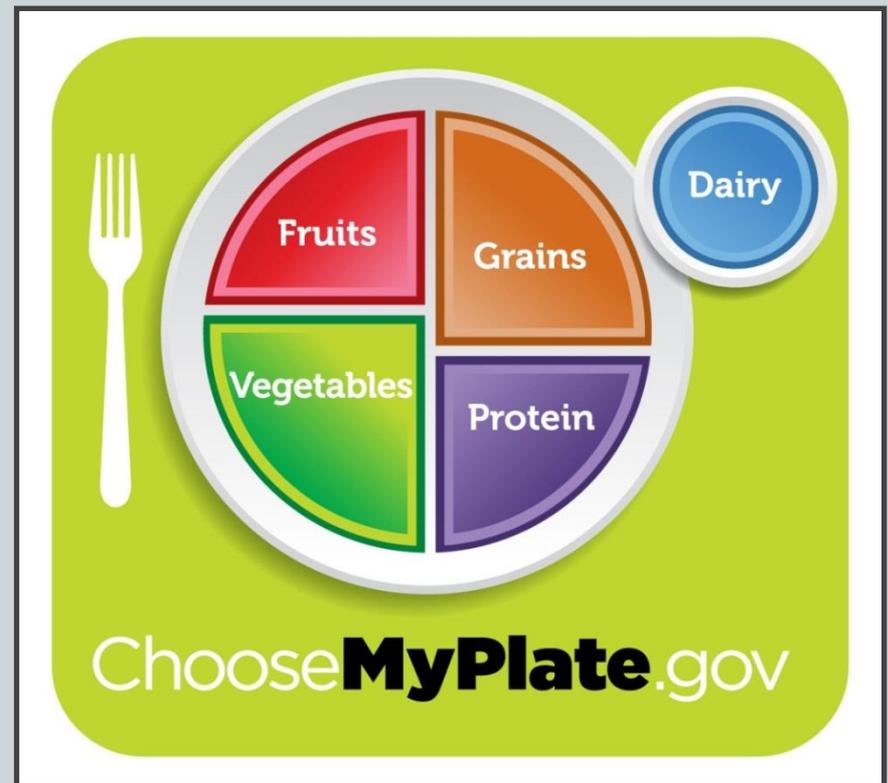
- Saturated & *trans* fat
- Cholesterol
- Added sugar
- Sodium



**\*\*\* Calories in = Calories out \*\*\***

# BALANCED DIET = LOW IN FAT AND SODIUM

- Emphasis on fruits, vegetables, whole grains, low fat dairy, seafood, and lean protein sources
- Energy balance
- Reduced solid fats, added sugars and sodium

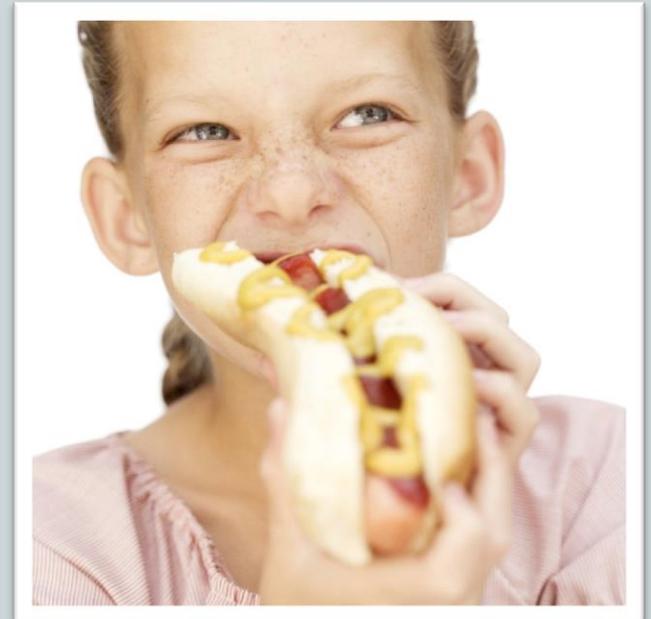


# 2010 DIETARY GUIDELINES FOR AMERICANS

- **Energy balance:** Balancing calories consumed in foods and beverages with calories spent in physical activity to achieve a healthy weight
- **Consuming nutrient dense foods by:**
  - Consuming a mostly plant based diet
  - Focusing on eating mostly fruits, vegetables, whole grains, seafood and low fat or nonfat dairy
  - Consuming only moderate amounts of lean meats, poultry, eggs and other healthy foods
- **Reducing high calorie, low nutrient foods such as solid fats and added sugars, as most Americans do not spend enough calories in physical activity to leave room in their “calorie budget” for these**
- **Meeting the 2008 Physical Activity Guidelines for Americans**

# 2010 DIETARY GUIDELINES FOR AMERICANS

Reduce daily sodium intake to less than 2,300 milligrams (mg) and further reduce intake to 1,500 mg among persons who are 51 and older and those of any age who are African American or have hypertension, diabetes, or chronic kidney disease.



# HISTORY OF SALT

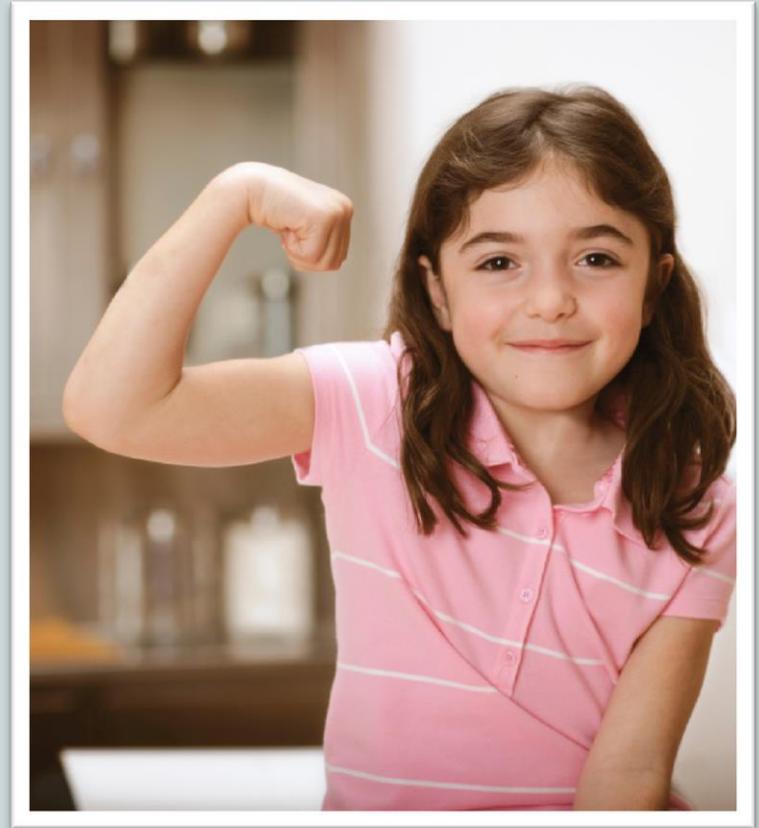
- Was once traded by the ounce; considered worth its weight in gold.
- Involved in historic events such as building the Erie Canal, the French Revolution, and drive for India's independence from British rule
- The word “salary” is derived from the Latin term “salarium”,
- During the Civil War 225,000 tons of salt were produced in the US by 3,000 workers. Today, ~6,000 workers produce more than 100x that amount of salt.



Salar de Uyuni Salt Flat - Bolivia

# WHY IS TOO MUCH SODIUM A PROBLEM?

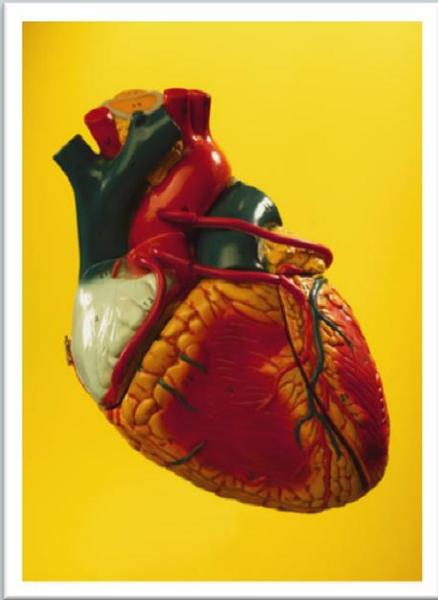
- Habitual use of high sodium foods can contribute to developing high blood pressure, even in children.
- This can lead to strokes and heart attacks.



# SODIUM FUNCTIONS & NEEDS

- Regulator of blood volume, blood pressure, and our body's pH
- Balances fluids within our body
- Facilitates nerve impulse transmission
- Influencer of contraction and relaxation of muscles
- Our bodies only “need” ~ 500mg

# SODIUM RECOMMENDATIONS



## Other sources for recommendations

- Dietary Reference Intake (DRI's)  
= 2.3 gms/day (2,300 mg)
- American Heart Association  
= < 1,500 mg/day

# SODIUM INTAKE

- According to the CDC, the average sodium intake in the U.S is 3,436 mg (ages 2 and up).
- 75% of the sodium we consume comes from packaged or prepared foods.
- Food company's & restaurants have made some improvements.





## WHAT IS 2,300 MG OF SODIUM?

1 tsp = 2300 mg

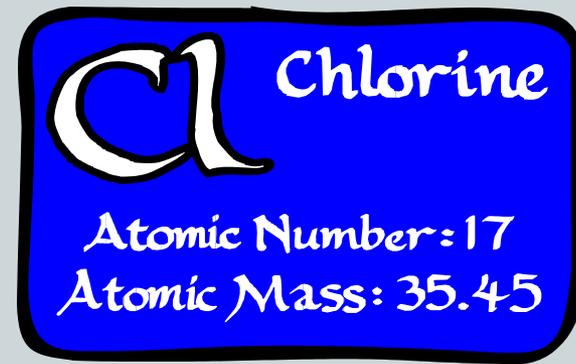
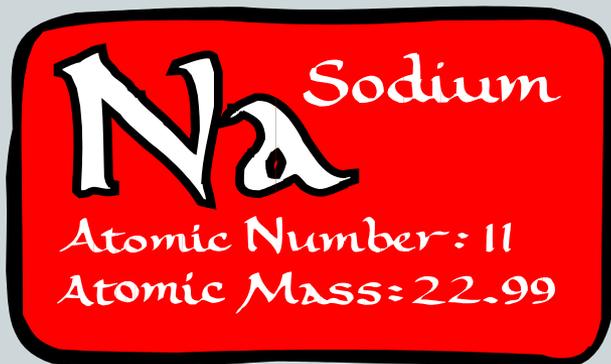
$\frac{3}{4}$  tsp = 1725 mg

$\frac{1}{2}$  tsp = 1150 mg

$\frac{1}{4}$  tsp = 575 mg

# SODIUM: OTHERWISE KNOWN AS...

- Salt/Sodium Chloride
- Disodium Phosphate
- Monosodium glutamate (MSG)
- Sodium Alginate
- Baking Soda
- Sodium Nitrate/Nitrite
- Sodium Benzoate



# Main Sources of Sodium in the Average U.S. Diet



- 5% added while cooking
- 6% added while eating
- 12% from natural sources
- 77% from processed and prepared foods

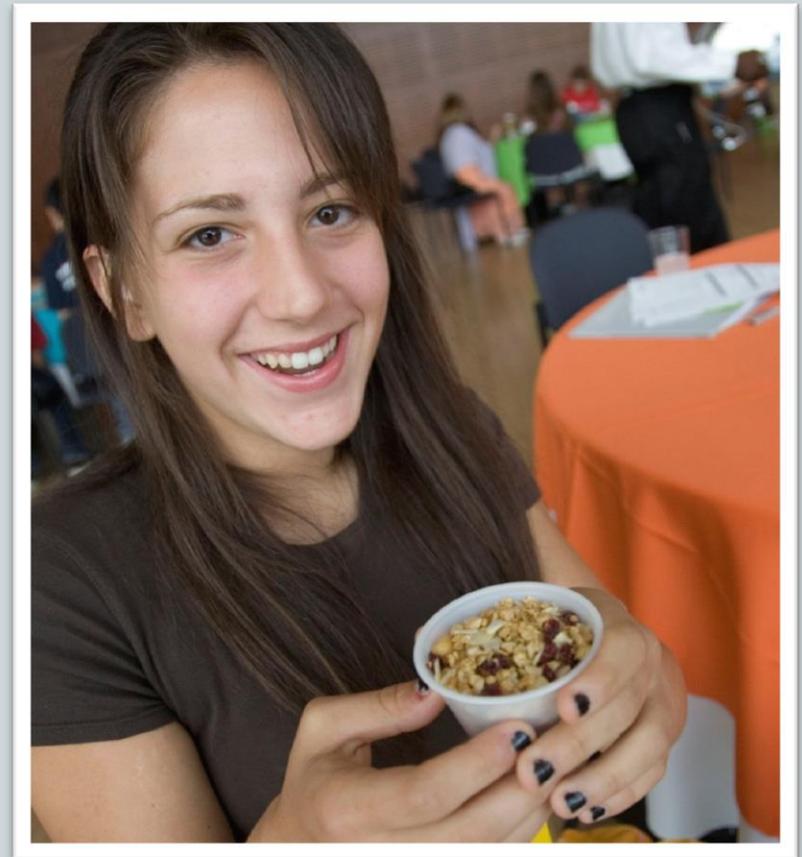
Source: Mattes & Donnelly, 1991

**WHERE  
DOES  
OUR  
DIETARY  
SODIUM  
COME  
FROM?**

Since the 1970's, the sodium in our diet has increased, as well as the amount of food we consume each day.

# WHERE DO WE FIND SODIUM?

- Naturally occurring in foods
- Added in processing
- Added in recipes
- Added at the table



# MATCHING GAME



# PROCESSED FOODS HIGH IN SODIUM

- Lunch meats, hot dogs, sausages
- Ketchup, salad dressings, soy sauce, BBQ sauce
- Most cheeses



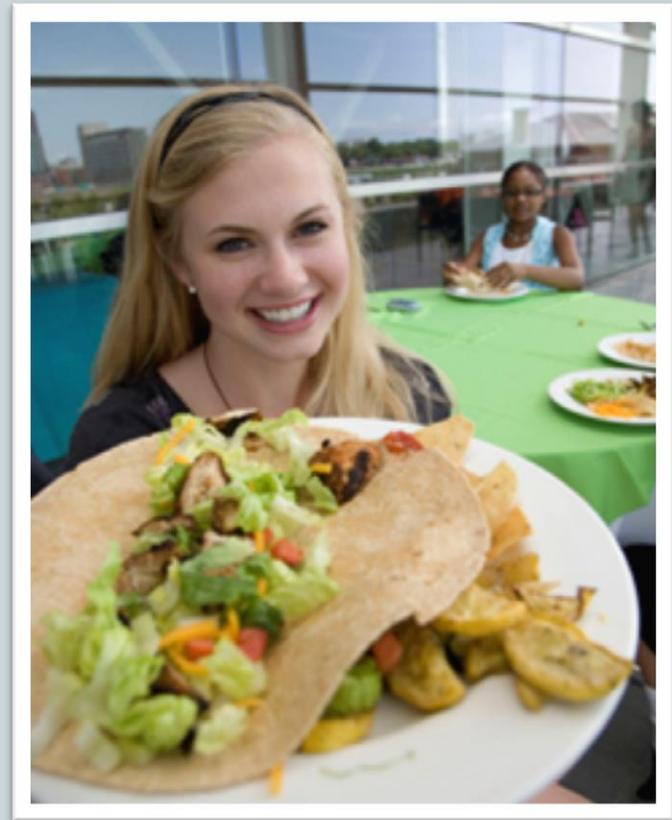
# PROCESSED FOODS HIGH IN SODIUM

- Pickles, olives
- Salted snacks, nuts, chips, pretzels
- Pizza sauce, spaghetti sauce
- Canned soups and vegetables



# TEST YOUR KNOWLEDGE

- Identify at least 3 sources of sodium.
- Name at least two simple procedures to reduce sodium in recipes and school meals.



# HOW TO REDUCE SODIUM IN FOODS

- Buy more fresh, unprocessed foods
- Buy reduced sodium or “no added salt” versions of processed foods
- Reduce salt and add other flavors in cooking
- Avoid adding salt at the table



# CHOOSE FRESH MORE OFTEN



# PURCHASE LOW-SODIUM FOODS

## Specify low-sodium canned foods

- Soups
- Tomato sauce & paste
- Vegetables
- Beans

## Use low-sodium condiments

- Catsup
- Relish
- Soy-sauce
- Salad dressing

## Purchase unsalted snacks when able:

- Pretzels
- Crackers
- Trail mix w/ unsalted nuts



# REDUCE SODIUM DURING COOKING

## NO

- Salt in cooking water
- Baking soda when cooking vegetables

## LESS

- Cured meats-deli meats, sausages, ham
- Salt-based seasonings and flavor enhancers-MSG, garlic salt, seasoned salt

## Try Instead

- Lemon juice in cooking water
- Herb/Spice blends
- Flavored vinegar
- Garlic

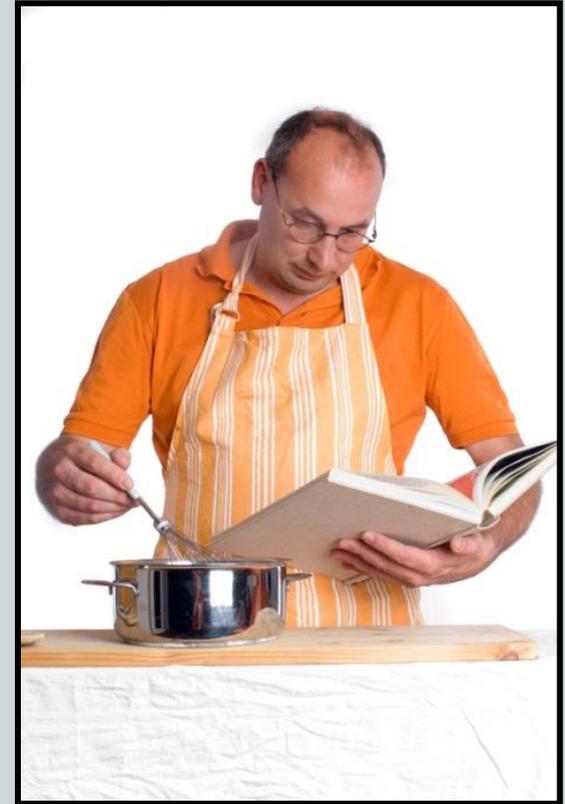
## Create New Flavors

- Cinnamon
- Pepper
- Cumin
- Cayenne



# USDA STANDARDIZED RECIPES

- Sodium content is already reduced
- Tested and tried for best results
- Use correct portion sizes

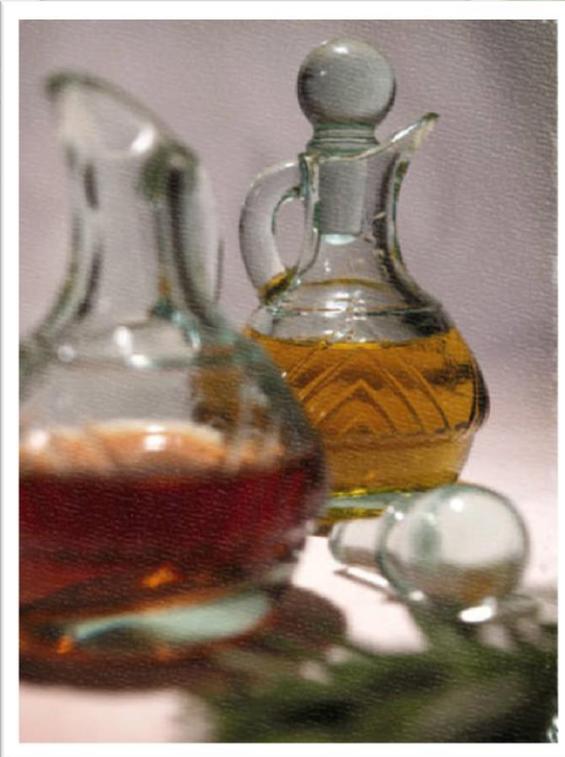
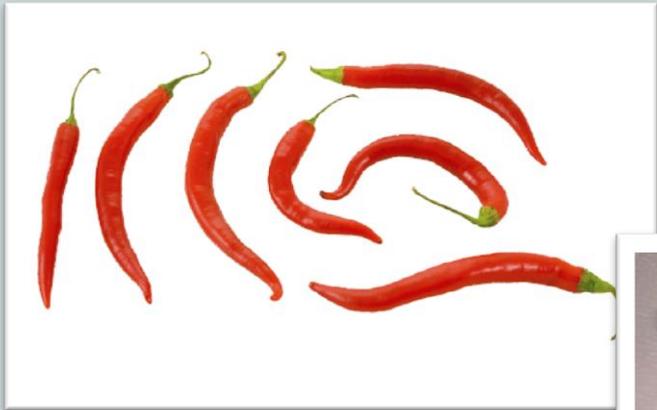


# MODIFY RECIPES TO BE LOW IN SODIUM

- Reduce salt in recipe by  $\frac{1}{4}$  to  $\frac{1}{3}$
- Use low-sodium products
  - Soy sauce
  - BBQ sauce
  - Condiments
- Replace the flavor of salt with lemon, garlic, herbs and spices, and salt free blends.



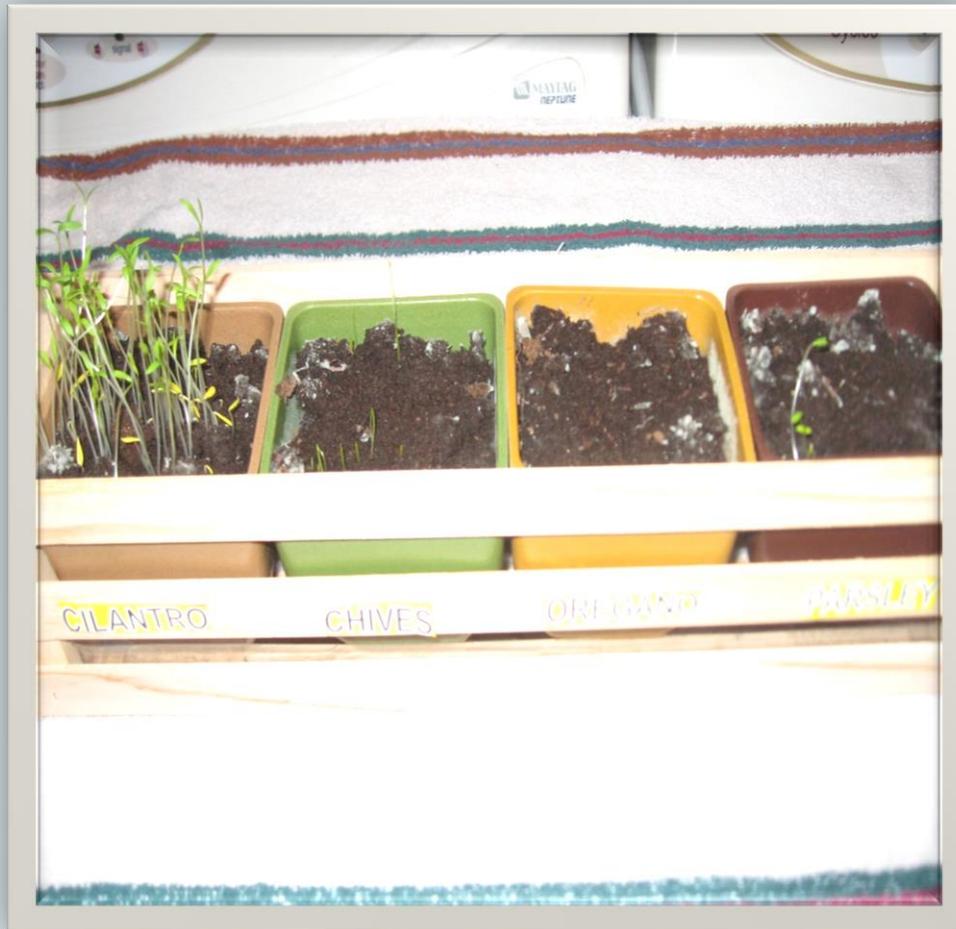
# ADD FLAVOR!



# GROW A HERB GARDEN



# HERBS



# RECIPES FOR SUCCESS

- Generate enthusiasm by involving students in taste testing new foods.
- Everyone eats with their eyes first—use garnishes, bright colors and attractive presentation.
- Create a seasoning bar for students to concoct their own flavor blends.
- Advertise a new spice! Give information and history. Set a sample out for students to investigate.
- Make changes gradually—preferences for foods with less salt take time to develop.

# SOCK IT TO SODIUM IN SCHOOL MEALS!

- Review the school menu
- Identify 1-2 foods high in sodium
- Share ideas on how to modify the menus or with group



# ON TARGET



## Age Group

## Breakfast

## Lunch

■ Grades K – 5<sup>th</sup>

≤540

≤1230

■ Grades 6-8<sup>th</sup>

≤600

≤1360

■ Grades 9-12<sup>th</sup>

≤640

≤1420



**TO  
THE  
KITCHEN**

# THE PURPOSE OF LAB IS...

- To evaluate the differences between high sodium and lower sodium menu items.
- To practice effective, efficient and safe production techniques.



# IN LAB, PLEASE REMEMBER TO...

- Wear a clean apron.
- Wear a hair restraint over all of your hair.
- Limit jewelry.
- Wash hands at handwashing sink.
- Wear gloves when handling ready-to-eat food and to cover open cuts or bandages.
- Do not eat, drink, or chew gum in the kitchen.
- Follow all safety rules.



# IN LAB, PLEASE REMEMBER TO...

- Follow all recipes exactly.
- Use only the ingredients purchased for you.
- Complete the Lab Notes for your recipe(s).
- Observe or help other lab groups if you have extra time.
- Clean your preparation area and equipment.
- Ask for help if needed.



# BEFORE ENTERING THE KITCHEN...

- Find your group members.
- Read through your recipe(s) carefully.
- Assign duties within the group.



# LAB ASSIGNMENTS

**Group 1:** Tacos

**Group 2:** Spaghetti w/ Meat sauce

**Group 3:** Fruit and Oatmeal Bar

**Group 4:** Fresh Vegetables w/ Ranch Dip

- Products ready in 1 hour!



# COOKING LABORATORY



# TASTE TESTING



# LAB REPORTS

**Group 1:** Spaghetti w/ Meat sauce

**Group 2:** Tacos

**Group 3:** Fruit and Oatmeal Bar

**Group 4:** Fresh Vegetables w/ Ranch Dip



# SODIUM CONTENT OF LAB RECIPES

<u>Recipe</u>	<u>Before</u>	<u>After</u>
■ Spaghetti & meat sauce	637 mg	292 mg
■ Taco meat	361 mg	118 mg
■ Fruit & Oatmeal Bars	59 mg	22 mg
■ Ranch Dip	<u>167 mg</u>	<u>26 mg</u>
<b>Menu Total</b>	<b>1224 mg</b>	<b>458 mg</b>



# Fact Sheet

## Be Salt Savvy – Cut Back on Sodium for Healthier School Meals

### KEY ISSUES:

- Too much salt and sodium are linked to high blood pressure. Reducing dietary sodium can lower blood pressure, which reduces the risk of heart disease, stroke and kidney disease.
- The 2005 Dietary Guidelines for Americans recommend that both adults and children get less than 2,300 mg of sodium (approximately one teaspoon of salt) per day. Many students eat nearly double the daily recommended amount!
- The typical school lunch contains more than 1,000 mg of sodium. Strive to offer school lunches with less than 800 mg of sodium.
- Cutting back on sodium in school meals can help students learn to enjoy foods for their natural tastes. Kicking the salt habit may provide health benefits for a lifetime.



**N**early all Americans consume more sodium than they need. Often we don't know how much sodium we are getting. Taste alone may not tell us which foods are high in sodium. Table salt (sodium chloride) isn't the only source of sodium. Look at ingredient lists for other sources, such as monosodium glutamate (MSG), baking soda, baking powder, disodium phosphate, sodium alginate, and sodium nitrate or nitrite.

Children's taste for salt is a learned habit. By gradually reducing the salt and sodium in school meals, students' tastes can change. Offer lower sodium versions of popular menu items and recipes at the beginning of a school year. Students may hardly notice the difference. Be "salt savvy" and help students enjoy the taste of the food instead of the salt!

Easy ways to follow the 2005 Dietary Guidelines for Americans

### Recipe for Success

- **Read Nutrition Facts labels** to compare the sodium content for similar foods. Foods that are low in sodium contain less than 140 mg or 5% Daily Value (DV). Choose products with the lowest amount of sodium per serving.
- **Serve more fresh foods** and fewer processed foods. Most fresh fruits and vegetables are naturally low in sodium.
- **Talk to food vendors that offer low-sodium products.** Order lower sodium versions when purchasing popular processed foods.

### Nutrition Facts

Serving Size 1 slice (34g)	
Servings Per Container 108	
Amount Per Serving	
Calories 90	Calories from Fat 15
%Daily Value*	
Total Fat 1.5g	2 %
Saturated Fat 0g	0 %
Trans Fat 0g	
Cholesterol 0mg	0 %
Sodium 140mg	6 %
Total Carbohydrate 16g	5 %
Dietary Fiber 1g	0 %
Sugars 2g	
Protein 2g	
Vitamin A 0%	Vitamin C 0%
Calcium 0%	Iron 6%
* Percent Daily Values are based on a 2,000 calorie diet.	

# USDA FACT SHEETS

At School.  
At Home. Eating Out.

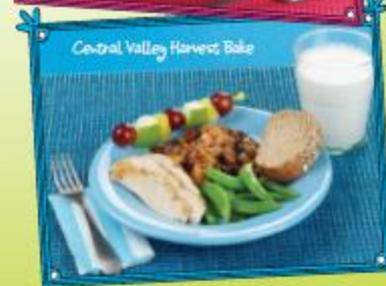
# Make Half Your Plate Fruits & Vegetables



Find these recipes  
and more ideas at  
Choose**MyPlate.gov**



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# MyPlate Poster

# 10 tips

Nutrition Education Series

## salt and sodium

10 tips to help you cut back



**It's clear that Americans have a taste for salt**, but salt plays a role in high blood pressure. Everyone, including kids, should reduce their sodium intake to less than 2,300 milligrams of sodium a day (about 1 teaspoon of salt). Adults age 51 and older, African Americans of any age, and individuals with high blood pressure, diabetes, or chronic kidney disease should further reduce their sodium intake to 1,500 mg a day.

**1 think fresh**  
Most of the sodium Americans eat is found in processed foods. Eat highly processed foods less often and in smaller portions—especially cheesy foods, such as pizza; cured meats, such as bacon, sausage, hot dogs, and deli/luncheon meats; and ready-to-eat foods, like canned chili, ravioli, and soups. Fresh foods are generally lower in sodium.

**2 enjoy home-prepared foods**  
Cook more often at home—where you are in control of what's in your food. Preparing your own foods allows you to limit the amount of salt in them.

**3 fill up on veggies and fruits—they are naturally low in sodium**  
Eat plenty of vegetables and fruits—fresh or frozen. Eat a vegetable or fruit at every meal.

**4 choose dairy and protein foods that are lower in sodium**  
Choose more fat-free or low-fat milk and yogurt in place of cheese, which is higher in sodium. Choose fresh beef, pork, poultry, and seafood, rather than those with salt added. Deli or luncheon meats, sausages, and canned products like corned beef are higher in sodium. Choose unsalted nuts and seeds.

**5 adjust your taste buds**  
Cut back on salt little by little—and pay attention to the natural tastes of various foods. Your taste for salt will lessen over time.



**6 skip the salt**  
Skip adding salt when cooking. Keep salt off the kitchen counter *and* the dinner table. Use spices, herbs, garlic, vinegar, or lemon juice to season foods or use no-salt seasoning mixes. Try black or red pepper, basil, curry, ginger, or rosemary.

**7 read the label**  
Read the Nutrition Facts label and the ingredients statement to find packaged and canned foods lower in sodium. Look for foods labeled "low sodium," "reduced sodium," or "no salt added."

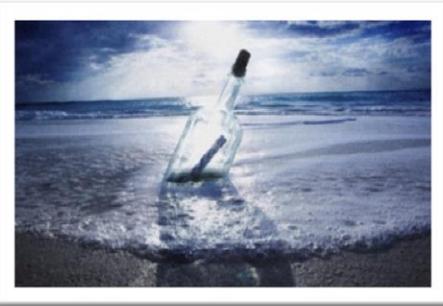
**8 ask for low-sodium foods when you eat out**  
Restaurants may prepare lower sodium foods at your request and will serve sauces and salad dressings on the side so you can use less.

**9 pay attention to condiments**  
Foods like soy sauce, ketchup, pickles, olives, salad dressings, and seasoning packets are high in sodium. Choose low-sodium soy sauce and ketchup. Have a carrot or celery stick instead of olives or pickles. Use only a sprinkling of flavoring packets instead of the entire packet.

**10 boost your potassium intake**  
Choose foods with potassium, which may help to lower your blood pressure. Potassium is found in vegetables and fruits, such as potatoes, beet greens, tomato juice and sauce, sweet potatoes, beans (white, lima, kidney), and bananas. Other sources of potassium include yogurt, clams, halibut, orange juice, and milk.

# 10 Tips Nutrition Education Series

# TAKE HOME MESSAGES



- Reduce salt in recipes whenever possible.
- Choose fresh, frozen, or canned items without added salts.
- Incorporate more reduced – sodium or sodium free products into school menu's.
- Replace salt shakers with sodium free alternatives.
- Enhance flavor within recipes using herbs, spices, and sodium free flavorings.
- Choose fresh foods more frequently.