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Sodium Reduction VILT Series

Identifying Low-Sodium Food Products and Menu Planning Strategies to Meet Meal Pattern Requirements

Instructor's Manual

Sodium Reduction VILT Series: Identifying Low-Sodium Food Products and Menu Planning Strategies to Meet Meal Pattern Requirements

Instructor's Manual

PROJECT COORDINATOR
Danielle Barrett, EdD, RDN

EXECUTIVE DIRECTOR
Aleshia Hall-Campbell, PhD, MPH

Key Areas:

1000 Nutrition

2000 Operations

USDA Professional Standards Codes:

1300 – General Nutrition

1100 – Meal Planning

2400 – Purchasing and Procurement

2100 – Food Production

2025

INSTITUTE OF CHILD NUTRITION

THE UNIVERSITY OF MISSISSIPPI

The Institute of Child Nutrition was authorized by Congress in 1989 and established in 1990 at the University of Mississippi in Oxford and is operated in collaboration with The University of Southern Mississippi in Hattiesburg. The Institute operates under a grant agreement with the United States Department of Agriculture, Food and Nutrition Service.

PURPOSE

Improve the operation of child nutrition programs through research, education and training, and information dissemination.

VISION

Lead the nation in providing research, education, and resources to promote excellence in child nutrition programs.

MISSION

Provide relevant research-based information and services that advance the continuous improvement of child nutrition programs.

Disclaimer

This project has been funded at least in part with Federal funds from the U.S. Department of Agriculture, Food and Nutrition Service through an agreement with the Institute of Child Nutrition at the University of Mississippi. The content of this publication does not necessarily reflect the view or policies of the U.S. Department of Agriculture, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

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Suggested Reference Citation:

Institute of Child Nutrition. (2025). *Sodium reduction VILT series: Identifying low-sodium food products and menu planning strategies to meet meal pattern requirements.* University, MS: Author.

01/15/2025

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BACKGROUND INFORMATION

Instructor's Note: The purpose of the background information section is to help you become familiar with the context of the training. It is not a part of the training details.

Introduction

In January 2012, the USDA Food and Nutrition Service (FNS) published the final rule, *Nutrition Standards in the National School Lunch and School Breakfast Programs* (77 FR 4088), that updated the meal patterns and nutrition standards for the National School Lunch Program (NSLP), the Seamless Summer Option (SSO), and the School Breakfast Program (SBP) to reflect the *Dietary Guidelines for Americans*. One provision of the updated nutrition standards required the gradual reduction in the sodium content of school meals offered in the NSLP and SBP by meeting progressively lower-sodium targets.

On February 7, 2022, USDA FNS announced *Transitional Standards for Milk, Whole Grains, and Sodium* (87 FR 6984) to support the continued provision of nutritious school meals as schools respond to and recover from the pandemic. The final rule modified the proposed sodium standards by establishing Sodium Target 1 as the sodium limit for school lunch and breakfast in SY 2022–2023 and implementing a Sodium Interim Target 1A effective for school lunch beginning in SY 2023–2024. In 2024, USDA FNS announced the Child Nutrition Programs: Meal Patterns Consistent with the 2020-2025 Dietary Guidelines for Americans, which maintains the current sodium limits—Target 1A for lunch and Target 1 for breakfast—until June 30, 2027 and the associated reductions in lunch and breakfast starting on July 1, 2027.

USDA FNS has conducted studies investigating the barriers and challenges School Food Authorities (SFAs) face when implementing sodium nutrition standards. In 2019, USDA FNS conducted the *Successful Approaches to Reduce Sodium in School Meals* study to examine the market availability of foods that meet the current and future sodium targets for school meal programs and to identify best practices in schools that are successfully meeting sodium targets. These training modules explore some strategies identified as useful in meeting sodium targets.

The Institute of Child Nutrition (ICN) developed four virtual instructor-led trainings sessions to reach school nutrition directors, dietitians, and menu planners nationwide. The training will focus on sodium reduction through menu planning and analysis, procurement, staff training, and maintaining student satisfaction. The intended audience includes directors, dietitians, and menu planners operating heat-and-serve or hybrid (heat-and-serve/speed-scratch/scratch) models focused on reducing sodium in their menus.

Sodium Reduction VILT Series sessions will consist of instruction on the subject, subject matter expert or peer presentation, facilitator-led breakout discussion, and hands-on application. The lead facilitator will introduce the handouts in the chat and BOX folder, the training objectives, a high-level overview of the training content, SMART goals, and the presenters. Following instruction and subject matter expert or peer presentation, the participants will form breakout discussion groups led by a group facilitator. After the training, participants will formulate action plans, including SMART goals, incorporating the gained knowledge into their nutrition program.

Identifying Low-Sodium Food Products and Menu Planning Strategies to Meet Meal Pattern Requirements is one of the four virtual trainings. This VILT will teach participants how to identify lower-sodium food products, modify recipes to reduce the sodium content, and plan a menu that meets the meal pattern requirements for sodium. Participants will learn the benefits of a lower-sodium meal pattern, where to find sodium information on food labels, and how to reduce the sodium content of recipes. They will also learn about resources for new lower-sodium recipes and how to reformulate recipes to lower sodium while maintaining flavor. Finally, participants will learn how to reduce the sodium content of school meals and develop an action plan to gradually produce lower-sodium school menus.

Prompts are as follows:

SAY: What the mentor is to say to participants. This is the content that teaches the learning objectives.

ASK: This prompt is used when the mentor should ask the participants a question.

FEEDBACK: This prompt ensures certain elements are covered in discussions.

DO: This prompt explains what the mentor/participants are to do. It may lead to activities, demonstrations, or show videos.

SHOW SLIDE: This prompt is used to show slides designed for the Mentorship Program. This prompt will not be included when panelists present their slide deck during the panel discussion.

PRE-/POST-ASSESSMENTS: This manual includes a Pre-/Post-Assessment that will be administered at the beginning and the end of the training.

Instructor's Note: The Instructor's Note prompt provides additional information or helpful hints. This information should not be shared with the participants unless prompted. Instructions should be included in the "DO" segment.

FUNCTIONAL AREA AND COMPETENCIES

Functional Area 3: Food Production and Operation Management

Competency 3.1: Develops a management system to ensure high standards for quality food production.

Knowledge Statement: Knows principles of food science and fundamentals of flavor enhancement related to quantity food production, holding, serving, and appealing food presentation.

Functional Area 7: Menu and Nutrition Management

Competency 7.1: Develops guidelines for planning menus that comply with nutrition objectives and support operational goals of the school nutrition program.

Knowledge Statement: Knows menu planning principles.

Functional Area 8: Procurement and Inventory Management

Competency 8.1: Develops procurement guidelines that comply with established regulations and support operational goals of the school nutrition program.

Knowledge Statement: Knows federal, state, and local procurement regulations, policies, and procedures governing all school nutrition program purchases.

Source: *Institute of Child Nutrition. (2009). Competencies, knowledge, and skills for district-level school nutrition professionals in the 21st century. University, MS: Author.*

PROFESSIONAL STANDARDS

Nutrition 1000

Menu Planning – 1100

Employee will be able to effectively and efficiently plan and prepare standardized recipes, cycle menus, and meals, including the use of USDA Foods, to meet all Federal school nutrition program requirements, including the proper meal components.

1150 – Analyze menus for school meal pattern requirements.

General Nutrition – 1300

Employee will be able to understand the Dietary Guidelines for Americans, USDA's food guidance system concepts and general nutrition principles.

1320 – Understand general nutrition concepts that relate to school meals, such as whole grains, sodium, etc.

Operations 2000

Food Production – 2100

Employee will be able to effectively utilize food preparation principles, production records, kitchen equipment, and food crediting to prepare foods from standardized recipes, including those for special diets.

2150 – Understand CN Labeling, product formulation statements and/or appropriate crediting information for school meal pattern requirements.

Purchasing and Procurement – 2400

Employee will be able to effectively and efficiently implement purchasing procedures and practices in order to appropriately and best utilize supplies and USDA Foods to meet menu requirements and comply with all Federal, State, and local regulations.

2430 – Purchase food, supplies, and equipment through vendors, meeting school district specifications in compliance with Federal, State, and local procurement regulations and availability of USDA Foods.

OBJECTIVES

At the end of this training, participants will be able to:

- Name the benefits of a lower-sodium meal pattern.
- Locate where sodium amounts are located on the updated Nutrition Facts label.
- Evaluate food products to assess sodium content and select products that are lower in sodium.
- Choose lower-sodium recipes and food products for school menus.
- Identify resources to locate lower-sodium recipes.
- Describe recipe reformulation strategies to gradually lower the sodium content and enhance the flavor of recipes.
- Identify methods for gradually lowering sodium content of menu items while maintaining student acceptability.
- Recall the sodium nutrition standards for school meals.
- Establish and calculate daily and weekly sodium goals for food products, recipes, and school menus.
- Analyze and assess a school menu to identify opportunities to reduce daily and/or weekly sodium levels.
- Develop an action plan to gradually produce lower-sodium school menus.

GROUND RULES

ICN has developed Ground Rules to help the class run smoothly and allows all participants to benefit from the course instruction and information. (These Ground Rules can be found on the ICN website – *Ground Rules for Training Mini-Posters.*)

PREPARATION CHECKLIST

Instructions: The following tasks are necessary for presenting this lesson. Assign each task to a specific person and determine the date that each task must be completed. Keep track of the progress by checking off tasks as they are completed.

Task	Person Responsible	Completion Date	✓
Reserve equipment and gather supplies as needed for use on the day of class (6 weeks prior). **Instructor's Manual** Roster of participants attending for instructor **List of equipment and supplies needed** Computer Microphone Webcam Pens, pencils, note paper Participant's Workbook	Instructor		
Agenda, roster of presenters/participants, and handouts			
Pre-/Post-Assessments (available at www.theicn.org)			
Other handouts (documents from outside sources needed for VILT)			

TRAINING-AT-A-GLANCE

TIME ALLOWED	TOPIC
20 minutes	Introduction
60 minutes	Lesson 1: Sodium Basics • Discuss sodium basics • List benefits of lower-sodium meal pattern • Identify and discuss the parts of a Nutrition Facts label • Calculate sodium when serving size needs to be adjusted • FDA Claims
60 minutes	Lesson 2: Sodium Reduction Strategies • List food items typically lower in sodium • Child Nutrition Recipe Box (CNRB) • Culinary Institute Child Nutrition (CICN) • Team Nutrition • Make small adjustments to gradually lower the sodium content of a recipe • Identify lower-sodium versions of ingredients (e.g., lower-sodium canned vegetables are lower in sodium) • Incorporate more fresh or frozen fruits and vegetables into recipes • Spices, herbs, and salt-free seasoning mix recipes that can be used to enhance the flavor of a recipe. (Instructional aids will refer to specific salt-free seasoning mix recipes provided by the CICN) • Product substitution • Serve higher sodium items less frequently • Procure lower sodium versions • Use herbs and spice blends
60 minutes	Lesson 3: Sodium Standards • List the standards • How to set goals • How to calculate averages • Review a menu
40 minutes	Culminating Activity and Action Plan • Put it all together • Wrap Up
4 hours	**Total Time**

LESSON-AT-A-GLANCE
TRAINING INTRODUCTION

TIME ALLOWED	TOPIC	ACTIVITY	MATERIALS
10 minutes	• Introductions	• Introductions	
10 minutes	• Training Overview • Pre-Assessment	• Pre-Assessment	• Pre-Assessment

INTRODUCTION

SHOW SLIDE: ***Identifying Low-Sodium Food Products and Menu Planning Strategies to Meet Meal Pattern Requirements***

SAY: Welcome to the Identifying Low-Sodium Food Products and Menu Planning Strategies to Meet Meal Pattern Requirements training. The Institute of Child Nutrition would like to thank you for providing us with the opportunity to offer this sodium reduction virtual instructor-led training. It is our hope that you will gain the knowledge and skills for implementing the sodium reduction strategies into your school nutrition program.

This training is part of the *Shaking It Up! Small Changes Lead to Big Flavors* series. It provides the foundational knowledge and skills needed to reduce the amount of sodium in school meals while ensuring that meals are flavorful and satisfying for students.

In this introduction lesson, we are going to cover some general information before exploring how to identify low-sodium food products and menu planning strategies to meet meal pattern requirements.

First, let's begin by getting to know each other.

SHOW SLIDE: ***Activity: Introductions***

Activity: Introductions

Materials: Mute/Unmute, Raise Hand, Chat functions

Time: 5 minutes

Instructions: Instruct participants to use the mute/unmute or chat function to introduce themselves.

DO: Introduce yourself and other special guests. Be sure to state your name, title/credentials, and your experience in school nutrition and other child nutrition programs.

SAY: Please unmute and introduce yourself including your name, title/credentials, and your experience in school nutrition and other child nutrition programs.

DO: Encourage participants to respond. Allow participants time to unmute and answer or post in the chat.

FEEDBACK: Thank the participants for responding.

SHOW SLIDE: *Logistics*

SAY: To help ensure this training is a success, there are a few key things to keep in mind.

- ICN has some training ground rules as you can see on the screen. They are:
  1. Show up on Time
  2. Be Present
  3. Let Everyone Participate
  4. Listen with an Open Mind
  5. Think Before Speaking
  6. Attack the Problem Not the Person
- We will take a minimum of two breaks during this training. Please be sure to return on time, as starting and ending breaks on time will allow us to cover all the training information and activities within the time allotted. If you need to stretch or attend to a need at a different time, please feel free to do so. All that I ask is that you leave and return without disturbing the training.
- Feel free to ask any questions in the chat or use the raise hand function to get my attention. I will aim to answer all questions and share the information with the class before the end of this training. Although, I will try to answer questions throughout the training, some questions may require research or a longer answer than time allows. Any questions I cannot answer, I will forward to the ICN for further assistance.
- Throughout the training, I will be referring worksheets from the Shaking It Up! Series, additional resources, and handouts. These can also be found in your Participant's Workbook for this training.

Now that we have reviewed some basic logistical information, let's shift our focus to the training topic, sodium reduction.

SHOW SLIDE: *Background*

SAY: In January 2012, the USDA Food and Nutrition Service (FNS) published the final rule, *Nutrition Standards in the National School Lunch and School Breakfast Programs* (77 FR 4088), that updated the meal patterns and nutrition standards for the National School Lunch Program (NSLP), the Seamless Summer Option (SSO), and the School Breakfast Program (SBP) to reflect the Dietary Guidelines for Americans. One provision of the updated nutrition standards required the gradual reduction in sodium content of school meals offered in the NSLP and SBP by meeting progressively lower-sodium targets.

On February 7, 2022, USDA FNS announced *Transitional Standards for Milk, Whole Grains, and Sodium* (87 FR 6984) to support the continued provision of nutritious school meals as schools respond to and recover from the pandemic. The final rule modified the proposed sodium standards by establishing Sodium Target 1 as the sodium limit for school lunch and breakfast in SY 2022–2023 and implementing a Sodium Interim Target 1A effective for school lunch beginning in SY 2023–2024. In 2024, USDA FNS announced the Child Nutrition Programs: Meal Patterns Consistent with the 2020-2025 Dietary Guidelines for Americans, which maintains the current sodium limits—Target 1A for lunch and Target 1 for breakfast—until June 30, 2027 and the associated reductions in lunch and breakfast starting on July 1, 2027.

USDA FNS has conducted studies to investigate the barriers and challenges School Food Authorities (SFAs) face when implementing sodium nutrition standards. In 2019, USDA FNS conducted the *Successful Approaches to Reduce Sodium in School Meals* study to examine the market availability of foods that meet the current and future sodium targets for school meal programs and to identify best practices in schools that are successfully meeting sodium targets. These training modules explore some of the strategies identified as useful in meeting the sodium targets.

Instructor's Note: Remind participants that the links can be found in the Participant's Workbook on the additional resources page.

Links for reference: *Nutrition Standards in the National School Lunch and School Breakfast Programs (77 FR 4088)*, *Transitional Standards for Milk, Whole Grains, and Sodium (87 FR 6984)*, *Child Nutrition Programs: Meal Patterns Consistent With the 2020-2025 Dietary Guidelines for Americans, 7 C.F.R § 210, 215, 220, 225, 226 (2024)*, and *Successful Approaches to Reduce Sodium in School Meals*

SHOW SLIDE: ***Sodium Reduction Virtual Workshop Series***

SAY: In response to the study's findings, the Institute of Child Nutrition (ICN) developed four virtual instructor-led training sessions to reach school nutrition directors, dietitians, and menu planners throughout the country. The trainings focus on sodium reduction through menu planning and analysis, procurement, staff training, and maintaining student satisfaction. The intended audience includes directors, dietitians, and menu planners operating heat-and-serve or hybrid (heat-and-serve/speed-scratch/scratch) models focused on reducing sodium in their menus.

Sodium Reduction VILT Series sessions consist of instruction on the subject, breakout discussion, and hands-on application. At the conclusion of the training, you will formulate action plans, including SMART goals, incorporating the gained knowledge into your nutrition program.

SHOW SLIDE: ***Identifying Low-Sodium Food Products and Menu Planning Strategies to Meet Meal Pattern Requirements***

SAY: *Identifying Low-Sodium Food Products and Menu Planning Strategies to Meet Meal Pattern Requirements* is one of the four trainings. This training will teach you how to identify lower-sodium food products, modify recipes to reduce the sodium content, and plan a menu that meets the meal pattern requirements for sodium. You will learn the benefits of a lower-sodium meal pattern, where to find sodium information on food labels, and how to reduce the sodium content of recipes. You will also learn about resources for new lower-sodium recipes and how to reformulate recipes to gradually lower the sodium content while maintaining flavor. Finally, you will learn how to reduce the sodium content of school meals and develop an action plan to gradually produce lower-sodium school menus.

SHOW SLIDE: ***Activity: Pre-Assessment***

Activity: Pre-Assessment

Materials: Link to Pre-Assessment

Time: 5 minutes

Instructions: Instruct participants to use the link in the chat or QR code on the screen to complete the Pre-Assessment.

SAY: Before we begin exploring the first topic, let's assess what you already know about sodium in school meals and sodium reduction strategies by completing a Pre-Assessment.

Instructor's Note: Paste the link to the Pre-Assessment into the chat box.

DO: Allow 5 minutes for participants to complete the Pre-Assessment.

Instructor's Note: It is recommended that you take at least a 5 to 10-minute break for every hour of online learning. Plan breaks accordingly and based on your learners' needs.

LESSON-AT-A-GLANCE
LESSON 1: SODIUM BASICS

Objective: Name the benefits of a lower-sodium meal pattern.

TIME ALLOWED	TOPIC	ACTIVITY	MATERIALS
20 minutes	• Discuss sodium basics • List benefits of lower-sodium meal pattern	• List benefits of a lower-sodium meal pattern.	• Paper or notetaking method of choice • Pen/pencil

Objective: Locate where sodium amounts are located on the updated Nutrition Facts label.

TIME ALLOWED	TOPIC	ACTIVITY	MATERIALS
20 minutes	• Identify and discuss the parts of a Nutrition Facts label	• Provide Nutrition Facts labels for participants to label the sections.	• Paper or notetaking method of choice • Pen/pencil

Objective: Evaluate food products to assess sodium content and select products that are lower in sodium.

TIME ALLOWED	TOPIC	ACTIVITY	MATERIALS
20 minutes	• Calculate sodium when serving size needs to be adjusted. • FDA Claims	• Provide Nutrition Facts labels of products to identify sodium, adjust portion sizes, and choose the lowest sodium product.	• Adjusting Serving Size handout • Pen/pencil • Calculator

LESSON 1: SODIUM BASICS

SHOW SLIDE: ***Lesson 1: Sodium Basics***

SAY: Our first lesson is all about sodium basics. In this lesson, we will cover the benefits of a lower-sodium meal pattern, where to find sodium amounts on the updated Nutrition Facts label, and how to evaluate food items to select products that are lower in sodium. Let's get started.

Objective: Name the benefits of a lower-sodium meal pattern.

SHOW SLIDE: ***Is salt the same as sodium?***

SAY: To make sure we are all on the same page, we are going to begin with some simple questions.

ASK: Is salt the same as sodium?

DO: Encourage participants to respond. Allow participants time to unmute and answer or post in the chat. After participants have responded, click to display the feedback on the slide and summarize.

FEEDBACK: Sodium chloride is the chemical name for salt. Ninety percent of the sodium we consume is in the form of salt. The words salt and sodium are not the same, yet these words are often used interchangeably. For example, the Nutrition Facts Panel on foods in the grocery store uses "sodium," while the front of the package may say "no salt added" or "unsalted."

SHOW SLIDE: ***How much sodium does the average person need each day?***

ASK: How much sodium does the average person need each day?

DO: Encourage participants to respond. Allow participants time to unmute and answer or post in the chat. After participants have responded, click to display the feedback on the slide and summarize.

FEEDBACK: Sodium is an essential nutrient that our bodies need in certain amounts but most Americans consume too much sodium. The Dietary Guidelines for Americans recommends that adults and high school-age students limit their sodium consumption to less than 2,300 mg (that's approximately one teaspoon of salt) per day. Younger children should consume even less. Too much dietary sodium can lead to chronic illnesses, such as stroke and heart disease. Most of the sodium we consume is in the form of salt.

SHOW SLIDE: ***Do you think children consume too much sodium?***

ASK: Do you think children consume too much sodium?

DO: Encourage participants to respond. Allow participants time to unmute and answer or post in the chat. After participants have responded, click to display the feedback on the slide and summarize.

FEEDBACK: According to the CDC, about 90% of US children ages 6-18 years eat too much sodium daily.

SHOW SLIDE: ***Why is it concerning that children are consuming so much sodium?***

ASK: Why is it concerning that children are consuming so much sodium?

DO: Encourage participants to respond. Allow participants time to unmute and answer or post in the chat. After participants have responded, click to display the feedback on the slide and summarize.

FEEDBACK: The CDC also notes that about 9 in 10 US children eat more sodium than recommended. Most sodium is in the form of salt, as a part of processed foods. A high sodium diet can lead to high blood pressure. About 1 in 6 children ages 8-17 years has raised blood pressure. High blood pressure is a major risk factor for heart disease and stroke. The taste for salt is established through diet at a young age.

SHOW SLIDE: ***Call to Action***

SAY: The good news is lowering sodium in children's diets today can help prevent heart disease in the future, as a school nutrition operator, you play an important role in reducing sodium intake for children in the U.S.

SHOW SLIDE: ***Activity: Communicating "The Why" of Sodium Reduction***

Activity: Communicating "The Why" of Sodium Reduction

Materials: Mute/Unmute, Raise Hand, Chat functions

Time: 15 minutes

Instructions: Instruct participants to use the mute/unmute or chat function to list the benefits of a lower-sodium meal pattern. They will work independently for 2 minutes, and then share their answers with the group.

SAY: We have covered the basics of sodium reduction, so let's take time to note why sodium reduction is important. Using the mute/unmute or chat function, let's share and discuss the benefits of a lower-sodium meal pattern.

DO: Encourage participants to respond. Allow participants time to unmute and answer or post in the chat. After participants have responded, click to display the feedback on the slide and summarize.

FEEDBACK: Reduced blood pressure and risk of cardiovascular disease, stroke, and coronary heart attack. Altering taste buds at a young age to prefer less "salty" tastes.

SAY: Now that we've covered the benefits of a lower-sodium meal pattern, let's brainstorm and discuss ways that we can share this with our students, teachers, school administration, parents/guardians, and the community. Oftentimes, people need to hear the why behind something before they fully buy-in to it. This activity will provide you with the first step in getting stakeholders on board with lower-sodium meals and products. Take 10 minutes to identify and plan ways to educate students, teachers, school administration, parents/guardians, and the community on why sodium reduction is important. Make notes on how you plan to communicate this with these audiences.

DO: Allow participants 10 minutes of independent work time.

SAY: Who would like to unmute and share their ideas?

DO: Encourage participants to respond. Allow participants time to unmute and answer or post in the chat. After participants have responded, summarize.

FEEDBACK: Here are some potential talking points and strategies for educating various stakeholders on the importance of sodium reduction in K-12 schools:

Students:

- Interactive Workshops: Organize interactive workshops or classroom activities where students can learn about the harmful effects of excessive sodium on their health.
- Taste Tests: Conduct taste tests with lower-sodium options and let students compare the taste with regular options to show that healthier choices can still be delicious.
- Peer Influence: Encourage students to influence their peers by sharing information on social media or creating posters promoting lower-sodium meals.

Teachers:

- Professional Development: Offer professional development sessions for teachers to understand the health benefits of reduced sodium and how to incorporate it into their curriculum.
- Curriculum Integration: Provide resources and lesson plans that align with the curriculum, allowing teachers to teach about sodium reduction in subjects like science, health, or family and consumer sciences.

School Administration:

- Health and Academic Outcomes: Present data showing that lower-sodium meals can improve student health and potentially lead to better academic performance, emphasizing the long-term benefits.
- Cost Savings: Discuss how reducing sodium can lead to cost savings in the long run, as it can help prevent health-related expenses.

Parents/Guardians:

- Parent Workshops: Organize workshops or information sessions for parents to learn about the importance of sodium reduction and how they can support it at home.
- Healthy Recipes: Share lower-sodium recipes and meal planning tips with parents to help them make healthier choices for their children.

Community:

- Community Health Fairs: Participate in or organize health fairs where community members can learn about the benefits of reduced sodium and access resources.
- Collaborate with Local Organizations: Partner with local health organizations to host awareness campaigns or distribute educational materials in the community.

General Talking Points:

- Health Impact: Emphasize the direct link between high sodium intake and health issues like high blood pressure, heart disease, and stroke.
- Lifelong Habits: Explain that developing a taste for lower-sodium foods at a young age can lead to healthier eating habits throughout life.
- Collaborative Effort: Highlight that this initiative is a joint effort involving schools, parents, and the community to prioritize the well-being of children.

Objective: Locate where sodium amounts are located on the updated Nutrition Facts label.

SHOW SLIDE: ***Where do I find the sodium amounts?***

SAY: Now that we understand what sodium is and why it is important to be mindful of it, let's discover how we determine how much sodium is in a food item.

ASK: Does anyone know where we can find the sodium information for a food item?

DO: Encourage participants to respond. Allow participants time to unmute and answer or post in the chat.

FEEDBACK: The sodium information for a food product can be found on The Nutrition Facts label.

SHOW SLIDE: ***The Updated Nutrition Facts Label***

SAY: The Nutrition Facts label isn't new; however, the U.S. Food and Drug Administration (FDA) has updated the Nutrition Facts label on packaged foods and drinks. According to What's New with the Nutrition Facts Label, FDA implemented changes to the Nutrition Facts label based on updated scientific information, new nutrition research, and input from the public. This is the first major update to the label in over 20 years. The refreshed design and updated information will make it easier for you to make informed food choices that contribute to lifelong healthy eating habits.

SHOW SLIDE: ***Nutrition Facts Label: Overview***

SAY: Sodium and other nutrition information are located on the Nutrition Facts label, which is usually placed on the outermost packaging of a food product. If the Nutrition Facts label is not readily available, nutrient information can be found on a food product's specification sheet or the manufacturer's label. Let's look at a Nutrition Facts label. The label is divided into parts containing relevant nutrition information.

- Serving Information is shown by #1 on the sample label. When looking at the Nutrition Facts label, first take a look at the number of servings in the package (servings per container) and the serving size. Serving sizes are standardized to make it easier to compare similar foods; they are provided in familiar units, such as cups or pieces, followed by the metric amount, e.g., the number of grams (g). The serving size reflects the amount that people typically eat or drink. It is not a recommendation of how much you should eat or drink. It's important to realize that all the nutrient amounts shown on the label, including the number of calories, refer to the size of the serving. Pay attention to the serving size, especially how many servings there are in the food package.
- Calories are shown by #2 on the sample label. Calories provide a measure of how much energy you get from a serving of this food. Remember, the number of servings you consume determines the number of calories you eat.
- Nutrients are shown by #3 on the sample label. It lists some key nutrients that impact your health. You can use the label to support your dietary needs—choose foods that contain more of the nutrients you want to get more of and less of the nutrients you may want to limit. This is where we find sodium listed.
- The Percent Daily Value (%DV) is shown by #4 on the sample label. The % Daily Value (%DV) is the percentage of the Daily Value for each nutrient in a serving of the food. The Daily Values are reference amounts (expressed in grams, milligrams, or micrograms) of nutrients to consume or not to exceed each day. The %DV shows how much nutrient in a serving of a food contributes to a total daily diet. The %DV helps you determine if a serving of food is high or low in a nutrient.

Instructor's Note: Remind participants that the links can be found in the Participant's Workbook on the additional resources page.

Link for reference: *What's New With the Nutrition Facts Label?*

SHOW SLIDE: ***Looking at Sodium***

SAY: Sodium is one of the nutrients listed on a Nutrition Facts label. After you find the Nutrition Facts label, locate the Serving size in the serving information near the top of the label and Sodium in the list of nutrients. The sodium amount listed refers to the amount of sodium contained in one serving of the product (milligrams of sodium per serving of product). As you may remember, the average person needs 2300 mg of sodium per day. When you think about the sodium in a specific product, it is helpful to have this number in mind.

SHOW SLIDE: ***Activity: Labeling a Nutrition Facts Label***

Activity: Labeling a Nutrition Facts Label

Materials: Annotate function

Time: 5 minutes

Instructions: Instruct participants to use the annotate function to identify the sections of a Nutrition Facts label.

SAY: We will be reviewing what we just learned by labeling a Nutrition Facts label using the Annotate function. Using the arrow, can you point to the Serving size?

DO: Allow participants time to mark their answers. After participants have responded, confirm their choice was correct or identify the correct response, if needed. Clear the screen for the next question.

SAY: Using the arrow, can you point to the number of servings?

DO: Allow participants time to mark their answers. After participants have responded, confirm their choice was correct or identify the correct response, if needed. Clear the screen for the next question.

SAY: Can you point to sodium?

DO: Allow participants time to mark their answers. After participants have responded, confirm their choice was correct or identify the correct response, if needed. Clear the screen for the next question.

SAY: Can you point to the amount of sodium?

DO: Allow participants time to mark their answers. After participants have responded, confirm their choice was correct or identify the correct response, if needed.

SAY: Great job identifying the parts of a Nutrition Facts label. This information will be utilized to calculate sodium when the portion of food you are serving is larger or smaller than the serving size on the Nutrition Facts panel.

Objective: Evaluate food products to assess sodium content and select products that are lower in sodium.

SHOW SLIDE: *Serving Size Versus Portion Size*

SAY: Before we continue, let's discuss the difference between a serving size on a Nutrition Facts label and a portion size in the meal programs. A serving size, as listed on the Nutrition Facts Label of a food product, and a portion size as served in the meal programs are related but distinct concepts that serve different purposes in the context of nutrition and food labeling.

The serving size on a Nutrition Facts Label represents the recommended standard portion of a food product determined by the manufacturer. It's a standardized quantity that allows consumers to compare nutritional information between different products easily. Serving sizes on the Nutrition Facts Label provide a uniform basis for assessing the nutrient content and calorie content of a food product. They are intended to help consumers make informed dietary choices and understand how many nutrients they are consuming per serving. Serving sizes are determined by regulations set by the U.S. FDA and are often based on typical consumption patterns for that type of food. They are consistent across similar products for ease of comparison.

Portion size in the context of the CN programs refers to the specific amount of food served to students in school meals. These portion sizes are set by the program's guidelines and may vary depending on the age group and the meal components being served. Portion sizes in school meal programs are designed to meet nutritional standards and dietary guidelines while ensuring that students receive appropriate amounts of food to meet their nutritional needs. The goal is to provide balanced and nutritious meals that contribute to students' health and well-being. Portion sizes in NSLP and SBP are tailored to the nutritional needs of different age groups (e.g., elementary school, middle school, high school) and may be adjusted based on specific program requirements.

In summary, serving size on a Nutrition Facts Label is a standardized reference point provided by food manufacturers for consumers to understand the nutrient content in a product, while portion size in the meal programs is the actual amount of food served to students in school meals, designed to meet nutritional standards and guidelines. While they share the common goal of promoting healthy eating, they serve different purposes and are regulated differently.

SHOW SLIDE: *Assessing Sodium Content*

SAY: With so many product options to choose from, how do you decide which option is best? While this question may involve more than one aspect, we are going to discuss how to identify and choose the lowest sodium options. Using the Nutrition Facts labels of food products, we are going to discover how to compare products as well as calculate sodium amounts for different serving sizes when needed.

SHOW SLIDE: ***What if the serving sizes are not the same?***

SAY: Sometimes the amount you plan to use in your school nutrition program is not the serving on the label. When this occurs, it's important to know how to calculate accurate sodium content.

SHOW SLIDE: ***Calculating Sodium Content***

SAY: Calculating the sodium amount for a specific portion size is straightforward and has only two steps.

1. Step 1 is to calculate the amount of sodium per single food item or piece.
   a. (Amount of sodium) ÷ (number of pieces per serving) = Amount of sodium per piece

2. Step 2 is to multiply the amount of sodium per piece by the new serving size.
   a. Amount of sodium per piece × New number of pieces per serving
      = Amount of sodium per serving

SHOW SLIDE: ***Activity: Calculating Sodium Content***

Activity: Calculating Sodium Content

Materials: *Adjusting Portion Size* handout in Participant's Workbook, pen/pencil, calculator, scratch paper

Time: 5 minutes

Instructions: Instruct participants to use the handout to complete the calculation. They will work independently for 2 minutes, and then share their answers with the group.

SAY: Time to practice! Using the "Adjusting Portion Size" handout in your Participant's Workbook, complete the calculation. You can type your answers in the chat box or do the calculations on a piece of scratch paper. The scenario is that a high school lunch program operator wants to serve six (6) chicken nuggets instead of five (5), how would they use the Nutrition Facts label provided on this page to calculate the total amount of sodium in six (6) nuggets?

Instructor's Note: Remind participants that the handout can be found in the Participant's Workbook.

DO: Allow participants 2 minutes to work independently. Encourage participants to respond. Allow participants time to unmute and answer or post in the chat. After participants have responded, click to display the feedback on the slide and summarize.

FEEDBACK: Step 1: 250 mg sodium ÷ 5 nuggets = 50 mg of sodium per nugget. Step 2: 50 mg of sodium per nugget × 6 nuggets per serving = 300 mg of sodium per serving.

SAY: Good work on those calculations. Before we move on, let's discuss another example. What if the item is not per piece? For example, 1/2 of a cup. What if the serving size on the label is 1/2 cup and they want to offer 1/4 cup or a whole cup? Do you think there could be instances where you would have to go from a 1/3 to a 1/2?

DO: Encourage participants to respond. Allow participants time to unmute and answer or post in the chat. After participants have responded.

FEEDBACK: The steps are the same even if whole numbers are not used. Complete the calculations and always round up if necessary.

SHOW SLIDE: *Sodium Nutrient Claims*

SAY: When searching for lower-sodium versions of food products, you may come across terms such as Low Sodium or Sodium Free. These terms are known as nutrient claims. The FDA regulates the nutrient claims that food manufacturers can use to describe their products and put on food labels. The FDA defines six (6) nutrient claims that may be used to indicate the amount of sodium in a food product. You can use these claims to quickly identify food products that may offer lower-sodium versions of the food products you currently use.

SHOW SLIDE: *FDA-Approved Sodium Nutrient Claims*

SAY: Let's take a closer look at the six claims and their definitions.

WHAT IT SAYS	WHAT IT MEANS
Sodium Free/Salt Free	Less than 5 mg of sodium per serving
Very Low Sodium	35 mg of sodium or less per serving
Low Sodium	140 mg of sodium or less per serving
Reduced Sodium	At least 25% less sodium than the regular product
Light in Sodium/ Lightly Salted	At least 50% less sodium than the regular product
No Salt Added/ Unsalted	No salt is added during processing—but these products may not be salt/sodium-free unless stated. The label must declare, "This is not a sodium-free food" on the information panel if the food is not "sodium free."

SHOW SLIDE: *Don't Be Fooled*

SAY: Do not fully rely on a label claim to guarantee you have the lowest sodium version of a product. For example, a Reduced Sodium product may not necessarily be Low Sodium. Recall that a product labeled Reduced Sodium has at least 25% less sodium than the regular product; a product labeled Low Sodium contains 140 mg of sodium or less per serving.

SHOW SLIDE: ***Activity: Finding the Lowest-Sodium Product***

Activity: Finding the Lowest-Sodium Product

Materials: Annotate function, unmute/mute function, chat function

Time: 5 minutes

Instructions: Instruct participants to use the Annotate function to identify the serving size, sodium amounts, and sodium nutrient claim.

SAY: Let's compare three different black beans. Using the Annotate function, place a star stamp next to the Serving size for each label and place a check stamp next to the sodium amounts for each label.

DO: Allow participants time to mark their answers. After participants have responded, confirm their choice was correct or identify the correct response, if needed.

SAY: These are correct.

ASK: Label 1 is an example of regular sodium black beans. Considering the FDA-Approved Sodium Nutrient Claims, which claim do you think corresponds with label 2?

DO: Encourage participants to respond. Allow participants time to unmute and answer or post in the chat. After participants have responded, click to display the feedback on the slide and summarize.

FEEDBACK: Label 2 is an example of Reduced-Sodium Black Beans.

SAY: A serving of Reduced-Sodium black beans (210 mg of sodium) has about 54% less sodium than a serving of regular black beans (460 mg sodium)! However, at 210 mg of sodium per serving, it is not considered a low-sodium product.

ASK: Which claim do you think corresponds with label 3?

DO: Encourage participants to respond. Allow participants time to unmute and answer or post in the chat. After participants have responded, click to display the feedback on the slide and summarize.

FEEDBACK: Label 3 is an example of Low-Sodium Black Beans.

SAY: A serving of Low-Sodium black beans (130 mg of sodium) has significantly less sodium than a serving of Reduced-Sodium black beans (210 mg of sodium).

SHOW SLIDE: ***Lesson 1 Summary***

SAY: To wrap up this lesson, we learned that:

- Sodium chloride, commonly known as salt, is a major source of sodium in our diet.
- Excessive sodium consumption, even in children, can increase the risk of high blood pressure, which is a major risk factor for heart disease and stroke. The benefits of a lower-sodium meal pattern help to decrease these health risks.
- School nutrition operators can play a crucial role in reducing sodium intake among children by identifying lower-sodium food products and altering taste preferences at a young age.

DO: Encourage participants to take a 5-minute break before Lesson 2.

LESSON-AT-A-GLANCE
LESSON 2: SODIUM REDUCTION STRATEGIES

Objective: Choose food items that are typically lower in sodium.

TIME ALLOWED	TOPIC	ACTIVITY	MATERIALS
20 minutes	• List food items typically lower in sodium.	• Practice product substitution to find the lower sodium option.	• Paper or notetaking method of choice • Pen/pencil

Objective: Identify resources for new lower-sodium recipes.

TIME ALLOWED	TOPIC	ACTIVITY	MATERIALS
5 minutes	• Child Nutrition Recipe Box (CNRB) • Culinary Institute Child Nutrition (CICN) • Team Nutrition	• Generate a list of resources for new lower-sodium recipes.	• Paper or notetaking method of choice • Pen/pencil

Objective: Describe recipe reformulation strategies to gradually lower the sodium content and enhance the flavor of recipes.

TIME ALLOWED	TOPIC	ACTIVITY	MATERIALS
20 minutes	• Make small adjustments to gradually lower the sodium content of a recipe. • Identify lower-sodium versions of ingredients (e.g., lower-sodium canned foods– include reviewing that USDA Foods canned vegetables are lower in sodium). • Incorporate more fresh or frozen fruits and vegetables into recipes. • Spices, herbs, and salt-free seasoning mix recipes that can be used to enhance the flavor of a recipe. (Instructional aids will refer to specific salt-free seasoning mix recipes provided by the CICN).	• Reformulate a recipe.	• Paper or notetaking method of choice • Slash the Salt and Focus on Flavor handout • Pen/pencil • Calculator

Objective: Identify methods for gradually lowering sodium content of menu items while maintaining student acceptability.

TIME ALLOWED	TOPIC	ACTIVITY	MATERIALS
15 minutes	• Product substitution • Serve higher sodium items less frequently • Procure lower sodium versions • Use herbs and spice blends	• Sharing Success	• Paper or notetaking method of choice • Pen/pencil

LESSON 2: SODIUM REDUCTION STRATEGIES

SHOW SLIDE: ***Lesson 2: Sodium Reduction Strategies***

SAY: Our second lesson is all about sodium reduction strategies. In this lesson, we will list food items that are typically higher and lower in sodium, identify resources for lower-sodium recipes, describe recipe reformulation, and discuss methods for gradually lowering the sodium content of menu items while maintaining student acceptability. Let's get started.

Objective: Choose food items that are typically lower in sodium.

SHOW SLIDE: ***Sneaky Sources of Sodium***

SAY: Before we dive into food items that are typically lower in sodium, let's discuss the food items that are typically higher in sodium.

ASK: What food items are typically higher in sodium?

DO: Encourage participants to respond. Allow participants time to unmute and answer or post in the chat. After participants have responded, click to display the feedback on the slide and summarize.

FEEDBACK: breads, rolls, tortillas, burritos, tacos, cheese, deli/cured meats (luncheon/sandwich meat, ham, and sausage), pizza, poultry (chicken patties, nuggets, and tenders), sandwiches (hamburgers, hot dogs, and sub sandwiches), snack foods (crackers, chips, pretzels/snack mix, and popcorn), soups, corn dogs, flavored milk, pickles and olives, potato products (mashed potatoes, oven-baked fries, potato wedges, and tater tots), ready-to-eat cereals, salad dressings (ranch, Italian, and French), mayonnaise, soy/teriyaki sauce, tomato-based sauces and condiments (spaghetti sauce, marinara sauce, ketchup, and salsa)

SAY: According to the Center for Disease Control and Prevention (CDC), almost half (48%) of the sodium in children's diets come from the following foods or mixed dishes:

- Breads, rolls, and tortillas
- Burritos and tacos
- Cheese
- Deli/cured meats (luncheon/sandwich meat, ham, and sausage)
- Pizza
- Poultry (chicken patties, nuggets, and tenders)
- Sandwiches (hamburgers, hot dogs, and sub sandwiches)
- Snack foods (crackers, chips, pretzels/snack mix, and popcorn)
- Soups

Additional sneaky sources of sodium often found in school menus include

- Corn dogs
- Flavored milk (additional sodium is added to flavored milk during processing.)
- Pickles and olives
- Potato products (mashed potatoes, oven-baked fries, potato wedges, and tater tots)
- Ready-to-eat cereals
- Salad dressings (ranch, Italian, and French), mayonnaise, soy/teriyaki sauce
- Tomato-based sauces and condiments (spaghetti sauce, marinara sauce, ketchup, and salsa)

SHOW SLIDE: ***Mindful Menu Choices***

SAY: Small amounts of sodium are naturally found in foods, but most sodium comes from salt added during food processing and preparation. Identifying foods or dishes that are typically high in sodium can help you quickly examine the frequency of high-sodium menu offerings throughout the week.

SHOW SLIDE: *Lower-Sodium Foods by Meal Pattern Component*

SAY: Now that we have identified foods that are typically higher in sodium, let's shift our discussion to lower-sodium foods by each meal pattern component:

- Fruits
- Vegetables
- Grains
- Meats/Meat Alternates
- Fluid Milk
- Bonus: Condiments

SHOW SLIDE: *Lower–Sodium Foods: Fruits*

SAY: Most fresh, frozen, and canned fruit is naturally sodium-free or very low in sodium.

SHOW SLIDE: *Lower–Sodium Foods: Vegetables*

SAY: Fresh or frozen vegetables are naturally low in sodium. Use lower-sodium condiments and seasonings to add a boost of flavor. The Culinary Institute of Child Nutrition (CICN) offers many flavor enhancement ideas. Only choose canned vegetables labeled Low Sodium or No Salt Added. Avoid prepackaged vegetable dishes with sauce as they are typically higher in sodium.

Instructor's Note: Remind participants that the links can be found in the Participant's Workbook on the additional resources page.

Link for reference: *Culinary Institute of Child Nutrition (CICN)* into the chat box.

SHOW SLIDE: *Lower-Sodium Foods: Grains*

SAY: Whole grains (e.g., brown rice, barley, quinoa) and pasta are naturally lower in sodium than more processed grain products, such as bread, rolls, bagels, and tortillas. No salt added items are also available, for example no salt added corn tortilla chips.

SHOW SLIDE: *Lower-Sodium Foods: Meats/Meat Alternates*

SAY: Fresh meat is the lowest-sodium variety of meat. Avoid fresh meat injected with or packaged in a saline or sodium solution. Boiled eggs are low in sodium if no salt is added. Choose canned beans labeled Low Sodium or No Salt Added. Use "unbreaded" meat products – they are lower in sodium than "breaded" options. Select lower-sodium varieties of cheese. Swiss, Monterey Jack, cheddar, and mozzarella cheeses are lower in sodium than processed cheeses, like American.

SHOW SLIDE: *Lower-Sodium Foods: Fluid Milk*

SAY: Plain, unflavored milk is lower in sodium than flavored milk (e.g., chocolate), because additional sodium is added to flavored milk during processing.

SHOW SLIDE: *Lower-Sodium Condiments*

SAY: What about lower-sodium condiments? Use herbs, spices, and low-sodium seasonings and condiments to enhance the flavors of lower sodium foods. To season or flavor food, use:

- Fresh or dried herbs and spices or salt-free seasoning mixes
- Chopped aromatic vegetables (e.g., garlic, ginger, carrots, celery, onions, peppers)
- Lemon or lime juice

On the salad bar line, offer:

- Fresh salsa
- Flavored vinegars
- Simple salad dressings (e.g., vinegar and oil)

The CICN provides a number of resources and trainings regarding flavor enhancement – check out the trainings on made-from-scratch salad dressings and condiments, fresh herbs, and spice blends.

Instructor's Note: Remind participants that the link can be found in the Participant's Workbook on the additional resources page.

Link for reference *CICN's Flavor Enhancement* resources

SHOW SLIDE: *Product Substitution*

SAY: A best practice to reduce the amount of sodium in a school nutrition program's menu is to use product substitution. It involves exchanging one menu item for another, generally within the same meal pattern component. Using product substitution to replace higher-sodium food products with lower-sodium versions can make a big difference in the weekly sodium total, even if the reductions are small. Understanding sodium nutrient label claims and identifying foods and condiments that are typically lower in sodium can help you utilize product substitution to the fullest extent possible.

SHOW SLIDE: ***Activity: Practicing Product Substitution***

Activity: Practicing Product Substitution

Materials: Mute/Unmute, Raise Hand, Chat functions

Time: 10 minutes

Instructions: Instruct participants to use the mute/unmute or chat function to identify product substitutions and other sodium-reduction practices for each example.

SAY: This popular lunch menu offers many opportunities in which product substitution and other sodium-reduction practices can be utilized to lower the total amount of sodium. Let's begin. Using the mute/unmute or chat function, share ways to reduce the sodium of the menu item listed on the screen. The first one is spaghetti with tomato sauce.

DO: Allow participants time to share their answers. After participants have responded, summarize the feedback.

FEEDBACK: Look for a lower-sodium tomato sauce; add flavor with oregano, basil, and garlic. Consider making your own sauce in-house.

SAY: Our next menu item is garlic bread.

ASK: What are some ways we could reduce sodium in this product?

DO: Allow participants time to share their answers. After participants have responded, summarize the feedback.

FEEDBACK: Look for lower-sodium versions of garlic bread. Consider making your own garlic bread (choose a lower-sodium bread; make garlic spread with your own no salt added recipe).

ASK: How do we reduce sodium in a turkey and cheese sandwich?

DO: Allow participants time to share their answers. After participants have responded, summarize the feedback.

FEEDBACK: Look for lower-sodium versions of turkey, cheese, bread, and condiments.

Offer two versions of the sandwich—one with cheese, and one without. Limit the size and number of condiment packets offered.

ASK: What lower-sodium options do we have for a tossed salad?

DO: Allow participants time to share their answers. After participants have responded, summarize the feedback.

FEEDBACK: Look for lower-sodium salad dressings. Make your own vinegar and oil dressings. Find lower-sodium alternatives to salad toppings or replace with lower-sodium versions (e.g., croutons, bacon bits, sunflower seeds).

ASK: What about reducing the sodium in mixed veggies?

DO: Allow participants time to share their answers. After participants have responded, summarize the feedback.

FEEDBACK: Consider using fresh or frozen vegetables instead of canned, even if low-sodium. Flavor with herbs, spices, or salt-free flavoring mixes. Incorporate a "Flavor Station" in your cafeteria where students can add herbs and spices to season foods to their liking.

ASK: What lower-sodium options are available for fruit cocktail?

DO: Allow participants time to share their answers. After participants have responded, summarize the feedback.

FEEDBACK: Provide more fresh, frozen, or canned whole fruit, which is naturally low in sodium and lower in added sugar than fruit cocktail.

ASK: Finally, how do we provide lower-sodium options for milk?

DO: Allow participants time to share their answers. After participants have responded, summarize the feedback.

FEEDBACK: Consider offering flavored milk less often or not at all. Place unflavored, white milk front and center to make it the easiest option for students to select.

SHOW SLIDE: *Product Substitution Works*

SAY: Great job identifying possible product substitutions and other sodium-reduction practices. Product substitution is one way to lower the overall sodium content of your menus. Start with small, manageable changes you can begin working on today, such as looking for lower-sodium versions of existing high-sodium menu items. Also, consider larger changes that you can work on throughout the school year, such as identifying heat-and-serve and convenience food menu offerings that could be made with a speed-scratch recipe.

Objective: Identify resources for new lower-sodium recipes.

SHOW SLIDE: *Lower-Sodium Recipes*

SAY: Product substitution is only one sodium reduction strategy. Another avenue to consider is choosing lower-sodium recipes. Before we learn how to reformulate our own recipes, let's look at the resources already available to us that provide lower-sodium recipes.

SHOW SLIDE: *Culinary Institute of Child Nutrition (CICN)*

SAY: Culinary Institute of Child Nutrition (CICN) has the principal mission to increase the culinary skills of school nutrition programs by providing culinary training programs and resources to support Child Nutrition Program operators to prepare and serve healthy, culinary-inspired school meals from scratch and elevate the cafeteria atmosphere. CICN has *Grab and Go Recipes* and the *Menus of Flavor* series offers a variety of recipes.

Instructor's Note: Remind participants that the links can be found in the Participant's Workbook on the additional resources page.

Links for reference: *Grab and Go Recipes* and the *Menus of Flavor*

SHOW SLIDE: *Child Nutrition Recipe Box (CNRB)*

SAY: Child Nutrition Recipe Box (CNRB) provides Child Nutrition Program operators with recipes to prepare healthy and delicious meals that meet meal pattern requirements. These recipes are standardized to provide meal pattern crediting information for meal pattern components.

Instructor's Note: Remind participants that the link can be found in the Participant's Workbook on the additional resources page.

Link for reference: *Child Nutrition Recipe Box (CNRB)*

SHOW SLIDE: ***Team Nutrition Recipes***

SAY: Team Nutrition is an initiative of the United States Department of Agriculture's Food and Nutrition Service. Their mission is to promote lifelong healthy food choices and physical activity by improving the nutrition practices of the USDA child nutrition programs. Team Nutrition provides resources to schools, childcare settings, and summer meal sites that participate in these programs, including recipes.

Instructor's Note: Remind participants that the link can be found in the Participant's Workbook on the additional resources page.

Link for reference: *Team Nutrition Recipes*

SHOW SLIDE: ***Activity: Recipe Resource Sharing***

Activity: Recipe Resource Sharing

Materials: Mute/Unmute, Raise Hand, Chat functions

Time: 5 minutes

Instructions: Instruct participants to use the mute/unmute or chat function to identify resources to find lower-sodium recipes.

SAY: We have discussed three great resources to find lower-sodium recipes.

ASK: What other resources do you use to find lower-sodium recipes?

DO: Allow participants time to share their answers. After participants have responded, click to display the feedback on the slide and summarize.

FEEDBACK: CICN, CNRB, Team Nutrition, State agencies, industry, other school districts

SAY: Now, let's talk about recipe reformulation.

Objective: Describe recipe reformulation strategies to gradually lower the sodium content and enhance the flavor of recipes.

SHOW SLIDE: ***Recipe Reformulation***

SAY: Recipe reformulation refers to the process of modifying an existing recipe to improve its nutritional profile while maintaining its taste and other desired attributes. In the context of school meals, recipe reformulation is often used to lower the sodium content of meals served to students.

To lower the sodium content of school meals, recipe reformulation can be used to adjust the ingredients and cooking techniques used in meal preparation. This may involve reducing the amount of salt and other high-sodium ingredients such as processed meats, canned vegetables, and cheese, and replacing them with fresh or frozen fruits and vegetables, whole grains, and lean proteins. Flavorful herbs and spices can also be used to add flavor to meals without relying on salt.

Keep in mind that recipes may need to be re-standardized if certain ingredients are substituted. Always test and standardize a recipe to the specific ingredients and equipment used in your food service operation. Follow the steps outlined in the USDA Recipe Standardization Guide for School Nutrition Programs. Remember to test new products and recipes with students for acceptability before making menu changes.

SHOW SLIDE: ***Taste Matters***

SAY: When reformulating recipes for school meals, it is important to consider the taste preferences of students and ensure that meals remain appealing and satisfying. This may involve testing recipes with student focus groups and soliciting feedback from parents, teachers, and other stakeholders. Additionally, recipe reformulation should be part of a larger effort to promote healthy eating habits and improve the overall nutritional quality of school meals.**SHOW SLIDE:** ***Recipe Reformulation Strategies***

SAY: Now that we know what recipe reformulation is, let's discuss how to use it to reduce the sodium content in recipes.

SHOW SLIDE: ***Recipe Reformulation Strategies: Make Small Adjustments Gradually***

SAY: Make small adjustments to gradually lower the sodium content of a recipe. Incorporating a variety of flavor enhancers and cooking techniques can help increase the flavor and reduce the need for high-sodium products. Take it one strategy, tip, and trick at a time.

SHOW SLIDE: ***Recipe Reformulation Strategies: Identify Lower-Sodium Versions***

SAY: Identify lower-sodium versions of ingredients, also known as product substitution. Finding lower-sodium versions of high-sodium ingredients is another approach you can use to reduce the total amount of sodium in a recipe. The variability or range of sodium in high-sodium ingredients is typically quite large. You can utilize vendors' catalogs, food databases, and engage in general market research to determine where your ingredients fall within the sodium range of other like items. For example, use lower-sodium canned foods (USDA Foods canned vegetables are lower in sodium than most commercially available products). Check out FoodData Central, the USDA food composition database, which is a great resource for nutrition information. FoodData Central is an integrated data system that provides expanded nutrient profile data including the nutrients and other components found in a wide variety of foods and food products.

Instructor's Note: Remind participants that the link can be found in the Participant's Workbook on the additional resources page.

Link for reference: *FoodData Central* into the chat box.

SHOW SLIDE: ***Recipe Reformulation Strategies: Incorporate More Fresh or Frozen Fruits and Vegetables***

SAY: Incorporate more fresh or frozen fruits and vegetables into recipes. In addition to adding more whole fruits and vegetables as sides to your daily and weekly menu, consider adding more produce and low-sodium legumes to mixed-dish recipes.

SHOW SLIDE: ***Recipe Reformulation Strategies: Focus on Flavor***

SAY: Focus on flavor. Salt enhances the flavor of food. When revising a recipe to reduce sodium, do not remove or reduce salt without replacing it with flavor from spices, herbs, or culinary acids, which are naturally low in sodium. Use the following ideas for flavor development:

- Purchase unseasoned, pre-cooked products that you can add flavor to, which allows you to control the amount of sodium, customize your menus, and make them appealing to your students. Unseasoned, pre-cooked products are helpful for menu development and inventory control because they can be cross-utilized in different recipes.
- Add fresh herbs as a garnish to entrées. Cilantro and parsley are generally affordable for schools to buy in bulk and are easy to grow in a school garden.
- Consider adding culinary acids, such as vinegar and citrus (lemon, lime, and pineapple juices), to brighten and highlight the natural flavors of the food without adding any additional sodium. Add a squeeze of lime juice to taco meat or a splash of vinegar to beans.

SHOW SLIDE: Activity: Slash the Salt and Focus on Flavor

Activity: Slash the Salt and Focus on Flavor

Materials: Mute/unmute, *Slash the Salt and Focus on Flavor* handout in Participant's Workbook, pen/pencil

Time: 10 minutes

Instructions: Instruct participants to use the handout to identify ways to decrease the sodium content of the recipe. They will work independently for 5 minutes, and then share their answers with the group.

SAY: We have discussed some great strategies to use in recipe reformulation that lower the sodium content of a recipe. Using the handout in your Participant's Workbook title "Slash the Salt and Focus on Flavor," identify ways to decrease the sodium content of the recipe.

Instructor's Note: Remind participants that the handout can be found in the Participant's Workbook.

DO: Allow participants 5 minutes to work independently. Encourage participants to respond. Allow participants time to unmute and answer or post in the chat.

SHOW SLIDE: *Example Recipe*

SAY: Good work on identifying ways to reformulate the recipe. Now, check out this Chicken Fajitas - USDA Recipes for Schools. Let's review how herbs, spices, culinary acids, and culinary techniques are used to reduce sodium and enhance the flavor of this recipe.

- The recipe features lower-sodium, unseasoned chicken strips.
- A sodium-free spice blend is used to season the chicken.
- Frozen corn adds a fresh flavor without the salt.
- No-added-salt tomatoes and low-sodium salsa keep the sodium in check.
- Fresh squeezed lime juice adds a spritz of acid that brightens flavors.
- Fresh peppers and onions are sautéed for added flavor.
- Consider adding affordable fresh herbs, such as fresh cilantro, to increase presentation appeal and add flavor.

Instructor's Note: Remind participants that the link can be found in the Participant's Workbook on the additional resources page.

Link for reference: *Chicken Fajitas - USDA Recipes for Schools*

SAY: Now, let's talk about other methods for gradually lowering sodium content of menu items while maintaining student acceptability.

Objective: Identify methods for gradually lowering sodium content of menu items while maintaining student acceptability.

SHOW SLIDE: *Strategies to Reduce Sodium*

SAY: In school nutrition programs, reducing the sodium content of a menu takes time. Recipes, food products, and menu items must be evaluated, revised, or replaced with lower-sodium versions, while maintaining student acceptability. Let's dive into these strategies.

SHOW SLIDE: *Product Substitution and Procurement*

SAY: We have established that using product substitution to replace higher-sodium food products with lower-sodium versions can make a big difference. Look for lower-sodium versions of products in each procurement cycle. Engage with brokers and vendors to help you find lower-sodium versions of products, or alternative lower-sodium foods similar to those on your current menu. This will be covered in detail in the *Procurement of Lower Sodium Foods* training, or you can reference the steps outlined in ICN's Working With Your Procurement Partners worksheet.

Instructor's Note: Remind participants that the link can be found in the Participant's Workbook on the additional resources page.

Link for reference: *Procurement of Lower Sodium Foods* and *Working With Your Procurement Partners*

SHOW SLIDE: *Serve Higher Sodium Items Less Frequently*

SAY: Balance the use of high-sodium ingredients and products. When developing a menu, be mindful of higher-sodium ingredients, such as cheese. Rather than removing the cheese, consider balancing higher-sodium options with lower-sodium options. For example, when offering burgers, give students a choice between a hamburger and a cheeseburger to reduce the overall amount of cheese consumed. When serving a high-sodium menu item such as pizza, balance the menu with fresh fruits and vegetables, which are naturally low in sodium. Limiting the frequency of high-sodium menu items served within a weekly menu will help you meet the weekly sodium targets.

SHOW SLIDE: *Use Herbs and Spice Blends*

SAY: As we previously discussed, using herbs and spice blends is an excellent way to lower the sodium content while maintaining flavoring and student acceptance. Seasonings, such as garlic salt, taco, and chili seasoning, are often used to flavor meats, vegetables, rice, and beans. Consider reducing the use of these items or substituting seasonings with lower-sodium or sodium-free options.

- Purchase lower-sodium or sodium-free versions of seasonings.
- Purchase or make your own "spice blends"—spices and/or herbs with no added salt.
- Replace garlic salt with chopped garlic or garlic powder.
- Replace onion salt with fresh or frozen chopped onions, onion powder, or dried onions.

The Culinary Institute of Child Nutrition (CICN) provides a set of *Herbs and Spices* posters, found on ICN's Shaking It Up! website under "Other Resources." The posters are available in both English and Spanish. The posters illustrate methods for using dried spices, dried and fresh herbs, and spice blends. The Spice Blends poster features 12 different spice blend recipes. Each spice blend recipe consists of ingredients with a "part" that references the ratio of each ingredient in the recipe. Using ratios allows you to determine the overall yield of the seasoning mix.

Instructor's Note: Remind participants that the links can be found in the Participant's Workbook on the additional resources page.

Links for reference: *CICN's Herbs and Spices posters*

SHOW SLIDE: *Flavor Station*

SAY: A flavor station can be a creative avenue for students to customize their trays and add as little or as much flavor as they desire. Flavor stations are available from several manufacturers, OR you can create your own. A station can be assembled at the end of your serving line or elsewhere in the cafeteria—any place that is easy for students to access. Some schools have success with shaker containers, while others prefer providing individual portion packets. The choices offered at a middle or high school may differ from those provided at an elementary school, but that's okay!

SHOW SLIDE: *Flavor Station (cont'd)*

SAY: You can include spices, spice blends, seasonings, condiments, and fresh items (when appropriate). Your flavor station should accommodate your menu. Consider the following:

- Dried herbs and spices, such as oregano, red pepper flakes, and cinnamon
- Spice blends, including BBQ, chili, jerk, and ranch (review CICN's *Spice Blends* poster for 12 different spice blend recipes you can create on your own)
- Lower-sodium hot sauces, such as chili, hot pepper vinegar, and sriracha sauces
- Dipping sauces such as BBQ, buffalo, honey mustard, and ranch made from lower-sodium recipes
- Fresh ingredients, such as lime and lemon slices and herbs

SHOW SLIDE: ***Activity: Sharing Success***

Activity: Sharing Success

Materials: Breakout Rooms, Mute/Unmute, Raise Hand, Chat functions

Time: 15 minutes

Instructions: Divide participants into groups for Breakout Rooms of 3 participants each. Instruct participants to brainstorm and share sodium reduction strategies, including ideas for potential strategies and strategies currently being used. Then, instruct the participants to discuss how they can incorporate these strategies in their programs. Allow 10 minutes in the breakout rooms. End the Breakout Rooms. Instruct participants to use the mute/unmute or chat function to share the sodium reduction strategies and plans to incorporate the strategies in their programs.

Instructor's Note: Divide participants into groups for Breakout Rooms of 3 participants each. Allow 10 minutes in the breakout rooms. End the Breakout Rooms.

ASK: What sodium reduction strategies did you identify and how do you plan to incorporate them into your program?

DO: Encourage participants to respond. Allow participants time to unmute and answer or post in the chat.

FEEDBACK: Thank the participants for sharing.

SHOW SLIDE: ***Lesson 2 Summary***

SAY: To wrap up this lesson, we learned that:

- Reducing the sodium content of a menu takes time.
- Recipes, food products, and menu items must be evaluated, revised, or replaced with lower-sodium versions, while maintaining student acceptability.
- Sodium reduction strategies:
  - Product substitution
  - Serve higher sodium items less frequently
  - Procure lower sodium versions
  - Use herbs and spice blends

DO: Encourage participants to take a 5-minute break before Lesson 3.

LESSON-AT-A-GLANCE
LESSON 3: SODIUM STANDARDS

Objective: Recall the sodium nutrition standards for school meals.

TIME ALLOWED	TOPIC	ACTIVITY	MATERIALS
10 minutes	• List the standards.	• List the sodium standards.	• Traditional Sodium Targets and Timelines handout • Paper or notetaking method of choice • Pen/pencil

Objective: Establish and calculate daily and weekly sodium goals for food products, recipes, and school menus.

TIME ALLOWED	TOPIC	ACTIVITY	MATERIALS
25 minutes	• How to set goals • How to calculate averages	• Complete scenario and practice calculations.	• Weighted Analysis Example handout • Paper or notetaking method of choice • Pen/pencil • Calculator

Objective: Analyze and assess a school menu to identify opportunities to reduce daily and/or weekly sodium levels.

TIME ALLOWED	TOPIC	ACTIVITY	MATERIALS
25 minutes	• Review a menu	• Analyze and assess a menu.	• Sodium Reduction Practice handout • Paper or notetaking method of choice • Pen/pencil • Calculator

LESSON 3: SODIUM STANDARDS

SHOW SLIDE: *Lesson 3*: *Sodium Standards*

SAY: Our third lesson will discuss sodium standards. In this lesson, we will list the sodium nutrition standards for school meals, establish and calculate daily and weekly sodium goals for food products, recipes, and school menus, and analyze a school menu to identify opportunities to reduce daily and/or weekly sodium levels. Let's get started.

Objective 1: Recall the sodium nutrition standards for school meals.

SHOW SLIDE: *Sodium Targets*

SAY: In April 2024, the USDA published the final rule, *Child Nutrition Programs: Meal Patterns Consistent With the 2020-2025 DGAs*. This rule established standards for sodium in school meals. Evaluating daily weighted sodium totals and weekly averages can help balance menus and set daily sodium goals to meet the targets.

The average sodium content of meals offered over the week must meet the weekly sodium target for each age/grade group.

AGE/GRADE GROUPS	BREAKFAST SODIUM (MG) TARGET 1 THRU JUNE 30, 2027	LUNCH SODIUM (MG) TARGET 1A THRU JUNE 30, 2027
K–5	≤540	≤1,110
6–8	≤600	≤1,225
9–12	≤640	≤1,280

The current sodium targets explanations:

- For breakfast:
  - Maintains current sodium limit, Sodium Target 1, at breakfast through June 30, 2027.
  - Finalizes one 10% sodium reduction from current limit for school breakfast, which must be implemented by July 1, 2027.
- For lunch:
  - Maintains current sodium limit, Sodium Target 1A, at lunch through June 30, 2027.
  - Finalizes one 15% sodium reduction from current limit for school lunch, which schools must implement by July 1, 2027.

Instructor's Note: Remind participants that the link can be found in the Participant's Workbook on the additional resources page.

Link for reference: *Child Nutrition Programs: Meal Patterns Consistent With the 2020-2025 DGAs*

SHOW SLIDE: ***Activity: List the Sodium Targets and Timelines***

Activity: List the Sodium Targets and Timelines

Materials: *Sodium Targets and Timelines* chart in Participants Workbook, pen/pencil

Time: 2 minutes

Instructions: Instruct participants to use the handout to fill in the "Sodium Targets and Timelines" chart.

SAY: While I know we are all currently working with sodium standards, one of the best tools to remember something is to write it down. Using the "Sodium Targets and Timelines" chart in your Participant's Workbook, fill in the sodium targets. We will reference these targets when we discuss setting sodium goals.

Instructor's Note: Remind participants that the handout can be found in the Participant's Workbook.

DO: Allow participants 2 minutes to complete the chart.

Objective: Establish and calculate daily and weekly sodium goals for food products, recipes, and school menus.

SHOW SLIDE: ***Nutrient Analysis of Sodium***

SAY: In the NSLP and SBP, nutrients in foods can be calculated by nutrient analysis. A nutrient analysis is the process of calculating the nutritional content of food. The purpose of a nutrient analysis is to determine compliance with regulatory requirements for calories, saturated fat, and sodium, and to monitor levels of these dietary components in school meals. The nutrient analysis of menus averaged over a week is compared to the required nutrient standards for the age/grade group served.

The nutrient analysis of the offered menu must be based on weighted averages. A weighted nutrient analysis is the calculation that averages the nutrient content of all foods offered as part of the reimbursable meals. Food items are included based on portion sizes and serving amounts, and are weighted based on their proportionate contribution to the meals offered. This means that food items offered more frequently are weighted more heavily than those not offered as frequently.

SHOW SLIDE: ***Weighted Nutrient Analysis of Sodium***

SAY: It is important to know how much sodium is in your menu. Making small changes to reduce sodium in your menus will ultimately decrease the daily weighted sodium and weekly sodium averages. Weighted nutrient analysis is a great tool to ensure your menus meet the National School Lunch Program (NSLP) and School Breakfast Program (SBP) dietary specifications.

Weighted nutrient analysis can be used as a tool to balance sodium within a daily and weekly menu. For example, it can help you see how pairing higher-sodium entrées with fresh and/or frozen fruits and vegetables instead of canned produce or mixed side dishes can reduce the sodium contribution of that particular menu. Weighted nutrient analysis can also help you balance sodium by pairing higher-sodium entrées with popular lower-sodium entrées. This helps reduce the sodium contribution of higher-sodium entrées and also provides students the choice of lower-sodium options.

SHOW SLIDE: ***Daily Weighted Sodium Totals and Weekly Averages***

SAY: To set achievable sodium reduction goals to meet the targets, identify current daily weighted sodium totals and weekly averages for breakfast and lunch. A weighted sodium analysis considers the number of students that select each menu item when calculating sodium totals for each daily menu.

We will be working through the steps of how to calculate a weighted analysis, USDA's Nutrient Analysis Protocols: How to Analyze Menus for USDA's School Meals Programs (NAP Manual) provides technical guidance on calculating accurate nutrient analyses of school menus using software. On page 12 of the manual, you will find an overview of the steps for conducting a nutrient analysis.

Instructor's Note: Remind participants that the link can be found in the Participant's Workbook on the additional resources page.

Link for reference: *Nutrient Analysis Protocols: How to Analyze Menus for USDA's School Meals Programs*

SHOW SLIDE: ***Calculating a Weighted Nutrient Analysis of a Weekly Menu***

SAY: To calculate a weighted nutrient analysis of a breakfast or lunch weekly menu, you need the following:

- The estimated feeding figure and the number of servings and portion size for each menu item offered.
- Nutrient (sodium) information for each menu item offered, including condiments, and any extra foods, for each age/grade group. Noncreditable (extra foods) are foods offered with a reimbursable meal that do not credit toward any food component (e.g., ice cream).

Conduct separate analyses for breakfast and lunch menus, as well as for each established USDA age/grade group.

SHOW SLIDE: ***Step 1: Calculate the Daily Weighted Sodium Total***

SAY: Let's look at an example by calculating the weighted sodium total for each daily menu included in the analysis.

On Monday, 100 middle school students (the feeding figure) went through the serving line and were offered the following Menu Items (column 1). We are going to follow the steps using the table to calculate the weighted sodium contribution of the menu:

- STEP 1A: For each Menu Item (column 1), determine the amount of Sodium (mg) per Serving (column 2) and the Number of Servings Offered (column 3).
- STEP 1B: Multiply the amount of Sodium (mg) per Serving (column 2) by the Number of Servings Offered (column 3) to calculate the Total Sodium (mg) of Each Menu Item (column 4).
- STEP 1C: Determine the Total Sodium (mg) for the Menu by adding the Total Sodium (mg) of Each Menu Item (column 4).
- STEP 1D: Divide the Total Sodium for the Menu by the feeding figure.
  - 68,670 mg ÷ 100 students = 686.7 mg
  - The weighted sodium total for this menu = 686.7 mg.

SHOW SLIDE: ***Step 2: Calculate the Weekly Weighted Sodium Average***

SAY: Now that we have the daily weighted sodium totals from Step 1, we will calculate the weekly sodium average.

Daily weighted totals from Step 1:

- Day 1 = 686.7 mg
- Day 2 = 988.9 mg
- Day 3 = 843.6 mg
- Day 4 = 1,041.9 mg
- Day 5 = 1,069.4 mg

Steps for calculating the weekly weighted sodium average:

- STEP 2A: Add the daily weighted sodium totals:
  - 686.7 mg + 988.9 mg + 843.6 mg + 1,041.9 mg + 1,069.4 mg = 4,630.5 mg
- STEP 2B: Divide the sum by the number of menu days in the analysis:
  - 4,630.5 mg ÷ 5 days = 926.1 mg
  - The weekly sodium average = 926.1 mg.

SHOW SLIDE: ***Activity: Weighted Analysis Practice***

Activity: Weighted Analysis Practice

Materials: *Weighted Analysis Example* handout in Participant's Workbook, pen/pencil, calculator

Time: 10 minutes

Instructions: Instruct participants to use the handout to practice the weighted analysis example. Divide participants into groups for Breakout Rooms of 3 participants each. Encourage participants to work independently or as a group to complete the calculations for 5 minutes, and then share their answers with the group.

SAY: It's your turn to practice calculating the weighted analysis of sodium. Using the "Weighted Analysis Example" handout your Participant's Work, complete the calculations for the example scenario.

A popular menu item, burgers, provides an opportunity to showcase how weighted nutrient analysis can help you balance offerings within a daily menu. Scenario: In years past, a cheeseburger on a whole grain-rich bun (630 mg of sodium) was planned as the only entrée on a particular menu. One hundred students typically went through the serving line, and 90 selected the cheeseburger. To reduce sodium, the menu planner decided to provide a build-your-own burger bar, offering plain

hamburgers with a whole grain-rich bun (396 mg of sodium), American cheese (234 mg of sodium), and an assortment of condiments and fresh toppings. After running trials of the burger bar several times, the menu planner utilized their production records to plan 90 plain hamburgers, 75 slices of cheese, and the servings for an assortment of condiments and fresh toppings.

Let's examine how removing the cheese from the entrée and providing it as an optional accompaniment reduced the total sodium (mg) of the following menu items. Note, to simplify this activity, we only analyzed the sodium contribution from the cheeseburger (with whole grain-rich bun), hamburger (with whole grain-rich bun), and American cheese. Any condiments and fresh toppings offered will also need to be included in the nutritional analysis.

Instructor's Note: Remind participants that the handout can be found in the Participant's Workbook. Divide participants into groups for Breakout Rooms of 3 participants each. Allow 10 minutes in the breakout rooms. End the Breakout Rooms.

DO: Allow participants 5 minutes to work independently. Encourage participants to respond. Allow participants time to unmute and answer or post in the chat. After participants have responded, click to display the feedback on the slide and summarize.

FEEDBACK: Thank the participants for sharing. Use the following information to determine if all the shared responses were correct and summarize:

Old Menu

- Cheeseburger:
- 630 mg of sodium x 90 planned servings = 56,700 mg of sodium
- 56,700 mg of sodium ÷ 100 (feeding figure) = 567 mg of sodium

New Menu

- Hamburger: 396 mg of sodium x 90 planned servings = 35,640 mg of sodium
- American cheese: 234 mg of sodium x 75 planned servings = 17,550 mg of sodium
  - 35,640 mg of sodium (Hamburger) + 17,550 mg of sodium (American cheese) = 53,190 mg sodium
  - 53,190 mg sodium ÷ 100 (feeding figure) = 531.9 mg of sodium

To summarize:

- The weighted sodium contribution of the cheeseburger was 567 mg.
- The weighted sodium contribution of the hamburger and American cheese offered separately is approximately 532 mg.
- The new menu reduced the sodium content by 567 mg - 532 mg = 35 mg of sodium.

SAY: Weighted nutrient analysis can be used as a tool to balance sodium within a daily and weekly menu.

SHOW SLIDE: *Weekly and Daily Sodium Goals*

SAY: Now that you know your weekly sodium averages, you can set weekly and daily sodium goals.

Your weekly average sodium goal is pre-determined by the sodium target (e.g., Target 1, Target 1A). Upon calculating your weekly averages and comparing them to the sodium target, identify which sodium goals, if any, are above the target. You will need to evaluate the daily sodium totals for any weeks above the target.

SHOW SLIDE: *Daily Sodium Total Goals*

SAY: For any week that you identified as above the target, you will need to look closely at its daily sodium totals.

- How many daily menus in that week are at or below the target? How many daily menus in that week are above the target?

To reach your sodium reduction goals for "above the target" daily menus, carefully evaluate the sodium content of the menu items, especially entrées and condiments.

- Are there lower-sodium products you could substitute for current products?
  - Use sodium nutrient claims (e.g., Low Sodium, Reduced Sodium) to quickly identify food products that may offer lower-sodium versions of the food products you currently use.
  - Compare Nutrition Facts labels of similar products among the same brand and between different brands to find the lowest-sodium version.
- Have you considered utilizing a scratch or speed-scratch recipe instead of a heat-and-serve entrée to help you hit your goal?
  - Scratch and speed-scratch food preparation provides more control over the ingredients you choose to use in a recipe. This, in turn, allows you to better manage the nutritional content (including sodium) of your menu items.
- Would using more fresh fruits, vegetables, and meats reduce the sodium content of your menu?
  - Most fresh, frozen, and canned fruit is naturally sodium-free or very low in sodium.
  - Fresh or frozen vegetables are naturally low in sodium. Only choose canned vegetables or canned beans labeled Low Sodium or No Salt Added.
  - Fresh meat is the lowest-sodium variety of meat; avoid meat injected with or packaged in a saline or sodium solution.
- Are all of the condiments offered with each menu necessary?
  - Limit condiment packets or self-service of condiments and creating your own lower-sodium versions in-house.

- To season or flavor food, use fresh or dried herbs and spices or salt-free seasoning mixes, chopped aromatic vegetables (e.g., garlic, ginger, carrots, celery, onions, peppers), or lemon or lime juice.

Refer to ICN's *Scoping Out Sodium in School Menus*, *Sodium Swaps: Utilizing Product Substitution*, *Popular Speed-Scratch Menu Ideas*, *Strategies, Tips, and Tricks to Reduce Sodium and Increase Flavor*, and *Seasoning Menus Mindful of Sodium* worksheets located on the Shaking It Up! website for additional ideas of how to reduce your daily menu sodium totals.

Instructor's Note: Remind participants that the link can be found in the Participant's Workbook on the additional resources page.

Link for reference: *Shaking It Up!*

SHOW SLIDE: *Food Product Sodium Goals*

SAY: In addition to balancing your weekly menus and evaluating daily menu sodium totals to help you stay below the weekly sodium target, consider setting food product sodium goals. In 2021, the FDA released *Guidance for Industry: Voluntary Sodium Reduction Goals* to spur the food industry to reduce sodium and make more no-salt-added, low-sodium, and reduced-sodium products available. You are encouraged to evaluate the sodium content, unit price, and meal contribution of each product that makes up your menu and recipes and compare it to potential new lower-sodium products each procurement cycle. The goal for each food product that makes up your menu is to reduce the sodium to be able to easily plan menus within the regulations. When you are ready to procure lower-sodium products, you must include sodium nutrition standards within your product specifications.

Learn more about procuring lower-sodium products and how to write nutrition standards that limit sodium in ICN's Working With Your Procurement Partners and Writing Product Specifications That Limit Sodium worksheets.

Instructor's Note: Remind participants that the links can be found in the Participant's Workbook on the additional resources page.

Links for reference: *Working With Your Procurement Partners* and *Writing Product Specifications That Limit Sodium*

Objective: Analyze and assess a school menu to identify opportunities to reduce daily and/or weekly sodium levels.

SHOW SLIDE: ***Activity: Sodium Reduction Practice***

Activity: Sodium Reduction Practice

Materials: *Sodium Reduction Practice* handout in Participant's Workbook, pen/pencil

Time: 10 minutes

Instructions: Instruct participants to use the "Sodium Reduction Practice" handout to identify ways to decrease the sodium content of the menu. They will work independently for 5 minutes, and then share their answers with the group.

SAY: We have discussed some great strategies to use to reduce the sodium content of a menu. Using the handout titled "Sodium Reduction Practice" in your Participant's Workbook, identify ways to decrease the sodium content of the menu. Review the lunch menu, and circle or highlight sneaky sources of sodium you notice on the menu.

Instructor's Note: Remind participants that the handout can be found in the Participant's Workbook.

ASK:

- Which items could be served less frequently?
- What items could you add to the menu?
- What are other changes that could lower the sodium content?

DO: Allow participants 5 minutes to work independently. Encourage participants to respond. Allow participants time to unmute and answer or post in the chat. After participants have responded, click to display the feedback on the slide and summarize.

FEEDBACK: Thank the participants for sharing. Use the following information to determine if all the possible strategies were shared:

Main Entrée:

- The Turkey and Cheese Sandwich, Chicken and Cheese Tortilla, and Chicken Nuggets are all sneaky sources of sodium.
  - Limit your highest sodium entrée menu items to two per week.
  - Pair high-sodium entrées with lower-sodium versions or entrées. For example, offer another option with the Turkey and Cheese Sandwich on Monday—a Turkey Sandwich without cheese. Serving a lower-sodium alternate version or second entrée is another avenue in which to lower the sodium average for the day.
  - Adding one or more lower-sodium alternative entrées, such as a Turkey Sandwich (without cheese), is another avenue to reduce the frequency of consumption of high-sodium entrées. You could offer the same or a unique alternative entrée daily.
  - A Build-Your-Own Taco was substituted for the Chicken and Cheese Tortilla. Allowing students to choose their own toppings can also help lower sodium intake.
  - An Omelet was added as a lower-sodium alternative to the Sausage Patty.

Vegetables:

- Three potato products—French Fries, Mashed Potatoes, and Sweet Potato Fries—are provided on this menu.
  - Offer potato products only once or twice per week. Consider offering another fresh, frozen, or low-sodium canned vegetable as an alternative.
  - Potato products generally contain more sodium than other vegetable options and are frequently served with condiments. On Monday, French Fries were substituted with Roasted Root Vegetables to reduce the number of potato products on the weekly menu. This substitution also allowed for the removal of ketchup from the menu that day.

Fruit:

- Naturally low in sodium, fruit will be among the lowest sodium items offered on any menu.
  - Increasing the amount and variety of fruit offered may help offset the consumption of higher-sodium items.
  - The variety of fruit on the menu was increased to encourage students to select it as a meal component. More students selecting fruit may help displace the consumption of higher-sodium items.

Condiments:

- The sodium from Ketchup and Salad Dressing can add up quickly! Is ketchup necessary on Tuesday?
  - Only provide a condiment when it is intended to go with a specific menu item. Consider limiting condiment packets or self-service of condiments.
  - Ketchup was removed from Tuesday's menu as it was not paired with a specific menu item. You can review previous production records "number of portions served" to help justify the removal of condiments from the menu.

Milk:

- On average, flavored milk provides about 50% more sodium than unflavored milk.
  - Consider removing flavored milk from the menu or reducing the frequency in which it is served.
  - Chocolate milk was removed from the menu on Tuesday and Thursday. If you are considering removing flavored milk from your menu or reducing the frequency in which it is served, garnering support from your Local Wellness Committee may prove helpful. Open communication explaining "why" with students and parents is strongly encouraged.

SHOW SLIDE: ***Lesson 3 Summary***

SAY: To wrap up this lesson, we learned that:

- It is important to know how much sodium is in your menu.
- Making small changes to reduce sodium in your menus will ultimately decrease the daily weighted sodium and weekly sodium averages.
- Weighted nutrient analysis is a great tool to ensure your menus meet the National School Lunch Program (NSLP) and School Breakfast Program (SBP) dietary specifications.

DO: Encourage participants to take a 5-minute break before the Culminating Activity and Action Plan.

LESSON-AT-A-GLANCE CULMINATING ACTIVITY AND ACTION PLAN

Objective: Develop an action plan to gradually produce lower-sodium school menus.

TIME ALLOWED	TOPIC	ACTIVITY	MATERIALS
35 minutes	• Put it all together	• Culminating Activity • Action Plan	• Action Plan handout • Pen/pencil • Calculator
5 minutes	• Wrap Up	• Post-Assessment	• Post-Assessment

CULMINATING ACTIVITY AND ACTION PLAN

SHOW SLIDE: ***Culminating Activity and Action Plan***

SAY: Our final lesson today is unique. You will be using all of the sodium reduction knowledge and strategies that you learned to review your own menus. You will have 20 minutes to work independently to complete the culminating activity and your action plan. For the activity, you will need a copy of your current menu. If you currently use a cycle menu, we encourage you to look at it in its entirety to identify ways to incorporate the many sodium reduction strategies. Remember, small, gradual changes are recommended; however, you can use this time and your action plan to map out your overall plan.

Objective: Develop an action plan to gradually produce lower-sodium school menus.

SHOW SLIDE: ***Activity: Independent Work Time***

Activity: Culminating Activity and Action Plan

Materials: *Action Plan* handout, *SMART Goals* handout, pen/pencil, calculator, menu, access to nutrient analysis, product specifications/nutrition information for current menu items

Time: 20 minutes

Instructions: Instruct participants to analyze and assess their school menus to identify opportunities to reduce daily and/or weekly sodium levels. Choose one or two strategies to focus on and plan how they will incorporate them into their program. Participants will write SMART goals targeted at menu planning activities that can be completed post-training to reduce sodium in menus. They will work independently for 20 minutes, and then share their answers with the group.

SAY: It's your turn to practice. Gather your menu, nutrient analysis, product specifications/nutrition information for current menu items, and any other resources you need to review your menus and current food products. You will analyze and assess your school menu to identify opportunities to reduce daily and/or weekly sodium levels. Choose one or two strategies to focus on and plan how you will incorporate them into your program. Then, you will write SMART goals targeted at menu planning activities that can be completed post-training to reduce sodium in menus. A SMART goal is a specific, measurable, achievable, relevant, and time-bound objective designed to guide and evaluate progress effectively. You will work independently for 20 minutes, and then share your strategies and action plans with the group.

Instructor's Note: Remind participants that the handout can be found in the Participant's Workbook.

DO: Start the timer on the slide and display on the screen. Allow the participants to work independently for 20 minutes. After the time is up, welcome the participants back to the group.

Instructor's Note: Feel free to turn off your camera and mute during the 20 minutes of independent work. Be ready to start back on time.

SHOW SLIDE: ***Activity: Sharing Strategies and Action Plans***

Activity: Sharing Strategies and Action Plans

Materials: *Action Plan* handout**,** Breakout Room, mute/unmute, chat feature

Time: 15 minutes

Instructions: Break participants into breakout rooms of 3-4 people. Instruct participants to share their identified opportunities to reduce sodium in the menus and their action plans to incorporate the strategies. Allow participants to share in the breakout rooms for 10 minutes. Then, bring the group together to share highlights and main points.

SAY: Welcome back! I cannot wait to hear about all the great sodium-reduction strategies you have planned. I will be sending you into breakout rooms to share and discuss the identified opportunities to reduce sodium in your menus and your action plans to incorporate the strategies. Then, we will come back as a group to share highlights and main points.

Instructor's Note: Divide participants into groups for Breakout Rooms of 3-4 participants each. Allow 10 minutes in the breakout rooms. End the Breakout Rooms.

SAY: Who would like to share first?

DO: Encourage participants to respond. Allow participants time to unmute and answer or post in the chat.

FEEDBACK: Thank the participants for sharing.

SAY: Wow, you all have identified some great strategies to reduce sodium in your menus. Best of luck in your sodium reduction journey.

WRAP UP

SHOW SLIDE: ***Thank You!***

DO: Ask participants to complete the Post-Assessment. Ask participants to complete the evaluation. Thank participants. Ask if there are any questions. Answer participants' questions. Distribute the training certificates out at this time.

Instructor's Note: Paste the link to the post-assessment into the chat.

APPENDIX

The Shaking It Up! sodium resources provide tangible, practical guidance for school nutrition professionals to implement sodium reduction best practices and strategies in their school foodservice operations. The worksheets provide a deep dive into a sodium reduction topic and related strategies, feature scenarios or school success stories to demonstrate sodium reduction best practices, and include activities to test and reinforce key concepts.

Featured worksheets:

- Scoping Out Sodium in School Menus
- Sodium Swaps: Utilizing Product Substitution
- Strategies, Tips, and Tricks to Reduce Sodium and Enhance Flavor
- Mindfully Seasoning Your Menus
- Weighted Nutrient Analysis of Sodium
- Setting Weekly and Daily Sodium Goals

Shaking It Up!
SMALL CHANGES LEAD TO BIG FLAVORS

SCOPING OUT SODIUM IN SCHOOL MENUS

As a school nutrition operator, you play an important role in reducing sodium intake among our children. Best known as a component of table salt (chemical name: sodium chloride), sodium is an essential nutrient that our bodies need in certain amounts. However, most Americans—including children—consume too much sodium, about 3,400 milligrams (mg) per day! Children consume sodium throughout the day from multiple foods and locations, including school cafeterias.

Table salt is made up of 40% sodium and 60% chloride.

The *Dietary Guidelines for Americans, 2020–2025,* recommends that adults and high school-age students limit their sodium consumption to less than 2,300 mg (approximately one teaspoon of salt) per day. Younger children should consume even less! Too much dietary sodium can lead to chronic illnesses, such as stroke and heart disease.

Small amounts of sodium are naturally found in foods, but most sodium comes from salt added during food processing and preparation. Identifying foods or dishes that are typically high in sodium can help you quickly examine the frequency of high-sodium menu offerings throughout the week. Understanding how to apply the sodium information provided on the Nutrition Facts label will help you seek out lower-sodium versions of high sodium menu items when developing your menu.

SNEAKY SOURCES OF SODIUM

According to the Centers for Disease Control and Prevention (CDC), almost half (48%) of the sodium in children's diets come from the following foods or mixed dishes:

- Breads, rolls, and tortillas
- Burritos and tacos
- Cheese
- Deli/cured meats (luncheon/sandwich meat, ham, and sausage)
- Pizza
- Poultry (chicken patties, nuggets, and tenders)
- Sandwiches (hamburgers, hot dogs, and sub sandwiches)
- Snack foods (crackers, chips, pretzels/snack mix, and popcorn)
- Soups

Additional sneaky sources of sodium often found in school menus include:

- Corn dogs
- Flavored milk*
- Pickles and olives
- Potato products (mashed potatoes, oven-baked fries, potato wedges, and tater tots)
- Ready-to-eat cereals
- Salad dressings (ranch, Italian, and French), mayonnaise, and soy/teriyaki sauce
- Tomato-based sauces and condiments (spaghetti sauce, marinara sauce, ketchup, and salsa)

**Additional sodium is added to flavored milk during processing.*

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Limiting the frequency of high-sodium menu items served within a weekly menu will help you meet the weekly sodium limits.

Consider the following lunch menu:

1 Circle or highlight sneaky sources of sodium you notice on the menu. Which items could be served less frequently?

2 Next, let's look at the menu items categorically, keeping in mind we only have a one-week menu (versus a cycle menu) and do not know the actual sodium quantities.

Monday	Tuesday	Wednesday	Thursday	Friday
Main Entrée				
Turkey and Cheese Sandwich	Chicken and Cheese Tortilla	Chicken Nuggets	French Toast Sticks Sausage Patty	Beef Teriyaki Dipper Fried Rice
Vegetables				
French Fries Broccoli Tossed Salad	Mexicali Corn Refried Beans Tossed Salad	Mashed Potatoes Carrot Sticks Tossed Salad	Sweet Potato Fries Carrot Raisin Salad Tossed Salad	Celery Chinese-Style Veggies Tossed Salad
Fruit				
Apples Bananas Peaches	Apples Bananas Pears	Apples Bananas Fruit Cocktail	Apples Bananas Oranges	Apples Bananas Peaches
Condiments				
Ketchup Mustard Salad Dressing	Ketchup Mustard Salad Dressing	Ketchup Mustard Salad Dressing	Syrup Salad Dressing	Salad Dressing
Milk				
Milk, 1% Chocolate Milk, 1% Plain Milk, Skim Plain	Milk, 1% Chocolate Milk, 1% Plain Milk, Skim Plain	Milk, 1% Chocolate Milk, 1% Plain Milk, Skim Plain	Milk, 1% Chocolate Milk, 1% Plain Milk, Skim Plain	Milk, 1% Chocolate Milk, 1% Plain Milk, Skim Plain

Main Entrée:
The turkey and cheese sandwich, chicken and cheese tortilla, and chicken nuggets are all sneaky sources of sodium.

- Limit your highest sodium entrée menu items to two per week.
- Pair high sodium entrées with lower-sodium versions or entrées. For example, offer another option with the turkey and cheese sandwich on Monday—a turkey sandwich without cheese. Serving a lower-sodium alternate version or second entrée is another avenue in which to lower the sodium average for the day.

Vegetables:
Three potato products—French fries, mashed potatoes, and sweet potato fries—are provided on this menu!

- Offer potato products only once or twice per week. Consider offering another fresh, frozen, or low sodium canned vegetable as an alternative.

Fruit:
Naturally low in sodium, fruit will be among the lowest sodium items offered on any menu.

- Increasing the amount and variety of fruit offered may help offset the consumption of higher-sodium items.

Condiments:
The sodium from ketchup and salad dressing can add up quickly! Is ketchup necessary on Tuesday?

- Only provide a condiment when it is intended to go with a specific menu item. Consider limiting condiment packets or self-service of condiments.

Milk:
On average, flavored milk provides about 50% more sodium than unflavored milk.

- Consider removing flavored milk from the menu or reducing the frequency in which it is served.

Compare this menu to the menu on the previous page. Bolded menu items indicate a product substitution or an addition to the menu. Menu items with a strike-through were removed from the menu. Limiting the frequency of high sodium items can take various forms.

To identify and limit the highest sodium entrées to two per week, the cycle menu and sodium amounts are needed. However, some minor adjustments to this week's entrées helped lower its sodium average.

Monday	Tuesday	Wednesday	Thursday	Friday
Main Entrée				
Turkey and Cheese Sandwich	**Build-Your-Own Taco**	Chicken Nuggets	French Toast Sticks Sausage Patty or **Omelet**	Beef Teriyaki Dipper Fried Rice
Alternate Entrée				
Turkey Sandwich	Turkey Sandwich	Turkey Sandwich	Turkey Sandwich	Turkey Sandwich
Vegetables				
Roasted Root Veggies Broccoli Tossed Salad	Mexicali Corn Refried Beans Tossed Salad	Mashed Potatoes Carrot Sticks Tossed Salad	Sweet Potato Fries Carrot Raisin Salad Tossed Salad	Celery Chinese-Style Veggies Tossed Salad
Fruit				
Apples Bananas Peaches **Mixed Berry Cup**	Apples Bananas Pears **Strawberries**	Apples Bananas Fruit Cocktail **Pineapple Chunks**	Apples Bananas Oranges **Mixed Berry Cup**	Apples Bananas Peaches **Strawberries**
Condiments				
~~Ketchup~~ Mustard Salad Dressing	~~Ketchup~~ Mustard Salad Dressing	Ketchup Mustard Salad Dressing	Syrup Salad Dressing	Salad Dressing
Milk				
Milk, 1% Chocolate Milk, 1% Plain Milk, Skim Plain	~~Milk, 1% Chocolate~~ Milk, 1% Plain Milk, Skim Plain	Milk, 1% Chocolate Milk, 1% Plain Milk, Skim Plain	~~Milk, 1% Chocolate~~ Milk, 1% Plain Milk, Skim Plain	Milk, 1% Chocolate Milk, 1% Plain Milk, Skim Plain

Main Entrée:
A build-your-own taco was substituted for the chicken and cheese tortilla. Allowing students to choose their own toppings can also help lower sodium intake.

An omelet was added as a lower-sodium alternative to the sausage patty.

Alternate Entrée:
Adding one or more lower-sodium alternative entrées, such as a turkey sandwich (without cheese), is another avenue to reduce the frequency of consumption of high-sodium entrées. You could offer the same or a unique alternative entrée daily.

Vegetables:
Potato products generally contain more sodium than other vegetable options and are frequently served with condiments. On Monday, French fries were substituted with roasted root vegetables to reduce the number of potato products on the weekly menu. This substitution also allowed for the removal of ketchup from the menu that day.

Fruit:
The variety of fruit on the menu was increased to encourage students to select it as a meal component. More students selecting fruit may help displace the consumption of higher-sodium items.

Condiments:
Ketchup was removed from Tuesday's menu as it was not paired with a specific menu item. You can review previous production records "number of portions served" to help justify the removal of condiments from the menu.

Milk:
Chocolate milk was removed from the menu on Tuesday and Thursday. If you are considering removing flavored milk from your menu or reducing the frequency in which it is served, garnering support from your Local Wellness Committee may prove helpful. Open communication explaining "why" with students and parents is strongly encouraged.

FINDING SODIUM IN THE NUTRITION FACTS LABEL

Now that you recognize food products that may be high in sodium, let's review where sodium amounts can be found to identify food products that are lower in sodium. Sodium and other nutrition information are located on the **Nutrition Facts label**, which is usually placed on the outermost packaging of a food product. If the Nutrition Facts label is not readily available, nutrient information can be found with a food product's specification sheet or the manufacturer's label.

After you find the Nutrition Facts label, locate the **Serving size** in the serving information near the top of the label and **Sodium** in the list of nutrients. The sodium amount listed refers to the amount of sodium contained in one serving of the product (milligrams of sodium per serving of product).

Nutrition Facts

177 servings per container

Serving size 5 Pieces (77g)

Amount Per Serving

Calories 140

	% Daily Value*
Total Fat 6g	8%
Saturated Fat 1.5g	8%
Trans Fat 0g	
Cholesterol 50mg	17%
Sodium 250mg	11%
Total Carbohydrate 3g	1%
Dietary Fiber 0g	0%
Total Sugars 0g	
Includes 0g Added Sugars	0%
Protein 19g	38%

Now you try!

Sometimes the Nutrition Facts label doesn't reflect the actual serving size of the food product used in a school nutrition program. When this occurs, it's important to know how to calculate accurate nutrient amounts.

For example, if a high school lunch program operator wanted to serve six (6) chicken nuggets instead of five (5), how would they use the Nutrition Facts label provided on this page to calculate the total amount of sodium in six (6) nuggets?

STEP 1:

Calculate the amount of sodium per nugget

Amount of sodium ÷ Number of pieces per serving = Amount of sodium per piece

250 mg sodium ÷ 5 nuggets = 50 mg of sodium per nugget

STEP 2:

Multiply the amount of sodium per nugget by the new serving size

Amount of sodium per piece x New number of pieces per serving = Amount of sodium per serving

50 mg sodium per nugget x 6 nuggets per serving = **300 mg of sodium per serving**

Please visit the FDA's *What's New with the Nutrition Facts Label* to learn more about the new Nutrition Facts label!

RESEARCHING HIGH-SODIUM MENU ITEMS

Finding lower-sodium versions of high sodium menu items is another approach you can use to reduce the total amount of sodium in your school menu. The variability or range of sodium in high sodium menu items is typically quite large. You can utilize vendors' catalogs, food databases, and engage in general market research to determine where your menu items fall within the sodium range of other like items.

Check out *FoodData Central*, the USDA food composition database.

Use the following menu template to investigate your high sodium menu items' sodium content:

1. Write in a typical weekly menu.

2. Circle menu items known to be higher in sodium.

   Note the sodium content value for each high sodium menu item.

3. Scan the market to see if lower-sodium versions of your circled menu items are available.

4. If lower-sodium versions of your menu items are available, consider product substitution. Check out the worksheet *Sodium Swaps: Utilizing Product Substitution* to learn more about finding lower-sodium products and recipes for school menus.

Monday	Tuesday	Wednesday	Thursday	Friday
Main Entrée				
Vegetables				
Fruit				
Condiments				
Milk				

Adjusting the frequency in which high sodium menu items are served and finding lower-sodium versions of existing menu items are small changes that can make a big difference in your weekly sodium total!

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Suggested Reference Citation:
Institute of Child Nutrition. (2024). *Shaking it up! Small changes lead to big flavors. Scoping out sodium in school menus.* University, MS: Author.

10/04/2024

Shaking It Up!
SMALL CHANGES LEAD TO BIG FLAVORS

SODIUM SWAPS: UTILIZING PRODUCT SUBSTITUTION

As a school nutrition operator, you are probably familiar with the menu items that contribute the most sodium on a daily and weekly basis. A best practice to reduce the amount of sodium in a school nutrition program's menu is to use **product substitution**. It involves exchanging one menu item with another, generally within the same meal pattern component. Using product substitution to replace higher-sodium food products with lower-sodium versions can make a big difference in the weekly sodium total, even if the reductions are small. Understanding sodium nutrient label claims and identifying foods and condiments that are typically lower in sodium can help you utilize product substitution to the fullest extent possible.

SODIUM LABEL NUTRIENT CLAIMS

When searching for lower-sodium versions of food products, you may come across terms such as *Low Sodium* or *Sodium Free*. These terms are known as **nutrient claims**. The U.S. Food and Drug Administration (FDA) regulates the nutrient claims that food manufacturers can use to describe their products and put on food labels.

The FDA defines six (6) claims that may be used to indicate the amount of sodium in a food product. You can use these claims to quickly identify food products that ***may*** offer lower-sodium versions of the food products you currently use.

FDA-APPROVED SODIUM LABEL CLAIMS

What It Says	What It Means
Sodium Free/Salt Free	Less than 5 mg of sodium per serving
Very Low Sodium	35 mg of sodium or less per serving
Low Sodium	140 mg of sodium or less per serving
Reduced Sodium	At least 25% less sodium than the regular product
Light in Sodium/Lightly Salted	At least 50% less sodium than the regular product
No Salt Added/Unsalted	No salt is added during processing – but these products may not be salt/sodium-free unless stated. The label must declare, "This is not a sodium-free food" on the information panel if the food is not "sodium free."

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FINDING THE LOWEST-SODIUM PRODUCT

Do not fully rely on a label claim to guarantee you have the lowest-sodium version of a product. For example, a *Reduced Sodium* product may not necessarily be *Low Sodium*. Recall that a product labeled *Reduced Sodium* has at least 25% less sodium than the regular product; a product labeled *Low Sodium* contains 140 mg of sodium or less per serving.

The following example illustrates the importance of reading the actual sodium amounts listed on Nutrition Facts labels.

A serving of the ***Reduced Sodium*** **black beans** (210 mg of sodium) has about 54% less sodium than a serving of **regular black beans** (460 mg sodium)! However, at 210 mg of sodium per serving, it is not considered a *Low Sodium* product.

A serving of ***Low Sodium*** **black beans** (130 mg of sodium) has significantly less sodium than a serving of ***Reduced Sodium*** **black beans** (210 mg of sodium).

REGULAR SODIUM BLACK BEANS

Nutrition Facts

3 servings per container

Serving size	1/2 Cup (130g)
Amount Per Serving	
Calories	**100**
	% Daily Value*
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 460mg	20%
Total Carbohydrate 20g	7%
Dietary Fiber 5g	18%
Total Sugars 0g	
Includes 0g Added Sugars	0%
Protein 7g	14%
Vitamin D 0mcg	0%
Calcium 40mg	4%
Iron 1.5mg	8%
Potassium 450mg	10%

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

REDUCED SODIUM BLACK BEANS

Nutrition Facts

3 servings per container

Serving size	1/2 Cup (130g)
Amount Per Serving	
Calories	**110**
	% Daily Value*
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 210mg	9%
Total Carbohydrate 20g	7%
Dietary Fiber 5g	18%
Total Sugars 0g	
Includes 0g Added Sugars	0%
Protein 7g	14%
Vitamin D 0mcg	0%
Calcium 40mg	4%
Iron 1.6mg	8%
Potassium 470mg	10%

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

LOW SODIUM BLACK BEANS

Nutrition Facts

3 servings per container

Serving size	1/2 Cup (130g)
Amount Per Serving	
Calories	**110**
	% Daily Value*
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 130mg	6%
Total Carbohydrate 20g	7%
Dietary Fiber 5g	18%
Total Sugars 0g	
Includes 0g Added Sugars	0%
Protein 7g	14%
Vitamin D 0mcg	0%
Calcium 80mg	6%
Iron 1.6mg	8%
Potassium 480mg	10%

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

The nutrient content found on these Nutrition Facts labels for regular, Reduced Sodium, and Low Sodium black beans are for educational purposes only. The nutrient content of canned black beans varies by manufacturer formulation and brand.

TAKE ACTION TO COMPARE!

Compare Nutrition Facts labels of similar products among the same brand and between different brands to find the lowest-sodium version. Keep in mind that the sodium level of a food product that fits the menu of one school district may not fit the menu of another school district, based on overall menu offerings and student preferences.

CHOOSING LOWER-SODIUM FOODS AND CONDIMENTS

The following table lists food products and condiments that are typically lower in sodium. Incorporating more of these foods in your menu, as well as scratch or speed-scratch food preparation, will help you reduce your weekly sodium totals.

LOWER-SODIUM FOODS BY MEAL PATTERN COMPONENT	
Fruit	• Most fresh, frozen, and canned fruit is naturally sodium-free or very low in sodium.
Vegetables	• Fresh or frozen vegetables are naturally low in sodium. Use lower-sodium condiments to add a boost of flavor. The *Culinary Institute of Child Nutrition* (CICN) offers many flavor enhancement ideas. • Only choose canned vegetables labeled *Low Sodium* or *No Salt Added*. • Avoid prepackaged vegetable dishes with sauce.
Grains	• Whole grains (e.g., brown rice, barley, quinoa) and pasta are naturally lower in sodium than more processed grain products, such as bread, rolls, bagels, and tortillas.
Meats/Meat Alternates	• Fresh meat is the lowest-sodium variety of meat; avoid meat injected with or packaged in a saline or sodium solution. Check out ICN's *Food Safety Resources* for meat storage and preparation tips. • Boiled eggs are low in sodium if no salt is added. • Choose canned beans labeled *Low Sodium* or *No Salt Added*. • Use "unbreaded" meat products – they are lower in sodium than "breaded" options. • Select lower-sodium varieties of cheese. Swiss, Monterey Jack, cheddar, and mozzarella cheeses are lower in sodium than processed cheeses, like American.
Milk	• Plain, white milk is lower in sodium than flavored milk (e.g., chocolate).

Lower-Sodium Condiments

Use herbs, spices, seasonings, and condiments to enhance the flavors of lower-sodium foods.

- To season or flavor food, use:
  - Fresh or dried herbs and spices or salt-free seasoning mixes
  - Chopped aromatic vegetables (e.g., garlic, ginger, carrots, celery, onions, peppers)
  - Lemon or lime juice
- On the salad bar line, offer:
  - Fresh salsa
  - Flavored vinegars
  - Simple salad dressings (e.g., vinegar and oil)

The *CICN* provides a number of resources and trainings regarding flavor enhancement – check out the trainings on made from scratch salad dressings and condiments, fresh herbs, and spice blends.

Child Nutrition Recipe Box
Healthy Recipes for Child Nutrition Professionals

The *Child Nutrition Recipe Box* (CNRB) provides many delicious, standardized recipes that are lower-sodium alternatives to prepackaged items. Many of the recipes feature the use of herbs, spices, and other low sodium seasonings.

CICN CULINARY INSTITUTE OF CHILD NUTRITION

The *Culinary Institute of Child Nutrition* (CICN) provides trainings and resources to increase the culinary skills of school nutrition operators in support of preparing and serving kid-approved, healthy school meals.

PRACTICING PRODUCT SUBSTITUTION

This popular lunch menu offers many opportunities in which product substitution and other sodium-reduction practices can be utilized to lower the total amount of sodium.

LUNCH MENU	PRODUCT SUBSTITUTION AND OTHER SODIUM-REDUCTION PRACTICES
Spaghetti with Tomato Sauce	• Look for a lower-sodium tomato sauce; add flavor with oregano, basil, and garlic. • Consider making your own sauce in house.
Garlic Bread	• Look for lower-sodium versions of garlic bread. • Consider making your own garlic bread (choose a lower-sodium bread; make garlic spread with your own recipe).
Turkey and Cheese Sandwich	• Look for lower-sodium versions of turkey, cheese, bread, and condiments. • Offer two versions of the sandwich – one with cheese, one without. • Limit the size and number of condiment packets offered.
Tossed Salad	• Look for lower-sodium salad dressings. • Make your own vinegar and oil dressings. • Find lower-sodium alternatives to salad toppings (e.g., croutons, bacon bits).
Mixed Veggies	• Consider using fresh or frozen vegetables instead of canned, even if low sodium; flavor with herbs, spices, or salt-free flavoring mixes. • Incorporate a "Flavor Station" in your cafeteria where students can add herbs and spices to season foods to their liking.
Fruit Cocktail	• Provide more fresh, frozen, or canned fruit, which is naturally low in sodium.
Milk	• Consider offering flavored milk less often or not at all. • Place plain, white milk front and center to make it the easiest option for students to select.

Now it is your turn! Select one of your own weekly menus and explore how you can use product substitution to lower its overall sodium content. Start with small, manageable changes you can begin working on today, such as looking for lower-sodium versions of existing high-sodium menu items. Also, consider larger changes that you can work on throughout the school year, such as identifying heat-and-serve and convenience food menu offerings that could be made with a recipe.

Menu Items	Possible Substitutions

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Suggested Reference Citation:
Institute of Child Nutrition. (2021). *Shaking it up! Small changes lead to big flavors. Sodium swaps: Utilizing product substitution*. University, MS: Author.

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MALL CHANGES LEAD TO BIG FLAVORS

STRATEGIES, TIPS, AND TRICKS TO REDUCE SODIUM AND ENHANCE FLAVOR

In school nutrition programs, reducing the sodium content of a menu takes time. Recipes, food products, and menu items must be evaluated, revised, or replaced with lower-sodium versions, while maintaining student acceptability. For example, identifying higher-sodium products and ingredients allows you to replace items or balance your menu with lower-sodium options. This small step can lead to a big reduction in your weekly sodium average. Incorporating a variety of flavor enhancers and cooking techniques can help increase the flavor and reduce the need for high sodium products. Take it one strategy, tip, and trick at a time!

STRATEGIES TO REDUCE SODIUM

Look for lower-sodium versions of products in each procurement cycle (the process of selecting vendors and purchasing goods and services from them). Follow the steps outlined in ICN's *Working With Your Procurement Partners* worksheet to engage with brokers and vendors to help you find lower-sodium versions of products, or alternative lower-sodium foods similar to those on your current menu.

Keep in mind that recipes may need to be re-standardized if certain ingredients are substituted. Always test and standardize a recipe to the specific ingredients and equipment used in your food service operation. Follow the steps outlined in the *USDA Recipe Standardization Guide for School Nutrition Programs*. Remember to test new products and recipes with students for acceptability before making menu changes.

ICN's *Developing, Implementing, and Assessing Menu Surveys* and *Planning, Implementing, and Assessing Taste-Test Surveys* tip sheets provide ideas on implementing menu and taste test surveys.

Take a menu item inventory. Review your heat-and-serve and convenience food products to evaluate which can be transformed into speed-scratch recipes with little effect on labor. ICN's worksheet, *Popular Speed-Scratch Menu Items*, might give you some ideas! Aim to replace one high sodium menu item at a time with a speed-scratch recipe, with a possible goal of one or two per school year. Be sure to evaluate the recipes' labor and food costs to guarantee successful implementation.

Balance the use of high sodium ingredients and products. When developing a menu, be mindful of higher-sodium ingredients, such as cheese. Rather than removing the cheese, consider balancing higher-sodium options with lower-sodium options. For example, when offering burgers, give students a choice between a hamburger and a cheeseburger to reduce the overall amount of cheese consumed. When serving a high sodium menu item such as pizza, balance the menu with fresh fruits and vegetables, which are naturally low in sodium.

ICN's worksheets, *Setting Weekly and Daily Sodium Goals* and *Weighted Nutrient Analysis of Sodium*, provide more tips for balancing the sodium in your menus to meet the sodium limits.

Incorporate more fruits and vegetables. In addition to adding more whole fruits and vegetables as sides to your daily and weekly menu, consider adding more produce and low sodium legumes to mixed-dish recipes. For example, instead of:

- Heat-and-serve mac-and-cheese, add broccoli for "*Mac-n-Trees*"
- Heat-and-serve all-meat chili, add no or low sodium beans to increase the yield, or add a plant-based meat/meat alternate (M/MA)

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After modifying a recipe, you need to re-calculate how the menu item credits to the meal pattern. Use *Appendix A: Recipe Analysis Workbook* in the *Food Buying Guide for Child Nutrition Programs* to determine the meal pattern contribution for your recipes. After creating a USDA eAuthentication account, you can also access the Recipe Analysis Workbook via the *Food Buying Guide Interactive Web-Based Tool* or *Mobile App*.

The *Child Nutrition Recipe Box* is a great resource to find standardized recipes that include the desired ingredients.

Focus on flavor. Salt enhances the flavor of food. When revising a recipe to reduce sodium, do not remove or reduce salt without replacing it with flavor from spices, herbs, or culinary acids, which are naturally low in sodium. Use the following ideas for flavor development:

- Purchase unseasoned, pre-cooked products that you can add flavor to, which allows you to control the amount of sodium, customize your menus, and make them appealing to your students. Unseasoned, pre-cooked products are helpful for menu development and inventory control because they can be cross-utilized in different recipes. Some examples include:
  - Flavor unseasoned cooked or raw ground beef with a sodium-free taco spice blend for taco meat or a lower-sodium tomato sauce for sloppy joe's.
  - Spice up unseasoned frozen baked potato wedges with sodium-free Ranch or Cajun spice blends.
  - Add a blend of fresh or dried herbs to a pre-cooked roasted chicken to make an herb-roasted chicken.
- Add fresh herbs as a garnish to entrées. Cilantro and parsley are generally affordable for schools to buy in bulk and are easy to grow in a school garden!
- Consider adding culinary acids, such as vinegar and citrus (lemon, lime, and pineapple juices), to brighten and highlight the natural flavors of the food without adding any additional sodium. Add a squeeze of lime juice to taco meat or a splash of vinegar to beans.

Always taste the food when developing flavors to ensure proper seasoning amounts and acceptability. This is an important part of the product evaluation phase of standardizing a recipe.

ICN's *Mindfully Seasoning Your Menus* worksheet provides ideas of how to build a flavorful menu by purchasing or creating lower-sodium or sodium-free seasonings, condiments, sauces, and spice blends.

The Culinary Institute of Child Nutrition (CICN) provides *iBites Recipe Videos*, which feature how to use spices, herbs, and culinary acids, as well as a set of *Herbs and Spices Posters*, found on ICN's *Shaking It Up!* website under "Other Resources." The posters feature how to use dried spices, dried and fresh herbs, and spice blends. The Spice Blends poster features 12 different spice blend recipes you can create.

Cooking techniques that maximize flavor development. The following simple cooking techniques and strategies, in combination with seasoning, help develop flavor.

Cooking Technique*	Definition	Equipment	When to Add Seasoning	Recipe Examples
Roasting	A high heat cooking method in the oven	Oven 	Before	*Harvest Delight* *Herb Roasted Potatoes*
Sautéing	A dry heat cooking method; uses a small amount of oil	Tilt skillet preferred; can be done in the oven 	During	*Chicken Fajitas* *Collard Greens*
Stir-frying	A high heat cooking method in a lightly oiled pan (such as a wok) while stirring continuously	Tilt skillet preferred; can be done in the oven 	During	*Chicken Stir Fry* *Chinese-Style Vegetables*
Steaming	A moist heat cooking method that uses hot water vapors	Steamer or "combi" oven in a 2" perforated pan preferred; can also use a tilt skillet or oven  	After	*Honey Carrot Coins*

*Check out ICN's *Roasting Vegetables* *Manager's Corner* lesson plan and the *Cooking Methods and Recipes* videos for an overview of different cooking techniques.

TIPS AND TRICKS FOR USING LOWER-SODIUM PRODUCTS

As you consider incorporating lower-sodium products into your menu, below are a few tips and tricks to consider. ALWAYS taste test new products and recipes with your students!

Product	Lower-Sodium Options	Tips and Tricks
Bread/buns	• Lower-sodium bread/ buns	• Season lower-sodium bread/buns with garlic powder to mimic a salty flavor. • Add variety to bread/buns by seasoning with Italian herbs and spices or other dried herbs to create visual appeal and enhance flavor.
Breaded and seasoned meats/poultry	• Lower-sodium breaded, unseasoned meat/poultry • Unbreaded meat/poultry • Pre-made fresh burgers or chicken	• Reduce the use of seasoned or breaded chicken products to streamline inventory and control sodium. • Let students add low sodium sauces to unbreaded chicken to customize flavor (sriracha ranch, BBQ ranch, etc.). • Buy unseasoned chicken strips and season with sodium-free spice blends.
Canned beans	• Low sodium or no-salt-added canned beans • Individually quick-frozen (IQF) or dried beans	• Generally, it is a good practice to rinse and drain canned beans to reduce the sodium. However, some recipes require the bean liquid, so be sure to read the recipe first. • If purchasing no-salt-added canned beans, they may need to be cooked longer for a creamier and softer consistency.
Canned tomato products	• Low sodium or no-salt-added canned tomato products	• Enhance flavor with herbs, spices, and acids. For example, you can customize plain, crushed tomatoes with a salt-free Italian or pizza seasoning for a low sodium pizza sauce.
Canned vegetables	• Low sodium canned vegetables • Fresh or IQF vegetables; quality and appearance are better!	• For the best flavor and nutrient content, purchase fresh produce in season. • Drain and rinse canned vegetables to reduce sodium. • When steaming, always thaw frozen vegetables to help preserve food quality. • Consider roasting vegetables for added flavor. Avoid thawing frozen vegetables before roasting them to help maintain their crisp texture and quality.
Cheese	• Lower-sodium cheese	• Swiss, Monterey Jack, cheddar, and mozzarella cheeses are lower in sodium than processed cheeses, such as American. • Pair cheese with ingredients lower in sodium, such as fresh fruits and vegetables. • Make cheese available as an accompaniment to sandwiches or burgers only
Condiments	• Lower-sodium condiments	• Make your sauces/dips in-house. Look for other flavors to replace the salt: herbs, spices, and acids. • Offer and limit condiment packets vs. using self-serve dispensers.
Deli/cured meats	• Lower-sodium deli/ cured meats • Freshly cooked meats	• Purchase lower-sodium deli/cured meats. • Offer sandwiches that use whole meat products (meatballs, diced chicken, chicken strips, shredded chicken, turkey roast, pulled pork, and plant-based options). • Reduce the meat in a sandwich by half and replace with another creditable meat/ meat alternate, such as hummus.
Salad dressings	• Speed-scratch	• Make your own salad dressings. Start with the most popular, like ranch. Once the ranch recipe production is successful, and the students have accepted the new flavor profile, customize and introduce other flavors (BBQ ranch, salsa ranch, sriracha ranch).

Soups	• Lower-sodium soups
	• Speed-scratch
		• Implement speed-scratch versions for sodium control.
		  ◦ Use low sodium or no-salt-added broth or soup base.
		  ◦ Use water and season with fresh or dried herbs to add flavor.

ACTIVITY: SLASH THE SALT AND FOCUS ON FLAVOR

Using the information in this worksheet, think about how you can lower the sodium content and improve the taste of a chicken fajita recipe. Begin by reviewing the main ingredient list of a chicken fajita recipe provided in the left-hand column. Then, list the ingredients you would change or add to the recipe to lower the sodium content in the middle column. Last, list the culinary techniques you would use to enhance the recipe's flavor in the right-hand column.

Chicken Fajita Recipe Ingredients	Ingredients to Change or Add to Reduce Sodium	Culinary Techniques to Enhance Flavor
Fajita chicken strips, frozen, cooked	***Unseasoned chicken strips***	***Incorporate a sodium-free spice blend***
Green peppers		
Onions		
Canned corn		
Canned tomatoes		
Canned salsa		
Flour tortillas		

Now, check out this *Chicken Fajitas - USDA Recipes for Schools*. Review how herbs, spices, culinary acids, and culinary techniques are used to reduce sodium and enhance the flavor of this recipe in the example below.

The recipe features lower-sodium, unseasoned chicken strips.

A sodium-free spice blend jazzes up the chicken!

Frozen corn adds a fresh flavor without the salt.

No-added-salt tomatoes and low sodium salsa keeps the sodium in check.

Fresh squeezed lime juice adds a spritz of acid that brightens flavors.

Fresh peppers and onions are sautéed for added flavor.

Consider adding affordable fresh herbs, such as fresh cilantro, to increase presentation appeal and add flavor.

Chicken Fajitas

NSLP/SBP CREDITING INFORMATION

One fajita provides 2 oz eq meat, ⅛ cup starchy vegetable, ⅛ cup additional vegetable, and 1 oz eq grains.

Ingredients	100 servings	
	Weight	Measure
Frozen chicken strips, cooked, thawed	13 lb	3 gal 2 qt
Ground black or white pepper		2 Tbsp 2 tsp
Garlic powder		2 Tbsp 2 tsp
Chili powder		¼ cup
Ground cumin		¼ cup
Dried oregano		1 Tbsp 1 tsp
Ancho chili powder	3 ½ oz	¾ cup
Fresh green bell peppers, diced	1 lb	3 cups
Fresh onions, diced	1 lb 8 oz	1 qt ½ cup 3 Tbsp
Frozen corn, thawed, drained	4 lb 8 oz	3 qt ¼ cup 3 Tbsp 2 tsp
Canned no-salt-added diced tomatoes, drained	2 lb	3 ¼ cups 3 Tbsp 1 tsp (approx. ¼ No. 10 can)
Canned low sodium salsa	2 lb	3 ¾ cups (approx. ¼ No. 10 can)
Sugar		¼ cup
Canola oil		1 cup
Paprika		1 Tbsp 1 tsp
Fresh limes	8 each	8 each
Whole-grain tortillas, 8"	9 lb 6 oz	100 each (1 oz each)

Directions

1. Combine chicken, pepper, garlic powder, chili powder, cumin, oregano, and ancho chili powder in a large bowl. Stir well. Cover tightly. Allow chicken mixture to marinate for 12–24 hours. **Critical Control Point: Cool to 41 °F or lower within 4 hours. Critical Control Point: Hold at 41 °F or below.**
2. Place marinated chicken in a large stock pot. Cook uncovered over medium–high heat for 2 minutes. **Critical Control Point: Heat to 165 °F or higher for at least 15 seconds.** Set aside for Step 6.
3. In a medium stock pot, add peppers and onions. Cook uncovered over medium–high heat until onions are translucent. Set aside for Step 6.
4. In a medium stock pot, add corn, tomatoes, salsa, sugar, oil, paprika, and lime juice. Simmer uncovered for 5 minutes. Stir occasionally. Set aside for Step 6.
5. Combine chicken, peppers, onions, and corn mixture in a large bowl. Toss well.
6. Using a rounded No. 8 scoop, portion ½ cup 2 ⅓ tsp (about 4 ⅛ oz) chicken mixture on a tortilla. Spread filling on half of tortilla, and fold in other half like a taco. Place 25 fajitas on each steam table pan (12" x 20" x 2 ½"). For 100 servings, use 4 pans. **Critical Control Point: Hold for hot service at 135 °F or higher.**
7. Serve 1 fajita.

***ALWAYS test and standardize a recipe to your specific ingredients and equipment**. Follow the steps outlined in the *USDA Recipe Standardization Guide for School Nutrition Programs*.

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Shaking It Up!
SMALL CHANGES LEAD TO BIG FLAVORS

WEIGHTED NUTRIENT ANALYSIS OF SODIUM

It is important to know how much sodium is in your menu. Making small changes to reduce sodium in your menus will ultimately decrease the daily weighted sodium and weekly sodium averages. Weighted nutrient analysis is a great tool to ensure your menus meet the National School Lunch Program (NSLP) and School Breakfast Program (SBP) dietary specifications. Read more to learn how the daily weighted sodium total and weekly sodium average are calculated.

NUTRIENT ANALYSIS

In the NSLP and SBP, nutrients in foods can be calculated by a nutrient analysis—the process of calculating the nutritional content of food. The purpose of a nutrient analysis is to determine compliance with regulatory requirements for calories, saturated fat, and sodium, and to monitor levels of these dietary components in school meals. The nutrient analysis of menus averaged over a week is compared to the required nutrient standards for the age/grade group served.

The nutrient analysis of the offered menu must be based on weighted averages. A *weighted nutrient analysis* is the calculation that averages the nutrient content of all foods offered as part of the reimbursable meals. Food items are included based on portion sizes and serving amounts, and are weighted based on their proportionate contribution to the meals offered. This means that food items offered more frequently are weighted more heavily than those not offered as frequently.

ICN's *Setting Weekly and Daily Sodium Goals* worksheet provides information on how to set goals to meet the sodium limits.

WEIGHTED NUTRIENT ANALYSIS OF SODIUM

Weighted nutrient analysis can be used as a tool to balance sodium within a daily and weekly menu. For example, it can help you see how pairing higher-sodium entrées with fresh and/or frozen fruits and vegetables instead of canned produce or mixed side dishes can reduce the sodium contribution of that particular menu. Weighted nutrient analysis can also help you balance sodium by pairing higher-sodium entrées with popular lower-sodium entrées. This helps reduce the sodium contribution of higher-sodium entrées and also provides students the choice of lower-sodium options.

The weighted nutrient analysis can highlight where you can prepare and serve condiments and where you can make changes in products.

CALCULATING A WEIGHTED NUTRIENT ANALYSIS OF SODIUM FOR A WEEKLY MENU

To calculate a weighted nutrient analysis of a breakfast or lunch weekly menu, you need the following:

- The **estimated feeding figure** and the **number of servings** and **portion size** for each menu item offered.
- **Nutrient (sodium) information** for each menu item offered, including condiments, and any *extra foods, for each age/grade group.

**Noncreditable (extra foods)* are foods offered with a reimbursable meal that do not credit toward any food component (e.g., ice cream).

Conduct separate analyses for breakfast and lunch menus, as well as for each established USDA age/grade group.

Nutrition Facts

Serving Size	1 Tbsp (17g)
Amount Per Serving	
Calories	**20**
	% Daily Value*
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 180mg	8%
Total Carbohydrate 5g	2%
Dietary Fiber 0g	0%

STEP 1: Calculate the Daily Weighted Sodium Total

Let's look at an example by calculating the weighted sodium total for a sample daily menu.

On Monday, you plan to offer the **Menu Items** *(column 1)* listed in the table below, and you estimate that 100 middle school students *(feeding figure)* will go through the serving line. Follow the steps below using the table to calculate the weighted sodium average of the menu.

STEP 1A: For each **Menu Item** *(column 1)*, determine the amount of **Sodium (mg) per Serving** *(column 2)* and the **Number of Servings Offered** *(column 3)*.

STEP 1B: Multiply the amount of **Sodium (mg) per Serving** *(column 2)* by the **Number of Servings Offered** *(column 3)* to calculate the **Total Sodium (mg) of Each Menu Item** *(column 4)*.

1	2		3		4
Menu Items	**Sodium (mg) per Serving**	**X**	**Number of Servings Offered**	**=**	**Total Sodium (mg) of Each Menu Item**
Spaghetti w/ Meat Sauce (USDA Recipe)	293	X	85	=	24,905
WG Garlic Bread	184	X	75	=	13,800
Tuscan Grilled Cheese Sandwich (USDA Recipe)	301	X	15	=	4,515
Baked Beans (USDA Recipe)	183	X	15	=	2,745
Garden Salad	29	X	50	=	1,450
Garlicky Green Beans	3	X	35	=	105
Mandarin Oranges	0	X	75	=	0
Fresh Apples	0	X	10	=	0
Ranch Dressing (USDA Recipe)	181	X	50	=	9,050
Milk, Chocolate, 1%	130	X	85	=	11,050
Milk, Plain, 1%	105	X	5	=	525
Milk, Plain, Skim	105	X	5	=	+ 525
			Total Sodium (mg) for the Menu	=	68,670

STEP 1C: Determine the **Total Sodium (mg) for the Menu** by adding the **Total Sodium (mg) of Each Menu Item** *(column 4)*.

STEP 1D: Divide the **Total Sodium for the Menu** by the *feeding figure*.

68,670 mg ÷ 100 students = 686.7 mg

The weighted sodium total for this menu = 686.7 mg.

STEP 2: Calculate the Weekly Weighted Sodium Average

Calculate the weekly sodium average:

(from the example in Step 1) Day 1 = 686.7 mg
Day 2 = 988.9 mg
Day 3 = 843.6 mg
Day 4 = 1,041.9 mg
Day 5 = 1,069.4 mg

STEP 2A: Add the daily weighted sodium totals:

686.7 mg + 988.9 mg + 843.6 mg + 1,041.9 mg + 1,069.4 mg = 4,630.5 mg

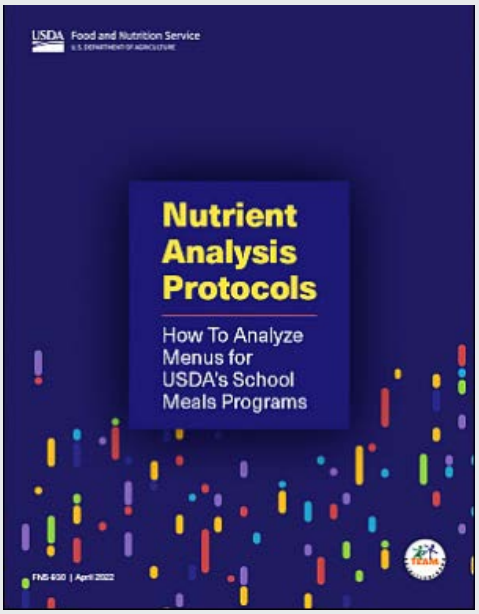
STEP 2B: Divide the sum by the number of menu days in the analysis:

4,630.5 mg ÷ 5 days = 926.1 mg

The weekly sodium average = 926.1 mg.

USDA-APPROVED NUTRIENT ANALYSIS SOFTWARE

- State agencies must use USDA-approved software when conducting a nutrient analysis as part of the Administrative Review process. For School Food Authorities (SFAs) that choose to conduct nutrient analysis, only USDA-approved software is considered an allowable cost to the nonprofit school food service account. Many of the USDA Approved Nutrient Analysis Software are also approved for menu planning (certification of compliance).
- Nutrient analysis of menus by SFAs is not required. However, many SFAs choose to conduct nutrient analysis as a program management option.
- USDA's Nutrient Analysis Protocols: How to Analyze Menus for USDA's School Meal Programs (NAP Manual) provides technical guidance for State agency or school nutrition professionals on calculating accurate nutrient analyses of school menus using their software. If you have nutrient analysis software, the nutrient analysis will be calculated for you. These steps and examples can help explain how a nutrient analysis is done. This manual is useful for guidance and understanding the process.



WEIGHTED SODIUM ANALYSIS EXAMPLE

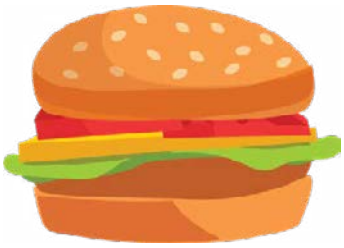
A popular menu item, burgers, provides an opportunity to showcase how a small change can help reduce sodium within a daily menu.

Scenario: *In years past, a cheeseburger on a whole grain-rich bun (630 mg of sodium) was planned as the only entrée on a particular menu. One hundred students typically went through the serving line, and 90 selected the cheeseburger.*

*To reduce sodium, the menu planner decided to provide a build-your-own burger bar, offering plain hamburgers with a whole grain-rich bun (396 mg of sodium), American cheese (234 mg of sodium), and an assortment of *condiments and fresh toppings. After trialing the burger bar several times, the menu planner utilized their production records to plan 90 plain hamburgers, 75 slices of cheese, and an assortment of condiments and fresh toppings.*

Let's examine how removing the cheese from the entrée and providing it as an optional accompaniment reduced the total sodium of the following menu items:

Old Menu



Cheeseburger:

630 mg of sodium x 90 planned servings = 56,700 mg of sodium

56,700 mg of sodium ÷ 100 *(feeding figure)* = 567 mg of sodium

New Menu

Hamburger: 396 mg of sodium x 90 planned servings = 35,640 mg of sodium

American cheese: 234 mg of sodium x 75 planned servings = 17,550 mg of sodium

35,640 mg of sodium (Hamburger)
+ 17,550 mg of sodium (American cheese)
53,190 mg of sodium

53,190 mg sodium ÷ 100 (feeding figure) = 531.9 mg of sodium

The weighted sodium contribution of the cheeseburger was 567 mg.

The weighted sodium contribution of the hamburger and American cheese offered separately is approximately 532 mg.

The new menu reduced the sodium content by 567 mg - 532 mg = 35 mg of sodium.

**To simplify this activity, we only analyzed the sodium contribution from the cheeseburger (with whole grain-rich bun), hamburger (with whole grain-rich bun), and American cheese. Any condiments and fresh toppings offered will also need to be included in the weighted sodium analysis.*

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Shaking It Up!
SMALL CHANGES LEAD TO BIG FLAVORS

MINDFULLY SEASONING YOUR MENUS

Enhancing the flavors of your menu is essential to maintaining student acceptability while lowering sodium content. Build a flavorful menu that is low in sodium by purchasing or creating lower-sodium or sodium-free seasonings, condiments, sauces, and spice blends.

CONDIMENTS, SAUCES, AND SEASONINGS

Lower-sodium condiments, sauces, seasonings, and spice blends are fantastic complements to the variety of cuisines offered in today's school nutrition programs. They allow you to add flavorful variety to your menu while using many of the same core ingredients. For example, seasonings can transform the rice on your menu into Spanish or Mexican rice, cilantro-lime rice, or Asian-style stir-fried rice. However, condiments, sauces, and seasonings can also be a hidden source of sodium. The following strategies will assist you in adding flavor to your menu while keeping sodium in check.

CONDIMENTS AND SAUCES

Condiments are here to stay, from the classic ketchup and mustard, to the always popular ranch dressing, and the hot sauces students often request. As students are exposed to more diverse cuisines and sauces, they are interested in pairing those sauces with other foods. Think about the different types of condiments and sauces in your cycle menu. Review the table below and check the condiments and sauces you currently offer.

Condiments and Sauces			
☐ BBQ sauce	☐ Buffalo sauce	☐ Cheese sauce	☐ Chili sauce
☐ Curry	☐ Dipping sauce	☐ French dressing	☐ Guacamole
☐ Hoisin sauce	☐ Honey mustard	☐ Italian dressing	☐ Ketchup
☐ Mandarin sauce	☐ Marinara sauce	☐ Mayonnaise	☐ Mustard
☐ Ranch dressing	☐ Salsa	☐ Sweet-and-sour sauce	☐ Soy sauce
☐ Sriracha sauce	☐ Szechuan sauce	☐ Taco sauce	☐ Teriyaki sauce
☐ Tomato-based sauces	☐ Other:	☐ Other:	☐ Other:

Consider the condiments and sauces you currently offer and answer the following questions:

Are lower-sodium versions available for purchase?
- Identify the sodium levels of your current condiments and sauces.
- Conduct market research to identify potential lower-sodium versions.

NO

Can you create a lower-sodium version using a recipe?

To get started, check out the recipes listed on the following page.

YES

Discuss your menu needs with your vendors.

Review ICN's *Working With Your Procurement Partners* worksheet to learn more about working with your vendors to procure lower-sodium products.

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Condiment and Sauce Recipes*	
Child Nutrition Recipe Box (CNRB)	*Healthy School Recipes*
Creamy Dip for Fresh Vegetables	Classic Roasted Red Pepper Hummus
Ranch Dressing	Cucumber Tzatziki
Stir-Fry Sauce	Pesto (Nut Free)
Teriyaki Sauce	Peanut Butter Vanilla Yogurt Dip
Tomato Sauce	Southwestern Black Bean Dip
White Sauce	Tangy BBQ Sauce
**Only a sample of the condiment and sauce recipes available on the CNRB and Healthy School Recipes websites are listed above. Explore each website for additional ideas.*	

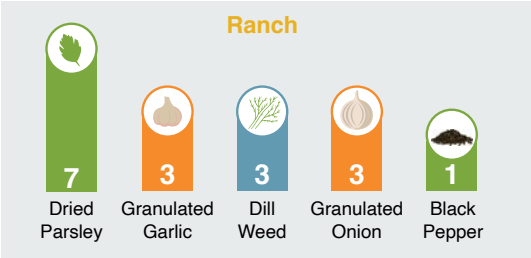
SEASONINGS AND SPICE BLENDS

Seasonings, such as garlic salt, taco, and chili seasoning, are often used to flavor meats, vegetables, rice, and beans. Consider reducing the use of these items or substituting seasonings with lower-sodium or sodium-free options:

- Purchase lower-sodium or sodium-free versions of seasonings.
- Purchase or make your own "spice blends"—spices and/or herbs with no added salt.
- Replace garlic salt with chopped garlic or garlic powder.
- Replace onion salt with fresh or frozen chopped onions, onion powder, or dried onions.

The *Culinary Institute of Child Nutrition* (CICN) provides a set of Herbs and Spices Posters, found on ICN's *Shaking It Up!* website under "Other Resources." The posters illustrate methods for using dried spices, dried and fresh herbs, and spice blends. The Spice Blends poster features 12 different spice blend recipes. Each spice blend recipe consists of ingredients with a "part" that references the ratio of each ingredient in the recipe. Using ratios allows you to determine the overall yield of the seasoning mix.

For example, the Ranch spice blend recipe calls for seven parts dried parsley; three parts each granulated garlic, dill weed, and granulated onion; and one part black pepper. You determine the measure you want one part to represent. If one part = ¼ cup, multiply the number of parts for each ingredient by ¼ cup to determine the yield for each ingredient.



Dried parsley	7 parts	¼ c + ¼ c + ¼ c + ¼ c + ¼ c + ¼ c + ¼ c	1 ¾ c
Granulated garlic	3 parts	¼ c + ¼ c + ¼ c	¾ c
Dill weed	3 parts	¼ c + ¼ c + ¼ c	¾ c
Granulated onion	3 parts	¼ c + ¼ c + ¼ c	¾ c
Black pepper	1 part	¼ c	¼ c
		Yield:	4 ¼ c

EVALUATING SEASONING PACKETS

Seasoning your menu items without a purchased seasoning packet might seem daunting. However, take a detailed look at the packets you are using—you might be surprised by their ingredients! Follow the steps below and fill out the table with the requested information.

1 **Choose any two purchased seasoning packet blends from your inventory.**
Write the names of the seasonings.

2 **Locate the Nutrition Facts label for each packet.**
Document the amount of sodium per serving.

3 **Read each packet's ingredient list.**
Ingredients are listed in descending order from greatest to smallest amount (by weight). In the order listed, write the names of the herb and spice ingredients. Be aware that the manufacturer may use language such as "other spices" for any herbs and spices present in minimal quantities. Do not include the names of food or color additives.

Seasoning Packet #1		
Name:		
Sodium amount/serving:	mg	mg
Ingredients:		

4 **Evaluate the seasoning packet ingredients.** Can these herbs and spices be purchased individually to make your own lower- or sodium-free seasoning blend? Utilize CICN's *Spice Blends poster* to help you determine specific ingredient ratios. You can get the same flavor using a blend of spices without adding salt.

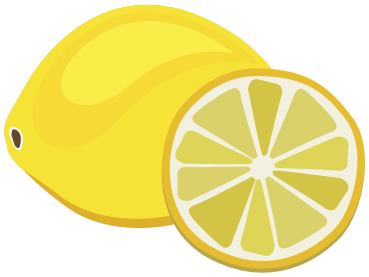
Healthy School Recipes also provides some spice blend recipes!

FLAVOR STATIONS

A flavor station can be a creative avenue for students to customize their trays and add as little or as much flavor as they desire. Flavor stations are available from several manufacturers, OR you can create your own. A station can be assembled at the end of your serving line or elsewhere in the cafeteria—any place that is easy for students to access. Some schools have success with shaker containers, while others prefer providing individual portion packets. You can include spices, spice blends, seasonings, condiments, and fresh items (when appropriate). The choices offered at a middle or high school may differ from those provided at an elementary school, but that's okay!

Your flavor station should accommodate your menu. Consider the following:

- Dried herbs and spices, such as oregano, red pepper flakes, and cinnamon
- Spice blends, including BBQ, chili, jerk, and ranch (review CICN's *Spice Blends poster* for 12 different spice blend recipes you can create on your own)
- Lower-sodium hot sauces, such as chili, hot pepper vinegar, and sriracha sauces
- Dipping sauces such as BBQ, buffalo, honey mustard, and ranch made from lower-sodium recipes
- Fresh ingredients, such as lime and lemon slices and herbs



MEETING STUDENT DEMAND

How can you meet the demand for condiments, sauces, and seasonings AND limit the sodium? Here are some ideas to consider:

- Purchase lower-sodium versions.
- Offer and limit condiment packets vs. using self-serve dispensers.
- Utilize spice blends in your recipes and at flavor stations.
- Save money and make your own in-house "special sauces." Adjust the flavor profiles to your students' taste preferences and give them creative names, such as "Tiger's Tangy Teriyaki" or "Roaring Ranch."
- Visit local restaurants to survey their menus and specials. Bring back ideas to create a lower-sodium version of these products for your schools.

Enhance the flavors of your menu with lower-sodium or sodium-free condiments, sauces, seasonings, and spice blends.

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SETTING WEEKLY AND DAILY SODIUM GOALS

On April 25, 2024, USDA published the Final Rule, "*Child Nutrition Programs: Meal Patterns Consistent with the 2020-2025 Dietary Guidelines for Americans*". This rule finalizes long-term school nutrition requirements based on the goals of the *Dietary Guidelines for Americans, 2020-2025*. Among the requirements is a single sodium reduction in the school lunch and breakfast programs. Evaluating daily weighted sodium totals and weekly averages can help balance menus and set daily goals to meet the limits.

SODIUM LIMITS

The average sodium content of meals offered over the week must meet the weekly sodium limit for each age/grade group.

National School Lunch Program Sodium Limits		
Age/Grade Group	**Current Sodium Limit: In place through June 30, 2027**	**Sodium Limit: Must be implemented by July 1, 2027**
Grades K–5	≤ 1,110	≤ 935
Grades 6–8	≤ 1,225	≤ 1,035
Grades 9–12	≤ 1,280	≤ 1,080

School Breakfast Program Sodium Limits		
Age/Grade Group	**Current Sodium Limit: In place through June 30, 2027**	**Sodium Limit: Must be implemented by July 1, 2027**
Grades K–5	≤ 540	≤ 485
Grades 6–8	≤ 600	≤ 535
Grades 9–12	≤ 640	≤ 570

The sodium limits explained:

- For the next three school years, until June 30, 2027, schools will maintain current sodium limits (Sodium Target 1A for lunch and Sodium Target 1 for breakfast).
- Beginning July 1, 2027, schools will implement an approximate 15 percent reduction for lunch and an approximate 10 percent reduction for breakfast from current sodium limits.

To set achievable sodium reduction goals to meet the limits, identify current **daily weighted sodium totals** and **weekly averages** for breakfast and lunch. A **weighted sodium analysis** considers the number of students that select each menu item when calculating sodium totals for each daily menu.

Refer to ICN's *Weighted Nutrient Analysis of Sodium* worksheet for more information on how to make those calculations. The worksheet walks through an example of how to calculate the weighted sodium total for each daily menu included in the analysis and how to average the weighted sodium total for the week.

USDA's *Nutrient Analysis Protocols: How to Analyze Menus for USDA's School Meals Programs (NAP Manual)* provides technical guidance on calculating accurate nutrient analyses of school menus using software.

DAILY WEIGHTED SODIUM TOTALS AND WEEKLY AVERAGES ACTIVITY

Using a USDA-approved nutrient analysis program or a spreadsheet, calculate and record the daily weighted sodium totals and weekly averages for four consecutive weeks of your lunch menus in the ***Daily Weighted Sodium Totals and Weekly Averages Table*** below. Then, calculate and record the difference between the weekly averages and your age/grade group's limit in the "Over/Under (+/-)" column.

Step 1

Calculate the **weighted sodium total** for each lunch menu included in the weekly analysis.

Daily Weighted Sodium Totals and Weekly Averages Table

Week	Monday Sodium (mg)	Tuesday Sodium (mg)	Wednesday Sodium (mg)	Thursday Sodium (mg)	Friday Sodium (mg)	Weekly Sodium (mg) Average	Sodium (mg) Limit	Over/Under (+ / -)
*Example	1,260	1,100	1,055	1,205	1,085	1,141	≤ 1,110	+31
**The provided example shows the daily weighted sodium totals and the weekly average for a K-5 elementary school lunch program. They compared their weekly sodium average to the current limit.*								
1								
2								
3								
4								

Step 2

Calculate the **weekly sodium average (mg)**.

Example:

1,260 mg + 1,100 mg + 1,055 mg + 1,205 mg + 1,085 mg = 5,705 mg

5,705 mg ÷ 5 days = 1,141 mg

Step 3

Calculate the difference between the **weekly sodium average** and the **sodium limit**.

Example:

1,141 mg - 1,110 mg = 31 mg

This menu's weekly sodium average is 31 mg above the weekly limit.

WEEKLY AND DAILY SODIUM GOALS

Now that you know your weekly sodium averages, you can set weekly and daily sodium goals.

WEEKLY AVERAGE SODIUM GOALS

Your weekly average sodium goal is pre-determined by the sodium limit. Upon calculating your weekly averages and comparing them to the sodium limit, identify which, if any, are above the limit. You must evaluate the daily sodium totals for any weeks above the limit.

DAILY SODIUM TOTAL GOALS

For any week you identified above the limit, you must look closely at its daily sodium totals. How many daily menus are **at or below the limit** that week? How many daily menus are **above the limit** that week?

In the example below, the weekly sodium average is 31 mg above the limit. Upon evaluating this week's daily weighted sodium totals, we can see that Monday's and Thursday's menus are above the weekly sodium limit.

Daily Weighted Sodium Totals and Weekly Averages Table

Week	Monday Sodium (mg)	Tuesday Sodium (mg)	Wednesday Sodium (mg)	Thursday Sodium (mg)	Friday Sodium (mg)	Weekly Sodium (mg) Average	Sodium (mg) Limit	Over/Under (+ / -)
*Example	1,260	1,100	1,055	1,205	1,085	1,141	≤ 1,100	+31

**The provided example shows the daily weighted sodium totals and the weekly average for a K-5 elementary school lunch program. They compared their weekly sodium average to the current limit.*

To reach your sodium reduction goals for daily menus **above the limit**, carefully evaluate the sodium content of the menu items, especially entrées and condiments.

- Are there lower-sodium products you could substitute for current products?
  - Use sodium nutrient claims (e.g., Low Sodium, Reduced Sodium) to quickly identify food products that may offer lower-sodium versions of the food products you currently use.
  - Compare Nutrition Facts labels of similar products among the same brand and between different brands to find the lowest-sodium version.
- Are all of the condiments offered with each menu necessary?
  - Limit condiment packets or self-service of condiments and creating your own lower-sodium versions in-house.
  - To season or flavor food, use fresh or dried herbs and spices or salt-free seasoning mixes, chopped aromatic vegetables (e.g., garlic, ginger, carrots, celery, onions, peppers), or lemon or lime juice.
- Would using more fresh fruits, vegetables, and meats reduce the sodium content of your menu?
  - Most fresh, frozen, and canned fruit is naturally sodium-free or very low in sodium.
  - Fresh or frozen vegetables are naturally low in sodium. Only choose canned vegetables or canned beans labeled Low Sodium or No Salt Added.
  - Fresh meat is the lowest-sodium variety of meat; avoid meat injected with or packaged in a saline or sodium solution.

- Have you considered replacing any heat-and-serve entrees with a scratch or speed-scratch recipe?
  - Scratch and speed-scratch food preparation provides more control over the ingredients you choose to use in a recipe. This, in turn, allows you to better manage the nutritional content (including sodium) of your menu items.

Refer to ICN's *Scoping Out Sodium in School Menus, Sodium Swaps: Utilizing Product Substitution, Principles of Speed-Scratch Food Preparation, Strategies, Tips, and Tricks to Reduce Sodium and Increase Flavor,* and *Mindfully Seasoning Your Menus* worksheets located on the *Shaking It Up!* website for additional ideas of how to reduce your daily menu sodium totals.

FOOD PRODUCT SODIUM GOALS

In addition to balancing your weekly menus and evaluating daily menu sodium totals to help you stay below the weekly sodium target, consider setting food product sodium goals. In 2021, the U.S. Food and Drug Administration (FDA) released *Guidance for Industry: Voluntary Sodium Reduction Goals* to spur the food industry to reduce sodium and make more no-salt-added, low-sodium, and reduced-sodium products available. You are encouraged to evaluate the sodium content, unit price, and meal contribution of each product that makes up your menu and recipes and compare it to potential new lower-sodium products each procurement cycle.

The goal for each food product that makes up your menu is to reduce the sodium to be able to easily plan menus within the regulations. When you are ready to procure lower-sodium products, you must include sodium nutrition standards within your product specifications.

Learn more about procuring lower-sodium products and how to write nutrition standards that limit sodium in ICN's *Working With Your Procurement Partners* and *Writing Product Specifications That Limit Sodium* worksheets.

FOOD PRODUCT SODIUM REDUCTION GOAL EXAMPLE

Year 1	Year 2	Year 3
ABC Ranch Dressing 370 mg sodium/serving	XYZ Ranch Dressing 280 mg sodium/serving	Scratch–made Ranch Dressing 180 mg sodium/serving

Identify your current daily weighted sodium totals and weekly averages to set achievable sodium reduction goals to meet the limits.

This project was funded using U.S. Department of Agriculture grant funds. The USDA is an equal opportunity provider, employer, and lender.

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For more information and the nondiscrimination statement in other languages:
https://www.fns.usda.gov/cr/fns-nondiscrimination-statement

Suggested Reference Citation:
Institute of Child Nutrition. (2024). *Shaking it up! Small changes lead to big flavors. Setting weekly and daily sodium goals.* University, MS: Author.

 10/04/24

LINKS

RESOURCE TITLE	LINK
Shaking It Up: Small Changes Lead to Big Flavors	https://theicn.org/shaking-it-up/
Scoping Out Sodium in School Menus	https://theicn.org/resources/1611/worksheets/122602/scoping-out-sodium-in-school-menus.pdf
Sodium Swaps: Utilizing Product Substitution	https://theicn.org/resources/1611/worksheets/122601/sodium-swaps-utilizing-product-substitution.pdf
Strategies, Tips, and Tricks to Reduce Sodium and Enhance Flavor	https://theicn.org/resources/2343/worksheets/125067/strategies-tips-and-tricks-to-reduce-sodium-and-enhance-flavor.pdf
Mindfully Seasoning Your Menus	https://theicn.org/resources/2343/worksheets/124790/mindfully-seasoning-your-menus.pdf
Weighted Nutrient Analysis of Sodium	https://theicn.org/resources/1611/worksheets/126119/weighted-nutrient-analysis-of-sodium.pdf
Setting Weekly and Daily Sodium Goals	https://theicn.org/resources/1611/worksheets/125388/setting-weekly-and-daily-sodium-goals-2.pdf
ICN's Ground Rules for Training	https://theicn.org/icn-resources-a-z/ground-rules-for-training-mini-posters/
Nutrition Standards in the National School Lunch and School Breakfast Programs (77 FR 4088)	https://www.federalregister.gov/documents/2012/01/26/2012-1010/nutrition-standards-in-the-national-school-lunch-and-school-breakfast-programs
Transitional Standards for Milk, Whole Grains, and Sodium (87 FR 6984)	https://www.federalregister.gov/documents/2022/02/07/2022-02327/child-nutrition-programs-transitional-standards-for-milk-whole-grains-and-sodium
Successful Approaches to Reduce Sodium in School Meals	https://www.fns.usda.gov/nslp/successful-approaches-reduce-sodium-school-meals-study
What's New With the Nutrition Facts Label?	https://www.fda.gov/media/135197/download
Child Nutrition Programs: Meal Patterns Consistent With the 2020-2025 Dietary Guidelines for Americans, 7 C.F.R § 210, 215, 220, 225, 226 (2024).	https://www.federalregister.gov/documents/2024/04/25/2024-08098/child-nutrition-programs-meal-patterns-consistent-with-the-2020-2025-dietary-guidelines-for
Culinary Institute of Child Nutrition (CICN)	http://www.theicn.org/cicn

RESOURCE TITLE	LINK
Child Nutrition Recipe Box (CNRB)	https://theicn.org/cnrb/
Team Nutrition Recipes	https://www.fns.usda.gov/tn/team-nutrition-recipes
FoodData Central	https://fdc.nal.usda.gov/
Chicken Fajitas - USDA Recipes for Schools	https://theicn.org/cnrb/recipes-for-schools-main-dishes/chicken-fajitas/
Working With Your Procurement Partners	https://theicn.org/resources/1616/worksheets/123831/working-with-your-procurement-partners.pdf
Herbs and Spices posters	https://theicn.org/resources/wpfdcat/1938/cicn-herbs-and-spices-posters
Nutrient Analysis Protocols: How to Analyze Menus for USDA's School Meals Programs	https://www.fns.usda.gov/tn/Nutrient-Analysis-Protocols-Manual
Writing Product Specifications That Limit Sodium	https://theicn.org/resources/1616/worksheets/123177/writing-specifications-that-limit-sodium.pdf

Adjusting Portion Size Handout

Sometimes the Nutrition Facts label doesn't reflect the actual serving size of the food product used in a school nutrition program. When this occurs, it's important to know how to calculate accurate nutrient amounts.

The scenario: a high school lunch program operator wanted to serve six (6) chicken nuggets instead of five (5), how would they use the Nutrition Facts label provided on this page to calculate the total amount of sodium in six (6) nuggets?

Nutrition Facts

177 servings per container

Serving size **5 Pieces (77g)**

Amount Per Serving

Calories **140**

	% Daily Value*
Total Fat 6g	**8%**
Saturated Fat 1.5g	**8%**
Trans Fat 0g	
Cholesterol 50mg	**17%**
Sodium 250mg	**11%**
Total Carbohydrate 3g	**1%**
Dietary Fiber 0g	**0%**
Total Sugars 0g	
Includes 0g Added Sugars	**0%**
Protein 19g	**38%**

Step 1: Calculate the amount of sodium per nugget

Amount of sodium ÷ Number of pieces per serving = Amount of sodium per piece

Step 2: Multiply the amount of sodium per nugget by the new serving size

Amount of sodium per piece x New number of pieces per serving =

Amount of sodium per serving

Slash the Salt and Focus on Flavor Handout

Think about how you can lower the sodium content and improve the taste of a chicken fajita recipe. Begin by reviewing the main ingredient list of a chicken fajita recipe provided in the left-hand column. Then, list the ingredients you would change or add to the recipe to lower the sodium content in the middle column. Last, list the culinary techniques you would use to enhance the recipe's flavor in the right-hand column.

CHICKEN FAJITA RECIPE INGREDIENTS	INGREDIENTS TO CHANGE OR ADD TO REDUCE SODIUM	CULINARY TECHNIQUES TO ENHANCE FLAVOR
EX: Fajita chicken strips, frozen, cooked	Unseasoned chicken strips	Incorporate a sodium-free spice blend
Green peppers		
Onions		
Canned corn		
Canned tomatoes		
Canned salsa		
Flour tortillas		

Sodium Targets and Timelines Handout

AGE/GRADE GROUPS	BREAKFAST SODIUM (MG) TARGET 1 THRU JUNE 30, 2027	LUNCH SODIUM (MG) TARGET 1A THRU JUNE 30, 2027
K–5		
6–8		
9–12		

Weighted Analysis Example Handout

A popular menu item, burgers, provides an opportunity to showcase how weighted nutrient analysis can help you balance offerings within a daily menu.

Scenario: In years past, a cheeseburger on a whole grain-rich bun (630 mg of sodium) was planned as the only entrée on a particular menu. One hundred students typically went through the serving line, and 90 selected the cheeseburger.

To reduce sodium, the menu planner decided to provide a build-your-own burger bar, offering plain hamburgers with a whole grain-rich bun (396 mg of sodium), American cheese (234 mg of sodium), and an assortment of condiments and fresh toppings. After trialing the burger bar several times, the menu planner utilized their production records to plan 90 plain hamburgers, 75 slices of cheese, and the servings for an assortment of condiments and fresh toppings.

Let's examine how removing the cheese from the entrée and providing it as an optional accompaniment reduced the total sodium (mg) of the following menu items:

Old Menu

- Cheeseburger:
  - _____ mg of sodium x _____ planned servings = _____ mg of sodium
  - _____ mg of sodium ÷ _____ (feeding figure) = _____ mg of sodium

New Menu

- Hamburger:
  - _____ mg of sodium x _____ planned servings = _____ mg of sodium
- American cheese:
  - _____ mg of sodium x _____ planned servings = _____ mg of sodium
- Separate:
  - _____ mg of sodium (Hamburger) + _____ mg of sodium (American cheese) = _____ mg sodium
  - _____ mg sodium ÷ _____ (feeding figure) = _____ mg of sodium

Compare the total mg of sodium for both options. Which is lower?

Sodium Reduction Practice Handout

Identify ways to decrease the sodium content of the menu. Review the lunch menu, and circle or highlight sneaky sources of sodium you notice on the menu. Which items could be served less frequently? What items could you add to the menu? What are other changes that could lower the sodium content?

Monday	Tuesday	Wednesday	Thursday	Friday
Main Entrée				
Turkey and Cheese Sandwich	Chicken and Cheese Tortilla	Chicken Nuggets	French Toast Sticks Sausage Patty	Beef Teriyaki Dipper Fried Rice
Vegetables				
French Fries Broccoli Tossed Salad	Mexicali Corn Refried Beans Tossed Salad	Mashed Potatoes Carrot Sticks Tossed Salad	Sweet Potato Fries Carrot Raisin Salad Tossed Salad	Celery Chinese-Style Veggies Tossed Salad
Fruit				
Apples Bananas Peaches	Apples Bananas Pears	Apples Bananas Fruit Cocktail	Apples Bananas Oranges	Apples Bananas Peaches
Condiments				
Ketchup Mustard Salad Dressing	Ketchup Mustard Salad Dressing	Ketchup Mustard Salad Dressing	Syrup Salad Dressing	Salad Dressing
Milk				
Milk, 1% Chocolate Milk, 1% Plain Milk, Skim Plain	Milk, 1% Chocolate Milk, 1% Plain Milk, Skim Plain	Milk, 1% Chocolate Milk, 1% Plain Milk, Skim Plain	Milk, 1% Chocolate Milk, 1% Plain Milk, Skim Plain	Milk, 1% Chocolate Milk, 1% Plain Milk, Skim Plain

Sodium Reduction Strategies:

SMART Goals Handout

A SMART goal is specific, measurable, achievable, relevant, and time-bound.

"S" stands for specific. State exactly what you want to accomplish. Ask yourself these questions:

- What do I want to accomplish?
- When will this happen?
- Where will this happen?
- Why am I setting this goal?

"M" stands for measurable. How will you evaluate whether or not you have met your goal? Ask yourself these questions:

- How much?
- How many?
- How will I know it's accomplished?
- What is the goal line?

"A" stands for achievable. Is your goal something you can accomplish? Ask yourself these questions:

- Am I prepared to make the commitment necessary to reach my target?
- Am I willing to make major changes in my routine and work environment?
- Do I need approval before major changes can be made?
- Is there a more achievable goal that I would be willing to work toward?

"R" stands for relevant. How does this goal align with your job responsibilities? Think about these questions:

- Do I have the resources I need?
- Does it make sense for my program?
- Does it align with my job responsibilities and staff needs?

"T" stands for time-bound. What timeframe would create a sense of urgency? Ask yourself:

- What can I do today to reach my goal?
- What can I do a week from now?
- What can I do a month from now?

To learn more about effective goal setting, visit *https://theicn.docebosaas.com* to enroll in our Effective Goals Setting Using SMART Goals iLearn course.

Action Plan

Instructions: Using the knowledge and skills you learned, complete the following application action plan.

List the most useful knowledge and/or skills you gained during this training.

What are some steps you can take to apply what you have learned?

What barriers do you think you might face at your job when trying to apply what you have learned from this training?

ASSESSMENT

1. Name the benefits of a lower-sodium meal pattern.
    a. Reduced blood pressure
    b. Reduced risk of cardiovascular disease, stroke, and coronary heart attack
    c. Altered taste buds at a young age to prefer less "salty" tastes
    d. All of the above

2. Where can you locate the amount of sodium on the updated Nutrition Facts label?
    a. Serving information
    b. Nutrients section
    c. Ingredients list
    d. Label claims

3. Which of the following food items is typically lower in sodium?
    a. Processed cheese
    b. Fresh fruit
    c. Frozen pizza
    d. Corned dogs

4. How can you evaluate food items to determine which product has lower-sodium content?
    a. Compare the sodium content per serving size
    b. Compare the calories of the products
    c. Compare the protein content of the products
    d. Compare the fat content of the products

5. What resources can you use to find new lower-sodium recipes?
    a. Culinary Institute of Child Nutrition (CICN)
    b. Child Nutrition Recipe Box (CNRB)
    c. Team Nutrition
    d. All of the above

6. What recipe reformulation strategy can help gradually lower the sodium content and enhance the flavor of recipes?
    a. Increasing the amount of salt used
    b. Using more processed ingredients
    c. Experimenting with different herbs and spices
    d. Adding more sugar to the recipe

7. What method can you use to gradually lower the sodium content of menu items while maintaining student acceptability?
   a. Reduce the portion size of the menu item
   b. Remove the menu item from the menu altogether
   c. Decrease the sodium content over time
   d. Replace the menu item with a similar, lower-sodium option

8. True or False: The weekly sodium limits for school lunch will remain at Target 1A through 6/30/27.
   a. True
   b. False

9. How can you establish and calculate daily and weekly sodium goals for food products, recipes, and school menus?
   a. Use a nutrition analysis software program
   b. Guess how much sodium is in the food
   c. Count the number of ingredients in the recipe
   d. Assume the use of lower-sodium products is enough

10. How can you analyze and assess a school menu to identify opportunities to reduce daily and/or weekly sodium levels?
    a. Review the nutritional information for each menu item
    b. Ask students for feedback on the menu
    c. Conduct taste tests on the menu items
    d. None of the above

RESOURCES

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The University of Mississippi

School of Applied Sciences

800-321-3054

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