

Introduction (I)

Course: Fruits and Vegetable Galore – Helping Kids Eat More

Lesson I: Keep Your Eye on the Prize – Healthy Children

Lesson Length: 60 minutes

Lesson Equipment and Materials

Equipment

Overhead projector or Power Point
Flip chart easel

Visual Aids

V-I1 *The 5P's*
V-I2 *Most Children are not Meeting...*
V-I3 *Nutrients in Fruit and Vegetables*
V-I4 *Benefits of Fruit and Vegetable Consumption*
V-I5 *Recommendations*
V-I6 *How Much is One Serving*

Supplies

Flip chart and marker
Bag of apples for prizes
Yo-Yo, small paper plate, tennis ball, Nerf ball, one cup bowl, baseball cap
White paper plates-three per participant
One piece of fruit in each color (red, white, yellow/orange, green, purple/blue)
Optional – M&M bag of candy for each group
Optional - Box of color crayons per group
Optional - 2005 Dietary Guidelines pamphlet
Optional - CD player with music

Participant Materials

H-I1 *Fruits and Vegetables Galore*
H-I2 *Nutrients in Fruits and Vegetables*
H-I3 *Fruit and Vegetable Personal Challenge*
H-I4 *Nutrition Web Addresses*

Lesson Preparation

1. Read the entire Introduction.
2. Reproduce all Participant Materials for Introduction.
3. State performance standards to participants for Introduction.
4. The term School Nutrition Program (SNP) will be used for school foodservice or Child Nutrition.

Lesson Outcome

On completion of the lesson, the learner will become actively involved in ensuring that the SNP increases the variety and consumption of fruits and vegetables based on the following **performance standards**:

- Identify personal health benefits of fruits and vegetables.
- Develop a personal plan to increase the variety and consumption of fruits and vegetables.

Lesson Instruction

◆ Setting the Stage

Focus learner's attention.

- ▷ **Pre-lesson activity** – have participants complete the sentences on *H-II Fruits and Vegetables Galore Training Activity*. At the beginning of the lesson quickly engage the group and highlight some of the questions that participants answered on the handout. Instructor note: Relate these questions to the information provided in the subsequent lessons in this course.

◆ Relate to Past Experience

- ▷ Your school was sent an incredible resource called **Fruits & Vegetables Galore: Helping Kids Eat More**. This was developed specifically for school foodservice by a combination of government agencies with help from several different groups. (Hold up and show the inside cover of the manual which displays the names and logos of the groups involved.)
- ▷ This course is designed around a three–booklet Team Nutrition technical assistance tool that is packed with tips to help you purchase, protect, prepare, present, and promote fruits and vegetables—and capture the interest of your students.
- ▷ Upon completion of this course you will have a plan for your school foodservice to increase fruits and vegetables in your meals.
- ▷ Your plan will outline steps for translating your commitment into action. Show *V-II 5P's*, you can think about the steps as **5 P's: purchasing, protection, preparing, presenting, and promoting**.
- ▷ These steps are interrelated and all are necessary. Only high quality, wholesome fruits and vegetables prepared carefully and presented attractively will entice student to select and eat them.

◆ In Today's Lesson...

- ▷ In today's introduction lesson you will understand the importance of achieving a healthy lifestyle for yourself and for the children you serve.

◆ You Will Be Able To...

- ▷ You will be able to identify personal health benefits of fruits and vegetables.

- ▷ Develop a personal plan that incorporates more fruits and vegetables in your diet.

◆ **Identify the Purpose**

- ▷ The first step in helping children move toward healthy eating habits is to make sure that **you** understand all the issues. What do you know about **weight, nutrition, and activity**?

Performance Standard

The learner will:

--List your personal health benefits of including more fruits and vegetables in your diet.

--Develop a personal plan to include more fruits and vegetables in your diet.

◆ **Lesson Content**

- ▷ There is a fight against childhood obesity in this country, and making fruits and vegetables fun, exciting, readily available, and easy to eat is more important than ever. Much of this fight can be won fostering early healthy eating habits by educating children about the importance of eating a variety of fruits and vegetables.

- ▷ **Understanding Healthy Weight.** We've all seen the headlines: *Childhood overweight and obesity are increasing, and the status of our children's health is declining.* According to data from the 1999-2000 National Health and Nutrition Examination Survey (NHANES) released in October 2002: (Source: School Foodservice & Nutrition, March 2003, p. 20) and the North Dakota 2003 Behavioral Risk Factor Surveillance Survey (BRFSS) and the 2003 North Dakota Youth Risk Behavior Survey (YRBS)

➔ *In the United States 64 percent of adults are overweight or obese; North Dakota is about "average" with a 63% of us overweight are obese.*

➔ *15 percent of young people (ages 6-19) are overweight (triple the number from 1980); In North Dakota, 11% of 7-8th graders and nine percent of 12th graders are overweight.*

➔ *Nationally, another 15 percent of 6- to 19-year-olds are at risk of becoming overweight. In North Dakota, 17% of 7-8th graders and 11% of 9-12th graders are at risk for becoming overweight.*

- ➔ *Nationally, more than 10 percent of preschool children (ages 2 to 5) are overweight. In fact, today's young people may be the first generation in U.S. history that has a shorter life span than their parents, due to increased obesity earlier in their lives (National Institutes of Health, 2005).*
- ▷ These numbers are a concern for several reasons. The most frequently mentioned one is that being overweight increases the risk of heart disease, stroke, Type 2 diabetes, arthritis, breathing problems and certain types of cancer.
- ▷ Another serious concern is that being overweight as a child increases the risk of becoming an overweight adult.
- ▷ Encouraging children to develop healthy eating habits is essential for achieving a healthy weight. Make small changes in your SNP. For example, serving low-fat or non-fat milk instead of whole milk and offer one cookie instead of two. Don't offer seconds on the main entrée but offer additional fruits or vegetables to fill kids up.
- ▷ Government guidelines now use the concept of Body Mass Index (BMI) to evaluate weight status in relation to height. BMI is also being used to define overweight in children. Easiest way to find your BMI is to use an online calculator or BMI table, like those found on the Web at <http://nhlbisupport.com/bmi/bmicalc.htm> (refer participants to *H-14 Nutrition Web Addresses* throughout this course).
- ▷ Obesity is caused by an imbalance between **energy input** and **energy output**. That means when anyone consumes more calories (energy units in food) than he or she is able to expend, the body is likely to gain fat.
- ▷ **Optional M&M Activity:** Give one bag of M&M candy to each group. Instruct them to share the bag with each other. Give them a moment to share. Now tell them they need to get and jog in place for _____ minutes for each M&M candy they ate. That is an example of energy in and energy out.
- ▷ The healthy way to a healthy weight is to make a lifetime commitment to eat smarter and move more.
- ▷ **Understanding Nutrition.** Show *V-12 Most Children Are Not Meeting the Recommendations*. Eating and obesity trends among today's youth reveal that nationally:
 - ➔ *Only 17% met the target of 3 servings of vegetables a day. (Children's mean intake of vegetables is 2.6 servings.)*
 - ➔ *Only 14% of school-age children met the target of 2 servings of fruit daily. (Children's mean intake of fruit is 1.4 servings.)*

- ➔ *In North Dakota 23.5% of 7-8th graders consume at least 5 servings of fruits and vegetables daily;*
- ➔ *and 17% of 9-12th graders consume at least 5 servings of fruit and vegetables daily (source: 2003 YRBS).*
- ▷ Reasons for the Trends (have group generate ideas and record on flip chart):
 1. Competition from vending machines and snack bars in school.
 2. Fewer meals cooked at home.
 3. Increased popularity of high fat, high sodium foods.
 4. Marketing efforts of companies that sell high fat, high sodium foods.
- ▷ Why learn about fruits and vegetables? Because there are so many to choose from and they are all low in fat, sodium, and cholesterol. Fruits and vegetables are very versatile and packed with nutrients. Show *H-12 Nutrients in Fruits and Vegetables*.
- ▷ Show *V-14 Benefits of Fruit and Vegetable Consumption*.
- ▷ Display *V-15 Recommendations*. Aim for at least five to nine servings
- ▷ **Activity - Portion Distortion - Then and Now:**
 1. **Then** – cookie (Yo-Yo size), **Now** – cookie (small paper plate size)
 2. **Then** - muffin (tennis ball), **Now** – muffin (Nerf ball)
 3. **Then** – spaghetti (1 cup bowl), **Now** – spaghetti (baseball cap)
- ▷ Show *V-16 How Much is 1 Serving? Now that you know what a serving size is, how many of you think you eat 5 or more servings on most days?* Wait for a show of hands or have them answer by standing up. Research has shown that many people think the specified portion sizes are larger and therefore tend to answer surveys about consumption incorrectly. If this proves to be true among the class participants, point out the difference and encourage them to explain portion sizes when talking to others (students and parents) about consumption.
- ▷ As you can see, for most fruits and vegetables, ½ a cup is an appropriate serving size. If you follow the recommendation of at least **5 servings** per day (2 servings of fruit and 3 servings of vegetables), that is a total of 2 ½ cups each day. For **9 servings** = 4 ½ cups per day.
- ▷ Fruits and vegetables add a variety of colors, textures, shapes, and flavors to menus. More importantly, fruits and vegetables provide a variety of health benefits. They naturally contain:

1. **Antioxidants** – Protect cells from damage.
 2. **Vitamins A** (beta-carotene) **& C** (ascorbic acid) – powerful antioxidants.
 3. **Folate** – Member of the vitamin B complex. Found naturally in green plant tissue. Helps reduce risk of birth defects and helps to keep our hearts healthy.
 4. **Potassium** – Mineral found in most foods (bananas, potatoes, prune or orange juice, watermelon). Important for cardiac muscles.
 5. **Fiber** – Components of food resistant to chemical digestion. Diets high in fiber may help diverticula of the intestinal tract, may help to lower cholesterol and possibly prevent cancer of the intestinal tract.
 6. **Phytochemicals** (plant chemicals) - Natural chemicals found in fruits and vegetables that give them their color and flavor and are credited with reducing the risk of diseases such as heart disease, stroke and some cancers.
 7. No fat, saturated fat, trans fats, or cholesterol
 8. Low in sodium and calories
- ▷ Eating a variety of different colors of fruits and vegetables every day is a new way of thinking about meeting your 5 a day goal.
 - ▷ The five color categories are blue/purple, green, white, yellow/orange, and red. Each color makes a unique contribution to maintaining health and a lower risk of developing chronic diseases.
 - ▷ **Optional Activity - Color Your Rainbow: (Great activity to do with students in the classroom)** - Provide a small white paper plates to each participant and a box of color crayons to each table. Instruct participants to draw a rainbow using five colors (blue/purple, green, red/orange, white, and red). Have participants write the name of a fruit or vegetable beside the color it represents.
 - ▷ As you discuss each of the fruit and vegetable colors have example of each.(**Optional** – to include information on phytochemicals.)
 1. **Blue/purple (Urinary tract health, memory function and healthy aging)** – helps maintain lower risk of some cancers, promotes urinary tract health, maintains memory function, and supports healthy aging. Some examples of the blue/purple group: blackberries, blueberries, purple grapes, raisins, eggplant, figs, plums, prunes. **Phytochemicals:** *Anthocyanins and Phenolics* – studied for ability to fight heart disease and cancer, anti-inflammatory power, and delay aging. Berries, dried plums, raisins, eggplant, plums, purple grapes, (blueberries are lined with improve memory function and healthy aging).

2. **Green (Strong bones and teeth, vision health)** – helps maintain lower risk of some cancers, promoted vision health, and supports strong bones and teeth. Some examples of the green group: Green apples, artichokes, asparagus, avocados Green beans, broccoli, green cabbage, cucumbers, green grapes, honeydew melon, kiwi, lettuce, limes, green onions, peas, green pepper, spinach, zucchini.
Phytochemicals: *Indoles* – cruciferous vegetables (broccoli, cabbage, bok choy, Brussel sprouts) studied for role in protecting against breast and prostate cancers. *Luten & Zeaxanthin* – powerful antioxidant, studied for role in maintaining good vision health. Found in green leafy vegetables (kale, peas, spinach, kiwi).
3. **White (Heart health and reduction in Cholesterol levels)** – helps maintain a lower risk of some cancers, and healthy cholesterol levels, promotes heart health, and supports a healthy immune system. Some examples of the white group: bananas, cauliflower, garlic, ginger, mushrooms, onions, parsnips, potatoes, turnips.
Phytochemicals: *Allicin* – studied for role in lowering cholesterol and blood pressure and increasing ability to fight infections, found in garlic, chives, scallions, leeks and onions. *Indoles and Sulfaforaphanes* – studied for role in inhibiting cancer growth. Found in cauliflower.
4. **Yellow/orange (Vision health, healthy heart, and healthy immune system)** – helps maintain a lower risk of some cancers, health heart and vision health, and supports a healthy immune system. Some examples of the yellow/orange group: yellow apples, apricots, butternut squash, cantaloupe, carrots, grapefruit, lemons, mangos, nectarines, oranges, papayas, peaches, pears, yellow peppers, pineapple, pumpkin, rutabagas, sweet corn, sweet potatoes, tangerines, yellow tomatoes, yellow watermelon.
Phytochemicals: *Beta Carotene* – in sweet potatoes, pumpkins, and carrots is converted to vitamin A. Beta Carotene is a powerful antioxidant; studied along with vitamins C & E for role in reducing risk for cancer, heart disease, boosting immune system, slowing aging and maintaining good eyesight. *Bioflavonoids* - found in citrus, works with vitamin C to strengthen bones and teeth, heal wounds, and keep skin healthy.
5. **Red (Healthy heart, memory function and urinary tract health)** -helps maintain a lower risk of some cancers, heart health, urinary tract health, and memory function. Some examples of the red group are: red apples, beets, red cabbage, cherries, cranberries, pink grapefruit, red grapes, red peppers, pomegranates, red potatoes, radishes, raspberries, rhubarb, strawberries, tomatoes, watermelon.
Phytochemicals: *Lycopene* – studied for role in prostate cancer and heart disease. Found in tomatoes, watermelon and pink grapefruit. *Anthocyanins* – powerful antioxidants. Found in berries, cherries, strawberries, cranberries, red apples, beets, red cabbage, kidney beans.

- ▷ **Activity – Healthy Lifestyle:** Ask each participant to stand if they can answer “yes” to the following questions and keep standing until their answer to a question is “no”:
 1. Do you eat breakfast at least 6 out of 7 days each week?
 2. Do you eat a minimum of 6 bread servings each day?
 3. Do you eat 5 fruits and vegetables each day?
 4. Do you drink 8 glasses of water every day?
 5. Do you exercise 6 out of 7 days each week?
- ▷ Congratulations to those left standing for having a healthy lifestyle. Give a small prize (e.g. an apple) to the last participants standing.
- ▷ A tool to help you achieve a healthy lifestyle is the *2005 Dietary Guidelines for Americans*. (**Optional** -distribute a pamphlet or handout of the guidelines to each participant.)
- ▷ The *Dietary Guidelines for American* makes the following recommendations for encouraging fruits and vegetables:
 1. Consume sufficient amount of fruits & vegetables while staying within energy needs. Two cups fruit and 2 ½ cups vegetables per day are recommended for a reference 2,000 calorie intake, with higher or lower amounts depending on the calorie level.
 2. Choose a variety of fruits and vegetables each day. In particular, select from all five vegetable subgroups (dark green, orange, legumes, starchy vegetables, ant other vegetables) several times a week.
 3. Choose fiber-rich fruits and vegetables, and whole grains often.
- ▷ USDA’s MyPyramid symbolizes a personalized approach to healthy eating and physical activity, The symbol has been designed to be simple. It has been developed to remind consumers to make healthy food choices and to be active every day. Go to www.MyPyramid.gov to personalize your plan.
- ▷ **Activity – What Did You Eat:** Have participants write down all the fruits and vegetables they ate yesterday. Did they have any fruit at breakfast? Lunch? Snacks? Dinner? Also, what color groupings did they try?
- ▷ **Understanding Activity.** Your body needs regular movement, experts suggest 60-90 minutes per day. Get up and get moving for at least 60 minutes of physical activity a day; at least 10 minutes at a time; at least five to six days a week.

- ▷ The *Dietary Guidelines for Americans* makes the following recommendations for **weight management** and **physical activity**:
 1. Maintain body weight in a healthy range, balance calories consumed from foods and beverages with calories expended.
 2. Prevent gradual weight gain over time, make small decreases in food and beverage calories and increase physical activity.
 3. Engage in regular physical activity (at least 60 to 90 minutes most day of the week) and reduce sedentary activities.
 4. Include cardiovascular conditioning, stretching exercises, and resistance exercises or calisthenics for muscle strength and endurance.
- ▷ **Optional Activity - Paper Plate Dance:** Give each participant two paper plates (one for each hand). Instruct them to stand and follow your movements. Instructor should play lively music (e.g. theme from the Lion King) and move to the music waving the plates in the air. Movements can include arm circles, side to side movement etc. The idea is to get them moving their body; the plates should make the movement less intimidating.
- ▷ **Local Wellness Policy.** To address concerns about the childhood obesity epidemic, Congress now requires each local education agency that participates in USDA's school meals programs to have a local wellness policy.
- ▷ The Team Nutrition website, www.fns.usda.gov/tn, serves as the clearinghouse for information to assist schools in meeting this requirement. Refer participants to *H-14 Nutrition Web Addresses*. Be sure to review your schools wellness policy to see that it includes fruits and vegetables as a priority in improving the school nutrition environment.

◆ **Performance Check**

- ▷ Distribute *H-13 Fruit and Vegetable Personal Challenge*. Have participants jot down three health benefits of fruits and vegetables that relate to their own health. Then have participants write a balance of fruits and vegetables to include in their daily diet.

◆ **Closure**

- ▷ As school foodservice professionals you have the unique opportunity to improve the health of the children you serve. By improving the nutritional quality of school meals and motivating children to choose healthier options you can help your students prevent overweight and obesity and improve their health.

- ▷ One excellent way to boost the nutritive value, taste, and eye appeal of school meals is to serve more fruits and vegetables in variety of creative and appetizing ways. The following lessons will give you fresh ideas to incorporate more fruits and vegetables in your program