Florida Nutrition Training Guide

Preschool Child Nutrition Module

Florida Department of Health
Bureau of WIC and Nutrition Services
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FLORIDA DEPARTMENT OF HEALTH

FLORIDA WIC
Good Nutrition for Women, Infants & Children

Preschool Child Nutrition Module

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Introduction

The Preschool Child Nutrition Module **consists of 3 components:**

1. **The module itself.**
2. **The workbook, to be completed by the staff member.**
3. **The evaluation materials for the supervising nutritionist.**

Instructions

1. Read the **Knowledge Objectives** and **Performance Objectives** (pages 5 and 6).

2. Follow along with this presentation.

3. Stop and complete the **Self-Checks** as they appear and immediately correct any mistakes.

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Instructions (continued)

4. Complete the **Practical Activity** found in your **Workbook**.

5. Arrange for a convenient time to take the **Posttest.**

Glossary

- Review the **Glossary** and become familiar with **all** of the terms.

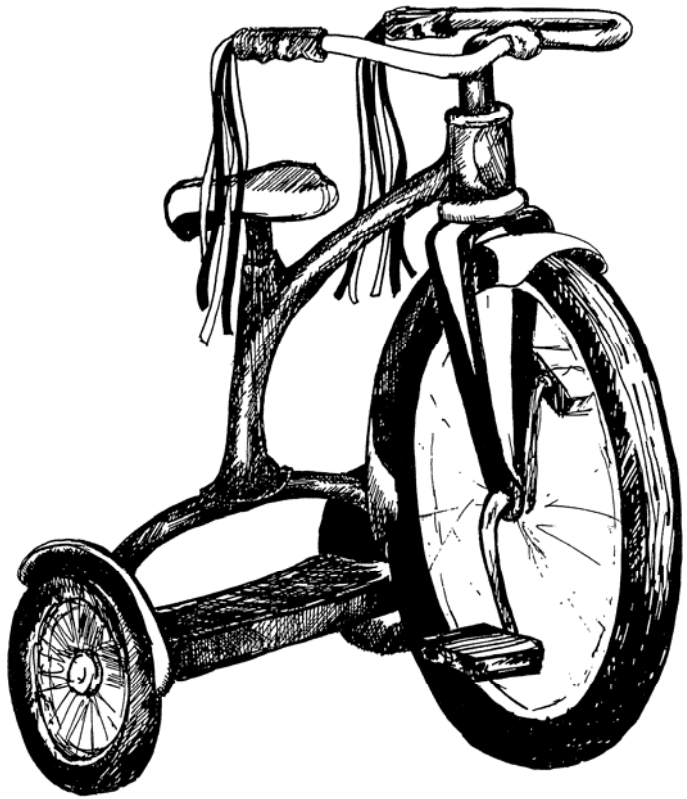
- **Example:**

  Allergen: something that causes allergic symptoms.

Part 1: Eating Behavior

Goals of Good Nutrition

Good nutrition and a healthful diet are necessary for both the physical and mental development of the preschool child.



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Goals of Good Nutrition (continued)

The *nutrients in food* and the *eating process* should help the child to:

- **Attain optimal physical and mental growth.**
- **Resist infection and disease.**
- **Develop motor skills.**
- **Grow intellectually and mature psychologically.**
- **Form good eating habits.**
- **Learn to socialize with others.**

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Development of Food Habits

- Food habits are **taught**. Food habits and attitudes established early in life can affect food choices and therefore one's nutritional status throughout a lifetime.
- Children observe family members and imitate their attitudes toward food.

Creating a Positive Eating Environment

Encourage parents to:

- Eat family meals together regularly.
- Allow mealtimes to be relaxed, happy times.
- Avoid distractions such as having the television on during a meal.
- Assist and remind children to use spoons and forks.

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Positive Environment (continued)

Provide child-appropriate utensils, dishware, and sitting arrangements such as:

- *spoons and forks:* small handle that fits easily in the child's hand.
- *cups and glasses:* small enough to be easily grasped by the child.
- *plates and bowls:* sturdy and durable.
- *chair:* one that won't tip and is positioned so that food can be easily reached.

Fostering Healthy Eating Habits

- Be a smart gatekeeper.
- Variety is important, but only introduce one new food at a time.
- Allow children to have the same freedom of choice that others have at meals.
- Set a good example.
- Encourage children to help with food preparation.

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Eating Habits (continued)

- Offer foods from all the food groups daily.
- Serve small portions especially for children under age 4.
- Behavior that is rewarded is repeated.
- Avoid making dessert a “reward” for a clean plate.

Eating Habits (continued)

- If the child goes on a “food jag” (requesting one food often), do not be alarmed.
- Don’t force children to eat.
- A healthy appetite depends on adequate play, rest, sleep, and regular mealtimes.

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☑ Self-Check

- **Go** to the **Workbook** and complete **Self-Check Questions 1-7.**

- **Check** your answers against the **Answer Key** in your **Workbook**.

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Food Problems

Introducing New Foods

The parent should:

- Introduce only one new food at a time.
- Offer a very small amount at first, at the beginning of each meal.
- When appropriate, mix the food with another food the child likes.
- Allow plenty of time for the child to look at and examine the food.
- Do not try to introduce a new food when a child does not feel well or is irritable.

Pages 13-14 in Module

Food Problems (continued)

Food Dislikes

The parent should:

- Refrain from making an issue of the situation.
- Try combining the food with other favorites.
- Offer small servings.
- Prepare the food in a different way.
- Set a good example.

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Food Problems (continued)

Refusal to Eat

The parent should:

- Remove the child's food and let him/her wait until the next meal.
- There should be no bribes or punishment.
- A skipped meal will not do damage to a healthy child.
- Few well children starve themselves unless food becomes a weapon against parents.
- If the child is ill, consult the child's health care provider.

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Food Problems (continued)

Dawdling or Playing with Food

The parent should:

- Allow a reasonable amount of time.
- Offer help if it is needed.
- Explain that the food will be removed when the child is finished.
- Refrain from making a “scene”.
- Once the food is removed, parents should give the child no more food until the next planned meal or snack.

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Food Problems (continued)

"Food Jags"

- Usually the "jag" will not last long, if an issue is not made of it.
- At times, parents should offer choices, including the desired food, at snack time.
- Parents should not short-order cook the desired food at mealtimes when other foods have been prepared.

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“Managing” the Preschool Child’s Eating Habits

- **Parents/caregivers** are responsible for:

  what their children are *offered* to eat

  where they eat

  when they eat.

Responsibilities (continued)

- **Children** are responsible for *how much* of the food they want to eat.
- **Children under 4 years of age** need *child-sized* portions.

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☑ Self-Check

- **Go** to the **Workbook** and complete **Self-Check Questions 8-12.**

- **Check** your answers against the **Answer Key** in your **Workbook**.

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Part 2: Nutritional Requirements

Dietary Reference Intakes

The Institute of Medicine of the National Academy of Sciences develops reference values for the intake of nutrients by Americans known as **Dietary Reference Intakes (DRIs).**

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Dietary Reference Intakes (continued)

The DRIs include:

- **Recommended Dietary Allowances (RDAs).**
- **Adequate Intake (AI).**
- Estimated Average Requirement (EAR).
- Tolerable Upper Intake Level (UL).

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Dietary Reference Intakes (continued)

- **Recommended Dietary Allowance (RDA):** the average daily dietary nutrient intake level sufficient to meet the nutrient requirement of nearly all (97 to 98 percent) of healthy individuals in a particular life stage and gender group.

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Dietary Reference Intakes (continued)

- **Adequate Intake (AI):** the recommended average daily intake level based on observed or experimentally determined approximations or estimates of nutrient intake by a group (or groups) of apparently healthy people that are assumed to be adequate. It is used when there is not enough scientific evidence to calculate an RDA.

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Dietary Guidelines for Americans

Aim for Fitness

- Aim for a healthy weight.
- Be physically active each day.

Build a Healthy Base

- Let the Pyramid guide your food choices.
- Choose a variety of grains daily, especially whole grains.
- Choose a variety of fruits and vegetables daily.
- Keep food safe to eat.

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Dietary Guidelines (continued)

Choose sensibly

- Choose a diet that is low in saturated fat and cholesterol and moderate in total fat.
- Choose beverages and foods to moderate your intake of sugars.
- Choose and prepare foods with less salt.
- If you drink alcoholic beverages, do so in moderation.

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The Food Guide Pyramid

- **Milk, Yogurt & Cheese Group:** the foods in this group come from animals. These foods are important sources of protein, calcium, and some vitamins.

- **Meat, Poultry, Fish, Dry Beans, Eggs, & Nuts Group:** the foods in this group come from animals and some plants. These foods are important sources of protein, iron, zinc, and some vitamins.

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The Food Guide Pyramid (continued)

- **Vegetable Group and Fruit Group:** the foods in these two groups come from plants. Most people need to eat more of these foods for the vitamins, minerals, and fiber they supply.

Page 20 in Module

The Food Guide Pyramid (continued)

- **Bread, Cereal, Rice, & Pasta Group:** the foods in this group are from grains. You need the most servings of these foods each day. These foods are important sources of B vitamins, iron, and energy.

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The Food Guide Pyramid (continued)

The Food Guide Pyramid is a general outline of what a person should eat each day.

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The Food Guide Pyramid (continued)

Serving Sizes

- Serving sizes are smaller for young children than for older children and adults. They are usually about ½ to 2/3 the size of an adult portion.

A Guide to Daily Food Choices for Preschool Children

Meat Group: 2-3 oz/day for 1 year olds; 3-4 oz/day for 2-3 year olds; 5 oz/day for 4-5 year olds

	Serving Sizes for 1-3 years	4-5 years
Milk: 4 servings/day	½ cup	¾ cup
Fruit: 2-4 servings/day	¼ cup	½ cup
Vegetable: 3-5 servings/day	¼ cup	½ cup
Grain: 6-8 servings/day	¼ cup	½ cup

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Fruits and Vegetables

Excellent sources of vitamin A **3 or more/week**

sweet potato, carrots

Good sources of vitamin A **2 or more/day**

canned pumpkin, mango, cantaloupe, spinach, collards, kale, callaloo, plantain, dandelion greens, turnip greens, beet greens, butternut squash, calabaza, raw or cooked sweet red peppers, red chili peppers

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Fruits and Vegetables (continued)

Fair sources of vitamin A **2 or more/day**

swiss chard, mustard greens, bok choy, vegetable juice, tomato juice, tomato paste, mandarin, oranges, apricot, nectarine, tangerine, papaya, sapote, broccoli

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Fruits and Vegetables (continued)

Excellent sources of vitamin C **1 or more/day**

broccoli, brussels sprouts, cantaloupe, chili peppers, grapefruit, guava, kiwi, mandarin orange, mango, orange, orange juice, grapefruit juice, papaua, strawberries, sweet peppers (green and yellow), tangerine, WIC-allowed fruit and vegetable juices.

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Milk, Yogurt, & Cheese Group

- **Whole milk** should be given **from the age of 1 year until 2 years;** when the child is 2 years and older, low fat or fat free milk should be given because most healthy children age 2 and older do not usually need the added fat and calories contained in whole milk.

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Meat, Poultry, Fish, Dry Beans, Eggs, & Nuts Group

Parents should serve a variety of protein-rich foods. Some protein foods which are often popular with children include:

- Tuna fish
- Meat loaf
- Cooked dry beans
- Hamburgers
- Chicken

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Bread, Cereal, Rice, & Pasta Group

- Whole grain or enriched breads and cereals contain B vitamins and iron. Whole grains also contain many trace nutrients as well as fiber. Fiber helps regulate digestion and elimination.

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Vegetable Group

- **Vegetable Group:** Vegetables are important for their contribution of vitamin A, vitamin C, folic acid, fiber, and small amounts of various minerals.
- Overcooking will destroy vitamin C and folic acid.

Fruit Group

- Fruits are good sources of vitamin A, vitamin C, folic acid, fiber, potassium, and small amounts of various other minerals. Individual fruits vary widely in the amounts of these nutrients.

- Fruit drinks are not equivalent in nutritive value to 100 percent fruit juices. Fruit drinks generally are made of a small percentage of fruit juice and may be fortified with vitamin C.

☑ Self-Check

- **Go** to the **Workbook** and complete **Self-Check Questions 13-34.**

- **Check** your answers against the **Answer Key** in your **Workbook**.

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Choking

- Choking occurs when food or small objects get caught in the throat and block the airway.

- Children do not develop a full set of baby teeth until they are about 2 to 3 years of age. Young children also may not have enough muscle control to chew and swallow foods properly.

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Choking (continued)

Foods most likely to cause choking are:

- Foods that are round or cylindrical in shape, such as hot dogs.
- Foods that are small or slippery, such as peanuts.
- Foods that are sticky, or foods that have the ability to “ball up” in the throat, such as peanut butter.

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Choking (continued)

- Foods that require extensive chewing or are tough to break apart, such as tough meat.
- Foods that are dry and difficult to chew, such as popcorn and nuts.

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Choking (continued)

To prevent food-related choking do not serve these foods to **children under the age of 4:**

- Spoonfuls of peanut butter
- Hard candy, gum drops, chewing gum
- Fruits with pits (cherries)
- Hot dogs or other sausage shaped meats served whole or sliced into rounds.

Choking (continued)

- Marshmallows
- Popcorn, pretzels, chips
- Raisins and other dried fruits
- Raw vegetables such as carrots and celery sticks
- Nuts, seeds, peanuts
- Whole grapes (cut into small pieces)
- Ice cubes
- Large chunks of meat or cheese
- Fish with bones

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Choking (continued)

- Parents should modify the shapes and textures of the foods most likely to cause choking.
- Peanut butter should be spread **very thinly** on toast or crackers.
- Children should be encouraged to take small bites and chew food completely.
- Feeding times should always be supervised.
- Parents/caregivers should insist that children sit down during mealtime or snack time.

Foods Children Like

- Preschool children like simple meals, with the foods separated from each other.
- “Finger-foods” or small, bite-sized pieces of food eaten with the fingers is popular.
- Bright colors and varied shapes of foods will catch and hold the child’s interests.

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Foods Children Like (continued)

• Meat	moist, soft
• Hot cereal	smooth
• Mashed potatoes	smooth
• Raw vegetables	crisp
• Cheese	mild flavor
• Milk	cold

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Importance of Breakfast

- Most preschoolers sleep 10 to 12 hours at night. During this time the child has eaten nothing. Breakfast helps fill the child's "empty tank," giving energy to start the day.

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Breakfast (continued)

- The breakfast meal provides the body with food that helps brain function (increases attention and& concentration).

- Breakfast also contributes to the quality and quantity of a child's daily nutrient intake; it can add substantially to a child's total energy, protein, carbohydrate, vitamin & mineral intake.

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☑ Self-Check

- **Go** to the **Workbook** and complete **Self-Check Questions 35-38.**

- **Check** your answers against the **Answer Key** in your **Workbook**.

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Snacks

- Snacks can play an important role in the diet of a young child. Snacks can supplement meals, providing nutrients not eaten at mealtime.
- A good snack contains food from 1 or more food groups, foods low in sugar, and small amounts of foods that don’t spoil the appetite for meals.
- Most children need snacks.
- Timing is important so that a snack is offered when children are hungry, but not so late that it spoils their appetite for the next meal.

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Snacks (continued)

Planning for snacks means deciding:

- **What** the special nutrition and scheduling needs of the family are.
- **How** snacks can add to the child's diet.
- **When** would be the best time to offer snacks.
- Snacks should supplement meals with protein, vitamins, and minerals.

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Snacks (continued)

- **“Empty Calorie Snacks”** such as soda, fruit drinks, candy, and fried snack foods like chips are examples. These are foods that are high in sugar and/or fat and contribute very few nutrients to the child’s diet. If eaten regularly, they can contribute to overweight, iron-deficiency anemia, and dental caries.

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Snacks (continued)

Tea and coffee should *not* be offered to preschoolers for the following reasons:

- They have no nutritional value.
- They sometimes contain caffeine.
- When sweetened, they are high in empty calories.
- They can stain a child's teeth.
- Both regular and decaffeinated coffee and tea contain tannic acid which interferes with the body's ability to absorb iron.

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Snacks (continued)

Snacks/Desserts

- While snacks are eaten **between** meals, we usually consider desserts as sweets eaten **at the end** of a meal.
- Some nutritious desserts include: fruit, fruit smoothie, frozen fruit juice custard, pudding, ice cream, yogurt, etc.

Snacks (continued)

Traditional desserts can be improved nutritionally by:

- Decreasing the amount of sugar.
- Decreasing the amount of fat.
- Substituting applesauce for all or part of the fat.
- Substitute all or some of the white flour with whole wheat flour.
- Add chopped nuts, dried fruit, oatmeal, WIC cereals, nonfat dry milk powder, or wheat germ to your favorite recipes.

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Snacks (continued)

- It is easy to aid in the development of an insatiable “sweet tooth” by offering desserts every day. If children are given desserts often, they will expect them, demand them, and then, eating desserts will become a habit.

- Desserts should not be used to bribe or reward children; for example children should not be rewarded a dessert just because they finished their vegetables, drank all their milk, or behaved well during the day.

☑ Self-Check

- **Go to** the **Workbook** and complete **Self-Check Questions 39-47.**

- **Check** your answers against the **Answer Key** in your **Workbook**.

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Part 3: Nutrition-Related Problems/Concerns

Weaning

- Weaning from the breast or bottle is a gradual process.
- Weaning to a cup should have begun when the infant was able to sit up without support and was eating solid foods.
- It is a gradual process which usually will have been initiated when the child is around 6 or 7 months of age.

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Weaning (continued)

- Children who use the bottle after 1 year of age may drink too much milk and may not eat enough solids which provide iron and other important nutrients.

- This can lead to iron-deficiency anemia, overweight, and/or constipation.

Weaning (continued)

Suggestions to help parents with weaning from the bottle:

- Discontinue bottle feeding one bottle at a time, starting with the least favorite bottle.
- Put only water in the bottle.
- Hold the child and read a favorite book in place of giving a bottle.
- Interest the child in something other than the bottle at bedtime (special blanket or stuffed toy).
- Provide lots of affection and attention instead of a bottle at bedtime.

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Weaning (continued)

Weaning from the breast:

- The decision when to wean the infant or toddler from the breast to the cup is an individual one and is left up to the mother.
- Weaning is usually accomplished by stopping one nursing at a time.
- Continue gradually until the child is entirely weaned from the breast.

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Dietary Fiber for Children

- Dietary fiber has important health benefits in childhood, especially in promoting **healthy bowel movements.**

- Fiber may help reduce the risk of chronic diseases such as: cancer, cardiovascular disease, and adult-onset diabetes mellitus.

- Many children do not consume adequate amounts of dietary fiber to promote health and prevent disease.

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Dietary Fiber for Children (continued)

- Adverse effects of a very **high fiber** intake in childhood:
- High fiber foods are usually lower in calories than the same size (volume) of foods low in fiber.

- Since children have a small stomach capacity, high fiber foods can fill the child up before sufficient calories for energy & growth are consumed.

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Dietary Fiber for Children (continued)

- Minerals, such as iron, calcium, copper, and zinc, can be bound by the fiber or by the phytates which are naturally present in high fiber foods, thus making these nutrients unavailable for use by the body.

- Parents, eager to consume a high fiber diet themselves or to prevent chronic disease for their child, may mistakenly put their child at nutrition risk by giving the child a very high fiber diet.

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Fiber (continued)

- A child's recommended daily fiber intake can be calculated by dividing the daily calorie intake by 1,000 and then multiplying that amount by 14.
- Fiber intakes above 35 grams per day should be avoided.

Fiber (continued)

Age in years	Average Calories/day	Average grams/fiber/day
1	806	11
1 ½	930	13
2	1,023	14
2 ½	1,099	15
3	1,440	20
4	1,520	21
5	1,607	22

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Heart Healthy Habits for Children 2 Years of Age and Older

Heart Healthy Habits

- Eat foods lower in fat, saturated fat, and cholesterol.
- Choose food high in complex carbohydrates, e.g., those foods from the bread/cereal, fruit, and vegetable groups.
- Avoid being overweight.
- Participate in regular physical activity.
- Be sure children over age 2 years who are eating a low fat diet are obtaining enough calories for their growth and development.

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Heart Healthy Eating

More Often	Less Often
lean meats	fatty cuts of meat
low fat/fat-free milk	whole milk
bagels	croissants
baked potatoes	french fries
olive oil	coconut oil
cocoa powder	chocolate

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☑ Self-Check

- **Go to** the **Workbook** and complete **Self-Check Questions 48-52.**

- **Check** your answers against the **Answer Key** in your **Workbook**.

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Overweight

- Overweight is defined as the accumulation of excess body fat.
- A child who is 2 years of age or older is generally considered to be overweight if his/her BMI-for-age is at or above the 95th percentile.
- A child who is 2 years of age or older is considered to be at risk of becoming overweight if his/her BMI-for-age is greater than or equal to the 85th percentile and less than the 95th percentile.

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Overweight (continued)

- The establishment of poor eating habits and sedentary behavior patterns, and the impact being overweight has on the child psychologically and socially are significant issues for the overweight child.
- Being teased may develop a poor self-concept.
- Physical activity may be limited, causing a delay in motor development.
- The overweight child feels more self-conscious when he/she can't keep up with other children.

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Overweight (continued)

What causes a child to become overweight?

- **Inappropriate eating patterns.**
- **Insufficient physical activity.**
- **When parents take too much control over how much their children eat, children are less likely to be able to determine for themselves how much food they really need.**
- **Genetics may influence how much a person eats, how fast the person burns calories, and how likely the person is to gain fat rather than muscle.**

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Overweight (continued)

- **Preventing** overweight is very important. Once children become overweight, treatment can be difficult because of the need to provide the adequate nutrients and calories that are required for normal growth and development.

- Prevention includes adopting a lifestyle of healthy eating and physical activity habits.

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Overweight (continued)

Healthy Eating and Physical Activity Tips

- Gradually change to healthy eating habits.
- Limit the availability of food high in calories and low in nutrients.
- Have nutritious snack food available.
- Serve meals and snacks at regular times each day.
- Limit the frequency of eating meals away from home.
- Encourage regular physical activity.
- Parents should join children in active play.

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Overweight (continued)

Parenting Tips

- Provide the child with lots of love and attention.
- Do not use food as a bribe or reward.
- Serve the same healthy food to all family members.

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Overweight (continued)

Parenting Tips (continued)

- Set guidelines regarding food choices, frequency of eating, physical activity, television watching and playing computer/video games.
- Let the child decide how much to eat.
- Parents should take charge and not allow others to offer unhealthy foods to the child.
- Find other ways, besides eating, for the family to interact and have fun together.

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Overweight (continued)

Counseling the parent of an overweight child:

- Discuss the meaning of “food” with the family.
- Discuss body size and what is acceptable.
- Discuss the needs of the child and family that are being satisfied by eating food. Are children rebellious, bored, angry, upset, sad, tired, or feeling a lot of stress?
- Encourage parents to be supportive and encourage the child, showing love and acceptance regardless of the child’s body size.

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Overweight (continued)

Improving the Diet of the Overweight Child

- Substitute fresh fruits and vegetables for high sugar and/or high fat snacks and desserts.
- Try a new fruit or vegetable every week.
- Reduce added sugars.
- Buy substitutes for high fat foods (fat free milk).
- Bake and broil foods instead of frying.
- Keep food stored away, out of sight.

Overweight (continued)

- Give children water to drink, instead of flavored beverages or juice.
- Initiate the family practice of eating only at scheduled meal and snack times.
- Eat only in selected places in the home.
- Make meals a pleasant family experience.
- Learn how to prepare the family's favorite foods.
- Limit fast food meals.
- Limit purchase of cakes, cookies, doughnuts, chips, sodas, candy, etc.

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Overweight (continued)

Encourage Physical Activity

- Enjoying active play can help establish lifestyle habits that will keep energy in balance and improve health and self-esteem.
- Excessive television/video and computer games may be a parental habit that the child is learning and/or is the result of the television being used as a babysitter.

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☑ Self-Check

- **Go to** the **Workbook** and complete **Self-Check Questions 53-58.**

- **Check** your answers against the **Answer Key** in your **Workbook**.

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Iron-deficiency Anemia

- Iron-deficiency anemia is the most common nutrient deficiency in children from 6 months to 3 years of age.
- A combination of low intake of solid food and excessive intake of milk may contribute to the development of iron-deficiency anemia in children ages 1 to 2 years. (Note: Milk is a poor source of dietary iron.)
- After 2 to 3 years, the usual causes of iron-deficiency anemia are: a lack of iron-rich foods in the diet, or consumption of foods or beverages which contain substances that inhibit iron absorption, such as tea.

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Iron-deficiency Anemia (continued)

Prevention of Iron-deficiency Anemia

- Limit milk intake to a maximum of 16 ounces daily for children under 4 years of age.
- Limit those foods which are both low in iron and high in calories, such as sweet bakery goods, candy, chips, and soft drinks.
- Do not give children any type of tea or coffee.
- Encourage eating of iron-rich foods.
- Iron-rich foods should be served daily.

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Iron-deficiency Anemia (continued)

Food Sources of Iron

- **Meat, Fish, Poultry, Dry Beans:** clams, beef or chicken liver, dry beans, beef, light tuna, turkey, pork, chicken, shrimp, peanut butter, catfish
- **Breads and Cereals:** iron-fortified cereal, enriched wheat bread
- **Fruits:** prune juice, raisins, apple juice, prunes
- **Vegetables:** baked potato with skin, green peas, tomato or vegetable juice, beets, brussels sprouts, green beans, broccoli, tomato
- **Other:** blackstrap molasses or regular molasses

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Iron-deficiency Anemia
(continued)

Treatment of Iron-deficiency Anemia

- Encourage the use of good animal food sources.
- Encourage the use of iron-enriched plant sources.
- Encourage the use of WIC cereals.
- Discourage the use of tea or coffee.
- Discourage the use of low iron, high calorie snack foods.

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Preventing Accidental Iron Poisoning

- **Accidental iron overdose is a leading cause of poisoning deaths in children under 6 years old.** Children can overdose on iron by taking excessive iron supplements or even by consuming large amounts of children's chewable vitamins.
- Many poisonings happen when child-resistant caps are not closed properly.

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Preventing Accidental Iron Poisoning (continued)

Encourage parents to:

- Close the bottle of iron or vitamin pills tightly and correctly immediately after use. Don't put iron or vitamin pills in another container because children may be able to open the other container.
- Put the iron or vitamin pills away immediately in a place that children can't reach them or see them.
- Do not refer the to pills as "candy".
- Even if there are no immediate symptoms, parents should contact a doctor or local poison control center immediately if their child has accidently swallowed a product that contains iron.

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☑ Self-Check

- **Go to** the **Workbook** and complete **Self-Check Questions 59-64.**

- **Check** your answers against the **Answer Key** in your **Workbook**.

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Lead Poisoning

- **Lead poisoning is a common environmental disease of young children, especially low income children. Lead poisoning is a preventable condition**

Lead is found in:

- **Paint**
- **Soil**
- **Water**
- **Household items such as glazed pots, food stored in pewter or lead crystal, and vinyl mini blinds.**

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Lead Poisoning (continued)

- Lead damages the brain, kidneys, central nervous system, and red blood cells. Lead poisoning in preschoolers can cause permanent stunting of growth. High lead levels can cause mental retardation, convulsions, coma, and even death.
- Some children who have lead poisoning may appear tired or cranky; they may complain of stomach pains or lack of appetite. Because these complaints are common in children, no one may suspect lead poisoning.

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Blood Lead Levels

A blood test is used to identify individuals with elevated lead levels. Blood tests for lead level may be done in the health department or other health facility.

- **9 micrograms per deciliter (µg/dl) or less:** A child with this blood lead level is considered to be relatively safe from adverse effects of lead exposure.
- **10 to 14 µg/dl:** A child with this blood lead level is in a border zone; provide basic nutrition education and refer to health care provider for follow-up testing.

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Blood Lead Levels (continued)

- **15 to 19 µg/dl:** A child with this blood lead level has had a more significant exposure; provide individual nutrition counseling by a nutritionist who will develop of nutrition care plan and and refer to health care provider for follow-up testing.

- **20 to 69 µg/dl:** A child with this blood lead level is considered lead poisoned; requires urgent treatment by the health care provider.

- **70 µg/dl or more:** A child with this blood lead level has a medical emergency and requires immediate medical treatment.

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Preventing Lead Exposure

Nutrition plays a key role in preventing lead poisoning. Individuals who are well nourished are more likely to be protected from the harmful effects of lead exposure. In contrast, those at increased risk of poor nutritional status are at increased risk of lead poisoning.

Page 61 in Module

Preventing Lead Exposure (continued)

- Homes built before 1978 may have been painted with lead-based paint.
- Treat all peeling paint as if it contains lead.
- Make sure children don’t chew on anything covered with paint.
- Regular meals and snacks should be offered.
- Include plenty of iron-rich and calcium-rich foods in the child’s diet.

Page 61 in Module

Preventing Lead Exposure (continued)

- Let cold water run 2 minutes from the tap before use.
- When hot water is needed for a beverage or food, obtain cold water from the tap and heat it to the desired temperature.
- Always clean surfaces where food is prepared.
- Do no cook, store, or make food in pewter, ceramic dishes that have a lead glaze, or leaded crystal.

Page 61 in Module

Preventing Lead Exposure (continued)

- Remove food from cans before heating.
- Make sure that children's hands are washed often.
- Foods that falls to the floor should be thrown away.
- Dirt yards should be covered with grass or mulch.
- Workers who are exposed to lead at their workplace should not bring lead home.
- Avoid folk remedies such as alcaron, alkohl, azarcon, bali goli, coral, ghasard, greta, liga, pay-loo-ah, rueda, and litargirio. They may have a high lead content.

Page 61 in Module

☑ Self-Check

- **Go to** the **Workbook** and complete **Self-Check Questions 65-66.**

- **Check** your answers against the **Answer Key** in your **Workbook**.

Page 62 in Module

Dental Caries

- Dental caries are the most prevalent disease for all age groups beyond infancy.
- Tooth decay is caused by bacteria in the mouth which break down dietary carbohydrates, producing acid that attacks the tooth.
- Children who are put the bed with a bottle of milk, juice, or sweetened drink can develop serious tooth decay called **early childhood caries (ECC) or baby bottle tooth decay.**

Page 62 in Module

Preventing Dental Caries

- Regularly clean the child's teeth.
- Promote healthy eating and drinking habits.
- Serve snacks which are not as likely to promote tooth decay: raw fruits and vegetables, cheese, yogurt, meat cubes or slices, unsweetened fruit juice, milk.

Preventing Dental Caries (continued)

- Take the child for regular dental check-ups.
- Follow recommendations regarding the use of fluoride for children.
- Once dental caries exist, the only effective treatment is to have a dentist “fill” the cavity.

Page 63-64 in Module

Constipation

Constipation is defined as the passage of firm or hard stools. *Infrequent and/or irregular bowel movements do not by themselves indicate constipation.* Often constipation occurs along with other symptoms such as difficulty in the passage of stools, bloody stools, and abdominal pain.

Three major ways to treat constipation are to:

increase fiber; increase fluid; and increase physical activity.

Diarrhea

- A child with **diarrhea** has an increase in frequency, fluidity, or volume of stools compared to his/her normal stools. Normal patterns vary among healthy children. The frequency of stools for preschool children varies from one stool every 4 days to 2 or 3 stools per day.
- Young children with diarrhea can quickly become dehydrated and if not treated immediately, the condition can be fatal.

Page 66 in Module

Diarrhea (continued)

- Acute diarrhea can result from a viral or bacterial infection or when a child ingests a poison. On the other hand, children with chronic diarrhea may have a gastrointestinal disorder, infection, or cow's milk or soy-protein allergy. Also, children who drink too much fruit juice can get diarrhea because they aren't able to absorb the types of sugars in some juices.

Page 66 in Module

Diarrhea (continued)

- All families should be encouraged to have a supply of commercially available oral rehydration solution (ORS) such as Pedialyte or Infalyte, in the home at all times.
- Although producing a homemade solution with appropriate concentrations of glucose & sodium is possible, serious errors can occur. Thus, standard commercial oral rehydration preparations should be recommended.

Page 66 in Module

Diarrhea (continued)

A child with diarrhea should be referred to a health care provider if:

- **There is a history of premature birth, chronic medical conditions, or other illness occurring at the same time.**
- **There is fever or greater than or equal to 102^0 F (39^0 C).**
- **There is visible blood in the stool.**

Page 66 in Module

Diarrhea (continued)

- There is high output, including frequent and substantial volumes of diarrhea.
- There is persistent vomiting.
- The parent/caregiver reports signs consistent with dehydration, such as sunken eyes, decreased tears, dry mucous membranes, or decrease urine output.
- There is a change in mental status, such as irritability, apathy, or lethargy.
- The child is not responding well to oral hydration therapy already administered.

Page 66 in Module

☑ Self-Check

- **Go to** the **Workbook** and complete **Self-Check Questions 67-72.**

- **Check** your answers against the **Answer Key** in your **Workbook**.

Page 67 in Module

Food-Induced Reactions

Many adverse symptoms have been attributed to eating various foods, from hyperactivity to life-threatening shock. Food-induced reactions may result from any of the following:

- **Food hypersensitivity**
- **Food intolerance**
- **Food poisoning**
- **Food additives**

Page 67 in Module

Food-Induced Reactions (continued)

- **Food hypersensitivity** (true food allergy) is a reaction of the immune system resulting from eating a food or food additive to which the child has become sensitized.
- Very small amounts of an allergen can produce an allergic response.

Page 67 in Module

Food-Induced Reactions (continued)

- **Food intolerance** is an abnormal response to a food or food additive which does not involve an immune mechanism. For example, children who have lactose intolerance have **limited** ability to digest lactose, the sugar in milk, because their bodies are not producing an adequate amount of *lactase*, the enzyme needed to digest lactose. Often a lactose intolerant person can drink small amounts of milk at a time.

Page 69 in Module

Food-Induced Reactions (continued)

Alternate Calcium Sources are available for those who are unable to or do not desire to drink milk or eat milk products. These alternate calcium sources include: calcium-fortified tofu, salmon, sardines, soy infant formula, calcium-fortified orange juice, and calcium-fortified cereal.

The **Adequate Intake** (AI) for calcium for children 1 to 3 years old is 500 milligrams (mg) per day, and for children 4 to 5 years old, it is 800 mg per day. Obtaining this amount of calcium each day would be difficult without consumption of either milk, milk products, a calcium-fortified product, or a calcium supplement.

Pages 70-71 in Module

Food-Induced Reactions (continued)

- Children need **vitamin D (**present in fluid milk) in order to utilize calcium in the body.
- Encourage the parent of a child who cannot drink milk to discuss this with the child's health care provider. Children who do not get regular sunlight exposure or who do not consume at least 16 fluid ounces of vitamin-D fortified milk per day need a a daily multivitamin supplement or other source that contains at least 200 IU of vitamin D.

Pages 70-71 in Module

Food-Induced Reactions (continued)

- **Food poisoning** is an illness caused by eating foods containing toxins or poisons. Toxins may be either from the food itself (for example, poisonous mushrooms), food additives, or from microorganisms.

Page 70 in Module

Food-Induced Reactions (continued)

- **Food additives** including sulfites and the food color tartrazine (FD & C Yellow No 5) cause allergic symptoms in some people. Sulfites can be especially problematic for children with asthma; parents with children allergic to sulfites or tartrazine should carefully read labels of all processed foods & drugs.

Page 70-72 in Module

Food-Induced Reactions (continued)

- Other food additives have been suggested as being a dietary cause of hyperactivity.
- Advocates of this theory recommend providing a diet free of artificial colorings and flavorings, natural salicylates (mostly found in fruits), and some preservatives. This is referred to as the Feingold diet. Studies have shown that the Feingold diet has no effect on most children; however, a very small number of children may benefit from a diet free of additives.

Page 72 in Module

Health Advisory for Mercury in Fish

- Fish can be an important part of a balanced diet. It is a good source of protein and is low in fat. However, some fish contain high levels of *mercury*. Too much mercury can harm unborn babies, infants, and young children.
- Pregnant women, women who may become pregnant, infants, and young children should not eat these fish: shark, swordfish, king mackerel, and tilefish (also known as golden snapper, or white snapper).

Page 72 in Module

Health Advisory for Mercury in Fish (continued)

- Eat no more than 2 average meals per week of fish. For young children, a serving size is 3 ounces of fish.
- White albacore tuna has more mercury than canned light tuna. Light tuna should be eaten instead of white albacore tuna.
- Check local advisories about the safety of fish caught by family and friends in local lakes, rivers, and coastal areas. For more information, go to the Florida Fish Consumption Advisories website: http://www.doh.state.fl.us/Environment/hsee/fishconsumptionadvisories/index.html

Page 72 in Module

☑ Self-Check

- **Go to** the **Workbook** and complete **Self-Check Questions 73-78.**

- **Check** your answers against the **Answer Key** in your **Workbook.**

Page 72 in Module

Part 4: Physical Activity for Preschool Children

Physical Activity Guidelines for Toddlers and Preschoolers

- Toddlers should accumulate at least 30 minutes daily of structured physical activity; preschoolers at least 60 minutes.

- Toddlers and preschoolers should engage in at least 60 minutes and up to several hours per day of daily, unstructured physical activity and should not be sedentary for more than 60 minutes at a time except when sleeping.

Page 73 in Module

Physical Activity (continued)

- Toddlers should develop movement skills that are building blocks for more complex movement tasks; preschoolers should develop competence in movement skills that are building blocks for more complex movement tasks.

- Toddlers and preschoolers should have indoor and outdoor areas that meet or exceed recommended safety standards for performing large muscle activities.

Page 73-74 in Module

Physical Activity (continued)

- Individuals responsible for the well-being of toddlers and preschoolers should be aware of the importance of physical activity and facilitate the child's movement skills.

Page 74 in Module

“Fit WIC”

In 1998, USDA funded a childhood obesity prevention initiative called “Fit WIC.”

“Fit WIC” Concepts

- **Children learn by doing and young children use movement to explore many aspects of their environment.**
- **Although young children can learn some fundamental physical skills on their own, they also need an adult help to further develop and expand their motor competence.**

Page 74 in Module

“Fit WIC” (continued)

“Fit WIC” Concepts

- Parents are their child’s first and most important teachers.
- Outdoor playtime is more likely to produce vigorous physical activity in young children than indoor playtime.
- Children benefit from being physically active everyday.

“Fit WIC” (continued)

“Fit WIC” Physical Activity Guidelines

Young children need to participate in age-appropriate skill building activities.

- **Basic motor skills such as throwing, kicking, balancing, etc. should be taught to young children using age and developmentally appropriate methods.**
- **Preschool movement activities involve the large muscle groups and focus on gross motor practice much more than the small muscle, fine motor activities that are appropriate for older children**.

Page 75 in Module

"Fit WIC" (continued)

"Fit WIC" Physical Activity Guidelines (continued)

- Young children are naturally active and enjoy exploring their environment when given the opportunity.
- Sometimes it's good to let children run with their imagination, while at other times it's good to direct their play.
- Children tend to have short bursts of vigorous activity, followed by recovery periods, throughout the day.
- Each preschool child's physical, social, and cognitive abilities will be different.

Page 75-76 in Module

“Fit WIC” (continued)

Parent’s Role in Physical Activity for Preschoolers

- Be more active with their child, be a role model.
- Provide the time, place, and equipment, if necessary, for their child to participate in active play.
- Help children develop motor skills such as jumping or throwing a ball.

Page 76 in Module

“Fit WIC” (continued)

Parent’s Role in Physical Activity for Preschoolers (continued)

- Limit television, video, and computer games to 1 to 2 hours per day.
- Try to find a child care provider that incorporates physical activity into the day.
- Offer activities, not food, as rewards.

Page 76 in Module

Injury Prevention and Safety

- Children should be supervised when they participate in physical activity.
- Safety equipment should be used when children participate in certain physical activities, e.g., using a helmet when riding a bicycle.
- Protect children from excessive exposure to the sun by using sunscreen, sunglasses, brimmed hats, and clothing that protects skin.
- If outdoor safety is a concern, children can do many activities indoors with soft equipment.

Page 78 in Module

☑ Self-Check

- **Go to** the **Workbook** and complete **Self-Check Questions 79-81.**

- **Check** your answers against the **Answer Key** in your **Workbook**.

Page 78 in Module

Part 5: Case Studies

- **On pages 79 to 81 of the Module, read the four Case Studies and the suggestions given for counseling the clients in these case studies.**

- **When you are finished reading these case studies, complete the** Practical Activity **for the** Performance Objectives **which is in your** Workbook. **It follows the** Answer Key to the Self-Check Questions.

- **Arrange for a convenient time to take the** Posttest**.**

Page 79-81 in Module