

From the Florida Department of Education...

Nutrition for Children with Special Health Care Needs:

A Handbook for
Parents, Teachers,
Caregivers, and Food
Service Providers

GROW TO 5

2001



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Nutrition for Children with Special Health Care Needs:

**A Handbook for
Parents, Teachers,
Caregivers, and Food
Service Providers**

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PREFACE

This handbook was developed under a project from the Florida Department of Education, Food and Nutrition Management Section, to the Florida International University, Department of Dietetics and Nutrition, using Nutrition Education and Training Program (NETP) funds. NETP funds are provided by the U.S. Department of Agriculture through P.L. 95-166, an amendment to the Child Nutrition Act. The handbook was published in its original format in 1998. This 2001 edition has been reformatted and republished as part of the Florida Department of Education's *Grow to 5* training series. It includes minor revisions to the 1998 version, but provides essentially the same content.

Grow to 5 was developed to assist Florida school districts in providing interdisciplinary training and resources to families, degreed and nondegreed early childhood educators, health care providers, and others who work with young children, including children with disabilities. The series includes 13 training modules on topics such as planning an effective early care and education program, working with families, health care in the early care and education setting, and development of children ages birth to five years.

The series also includes English and Spanish versions of three booklets for parents and other caregivers.

- *Welcome to the World: An Overview of Your Growing Child*
- *A Simple Introduction to Physical and Health Impairments*
- *Nutrition for Children with Special Health Care Needs* (this booklet)

This handbook was included in the *Grow to 5* series to supplement the information provided by *Module D: Nutrition and Feeding Practices: What You Need to Know*.

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INTRODUCTION

The federal law called the Individuals with Disabilities Education Act (IDEA) requires that school-age children with disabilities be educated to the maximum extent possible in the “least restrictive environment” with nondisabled students. IDEA also directs states and communities to support efforts to provide education and other services to younger children with disabilities, developmental delays, and other special needs in “natural environments”— settings that most young children spend their time in. Natural environments for young children typically include the home, family day care settings, Head Start/Early Head Start programs and other early care and education programs, preschools, and similar environments. In order to appropriately serve children with special needs in these settings, program directors, caregivers, food service personnel, parents, and others need information about how to meet the special nutritional and feeding needs of these children.

This handbook provides practical information regarding common nutrition and feeding problems of infants and young children with special health care needs resulting from a disability or other cause.

Parents, teachers, early care and education providers, and school food service personnel are encouraged to contact the Food and Nutrition Resource Center, Florida Department of Education, at 850-487-3569 for materials to assist them in this effort.

NUTRITIONAL RISK CHECKLIST

When should a parent, teacher, caregiver, or food service provider become concerned about a child's food intake and eating habits? Nutritional problems are often seen in children with disabilities, developmental delays, or special health care needs. Evaluation by a physician, professional nutritionist, registered dietitian, occupational or physical therapist, special educator, or speech pathologist is needed if a child exhibits one or more of the following:

- ✓ Mechanical feeding difficulties
- ✓ Feeding skills below developmental level
- ✓ Marked over- or underweight
- ✓ Sudden weight gain or loss
- ✓ Refusal to eat or loss of appetite over a long time
- ✓ Unusual food habits
- ✓ Increased frequency of diarrhea or constipation
- ✓ Allergies or food intolerances that interfere with intake
- ✓ Prescribed stimulant or anticonvulsant medications
- ✓ Outward signs of nutritional deficiencies:
 - Tough, dry, pale, scaly skin
 - Rashes
 - Stringy, dry, brittle hair
 - Red, spongy, or bleeding gums
 - Dark circles under eyes
 - Missing or mottled teeth, unfilled caries
 - Dry, swollen, cracked lips

LOSS OF APPETITE AND UNDERWEIGHT

A child's appetite is dependent upon body size and type, rate of growth, physical activity, muscle tone, degree of motor dysfunction, and other physical limitations. Children often lose their appetites during slow growth periods or when they are developing interests at home or in school and eating isn't a priority. This may happen at various stages of development and usually will not put a child at nutritional risk.

Some children with special health care needs may be underweight even with an apparently adequate food intake. Vomiting, diarrhea, and malabsorption can contribute to weight loss. Children with athetoid cerebral palsy, congenital heart disease, or pulmonary problems have increased caloric needs.

Children go through periods of refusing to eat certain foods. They may have very particular food preferences. Many want each food on their plate served separately. Foods mixed together or even touching on a plate may be refused. Some will eat one food every day for weeks and then show no interest whatsoever in that food. Children are on a "food jag" when they narrow their intake to just a few foods. The child's overall eating pattern from month to month is more important to watch since food jags usually don't last long. Because children are more sensitive to temperature, they favor warm foods rather than cold or hot. Some foods cooked one way will be eaten heartily, but refused if cooked another way. Raw vegetables or fruit may be accepted while cooked ones are rejected. If a child refuses to eat a food, try preparing it another way.

Many parents, teachers, and caregivers begin forcing food when appetite decreases. Behavior problems, overweight, and poor eating habits can result. Indicators of an adequate food intake are a child's growth, energy level, and general health.

If a child stays on a pureed diet longer than necessary, interest in food may fade. Parents, teachers, caregivers, and food service providers should watch for signs of rotary chewing motions indicating that a child may be ready to progress to chopped foods. Practice is necessary to develop good chewing skills.

What Can You Do When a Child Is Refusing Food or Is Underweight?

1. Introduce new foods when the child is hungriest—first thing in the morning, after an afternoon nap, before or after exercise, or whenever appetite is best.
2. Fortify favorite foods with nutritious add-ons that increase calories without increasing volume.
3. Offer fruit juice instead of punch or “juice drinks.” Dilute juice concentrates with less water than recommended.
4. Check growth pattern. If weight is appropriate for height and the child eats a variety of foods, there may be no need to worry about a small appetite.

“ADD-ONS” THAT INCREASE CALORIES		
Food	Calories	Where to Use
Powdered, nonfat milk	25 cal/ tbsp	Beverages, soups, cooked cereal, mashed potatoes, puddings
Cheese (sliced, cubed, grated)	110 cal/ oz	Sandwiches, snacks, casseroles, soups, purees
Wheat germ	35 cal/ tbsp	Baked goods, meat loaf, casseroles, cereals
Vegetable oil	126 cal/ tbsp	Soups
Soft margarine	101 cal/ tbsp	Casseroles, vegetables, cereals, crackers
Peanut butter	100 cal/ tbsp	Snacks, baked goods, crackers

OVERWEIGHT

Overweight results when a person takes in more food than is used to meet that person's daily need for energy. Children with limited physical activity and low muscle tone are at increased risk for overweight. A child who doesn't walk or crawl requires about 25% fewer calories than a child of comparable height who does, unless there is another problem such as malabsorption. Children with Down Syndrome, myelomeningocele, Prader-Willi Syndrome, or hypotonia will need fewer calories. For the child with low muscle tone, extra weight interferes with coordination and muscle development. Overweight also makes the management of the child who needs to be carried more difficult.

Foods, particularly sweets, are often misused as behavioral rewards. Over time, these extra foods may add up to extra pounds. Well-intentioned adults sometimes over-feed a youngster because they feel sorry for the child or see that eating makes the child happy. A child will also sometimes eat just because of frustration, boredom, or habit if snacks are readily available. The health and social consequences of overweight are serious. Helping children avoid overweight is an important responsibility.

What Can You Do for an Overweight Child?

1. Limit food intake to slow further weight gain. Serve smaller portions of lean meats, grains, and starches. Encourage fresh or water-packed fruits and vegetables. Limit fatty meats, gravies, fried foods, sweets, desserts, and salad dressings. Change from whole to nonfat milk or at least mix equal parts together. (Children younger than two years should be given whole milk unless a physician recommends lowfat or nonfat milk for that child.) Dilute all beverages with extra water.
2. Encourage physical activity geared to the child's capability. This will not only increase energy expenditure but also provide good exercise experience. Overweight children often have not had the opportunity to develop motor skills. The severe peer discrimination further discourages their physical activities.
3. Avoid using food as a reward; try a sticker or star on a chart instead. If food rewards are absolutely necessary, use low-calorie foods suggested below.

Nutritious, Low-Calorie Snacks for Little Ones

Vegetables: Mix and Match—Carrot sticks, celery sticks, cauliflower buds, green pepper rings, mushrooms, radish roses, turnip slices, zucchini sticks, tomato wedges, cucumber slices, string beans, broccoli florets

Fruits: Fresh or Canned (Packed in Water)—Apples, Pears, Plums, Strawberries, Mango, Peaches, Pineapple, Prunes, Guava, Bananas, Cherries, Grapes, Grapefruit, Plantain, Melon, Apricots, Oranges, Papaya, Kiwi

Other: Nonfat yogurt, hot air popcorn (unbuttered), cottage cheese, skim milk, fruitsicles

VITAMIN AND MINERAL SUPPLEMENTS

Interest in good nutrition leads to questions about appropriate diets for children and the need for vitamin and mineral supplements. Many wonder if there is a difference between natural and synthetic pills.

The body needs only small amounts of vitamins and minerals for proper functioning. Since the body doesn't manufacture vitamins and minerals, we need foods to supply them. Vitamin and mineral supplements are not usually needed unless a child's diet is habitually very limited. They may be needed during times of extended illness, for specific metabolic disorders, and with certain medications. Since each child needs different amounts of vitamins and minerals guessing and self-prescribing could lead to dangerous overdosing. Generous amounts of all needed vitamins and minerals are in diets that are rich in fresh, deeply colored vegetables (green, yellow, and orange); fruits; whole grains and that include small amounts of dairy products, fish, chicken, and meats.

All vitamins are manufactured in a laboratory, whether they are labeled synthetic (made from chemicals) or "natural" (chemically extracted from plant and animal sources). The body's use of a vitamin is the same whether it is synthetic or "natural." Store-brand vitamin supplements are usually less expensive than highly advertised name brands. Compare labels. When types and amounts of vitamins listed are similar, buy the less expensive brand.

It is definitely better to eat well and get all vitamins and minerals from food. The chart on the next page lists good food sources of key vitamins and minerals.

Good Food Sources for Vitamins

Vitamin A

dark green leafy vegetables
yellow vegetables
yellow fruits
carrots
sweet potatoes
red vegetables
organ meats

Vitamin D

fortified milk
exposure to sunlight

Vitamin E

vegetable oils
nuts
legumes
cereal
milk
eggs
kiwi

Vitamin C

citrus fruits and juices
strawberries
tomatoes
potatoes
bell peppers
broccoli
papaya

Vitamin B1 (thiamin)

whole grain cereal
whole grain breads
organ meats
wheat germ
brewer's yeast
soybeans
corn
peanuts
avocado

Vitamin B2 (riboflavin)

milk
avocado
green leafy vegetables
organ meats
enriched foods

Vitamin B3 (niacin)

lean meat
fish
poultry
avocado
whole grains
potatoes
enriched cereals
enriched breads
peanut butter
dried peas and beans

Vitamin B12 (cyanocobalamin)

animal protein foods

Folic Acid

dark green leafy vegetables
asparagus
broccoli
organ meats
yeast

Good Food Sources for Minerals

Calcium

milk, cheese, yogurt
dark green leafy vegetables
dried peas and beans
sardines, salmon
figs, cherimoya

Zinc

lean meats, fish, poultry
whole grains
dried peas and beans
nuts

Iron

lean meats, liver
dried peas and beans
nuts
dried fruits
whole grains
dark green leafy vegetables
avocado

Copper

organ meats
shellfish
dried peas and beans
nuts
figs
mangos

PICA

Pica is an eating disorder in which the person repeatedly eats nonedible substances such as paint, plaster, dirt, clay, paper, chalk, laundry starch, or ice. Pica is most common in pregnant women and young children. Pica may be caused by exaggerated mouthing behaviors, emotional factors, or nutritional deficiencies.

Eating nonfoods or mouthing objects is common between 12 and 18 months of age. However, continuation of this behavior beyond that developmental period or ingestion of dangerous substances may become a serious problem.

A primary concern with pica is lead poisoning from eating old paint chips from walls or furniture. Symptoms of lead accumulation develop over 4 to 6 weeks and include loss of appetite, fatigue, irritability, vomiting, and aggressive behavior. Lead decreases iron absorption and anemia can develop. Hyperactivity and learning problems are seen in children with lead poisoning. Treatment of lead poisoning involves an interdisciplinary team. A physician determines lead levels in the blood; a social worker assesses family interaction; a nurse examines the home for environmental contaminants; and a dietitian/nutritionist provides dietary counseling.

You should also suspect pica if there is anything unusual in the stool or if there is dye in the mouth.

ALLERGIES

A food allergy is an abnormal reaction after eating a food. Allergic reaction symptoms can include wheezing, runny nose, bronchitis, vomiting, diarrhea, rashes, itching, dark circles around the eyes, and headaches. The allergic reaction depends on how much and how frequently the food is eaten. The most common allergic offenders in children are milk, wheat, corn, chocolate, eggs, fish, nuts, and citrus.

Food allergies are more common in infants due to their digestive immaturity. Infant food allergies are often outgrown during the preschool years. Estimates of the incidence of allergies in children range from 3% to 38%. Allergies often run in families. Testing by an elimination diet is the only definite means of diagnosing a food allergy. Once the offending food is identified, treatment consists of avoidance. After six months of avoidance, a small amount of the food should be reintroduced to determine if symptoms will recur.

Parents will need to read food labels to ensure that an offending food has not been used during processing. A concern has been raised about genetically engineered foods causing allergic reaction. No research indicates any problems.

If the allergy is severe and requires exclusion of many foods or a total food group from the diet, a nutritionist or dietitian should be consulted to assure an adequate diet.

Difficult to digest foods, such as high fiber or high fat foods, may cause bloating, cramps, or diarrhea. Food intolerance symptoms can be lessened by eating smaller amounts of the problem food.

An allergy to contact with latex is being increasingly identified in children with specific health care needs. Children who have frequent contact with latex are at highest risk.

Substitutes for Allergenic Foods	
Eliminated Food	Replacement Food
Milk	Soy milk, soy cheese, tofu For calcium—dark green vegetables, dried peas and beans
Orange juice	Vitamin C-fortified juices / drinks
Wheat	Rice, oats, barley
Chocolate	Carob

NUTRITION AND DENTAL HEALTH

Tooth decay is a common nutritional health problem in the United States today. Cavities can be painful and expensive to repair. They can cause infection, chewing difficulties, and malnutrition. Almost half of all children have some tooth decay by age 4 and 90% by age 12. Finding a dentist capable of working with a child with special health care needs is often difficult.

Cavities are caused by the acid destruction of tooth enamel. Acid comes from fermentation of sugars in the mouth. All natural or refined sugar including white sugar, honey, molasses, brown sugar, and raw sugar can cause decay. Carbohydrate foods, such as bread, rice, potatoes, and pasta, may also cause cavities.

The rate of cavity formation is influenced by when the food is eaten. Sugared foods between meals are more harmful than when eaten at mealtime. Sticky foods and candies are more likely to produce cavities. Mannitol, xylitol, and sorbitol have lower tooth decay producing potential, but large amounts of these sugars can cause diarrhea, gas, bloating, or cramps. As few as six pieces of sugar-free gum made with sorbitol could cause diarrhea in a child weighing 40 pounds.

Children with developmental delays may have a high rate of cavities because of poor brushing habits or techniques, frequent snacking instead of regular meals, and a preference for sweets that is often supported by overindulgent parents.

Promote Good Dental Health

- ✓ Drink fluoridated water (1 part per million of fluoride) or give a fluoride supplement until all teeth have broken through the gums.
- ✓ Brush the child's teeth morning and night until you are certain she or he can do the job very thoroughly. Use a pea-sized amount of toothpaste for children under age 8 years.
- ✓ Discontinue bedtime and naptime bottles or fill only with water.
- ✓ Offer sweets only at mealtime or with other foods. Avoid sticky, caramel types of candy.
- ✓ Offer snacks and desserts such as fresh fruits and vegetables, nuts, cheese, and yogurt.

CONSTIPATION

Constipation exists when bowels are moved less frequently than usual or with difficulty. The frequency of bowel movements varies greatly with each child. Less than once a day is not necessarily a sign of constipation unless it is a change from the usual pattern.

A child's constipation can have many causes. Inadequate fluid intake is a cause among children who are unable to respond to thirst and express a need to drink. Low fiber in the diet, due to a pureed diet or feeding difficulties, is also a common cause. Low muscle tone, as in Down Syndrome, or increased muscle tone, as in spastic cerebral palsy, may contribute to constipation. Decreased physical mobility due to gross motor problems or obesity often leads to bowel irregularities.

Prolonged use of laxatives and enemas is not recommended since this can lead to dependence on them. Mineral oil is not recommended because it decreases absorption of fat-soluble vitamins. Even though other laxatives and stool softeners have few side effects, they are not recommended for use over long periods. More dietary fiber and fluids are the answer.

Strategies for Decreasing Constipation

- ✓ Feed the child at regular mealtimes.
- ✓ Establish a regular sleeping schedule.
- ✓ Increase the child's fluid intake, especially juice and water.
- ✓ Allow ample time for a bowel movement before going to school. Prunes or prune juice at bedtime may help.
- ✓ Encourage participation in daily physical activity to increase intestinal motility.
- ✓ Include these **high fiber foods** in the diet frequently: whole grain bread, crackers, and cereal; bran; wheat germ; raw fruits and vegetables (with skins); dried fruits; corn; prunes; nuts and seeds (sesame, sunflower, pumpkin)—when choking is not a concern.

VOMITING, DIARRHEA, AND FLUID LOSS

Vomiting is the expulsion of food from the stomach. While spitting up is normal in infants, forceful vomiting may be more serious. Diarrhea is an increased frequency of bowel movements that are less formed and more watery than normal.

Diarrhea and vomiting may have similar causes, such as overfeeding, improper feeding, flu or virus, a physical problem in the digestive system, or stress. Although each child reacts differently, some foods known to contribute to diarrhea are strong green vegetables, corn, dried fruits, and bran products.

If the child is vomiting or has diarrhea, offer clear liquids such as broth, water, fruit juices, gelatin, tea, and popsicles. Give the stomach and intestines a chance to “rest” for up to 24 hours at most. Because vomiting and diarrhea cause the body to lose large amounts of fluids, the child needs to drink more liquids than usual to prevent dehydration. Signs of dehydration include excessive thirst, drowsiness, increased breathing or pulse rate, and loss of appetite. Even children who are nauseated can usually keep down liquids taken a few sips at a time. A general rule is to have the child drink a minimum of 1/4 to 1/2 cup (2 to 4 oz.) each hour. When there has been no vomiting or diarrhea for six hours, gradually add bananas, rice, toast, apples, or applesauce.

Be sure to call a doctor if a child is vomiting or has diarrhea *and*

- the vomiting or diarrhea persists beyond 24 hours, *or*
- the child has an axillary temperature (measured under the arm) above 99° F, *or*
- there is unusual tenderness in the stomach or blood in the vomitus or stool, *or*
- dehydration is suspected.

Some children need extra fluid on a regular basis. These include children who drool heavily, have difficulty drinking liquids, are on tranquilizers or anti-convulsants, ruminate or vomit frequently, or have difficulty swallowing.

Strategies to Increase Fluid Intake

- ✓ Encourage foods that become liquid at room temperature: ice cream, sherbet, gelatin, popsicles.
- ✓ Serve foods that contain large amounts of fluids: soups, fruits, vegetables, dairy products.

GAGGING AND RUMINATION

Normally, the gag reflex is stimulated by touch on the back of the tongue. The gag reflex protects the esophagus (the throat) and prevents inappropriate food from being swallowed or inhaled.

Weak and strong gags can contribute to feeding problems. A very weak gag reflex must be strengthened to prevent choking. The normally strong infant gag reflex generally weakens once chewing begins. If this does not occur, gagging interferes with feeding.

Often, children who have disabilities or developmental delays are hypersensitive in the mouth area. As a result, new food textures, tastes, or temperatures cause a gagging reflex. Because this hyperactive gag makes swallowing solid foods very difficult—or even impossible—it should be inhibited.

If hypersensitivity in the oral area seems to be the main cause of gagging, a desensitization program should be started. This generally requires the guidance of an occupational, speech, or physical therapist. The child should begin a program of oral normalization, initially in the less hypersensitive regions and later working toward the mouth. He should be encouraged to put soft rubber toys in the mouth. Deep pressure may be applied to the gums with the guidance of a therapist skilled in feeding intervention.

As with vomiting, gagging can be a form of tantrum or attention seeking behavior. If this is the case, the person feeding the child should not react. Children may also gag to show a dislike of the food being served.

Another common problem among patients with physical or mental delays is rumination. Food swallowed returns to the mouth and may be reswallowed or spit out. If serious, rumination can cause electrolyte disturbances or malnutrition and require medical attention. The child may be getting too much food or may need a little more attention. A pacifier, thickened feedings, or dry feedings can be useful.

INFANTILISM

The transition from bottle to cup and strained to table foods should be completed around one year of age. For children with developmental delays, parents, teachers, or caregivers may underestimate the child's potential and consequently not encourage or allow the practice needed to develop eating and self-feeding skills. Other parents, teachers, or caregivers cling to the convenience and simplicity of feeding baby food.

Children with disabilities or developmental delays may refuse solids for a number of reasons. These include abnormal muscle tone; poor postural alignment; hypersensitivity of the mouth, lips, and tongue; gagging and tongue thrust; a developmental level of less than six months; conflicts between parents or teachers and the child; resistance to change; and other behavioral problems.

Children usually show signs that they are ready to eat solids. They might reach out for food, chew toys, or mouth other things. In children with special health care needs, these clues may be very subtle and are easily missed.

A normal part of any child's development is the urge to be independent. Self-feeding is a sign of independence. Some parents, wanting to help too much, tend to overprotect. The child will learn faster if his or her actions are guided but not if the child continues to be totally dependent on someone else.

Once the child is ready to accept different textures and start self-feeding, use of bottles and baby foods should stop. The child's general social behavior often improves when he learns to self-feed, even if it is only finger feeding. Parents should accept the initial messiness, show patience, and, if necessary, seek help from a physical, speech, or occupational therapist on feeding methods and desensitization techniques. Development of good oral-motor skills follows a definite developmental sequence. The therapist may recommend specific positioning or handling techniques to help the child acquire these developmental skills. Several books on feeding skill development are listed in the reference section.

DISRUPTIVE MEAL TIME BEHAVIOR

Each eating situation makes different demands on a child. Before deciding that a child's behavior is inappropriate, the mealtime should be examined to determine if demands made on the child are realistic. Generally, the child should be allowed to finish eating and then leave the table. Sitting still and watching others eat is too difficult for many children. If the child eats adequately at other meals or snacks, a small appetite at one meal may be normal. If the child eats alone, he or she may need a model to learn appropriate behavior.

If a child's behavior is truly inappropriate, ignoring the behavior may help more than yelling or punishing the child. Such actions may be interpreted as attention by the child. If the behavior continues, the child should be removed from the table. After a short time-out, the child can return to the table.

All appropriate eating attempts by the child should be positively reinforced through praise, toys, or nutritious food. Children with developmental delays may not respond to the usual things that most children find reinforcing. An effort should be made to find an appropriate reinforcer. *If* food is used as a reinforcer, the following guidelines are suggested:

- ✓ Choose a very favorite food.
- ✓ Use high-nutrient foods.
- ✓ Have the reinforcer unavailable at other times.
- ✓ Don't use food reinforcers right before or after a meal.
- ✓ Use the reinforcer very consistently.

FOOD TEXTURE

The change from strained foods and liquids to a greater variety of textures may be a slower process in children with oral musculature problems. It is important to encourage this as soon as the child is ready. Although food does not need to be prepared especially for the child, adaptation of the family or school breakfast or lunch menu may be necessary. Often children find meat tough and pieces of food too large to handle or chew. It might be necessary to use a food processor or blender to change the food texture.

Chopped, ground, or blended foods are better than strained food. They provide chewing practice and promote normal bowel movements because of fiber. Most foods requiring chewing help muscle development. As the child learns to use the tongue, mouth, and throat muscles, chopped and solid foods should replace blended ones.

Good starting foods are crunchy, dissolve easily, and give good sensory stimulation. Examples are crackers, cookies, breadsticks, and bits of toast. Other good finger foods are small pieces of meat loaf, bits of chicken, cooked or raw vegetables, sections of fruit, and cheese sticks.

Food Processors

Food processors can chop, mince, shred, slice, and extract juice. A number of food processors are available and each has specific operating instructions that should be read.

Remember that food processors work in seconds. They will chop practically anything and can be dangerous. Watch carefully to not over-process foods. With practice, you can avoid pureeing and get varying degrees of texture to help the child learn to chew. It is often unnecessary to add any liquids to foods being processed.

Blenders

Children with oral musculature problems may require some pureed or chopped food. When several foods are blended together, an unappetizing and unappealing conglomeration results. Food should be blended individually to improve eye appeal and acceptance. Casseroles however are easily blended and well accepted by most children. Starches such as rice and spaghetti should be blended with a sauce or milk or they will become sticky.

Chop the food to be blended into one-inch pieces before cooking (chopping after cooking is often messier). Cooking foods only a short time will preserve their nutritional value.

Most blenders have at least two buttons: one for pureeing and one for chopping. Puree only if necessary, otherwise chop.

Place a liquid such as the cooking liquid, milk, or soup broth in the blender. Use an amount of liquid less than or equal to the solid. Add the chopped food and blend for several seconds to make the correct texture. If the mixture is too thick, more fluid or a longer blending time may be required.

It is more difficult to thicken food. Good nutritional thickeners are wheat germ, fortified baby cereal, cream of wheat, grated cheese, dry milk powder, yogurt, buttermilk, and other blended foods. Commercial thickeners are also available.

USDA CHILD NUTRITION PROGRAMS

The National School Lunch Program and the School Breakfast Program provide funding for reduced-price and free meals for school-age children. The Child and Adult Care Food Program funds nutritious meals and snacks for needy young children in early care and education settings, including day care centers and family day care homes. Federal regulations for these U.S. Department of Agriculture Child Nutrition Programs require that the meals served provide one-third of the day's nutrients at lunch and another one-fourth at breakfast.

Research shows school meals help children get their nutritional requirements. Cost studies show school lunch is a definite bargain for families.

Because of the nutritional and economic benefits, we should encourage participation in these programs. Approved menus now have less fat, sugar, and salt, and more variety.

Sample School Menus

Breakfast

Low-fat Milk
Cereal
Banana
Whole Grain Toast

Lunch

Low-fat Milk
Sliced Turkey
Mashed Potatoes
Green Beans
Fresh Fruit
Biscuit

For more specifics regarding USDA Child Nutrition Program regulations, see www.fns.usda.gov/cnd, or contact the school district's school food service director or the Food and Nutrition Management office of the Florida Department of Education (850-488-8375 or, in Florida, 1-800-504-6609).

Some children with special health care needs have difficulty eating a school lunch or breakfast. Teachers may find that the menu does not suit the eating abilities of their students. Other students may be very picky eaters with limited food preferences.

Most school cafeterias can chop or puree foods that are difficult to chew. Other schools do not have facilities, equipment, or staff to modify the food texture, especially if meals are not prepared on site. Many teachers have to chop or puree food in their classrooms. A food processor and blender are essential, as are aides to help prepare the food and assist the children in developing self-feeding skills. Cleanliness is essential to avoid food-borne illnesses. Depending upon the ability of the students, much classroom learning can be built into mealtime.

Most school food service programs should be able to arrange healthy substitutions for special diets, for example, a milk-free diet. Cafeteria managers can often obtain consultation regarding special diets from supervisory dietitians at the area or district level.

Designing a feeding program for a child with disabilities or developmental delays requires individualization since energy, nutrients, and texture needs vary. Expectations for developing self-feeding skills should be realistic. There are a number of excellent books on the list of references to help you.

As children with special health care needs enter the mainstream of education, careful planning with parents and caregivers is necessary so that mealtimes provide appropriate foods and learning opportunities both at home and school.

PUTTING NUTRITION IN THE IEP

School-age children who receive special education services because of a disability have an individual educational plan, or IEP. The IEP is the written plan for a child's education. The IEP includes information about a student's educational level, the goals and objectives to be met during the school year, the services to be provided to the student, and a method for assessing progress.

The IEP is developed by a team that includes the child's teacher, other school professionals involved in the student's education, parents, and anyone else that either the school or parents feel are necessary.

Infants and toddlers who have disabilities or developmental delays will have a family support plan (FSP) instead of an IEP. An FSP focuses on the services the family needs to help their child. Children ages three to five may have an IEP *or* an FSP. Staff of the early care and education setting may be on an FSP or IEP team.

It is appropriate to put nutrition goals in an FSP or IEP. A registered dietitian familiar with a student's nutrition needs could attend the team meeting at a parent's or program's request. The school food service manager or the person who prepares food in the early care and education setting also needs to be involved in case a special diet or food texture modification is necessary for the student. The following are examples of nutrition-related goals that could be incorporated into the FSP or IEP:

- To develop or refine self-feeding skills
- To improve oral motor function related to eating/lip closure
- To improve mealtime behaviors
- To identify and communicate nutritional needs
- To improve food preparation and mealtime skills
- To improve growth rates
- To maintain lab data within normal limits

Note: The above was adapted from *Feeding for the Future: Exceptional Nutrition in the IEP—A Guide to Self-Feeding for Teachers, Parents, and Caregivers of Children with Special Needs* by N. S. Wellman, et al. Copyright 1995 by the Florida Department of Education. Used with permission.

DIET AND HYPERACTIVITY

The term “hyperactive” is used to describe a child with a short attention span, increased motor activity, restlessness, impulsiveness, aggressiveness, and low frustration tolerance. In 1975, Dr. Benjamin Feingold erroneously attributed all these behavioral problems to salicylate-like natural compounds in food and to artificial food flavorings and colorings.

The Feingold treatment consists of an exclusion diet in that 21 fruits and vegetables are omitted, in addition to all foods that contain artificial colors and flavors. Nonfood items such as toothpaste, mouthwash, cough drops, and many prescription and over-the-counter drugs are also eliminated.

Feingold claimed his diet effectively treated almost half of all hyperactive children. Controlled scientific studies **do not** support the Feingold diet. It is well-known that a major change in eating habits will produce behavioral changes regardless of the type of diet. It is believed that children often show a positive response to the increased parental attention that the Feingold diet requires.

Parents and teachers are attracted to the diet because of dissatisfaction with other therapies and as an alternative to medication. A major concern with the child on this diet is that appropriate medical and other professional attention is often neglected. Very careful meal planning must accompany the exclusion plan in order for a child to receive a nutritionally adequate diet.

Nutritional problems related to drugs for hyperactivity are discussed in the next section.

DRUG AND NUTRIENT INTERACTION

Some medicines affect the body's use of food. Some foods interfere with medicine's effectiveness in the body. Children with special health care needs may have to take medications such as anticonvulsants (dilantin or phenobarbital), tranquilizers, antispasmodics, or stimulants for hyperactivity (ritalin or dextroamphetamine). Other drugs commonly used in childhood illnesses include fever and pain reducers, antibiotics, and laxatives.

Food-Related Guidelines for Taking Medications

Ampicillin	Do not take with fruit juice.
Colace	Take with milk or juice.
Dexedrine	Take with meals.
Dilantin	Take with meals.
Ducolax	Do not take with milk.
Macrochantin & Furadantin	Take with meals.
Mineral oil	Take at bedtime, if at all.
Ritalin	Take 1/2 hour before meals, unless appetite loss results.
Tetracycline	Take on empty stomach—do not take with milk.

Because some tranquilizers cause saliva to thicken, saliva's efficiency in tooth-decay prevention is reduced. Rinsing the mouth of excess food particles and sugars will help prevent tooth decay for children on these drugs. When constipation occurs as a side effect of tranquilizers such as valium and thorazine, increase fluids and fiber in the diet.

Many parents crush their child's pills in a small quantity of pureed food. Although this is fine for some medicines, **time-released medications should not be crushed.**

Hyperactivity is frequently treated with stimulant medication. Loss of appetite is a common side effect and may slow growth. Careful scheduling of the child's meals and medicine is important. A child will generally eat breakfast better in the half hour before the medication takes effect. As each dosage wears off, high nutrient food should be given to take advantage of the better appetite. A drug's effect on sleep and mood should be investi-

gated, as should changes in dietary habits. A rebound or catch-up weight gain is possible when stimulants are stopped during summer vacation.

Anticonvulsant drugs may increase a child's need for folic acid, Vitamin D, and calcium. The medication, dose, and duration of therapy affect the nutrient deficiencies. Foods high in these nutrients are milk, meat, organ meats such as liver, green leafy vegetables, and yogurt. Eating a varied diet is a good rule to follow. Folic acid and vitamin D supplements may be needed with the precautions that large doses of folic acid may increase seizure activity and that vitamin D is harmful in large amounts. Self-medicating is therefore not recommended.

When a Child Takes Medications...

1. Read labels on over-the-counter medications and package inserts that come with prescription drugs.
2. Follow doctor's orders about when to take drugs and what foods and beverages to avoid.
3. Be sure the child eats a nutritionally balanced diet from a variety of foods. Long-term use of medications is less likely to cause nutritional deficiencies if the overall diet is good.

SEIZURE CONTROL WITH KETOGENIC DIET

The ketogenic diet was first used for the management of seizures during the 1920s. The diet became less popular when medication for seizure control was developed. The recent revival of the ketogenic diet was initiated by a group of parents whose children did not respond to drug therapy.

The ketogenic diet is a high-fat, low-carbohydrate, low-protein eating plan. With a low carbohydrate intake, the body uses fat for energy and produces chemicals called ketones. When a child has a lot of ketones, the child is said to be in ketosis.. That is why this dietary treatment is called the ketogenic diet. No one knows why the diet sometimes works. Seizures will disappear for some children on the diet, others will only have a reduction in the number of seizures. There are also some reports of no improvement.

Many children remain seizure-free when they come off the diet after two to three years. Other children will need to remain on the diet to control their seizures. These decisions are made by the physician in consultation with the family.

The diet severely restricts carbohydrate foods such as breads, pasta, rice, juice, fruits, vegetables, and anything made with sugar. High-fat foods are the main ingredients in the diet plan. Sugar-free vitamins, minerals, and calcium must be taken, since the diet is inadequate in most nutrients. This diet must be carefully individualized and closely supervised by a medical team familiar with ketogenic diets.

Below is a *sample* ketogenic diet for a seven-year-old child weighing 47 pounds. Each child's diet is different.

Sample Ketogenic Diet for 7-Year Old Weighing 47 Lbs.

Breakfast

5 tablespoons heavy cream
1 1/2 tablespoons cheese
2 tablespoons margarine
3/4 egg
1/3 small orange

Lunch

6 1/2 tablespoons heavy cream
1/2 slice of turkey
2 lettuce leaves
1 teaspoon tomato
1/3 small tangerine
2 tablespoons margarine

Dinner

5 tablespoons heavy cream
2/3 oz. chicken
2 tablespoons carrots
3 tablespoons margarine
1/5 cup cantaloupe

UNPROVEN THEORIES

In searching for the best treatments for their child, many parents turn to alternative or unproven therapies. Every few years there is a new “cure” for an old problem. Most of these therapies do not produce the desired results and disappear over time. Many therapies seem to run in cycles, resurfacing every five or ten years when a new audience is available.

Parents and professionals need to check any unproven treatments against the following guidelines:

- ✓ Is there a potential for harm? Are the doses of vitamins or minerals at toxic levels? Are prescription medications being taken? Are prescription medications being obtained from other countries? Have these medications been tested in a pediatric population?
- ✓ Is there any research demonstrating that these therapies are effective? Is the research in a peer-reviewed journal?
- ✓ What are the credentials of the researchers? Are their degrees from reputable institutions or mail order diploma mills?
- ✓ How much do these therapies cost? Is this a hardship on the family? Is a company profiting from a family’s concern?

Two therapies have been gaining attention recently. One is a recycled treatment for Down Syndrome that has been around in various forms for the past 40 years. The other is a new dietary approach for autism.

Down Syndrome

The current alternative therapy for Down Syndrome has different names: targeted nutrition therapy, MSBP, and Nutrivene-D. These therapies combine vitamins, minerals, and other supplements that are claimed to be potent antioxidants. In addition, many children are given a drug called Piracetam. This drug is of the group called “smart drugs.” Piracetam has not undergone rigorous clinical trial testing on children with Down Syndrome. It has not been approved for any uses in the United States by the Food and Drug Administration.

The National Down Syndrome Society cautions parents that the vitamin-related therapies and the vitamin/mineral/enzyme combinations have not been shown to be beneficial in a controlled trial, that the rationale advanced for these therapies is flawed, and that the previous use of these therapies has not produced any significant results. The National Down Syndrome Society does not recommend use of Piracetam for children with Down Syndrome.

Any parent thinking about starting this type of therapy, or any professional working with a child on this therapy, should consult a medical professional familiar with Down Syndrome.

Autism

In the past few years, a dietary treatment for autism has been gaining followers. It has been promoted by parents of children with autism and professionals in Europe. The basis of this diet is the idea that some dietary proteins, particularly gluten and gliadin in grains and casein in all milk products, break down incompletely in some people. The result of this incomplete breakdown is the formation of psychotoxic peptides. These peptides are then supposedly released into the bloodstream and affect the brain and nervous system in unusual ways. This is only a theory. It has not been proven and must be considered experimental.

This diet essentially restricts all wheat, barley, rye, and oat products. Additionally all dairy products, including milk, cheese, yogurt, and ice cream, are eliminated. This very difficult diet has a high risk for nutrient deficiency.

If a family is considering this diet, they should consult with their pediatrician and a registered dietitian. The dietitian evaluates the nutritional adequacy of the diet plan and provides substitute foods for those that have been eliminated.

EVALUATING NUTRITION CLAIMS, CURES, AND THERAPIES

Both parents and professionals must be wary of nutritional cures for complex problems. Improper therapies can hurt health and finances. Worthless treatments often have very impressive testimonials describing fantastic cures. Below are the Red Flags of Fraud. They are a warning that whatever is being promoted might not live up to the claims.

The Red Flags of Nutrition Fraud

- ✗ Promises of a quick fix
- ✗ Dire warnings of danger from a single product or regimen
- ✗ Claims that sound too good to be true
- ✗ Recommendations based on a single study
- ✗ Dramatic statements that are refuted by reputable scientific organizations
- ✗ Lists of “good” and “bad” foods
- ✗ Celebrity endorsements
- ✗ Inadequate labeling
- ✗ Claims that the product works by a secret formula
- ✗ Promotion of the treatment only in the back pages of magazines, over the phone, by direct mail, in newspaper ads, or in 30-minute commercials in talk show format (infomercials)
- ✗ Treatments that rely on personal stories of success rather than on scientific data for documentation
- ✗ Claim to have special foreign, ancient, or natural ingredients
- ✗ Claim that the medical community or government agencies refuse to acknowledge the effectiveness of the cure, product, or treatment

Any new therapy for a child should first be discussed with a reputable health professional. A child’s diagnosis, medications, and level of development must be considered before starting treatment. A registered dietitian, nutritionist, or other qualified specialist is the best source for nutrition advice.

SPECIAL INFANT CONCERNS

Infancy, the time from birth to one year of age, is a rapid growth period. Infants usually double their birthweight by three to four months and triple it by one year. Length increases 50% from about 20 inches at birth to 30 inches at one year.

Nutrition is very important during an infant's first year. Calorie and protein needs, per pound of body weight, are greater than at any other time of life. Care regarding the amount and types of food is necessary because the infant's digestion and absorption system is immature.

The preferred food for infants is breast milk during the first six months of life and continued breast milk with supplemental foods through the first year of life. Breast milk offers easy-to-digest protein, the right vitamins and minerals, and important anti-infection factors to keep infants healthier. Even premature infants and those with a genetic disorder or chronic illness can be breastfed with special guidance by health professionals. For infants not breastfed or breastfed for only a short time, an iron-fortified commercial formula is an adequate but not exact alternative.

Most commercial formulas are made from cow's milk. The common brand names and manufacturers are Similac (Ross), Good Start (Carnation), and Enfamil (Mead Johnson). These three formulas are similar and in an emergency can substitute for each other. However, regular cow's or goat's milk is *not* a substitute for breast milk or infant formula.

Infants with milk intolerance or a family history of milk allergy need soy formulas. Common soy formulas are Isomil (Ross), ProSobee (Mead Johnson), and Alsoy (Carnation). These soy formulas are similar and in an emergency can substitute for one another. However, regular soy or rice milk not specially formulated for infants is *not* a substitute for breast milk or infant formula.

Nutramigen and Pregestimil (Mead Johnson) and Alimentum (Ross) are special formulas for infants with severe or multiple allergies, serious digestive problems, malabsorption, malnutrition and other medical conditions.

The Special Supplemental Nutrition Program for Women, Infants and Children, commonly called the WIC Program, is a federally funded program that serves pregnant, breastfeeding, and postpartum women and infants and children under the age of five. The WIC Program encourages breastfeeding as the best form of infant nutrition and prevention of certain health problems. However, when breastfeeding is not an option, the WIC Program will provide iron-fortified commercial formulas to eligible participants. Eligibility is based on low or moderate income and a medical or nutritional risk. In addition, the WIC Program can provide specialized formulas when prescribed by a health care provider for infants and children with medical conditions

Infants are ready to eat solids when they can sit with support, when tongue thrust has disappeared, and when they can swallow nonliquid foods. Rice cereal, with its low allergy potential and high iron content, is usually the first solid food given. The cereal is mixed with a small amount of formula and then fed by spoon. Cereal should not be put into the baby's bottle. If nipple holes have been enlarged for cereal, replace them. If an infant sucks hard without getting much formula, check if the nipple is clogged with dried milk or cereal.

Once the infant is used to eating cereal, vegetables or fruit can be given, and a few months later, soft or chopped meats or other foods are appropriate. New foods should be introduced one at a time so allergies can be recognized. Common allergic reactions during infancy are diarrhea, rashes, and wheezing.

Good eating goals are to have toddlers self-feed and eat regular table food as soon as possible. Most infants do not need baby food or formula after one year of age. Also for most infants, a cup that has a lid with a spout ("sippy cup") can be introduced at around six months.

Nutrient-intake needs for infants depend upon body size, activity level, and diagnosis. Likewise, length and weight vary greatly among well-nourished infants of the same age. However, many parents worry that their baby is not growing properly. The best way to keep track of an infant's growth is to schedule frequent well-baby check-ups during which a health care professional can measure and plot the baby's length and height on a growth chart.* Regular well-baby check-ups also give parents an opportunity to speak to the physician about any concerns related to their child's growth, health, or eating habits. Most infants grow fairly steadily along the same path on the growth chart. Slow or no growth is called "failure to thrive" and needs attention by health professionals.

Infant feeding can be a pleasant experience for the infant and the feeder. Parents, caregivers, and teachers of infants with mental or physical special health care needs set the foundation for future success in self-feeding and healthy food habits.

***Note:** Many pediatricians also use the body mass index (BMI) in determining if a child's weight is within the normal range relative to the child's height. The Centers for Disease Control has developed BMI indexes for children ages 2 to 20 years.

RESOURCES AND COOKBOOKS

The following pages list print and video resources related to nutrition and feeding. Information about how to obtain the items is provided when available. Some of the items are available on free loan from the Florida Department of Education through one of two resource centers. If the annotation for the item includes the initialism **CIC**, the item is available from the Clearinghouse Information Center. If the annotation includes the initialism **FNRC**, the item is available from the Food and Nutrition Resource Center. Contact information for these two resource centers is provided below.

FNRC: Food and Nutrition Resource Center

Florida Department of Education
325 W. Gaines Street, Room 1032
Tallahassee, FL 32399-0400
Voice: (850) 487-3569; In Florida: 1-800-504-6609
Fax: (850) 921-2766
Email: FNRC@mail.doe.state.fl.us

CIC: Clearinghouse Information Center

Florida Department of Education
325 W. Gaines Street, Room 628
Tallahassee, FL 32399-0400
Voice: (850) 488-1879
Fax: (850) 487-2679
Email: cicbiscs@mail.doe.state.fl.us

FOR PARENTS AND CAREGIVERS

Ash, J., & Roberts, D. *Recipes for Health: Hyperactive Child*. Thorsons Pub. 1996. ISBN #072253292X.

More than 150 recipes to help hyperactivity and other food intolerances.

Berman, C., & Fromer, J. *Meals without Squeals: Child Care Feeding Guide & Cookbook*. 2nd ed. Bull Pub. Co. 1997. ISBN #0923521399.

Combines simple feeding and nutrition information with menus and recipes.

#1915 Call Nutrition Counseling Education Services (NCES) at 1-800-445-5653 or visit the website at www.ncescatalog.com.

Figtree, D. *Eat Smart: A Guide to Good Health for Kids*. New Win Publishing. 1997. ISBN #0832904651.

Gundersen, K. *Babies with Down Syndrome*. Woodbine House Publishing. 1995. ISBN #0933149646.

Reference guide that helps parents understand what Down Syndrome is and what they can expect.

Lang, J. *Jenifer Lang Cooks for Kids*. Crown Publishing. 1993. ISBN #051788027X.

153 recipes and ideas for food that kids love to eat.

McNicol, J. *Your Child's Food Allergies*. Jon Wiley & Sons. 1992. ISBN #047155801X.

#1172 Call NCES at 1-800-445-5653 or visit the website at www.ncescatalog.com.

Powell, T., & Gallagher-Ahrenhold, P. *Brothers and Sisters—A Special Part of Exceptional Families*. Paul H. Brookes Publishing. 1993. ISBN #155761103.

Help for siblings of children with disabilities.

Richman W., Ferraco M., & Davis, S. *Pureed Foods with Substance and Style*. Aspen Publishers. 1994. ISBN #0834205548.

Cookbook for use in health care facilities to make purees more palatable and visually appealing.

Storper, B. *Kid's Kitchen*. 1995.

Enchanting cookbook and activity guide with favorite no-cook recipes, reproducible recipe cards, and creative food activities.

#1311 Call NCES at 1-800-445-5653 or visit the website at www.ncescatalog.com.

United States Department of Agriculture. "Tips for Using the Food Guide Pyramid for Young Children." (2000).

Online: www.usda.gov/cnpp/KidsPyra/index.htm

Warner, P. *Healthy Snacks for Kids*. Bristol Pub. Enterprises 1996. ISBN #1558671595.
Nutrition made fun with more than 120 recipes.
#1960 Call NCES at 1-800-445-5653 or visit the website at www.ncescatalog.com.

Wellman, N. S., et al. *Feeding for the Future: Exceptional Nutrition in the IEP—A Guide to Self-Feeding for Teachers, Parents, and Caregivers of Children with Special Needs*. Florida Nutrition Education and Training, Florida Department of Education. 1995.

A guide to self-feeding for teachers, parents, and caregivers of children with special needs. (English and Spanish video and manual).

FNRC: Request item #1438.

CIC: Request item #309165.

Zunkin, J. *Raising Your Child without Milk*. Prima Publishing. 1995. ISBN #0761501312.
Reassuring advice and recipes for parents of lactose intolerant and milk allergic children.

FOR TEACHERS AND OTHER PROFESSIONALS

Adverse Reactions to Food—Client Education Booklets. “Gluten Intolerance.” “Lactose Intolerance.” Food Allergies.” American Dietetic Association. 1991.

Call 1-800-877-1600 ext 5000.

Allen, E., & Schwartz, I. *The Exceptional Child: Inclusion in Early Childhood Education.* 3rd ed. Delmar Pub. 1996. ISBN #0827366981.

Basic Nutrition and Kitchen Skills for the Developmentally Disabled. Florida Department of Education. 1992.

Video and manual, grades 3-12.

FNRC: Request item #1008.

CIC: Request item #307008.

Blackman, J. A. *Medical Aspects of Developmental Disabilities Birth to Three.* 3rd ed. Aspen Publishing. 1997. ISBN #0834207591.

Carp D., Krick J., & Webster, C. *Eating for Good Health.* Nutrition Division, John F. Kennedy Institute For Handicapped Children, 707 N. Broadway, Baltimore, MD 21205.

Practical application of nutrition science for children with disabilities.

Cooking for Kids. Florida Department of Education. 1993.

For child care centers or residential treatment facilities serving fewer than 100 children. Planning, equipping small kitchens, food safety, injury prevention, child development issues.

FNRC: Request item #1130.

Dietary Guidelines. In Your Hands. National Food Service Management Institute. 1992.

Video encouraging partnerships among school staff, students, and parents.

1-800-321-3054 for price.

Edelstein, S. *Nutrition and Meal Planning Child-Care Programs: A Practical Guide.* American Dietetic Association. 1992.

Call 1-800-877-1600, ext. 5000.

Ekvall, S. *Pediatric Nutrition in Chronic Diseases and Developmental Disorders.* Oxford University Press. 1993. ISBN #0195072243.

Prevention, assessment, and treatment of various diseases and disabilities.

Food Choices for Healthy Living. Culver City, CA: Social Studies School Service. 1992.

Video to teach dietary guidelines through introduction to the Food Guide Pyramid.

FNRC: Request item #1160.

The Healthy Edge in Schools: Eating, Dietary Guidelines and Education. American School Food Service Association. 1991.

Video: implementing dietary guidelines in cafeteria and school.

FNRC: Request item #0887.

Hendricks, K., & Walker, A. *Manual of Pediatric Nutrition.* 2nd ed. BC Decker. 1990. ISBN #1556641982.

Horsley, J. W., Allen, E. R., & White, P. A. *Nutrition Management of Handicapped and Chronically Ill School Age Children.* Virginia Departments of Health and Education. 1990.

FNRC: Request item #0805.

Kurtz, L., Dowrick, P., Levy, S., & Batshaw, M. *Handbook on Developmental Disabilities: Resources for Interdisciplinary Care.* Aspen Publishing. 1986.

Meeting Their Needs, Training Manual for Child Nutrition Program Personnel Serving Child with Special Needs. University of Alabama, Department of Nutrition Sciences and Sparks Clinics. 1993.

Neilsen, L. *The Exceptional Child in the Regular Classroom: An Educator's Guide* Corwin Press. 1996. ISBN #0803964838.

Comprehensive overview of major disabilities teachers may encounter. Full of resources and references.

Nutrition for Elementary Aged Children: Resource Packet. Penn State University Nutrition Center. 1990.

Nutrition topics such as sugar, sodium, weight control.

Story of How Fred Fiddle Got Fit. Ohio Department of Education. 1992.

K-2 exercise video.

FNRC: Request item #1159.

Taylor, R. L. *Assessment of Exceptional Students: Educational and Psychological Procedures.* 4th ed. Allyn & Bacon. 1996. ISBN #0205188591.

GUIDES FOR FEEDING SKILLS DEVELOPMENT

Annotated Bibliography on Feeding Children with Special Needs. National Food Service Management Institute. 1992.

1-800-321-3054 for price.

Blended Diet: Applied Preparation and Feeding Technique. Book: Inservice Training Tool.

FNRC: Request item #1146

Cannon, R. L. *Feeding Techniques for the Severely Multiply Handicapped Child.* South Miami, FL: FDLRS.

CIC: Request item #304395

CARE: Special Nutrition for Kids. Alabama State Department of Education. 1993.

Video and workbook for child nutrition program.

Managers serving children with special needs.

FNRC: Request item #1126.

DiLima, S. N., et al. *Caregiver Education Guide for Children with Developmental Disabilities.* Aspen Publishers. 1997. ISBN #0834210347.

Dimensions in Feeding Techniques. C.H.I.P.S. 1992.

Three, 30-minute videos for school food service training: assessing ability to swallow, motor skills, feeding techniques.

Olathe, K. S. *When Feeding Is a Problem.* Nutrition Counseling Education Services. 1990.

FNRC: Request item #1248.

Project Chance. "Feeding Young Children with Special Needs: Child Development & Oral Motor Skills." Arizona Department of Health Services. n.d.

On-line document: www.hs.state.az.us/cfhs/ons/pchance/chil.htm

Rarback, S., & Nicholson, C. *Grow to 5 Module D: Nutrition and Feeding Practices: What You Need to Know.* Florida Department of Education. 2001.

Birth to 5 years.

CIC: Request item #310509.D.

Rokusek, C., & Heinincks, E. *Nutrition and Feeding for Persons with Special Needs: A Practical Guide and Resource Manual.* Child and Adult Nutrition Services, South Dakota Division of Education. 1992.

FNRC: Request item #0315.

Three Dimensions of Puree Diets. Anderson Benner Assoc.

FNRC: Video—Production, plating techniques; 1990. Request item #0838

FNRC: Recipe Set—Basic processing, creative production; 1992. Request item #1147

Gluczek, A., & Sondel, S. *Project S.P.O.O.N. Special Program of Oral Nutrition for Children with Special Needs*. University of Wisconsin Children's Hospital.
1-608-263-9059 for price.

GENERAL NUTRITION

Anderson, J., & Deskins, B. *The Nutrition Bible*. William Morrow Pub. 1995. ISBN #0688116191

General information on nutritional topics from A to Z.

Bowes, A., Church, H., & Pennington, J. *Bowes & Churches Food Values of Portions Commonly Used*. 17th ed Lippincott-Raven Publishers. 1997.

All the data on the nutrient content of foods in quick reference, tabular format.

Duyff, R. *The American Dietetic Associations Complete Food and Nutrition Guide*. American Dietetic Association. 1996. ISBN #1565610989.

Based on the most current nutrition information.

Vitamins, Minerals and Food Supplements. American Dietetic Association. 1996.

Provides a guideline for determining whether dietary supplements are necessary.
Call 1-800-877-1600 ext 5000.

Whitney, E., & Rolfes, S. *Understanding Nutrition*. 7th ed. West/Wadsworth. 1996. ISBN #0314063854.

One of the most popular textbooks used in college nutrition courses.

WHERE TO GET MORE INFORMATION

AIDS

Aids and Children

www.avert.org/children.htm

Children with AIDS Project

480-774-9718

www.aidskids.org

National AIDS Hotline

800-342-AIDS (2437) English

800-344-7432 Spanish

www.ashastd.org

Voices for Children Foundation

416-489-5485

www.voices4children.org

ALLERGIES AND ASTHMA

Allergy and Asthma Network Mothers of Asthmatics

800-878-4403

www.aanma.org

American Academy of Allergy, Asthma and Immunology

414-272-6071

www.aaaai.org

Lung Line

800-222-5864

www.natatijewish.org

Non-Dairy-Something to Moo About

www.nondairy.org

ATTENTION DEFICIT DISORDER

Attention Deficit Disorder Association

847-432-ADDA

www.add.org

Children with Attention Deficit Disorder

800-233-4050

www.chadd.org

AUTISM

Center for Autism and Related Disabilities (University of South Florida)

800-333-4530

<http://card-usf.fmhi.usf.edu>

Center for the Study of Autism

www.autism.com

BIRTH DEFECTS

Association of Birth Defect Children

800-313-2232

www.birthdefects.org

March of Dimes Birth Defects Foundation

800-MODIMES (663-4637)

www.modimes.org

BURNS

Shriners Hospital for Children

800-237-5055

www.shrinershq.org

CEREBRAL PALSY

United Cerebral Palsy Association
www.ucp.org

CHILD CARE

Early Head Start National Resource Center
202-638-1144
www.ehsnrc.org

Head Start Information & Publications Center
866-763-6481
www.headstartinfo.org

CLEFT LIP/PALATE

American Cleft Palate Craniofacial and Cleft Palate Foundation
800-242-5338
www.cleftling.org

Children's Craniofacial Association
800-535-3643
www.ccakids.com

FACES: The National Craniofacial Association
800-332-2373 (800-3FACES3)
www.faces-cranio.org

Wide Smiles
209-942-2812
www.widesmiles.org

CYSTIC FIBROSIS

Cystic Fibrosis Foundation
800-344-4823
www.cff.org

DOWN SYNDROME

National Association for Down's Syndrome
630-325-9112
www.nads.org

National Down Syndrome Society
800-221-4602
www.ndss.org

DISABILITIES

Advocacy Center for Persons with Disabilities
800-342-0823
www.advocacycenter.org

Alliance of Genetic Support Groups
800-336-4363
www.geneticalliance.org

American Occupational Therapy Association
301-652-2682
800-377-8555 (TDD)
www.aota.org

American Speech-Language-Hearing Association
www.asha.org

Florida Department of Health Children's Medical Services
850-487-2690

Florida Directory of Early Childhood Services (Central Directory)
800-654-4440

Family Network on Disabilities of Florida
800-825-5736
www.fndfl.org

National Information Center for Children and Youth with Disabilities
800-865-0285
www.nichcy.org

National Organization on Disability
800-248-2253
www.nod.org

Project Chance
Arizona Department of Health Services
www.hs.state.az.us/cfhs/ons/pchance/

EPILEPSY

Epilepsy Foundation of America
800-332-1000
www.efa.org

FOOD GUIDE PYRAMID

United States Department of Agriculture Food Guide Pyramid for Young Children
www.usda.gov/cnpp/KidsPyra

GROWTH CHARTS AND BODY MASS INDEX

Centers for Disease Control
301-458-4636
www.cdc.gov/growthcharts

METABOLIC DISORDERS

Fatty Acid Oxidation Disorder
336-547-8682
www.fodsupport.org

National Organization for Rare Disorders
800-999-6673
www.rarediseases.org

National Urea Cycle Organization
800-38NUCDF
www.NUCDF.org

PKU of Florida
888-454-3383
www.savebabies.org

PRADER-WILLI SYNDROME

Prader-Willi Connection
800-926-4797
www.pwsyndrome.com

NUTRITION

The American Dietetic Association
800-366-1655
website: www.eatright.org

Children's Nutrition Research Center
713-798-7971
www.bcm.tmc.edu/cnrc

International Food Information Council Foundation
202-296-6540
www.ific.org

American Dietetic Association National Center for Nutrition and Dietetics
312-899-0040
www.eatright.org

Nutrition Navigator
www.navigator.tufts.edu

**Florida Department of Education
Food and Nutrition Management
School Lunch and Breakfast Programs**
800-504-6609
<http://fnm.doe.state.fl.us>

NUTRITION PROGRAMS

**Florida Department of Health
Bureau of Child Nutrition Programs**
(Child Care Food Program, Homeless
Children Nutrition Program, Afterschool
Snack Program)
850-245-4323
website: www9.myflorida.com/family/ccfp

**Florida Department of Health
Bureau of WIC and Nutrition Services**
(Special Supplemental Nutrition Program
for Women, Infants, and Children (WIC))
800-342-3556
website: www9.myflorida.com/family/wic

**United States Department of Agriculture
Child and Adult Care Food Program**
website: www.fns.usda.gov/cnd

VISUALLY IMPAIRED

American Council for the Blind
800-424-8666
www.acb.org

American Foundation for the Blind
800-232-5463
www.afb.org

**National Association for Parents of
Children with Visual Impairments**
800-562-6265
www.spedex.com/NAPVI

National Federation for the Blind
410-659-9314
www.nfb.org



Florida Department of Education

Charlie Crist, Commissioner

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