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A Food and Nutrition Guide for People with Physical Limitations

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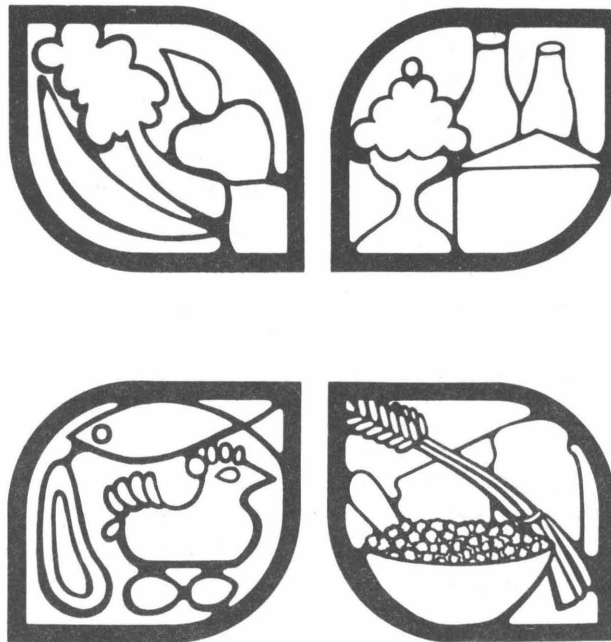
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A FOOD AND NUTRITION GUIDE FOR THE PHYSICALLY LIMITED

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This booklet has been developed for families and professionals working with individuals with physical limitations. It is designed to provide general information on normal adult nutrition, special nutrition problems associated with physical limitations, assessment of nutrition knowledge and self-feeding skills, and the use of feeding devices. In addition, a special section on feeding and nutrient needs of infants and children has been included.

Information presented here is to be used as a guide for evaluating the food and nutrition needs of individuals with physical limitations. Charts and numerous drawings have been selected to illustrate and further clarify the points made throughout the booklet. Individuality is stressed, and special consideration has been given to the construction of feeding devices in the home.

Basic Nutrition Facts

A well balanced diet is a major determinant of good health. Food provides the body with energy, fiber, water, minerals and vitamins necessary for growth and body maintenance.

All foods provide energy (calories). However, the amount of protein, carbohydrate, fat, vitamins and minerals vary. Therefore, it is essential that the individual with physical limitations eat a *variety of foods* to insure proper nutrition.

Nutrient's Role in the Body

Protein

makes up the basic cell structure, muscle tissue, blood, and antibodies which help fight disease and infection. Adequate protein is very important during times of growth and injury, where it is needed for tissue building and repair.

Dietary Sources of Protein include: meat, poultry, fish, eggs, milk, bread and whole grains (soy beans, dried kidney beans and peas).

Carbohydrate

is the major source of energy in the diet. Carbohydrates add bulk and taste appeal to the diet.

Dietary Sources of Carbohydrates include: vegetables, starches, fruits, grains and sugar.

Fat

provides energy, essential fatty acids and makes meals more satisfying. Essential fatty acids strengthen cell membrane struc-

tures and body fat provides a cushion around vital organs. Everyone needs some fat in their diet.

Dietary Sources of Fats include: meat group, cream, butter, margarine, oils and salad dressings.

Water

makes up 2/3 of the body. People can only live 72 hours without this vital nutrient. In the body, water is a component of body tissue, assists digestion and absorption of food; aids in the elimination of wastes, regulates body temperature through sweat and makes up body fluids which carry nutrients to every cell.

Vitamins

interact with other food nutrients to promote growth, insure proper functioning of nerves and muscle tissue.

Vitamins come from *all Food Groups*.

Minerals

also interact with other nutrients to promote growth of bones, teeth and regulate necessary body functions.

Examples of a few essential minerals are:

Calcium - helps build bones and teeth, promote blood clotting and proper nerve function

Iron - Necessary for red blood cell formation

Iodine - Necessary for prevention of goiter - enlargement of the thyroid gland

To insure proper nutrition and meal variety, the daily diet of an individual with physical limitations should include the following foods.

MEAT GROUP

2 or more servings

Meats, fish, poultry, eggs, or cheese - with dry beans, peas, nuts or peanut butter as alternatives.

FRUIT & VEGETABLE GROUP

4 or more servings

Include dark green or yellow vegetables; citrus fruit or tomatoes.

MILK GROUP

2 or more glasses (adults)

Cheese, ice cream and other milk-made foods can supply part of the milk.

BREAD & CEREAL GROUP

4 or more servings

Enriched or whole grain. Flours, pastas, rice, oats grits, cornmeal.

Food and Nutrition Problems Associated With Disabling Conditions

Nutrition is an integral part of health maintenance. However, it is not uncommon for an injury, disease or disabling condition to affect the nutritional status of an individual. Often the nutrition problem can be corrected by improving nutrition knowledge and food habits, modifying the diet, or providing special feeding devices.

The following charts give an overview of the nutrition aspects of some injuries, disease and disabling conditions. Definitions of selected terms are provided at the end of the chart.

****Note:** If an individual with physical limitations is suspected of having a nutrition or feeding problem, consult a physician and registered dietitian for diagnosis and treatment.

FIGURE I
Diseases or Injuries and Disabling Conditions Related to Nutrition

Disease or injury	Definition:	Possible disabling conditions relating to nutrition:	Notes:
Arthritis	rheumatoid-chronic, progressive inflammatory, primarily attacking joints, can affect whole body.	Prevention of weight loss. Feeding devices may be necessary. Sodium restriction* if patient is on corticosteroids*.	
	gout-disease which mainly attacks small joints, such as fingers, toes, wrists, and ankles.	Restriction of high Purine* foods.	
	osteoarthritis - non-inflammatory disease of joints, results from increased age.	Crippling of hands & arms may require feeding devices. Weight control. Use of antacids with pain medicine (aspirin) or restriction of irritating foods. Often victims of food faddism.	
Cardio-vascular Disease	disease associated with the heart and circulatory system, acute or chronic.	Sodium restriction, possible potassium supplementation, weight control, and possible need to reduce the amount and type of dietary fat.	
Cerebral Palsy	*Infants and Children A persisting qualitative motor disorder appearing before the age of three years, due to non-progressive damage to the brain.	●Difficulty in sucking, swallowing, and grasping. Stimulation of oral reflexes, adaptive feeding devices helpful. Tendency toward "colic."* Diets need to be adequate in roughage* and if ataxia* is present, a higher calorie diet may be required. Prevention of iron deficiency anemia.	

Disease or injury	Definition:	Possible disabling conditions relating to nutrition:	Notes:
Multiple Sclerosis	Chronic, usually progressive neurological disease, symptoms and progression vary greatly.	<ul style="list-style-type: none"> ● Inability to close mouth and chew properly, poor grasp, may require feeding devices and stimulation of oral reflexes. Weight control and adequate roughage in diet. 	
Muscular Dystrophy	A progressive muscle disorder characterized by weakness and wasting in the shoulders or pelvic girdle.	<ul style="list-style-type: none"> ● Weight control, adequate roughage in diet. Inability to close mouth, chew properly and grasp, may require feeding devices and stimulation of oral reflexes. 	
Hemiplegia	one-sided paralysis	Maintenance of positive Nitrogen balance through high protein diets Adequate fluid intake. Adaptive feeding devices may be necessary.	
Paraplegia	lower-half of body paralyzed	Maintenance of positive Nitrogen balance through high protein diets Regulation of fluid intake. Adequate dietary roughage and fluid intake. Weight control.	
Quadraplegia	paralysis or partial paralysis of all four limbs	Special feeding devices usually required. Weight control and adequate roughage in diet. Essential maintenance of positive Nitrogen balance through high protein diets. Adequate fluid intake to prevent dehydration and keep kidneys and bladder flushed.	
Amputation	The removal of a limb or other appendage.	Weight control. Feeding devices may be required.	
Scoliosis	lateral curvature of the spine	Weight control. Feeding devices may be required.	
Kyphosis	curvature of spine at high back	Weight control. Feeding devices may be required.	
Lordosis	inward curvature of the spine	Weight control. Feeding devices may be required.	

Disease or Injury	Definition:	Possible disabling conditions relating to nutrition:	Notes:
Parkinson Disease	Progressive neurological disorder characterized by tremor and muscular rigidity.	Weight control. If tremors are severe, special feeding devices may be required, especially when consuming liquids. (i.e. straw)	
Spinabifida	A developmental anomaly characterized by a defective closure of the bony encasement of the spinal cord.	Weight control. Adequate roughage in diet. Possible need to limit fluid intake. Feeding devices may be necessary.	
Aging	Physiological changes which may occur in the final stage of growth.	Weight control. Adequate calcium and roughage in diet. Decreased sensitivity of taste buds — more highly seasoned foods may be desired. Community feeding programs, i.e. "Meals on Wheels" to assist shut-ins.	

•Calm atmosphere for feeding.
 *See Vocabulary List

Vocabulary (For Chart)

ataxia	A condition characterized by: uncontrolled muscle movement; loss of ability to coordinate muscles.		arthritis), uric acid is not properly eliminated. It builds up in the body and deposits in joints causing pain. Therefore, eliminating high purine foods is thought to be one method of controlling uric acid build-up.
colic	Acute spasmodic abdominal pain caused by various abnormal conditions in the colon.		
corticosteroids	Drugs which contain a steroid hormone that is naturally produced by the adrenal gland in the body. The drugs are often prescribed for the treatment of arthritis.	roughage	Refers to foods which provide fiber in the diet and aid elimination. Examples of some high fiber foods are bran, potato skins, fresh fruits.
Nitrogen balance	Nitrogen is a component of protein. Nitrogen balance is the difference between the nitrogen ingested minus the nitrogen excreted and is used as a guide for determining whether the protein intake of an individual is adequate. Positive nitrogen balance means that the nitrogen intake is greater than the nitrogen excretion.	sodium	A chemical which is most commonly available in the diet from salt. In the body, sodium is a major component of the fluid surrounding the cells. Its concentration is normally controlled. However, in some conditions this control is not present and the body retains excessive amounts of sodium and water. Retention of sodium and water often occurs in cardio-vascular disease, and contributes to high blood pressure. Therefore, sodium is frequently restricted in the diet of people with cardiac problems to reduce water retention and help control high blood pressure.
purines	Parent substances of two chemicals which make up the nucleic acids DNA & RNA. Purines are also a component of uric acid. In gout (gouty		

Task Analysis for the Assessment of Nutrition Knowledge and Self-Feeding Skills

In order to effectively evaluate the food and nutrition needs of individuals with physical limitations, it is necessary to conduct a well planned assessment of their nutrition knowledge and self feeding ability.

Any assessment activity should focus first on the individual person and his/her particular needs, their individual goals and aspirations — not on the physical limitations. One should begin by determining the present eating pattern of the individual and what positive action can be taken to improve the feeding situation. It may be that an individual lacks knowledge of food and nutrition information or it could be that a particular device is needed to make the person more independent in the eating situation.

One method of assessing the nutrition knowledge and self feeding ability of an individual with a physical limitation is to analyze the tasks related to food selection and eating. Task analysis involves: 1. determining the steps needed to accomplish the task by breaking the task into steps of logical

sequence 2. observing the individual as he/she performs the task and 3. determining appropriate intervention.

The following charts represent examples of two types of task analysis which can be used to determine the nutrition knowledge and self feeding ability of an individual. The first (figure 2) is a conceptual task analysis. This relates to the food and nutrition knowledge of the individual i.e. how much he/she knows about food selection and nutrition. The second task analysis (figure 3) is a general mobility task analysis i.e. is he/she able to feed themselves. The third example (figure 4) is a specific mobility task analysis i.e. can he/she feed themselves using a spoon to remove food from a bowl. These same formats can be adapted to analyze most any food and nutrition conceptual or feeding skill behaviors. It is important to remember that gathering accurate information and careful observation are the keys to effective intervention in the food and nutrition behavior of an individual.

Figure 2
Nutrition Section
Conceptual Task Analysis

Adequate Nutrition: Eats Nutritious Meals

- Entering Criteria:
1. Person is physically limited
 2. Person has a nutritional problem

TASKS

- A. Chooses a variety of Foods
 - ___ 1. Selects food from food groups
 - ___ 2. Selects food for variety in color and texture
- B. Prepares Food to maximize nutrient intake
 - ___ 1. Is familiar with food preparation practices
 - ___ 2. Maximizes nutrient retention in food preparation
- C. Consumes adequate amounts of nutrients
 - ___ 1. Meets NRC-RDA requirements for age and sex
 - ___ 2. Lacks nutrient deficiency as evidenced:
 - a. Medical record (biochemical and anthropometric data)
 - b. Physical Appearance

COMMENTS

Note: Maintaining health is vital to independent living. Consuming an adequate diet is one of the most important factors in health maintenance. It is important to remember that achieving nutritional health is a process occurring over time, not merely "eating a balanced meal". Therefore in analyzing the task *Eats Nutritious Meals* one must employ a variety of methods. The interview is one way of determining if nutritious meals are selected, prepared and consumed. In interviewing, it is important to phrase questions in order to allow client freedom to respond as he/she behaves rather than directing the response. For example, rather than asking "what did you eat for breakfast?" ask "when did you get up?"; "when did you first have something to eat?" and "what did you eat?". You will find your information more accurate with this series of less judgemental questions. However, direct observation in the laboratory when the individual has various foods from which to select a diet, prepare the food and eat it is far superior to the interview. In the interview and the observation it is important to note what foods are selected, how foods are prepared, condiments and seasonings used with foods and portion size consumed by the client. If possible arrange to meet with the person in his/her home on more than one occasion during meal preparation to determine food selection, preparation and consumption practices.

Nutrient intake should also be compared to the (NRC-RDA) National Research Council — Recommended Dietary Allowances. Many states now offer nutrient analysis of the diet as a part of local Cooperative Extension programs. The person's medical records, if available, offer a source of biochemical and anthropometric data which can provide information as to the nutritional health of the individual. In addition, the general physical appearance (color and texture of skin, eyes clear and bright, etc.) of the individual can provide information regarding his/her nutritional health. Remember, physical health is the outward and visible manifestation of an adequately nourished individual.

Figure 3

Task Analysis for Assessing the Self-Feeding Abilities of the Physically Limited

TASK

Self-Feeding To determine if an individual possesses adequate self-feeding skills
 Entering Criteria: Person is physically limited and is suspected of having a self-feeding problem.

Rating Scale

- 6 - Does task well independently
- 5 - Does task fairly well independently
- 4 - Does task poorly independently
- 3 - Does task well with help
- 2 - Does task fairly well with help
- 1 - does task poorly with help
- 0 - Unable to perform task

COMMENTS

STEPS

Passive Skills

- _____ 1. Demonstrates ability to suck
- _____ 2. Swallows without apparent discomfort or strain
- _____ 3. Demonstrates ability to open mouth without apparent difficulty
- _____ 4. Demonstrates ability to close mouth without apparent difficulty

Active Skills

- _____ 1. Demonstrates ability to:
Sit with head balanced
- _____ 2. Pick up and hold a utensil
- _____ 5. Place food in the mouth
- _____ 6. Chew without apparent discomfort or strain
- _____ 7. Return utensil to appropriate place on the table

INTERPRETATION

1. If the individual is only to perform the *Passive* feeding skills, someone else will be needed to feed him.
Examples: during a period of infancy and often in quadriplegia.
2. Ability to satisfactorily perform all of the active feeding skills indicates that the individual is able to feed himself and does not require any adaptive devices.
3. If the individual can not sit with his head balanced regardless of whether he can hold a utensil, he is not going to be able to get food to his mouth properly and will require assistance during feeding.
4. Inability to hold a utensil may require the use of an adaptive feeding device i.e. thick handled utensils to help the person achieve a better grip.
5. If the person can not put food on the utensil, assistance during feeding will be required.
6. If the person has difficulty placing food in his mouth, assistance will be necessary and the use of an adaptive feeding device such as a swivel spoon may be helpful.
7. Difficulty in chewing can be eased through modification of the diet.
8. If the individual has difficulty returning the utensil to the table, assistance during feeding will be necessary.

Figure 4
Task Analysis

Self Feeding:
Entering Criteria:

Eating from a bowl with a spoon
1. Person is developmentally disabled
2. Person has a problem with self feeding

OBSERVATIONS, METHODS, ETC.

Equipment needed:

1. Spoon with appropriate handle size
2. Bowl
3. Food of soft consistency i.e. mashed potatoes, oatmeal

Rating Scale

- 6 - Does task well independently
- 5 - Does task fairly well independently
- 4 - Does task poorly independently
- 3 - Does task well with help
- 2 - Does task fairly well with help
- 1 - Does task poorly with help
- 0 - Unable to perform task

TASKS

1. Positions self in chair for feeding
2. Positions self in front of feeding utensils
3. Reaches for spoon
4. Opens hand
5. Grasps spoon
6. Moves spoon from table to bowl
7. Lowers spoon into bowl
8. Scoops food with spoon
9. Raises food from bowl to mouth
10. Opens mouth
11. Moves spoon into mouth
12. Removes food from spoon
13. Removes spoon from mouth
14. Closes mouth
15. Lowers spoon into dish
16. Releases spoon

DEVICING

Philosophy of Devicing

Tools or assistive devices can not take the place of good physical abilities. However, devices may make the difference between success and failure in mastering self-feeding skills. Because disabilities vary, devices for self-feeding are usually highly individualized. The most appropriate and functional are those developed specifically for the individual.

Basic Consideration in Selection of Devices

1. Use whenever possible, tools, utensil designed for the normal individual.
2. Assistive devices are more likely to be used if the physically limited individual helps select them.
3. Choose simple self-feeding devices and before purchasing, consider the complications involved in repair and general maintenance of the device. Also decide if they can be properly cleaned and stored.

4. Consider the self-feeding device as temporary, and change when the individual has acquired new skills.

Examples of Adaptive Devices

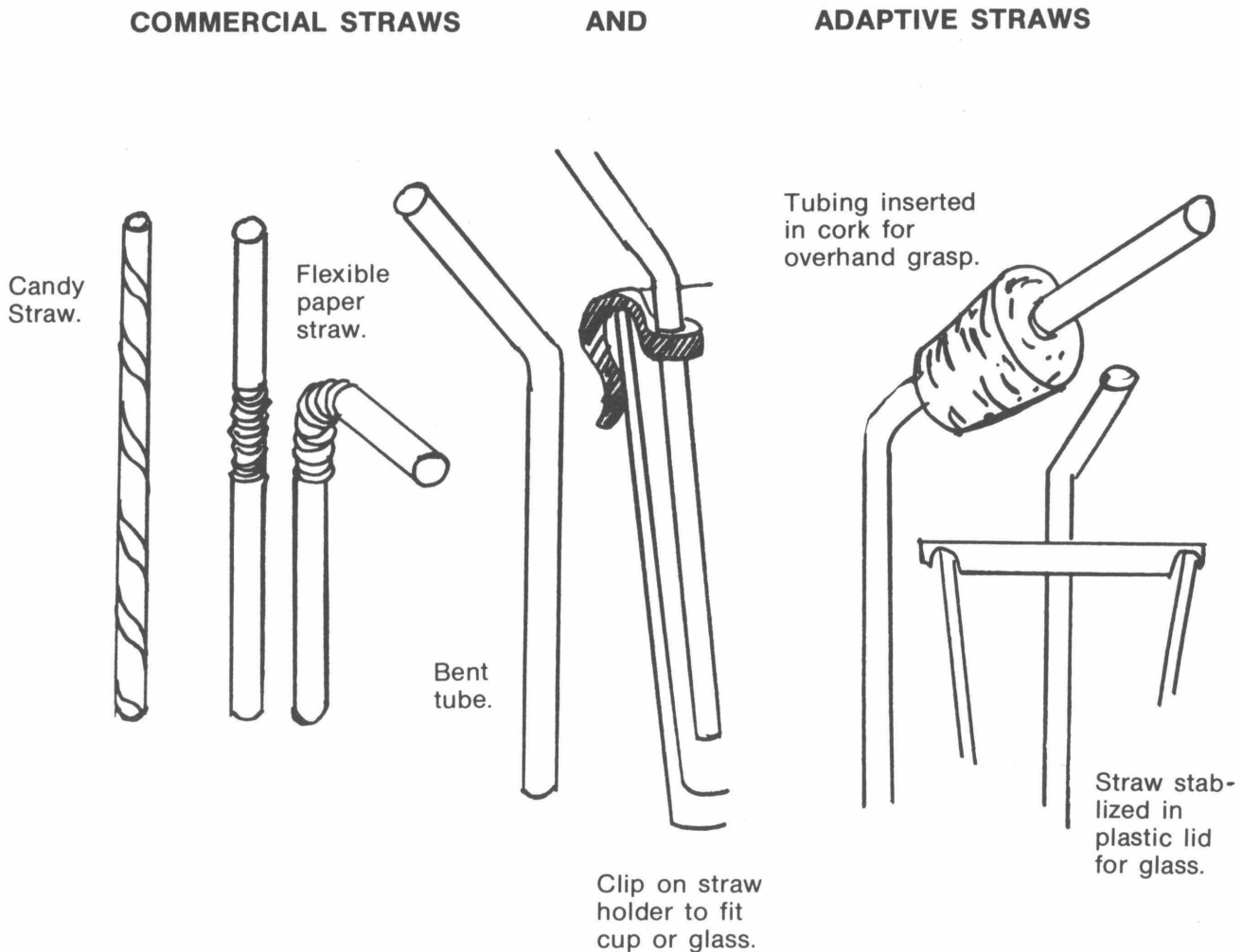
Self-feeding assistive devices can be as complex as a mechanical control brace or as simple as a straw in a glass.

Infant

An infant may require a modified nipple on the bottle.

A firm nipple with a small hole will encourage sucking. A nipple with bulbar flare will prevent air leakage and is designed for children with poor lip closure.

Infa-feeders may be necessary with children with a strong back thrust. Thicker foods can be used in the infa-feeder than in a regular bottle. The child is fed on his side with a small pillow under his head.



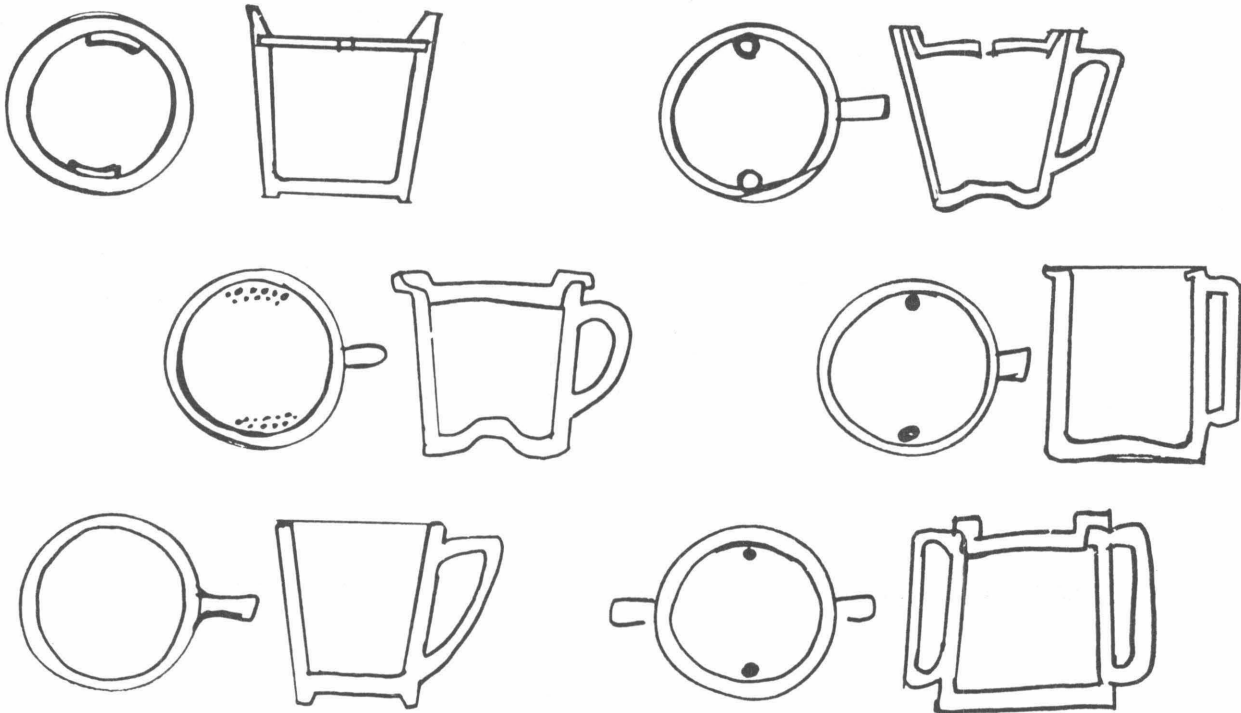
Drinking

Adaptive Devices In Children and Adults

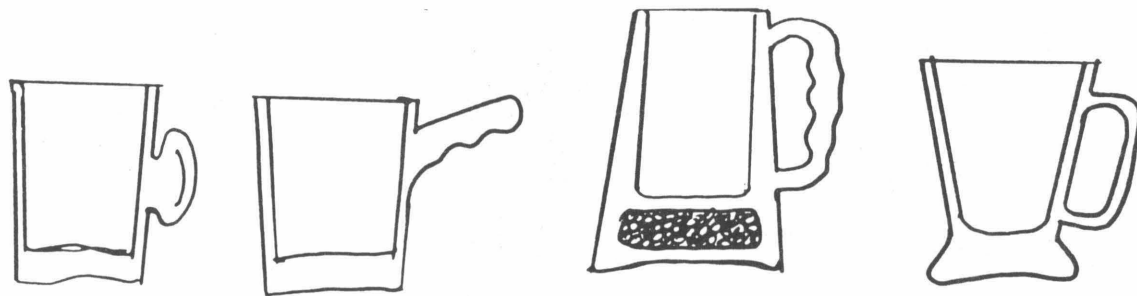
Straws are probably one of the most simple and helpful aids for drinking.

Cups can be modified with special lids or handles. Many are heavily weighed to prevent spilling.

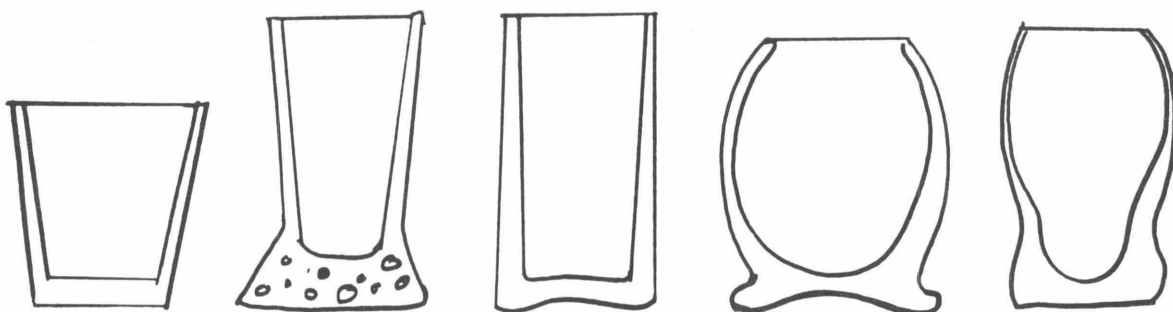
COMMERCIAL TRAINING CUPS WITH LIDS



ADAPTED HANDLES ON WEIGHTED CUPS



DRINKING GLASSES



Utensil Holding Aids

Adaptive Devices to Improve Grips

Lightweight, bulky handles make it easier to grasp a utensil. Often the handles can be modified

in the home. A rubber ball, attaching a sponge, spool, or tubing are excellent ways to build up the handle and improve the grip on the utensil. Also handles can be bent for easier use.



Sponge rubber handle

Ball or knob-shaped handle

Extended dowel handle

Spool handle

Ways to Minimize Bruising

Lips and gums can become bruised when an individual, especially a child, bites down on hard utensils. To prevent this bruising, plastic forks, spoons with Teflon or rubber coating can be used. The plastic is more flexible, food slips off the teflon easier and the rubber smooths sharp edges. Also, flexible rubber spoons which hold their shape even when boiled are excellent for children with sensitive lips and gums or mouth.

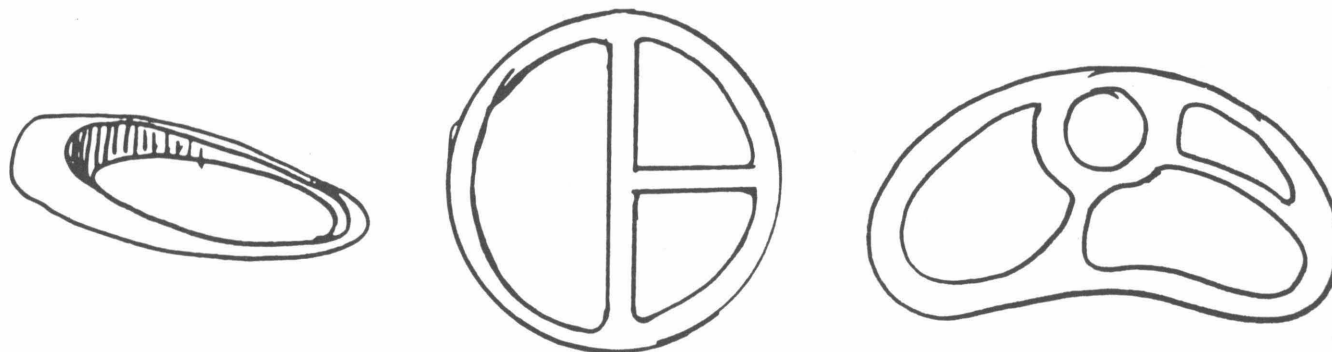
Adapted Dishes

Adaptive plates to assist the individual during meals are available. Often a regular divided plate or infant feeding dish is all that is required. However, dishes with a high side and a particular shape to facilitate scooping are commercially available. A rectangular metal cake pan is ideal for children, especially during lunch at school. The pan can also be clamped to a board to add stability.

TYPES OF UNDERCUTS AND SIDES ON COMMERCIAL FEEDING DISHES



TYPES OF FEEDING DISHES



It is frustrating for a person learning to eat if the dish continually slips. Here are some examples of simple and inexpensive ways to stabilize dishes.

Methods of stabilizing dishes

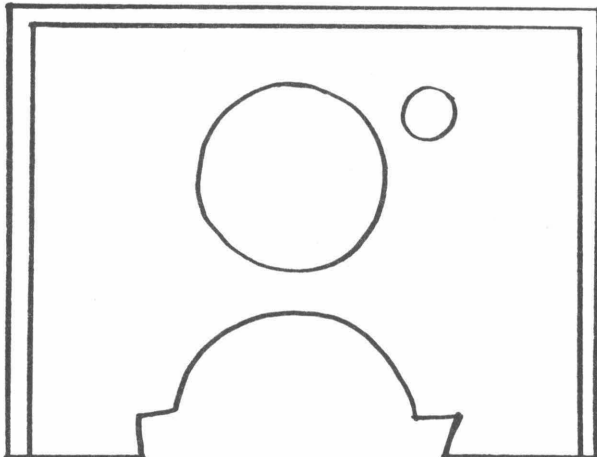
1. Plaster mold
2. Rubber mat placed under dish
3. Clay on bottom of dish and adhering to table
4. Suction cups attached to bottom of dish
5. Cut out board with openings to fit dish, clamped to table
6. Wet turkish towel wedged around dish

General Self-Feeding Adaptions

1. A cut out wooden tray at the waist is excellent for individuals in wheelchairs. It fits on the person's lap and allows free movement of arms for eating
2. Boards can have holes of specific sizes cut in them to fit cups, glasses, bowls and plates. This is an excellent way to stabilize dishes and

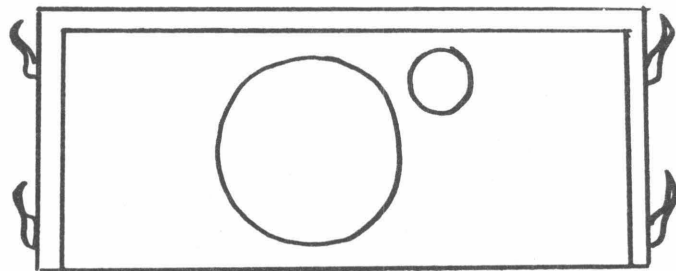
prevent spilling during a meal. Dishes with rims are best for use in cut-out boards.

3. A firm footrest is helpful in stabilizing an individual. It allows for freer arm movement.
4. Glass holders in wheelchairs are very convenient, and provide more independence for the disabled individual

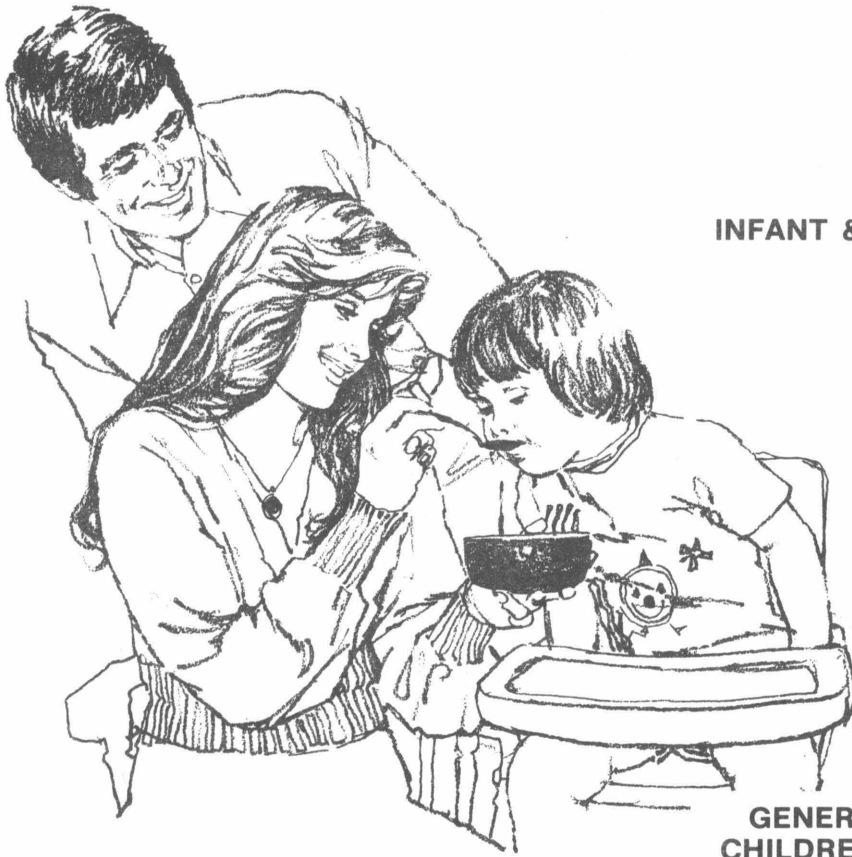


Removable feeding board, with cut-outs for dish and cup or glass. Board fits securely onto table top by means of small dowels which fit into holes in each corner.

FEEDING BOARDS WITH CUTOUTS



Cut-out board which may be hooked onto single table or at individual places at group table.



INFANT & CHILD NUTRITION

FOR THOSE WITH PHYSICAL LIMITATIONS

When considering the nutritional requirements of the infant or child with physical limitations, the first concern is that the diet provides adequate calories and nutrients for growth. As Dr. Helen W. Wallace states, "For some handicapped children, proper nutrition may be one of the most important factors in survival and development into useful and productive members of society." (Ref. 36) Helping a child develop self-feeding skills is a start on the road to independence. Self-feeding skill development is an excellent way to involve the parents in the habilitation and rehabilitation process.

The type of diet for the child will be influenced by the child's condition. The disability may have an effect on the consistency of the food chosen to feed the child, and the child's nutrient requirements. In addition, the appearance, smell, taste, and family's cultural patterns will influence the child's food intake. It is especially important that these children do not develop iron-deficiency anemia, as this can further retard the growth and development of these children who are already small for their age.

Remember — good nutrition has been found to play an important role in secondary prevention, and rehabilitation of children with physical limitations.

GENERAL GUIDELINES FOR FEEDING CHILDREN WITH PHYSICAL LIMITATIONS

1. To prevent a child from choking and aspirating food:
 - A. Do not allow a child to lie flat when drinking.
 - B. Do not allow a child to swallow chunks of food. If the child has a tendency not to thoroughly chew food, serve softer food and/or food in smaller pieces which require less chewing.
2. Make mealtime a pleasant experience for the child, not a tug of war. Consider feeding small, frequent meals which consist of a variety of foods.
3. Do not rush the child, allow him/her as much time as necessary to finish the meal. By doing this, the meal will be a much more pleasurable experience, as well as insure proper digestion.
4. If the infant is being bottle fed, do not enlarge the nipple hole, as a regular bottle is not suitable for anything other than fluids. It is important to encourage the child to learn to self-feed because it enables him/her to develop muscle coordination.
5. Adaptive feeding devices are sometimes necessary for the development of self-feeding skills. If the child requires one, contact a doctor and physical therapist to find out what type of device is needed. The most functional will be those designed specifically for the child and in many cases, they can be made right in the home. Consider self-feeding devices temporary aids which are changed as the child develops more self-feeding skills.

Table 1. The diet of a Child of Preschool age should include the following foods:

Sources of Important Nutritive Elements	Minimum Quantity Required Every Day
Milk and Milk Products	(2 1/2 c.) 20 oz. or the equivalent
Meat, Poultry, Fish	1 1/2 to 2 1/2 oz.
Liver	Once per week
Egg	one
Fruit	1 portion of fruit rich in vit. C + another fruit
Vegetables	2 portions of green or yellow (1 cooked, 1 raw)
Cereals and Bread	1 portion of cereal (dry or cooked) About 3 portions of bread with butter or margarine or Other starchy food (e.g. rice, pasta)

Adapted from Lambert-Lagace': *Feeding Your Child* p. 179

Table 2. Guide to portion size for a child between 1 and 6 years.

Type of Food	1 Year	2-3 Years	4-5 Years
Milk	1/2 cup (4 oz.)	1/2-3/4 cup (4-6 oz.)	3/4 cup (6 oz.)
Lean meat, chicken, fish	two Tb.	three Tb.	four Tb.
Peanut Butter		one Tb.	two Tb.
Egg	1	1	1
Orange juice or other juice rich in vitamin C	1/3 cup	1/2 cup	1/2 cup
Green or Yellow Vegetables	two Tb.	three Tb.	four Tb.
Other vegetables (potatoes, etc.)	two Tb.	three Tb.	four Tb.
Other fruits	1/4 cup	fruit 1/2 whole	fruit 1/2 whole
Bread	1/2 slice	1 slice	1-1 1/2 slices
Dry Cereals	1/3 cup	1/2 cup	1/2 cup
Cooked cereals and Pasta	1/4 cup	1/3 cup	1/2 cup

Adapted from Lambert-Lagace': *Feeding Your Child* p. 179.

RESOURCES

1. *Feeding the Child With a Handicap*. Washington, DC No. 017-029-00025-8.
2. Fred Sammons, Inc. Be O.K. Self-Help Aids, Box 32, Brookfield, ILL 60513, 800-323-7305 (Write or call for free catalog).
3. Lambert-Lagace, L. *Feeding Your Child*. Cambridge, Ontario: Collier MacMillan Canada Ltd., 1976.
4. May, E. C., Waggoner, N. R. and Hotte, E. B.s *Independent Living for the Handicapped and Elderly*. Chapter 11, Boston, MA: Houghton Mifflin Company, 1974.
5. Robinault, I. P. (Ed.) *Functional Aids for the Multiple Handicapped*. Maryland: Harper & Row Publishers, 1973.
6. Smith, M. A. (Ed.) *Feeding the Handicapped Child*. Tennessee-Child Development Center, 711 Jefferson Avenue, Memphis, Tennessee 38105.

FEEDING TECHNIQUE

Normally infants learn to eat and feed themselves in a developmental sequence. However, eating and self-feeding may be difficult for children with physical limitations, if they have a problem sucking, chewing, moving the tongue or swallowing. Because of these difficulties, children with disabilities need special attention and assist-

ance during the feeding process. A feeding technique has been developed for this purpose. It is designed to help the child learn to open his/her mouth, chew and swallow. The individual working with the child must be patient and calm to insure that mealtime remains a pleasurable experience for the child.



1. Body and head stabilized
Hips and arms flexed.
Head tilted slightly forward.



2. Food on tip of spoon.
Present spoon horizontally
to center of lips.



3. Place spoon on midportion of
tongue and press down lightly.



4. Slowly remove spoon and if
necessary, manually close lips
with fingers and again, if
necessary, hold closed.



5. Jaw can be controlled manually
with fingers at chin, under
chin and at mandible.



6. For slow swallowing, gently
stroke throat upward or
press at root of tongue.



7. For tongue thrust, press at
root of tongue, position jaw.

From: *Feeding the Handicapped Child*, ed. Dr. Mary Ann H. Smith, Tennessee Child Development Center, Memphis, Tennessee.

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