Between Infancy and Adolescence

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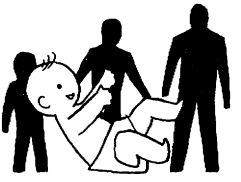

A CHILD'S growth in height and weight comes in spurts. Other kinds of growth take place between those spurts. The growth also is vital in the building of a sturdy, healthy body: The child is learning to live in his world. He is having mental and emotional experiences. He is forming patterns of eating and attitudes toward food that will influence him throughout his life.

Mothers and fathers recognize the importance of the diet in the first years and often worry therefore when their child does not eat what they think he should.

Or just the opposite: In times of frustration, they adopt the attitude, "Let him entirely alone, and he will eat what he wants," believing that in some strange way the child will begin to eat the food he needs.

Neither leads to success. Rather, one has to take a close look at the demands for growth and—even more important—to study children and to understand their drives and needs.

We then come to the point of view that happy, hungry children will eat and grow. As we study the child, we also recognize that he has many things to learn in order to eat acceptably. Limits there certainly are on how one eats, be he 8 or 80.

Adults set the stage for children's eating for good or ill, and parents do have a function to perform in regard to children's eating.

Dr. and Mrs. C. Anderson Aldrich, in *Feeding Our Old-Fashioned Children*, stated the functions of parents thus: "Parents are meant to enter the feeding situation for three reasons: First, to provide food; second, to support a child's progress from simple to mature methods of eating; and, third, to make it easy for him to establish his own satisfying feeding habits."

First, the foods that the growing bodies need.

We have only to follow a 2-year-old around for a few hours to know that his needs for energy are high. Children of all ages running, jumping, and playing hard in a playground often tire adults just to think of the energy being used up.

The child 1 to 3 years old, according

to the recommended daily allowances of the National Academy of Sciences-National Research Council, needs 1,300 Calories a day. That is twice as many Calories as the normal, moderately active man needs or uses in relation to the relative body weight of each of these ages.

Boys 13 to 15 years old, whose average weight is listed as 108 pounds, use almost as many Calories (3,100 Calories) as the normal, moderately active man (3,200) whose average weight at 25 years is considered to be 154 pounds.

Children also need proteins, vitamins, and minerals in amounts that are greater in relation to body weight. The National Research Council recommends that children 1 to 3 years old have daily 40 grams of protein; at 4 to 6 years, 50 grams; at 7 to 9 years, 60 grams; and 10 to 12 years, 70 grams.

A man weighing approximately 6 times as much as the child of 1 to 3 years needs only about 1.7 times as much protein.

The adolescent of 10 to 12 years needs as much protein as the man, whose average weight is about one and one-half times as much.

It is recommended that children 1 to 9 years old have 1.0 gram of calcium a day and 1.2 grams a day at 10 to 12 years. The adult body, however, may be kept in positive balance with 0.8 gram of calcium a day.

For iron, the daily recommendation for the child of 1 to 3 years old is 7 milligrams. The grown man and woman are listed as needing 10 milligrams and 12 milligrams, respectively. If we again compare the relative size of the average child of this age to an adult man or woman, we see that the need for iron also is relatively high.

Storage of some nutrients, such as iron and calcium, should be taking place during the period of growth. This storage cannot take place on inadequate diets—a matter of concern to those who guide the feeding of young children.

ALTHOUGH NUTRITIONISTS must reckon with the needs for nutrients in terms of grams and milligrams, the translation of these quantitative needs into the actual foods eaten daily is much more meaningful to those of us who are not technicians.

How, then, can we check growing children's diets to make certain that they are getting the materials they need for growth? To do this, we need to look at groups of foods that together furnish all the needed essentials in the total day's food.

Important to remember is that a good way to be sure of having an adequate diet is to provide a wide variety of foods.

Protein-high foods, including milk, meat, eggs, fish, and poultry, must bulk large in the child's diet.

Besides milk, the child needs at least one good serving of meat, poultry, or fish at one meal each day. The amount may vary from a 2-ounce portion for children 1 to 4 years old to a man-size serving of at least one-fourth pound for the hungry child of 6 to 13 years.

Eggs, which contribute a goodly share of iron as well as protein, should be considered in planning the child's diet.

Because milk and milk products contain more calcium than other foods, the child should have 3 to 4 cups of milk a day. Later I discuss ways of getting children to drink milk.

Fruit and vegetables are important for children because they furnish minerals, such as iron, vitamins A and C, and a goodly amount of several of the B vitamins.

Because children in the United States get less vitamin A than they need, we must direct special attention to including in their meals dark-green and yellow vegetables, such as broccoli, leaf lettuce, collards, kale, spinach, escarole, curly endive, carrots, sweetpotatoes, yams, and winter squash.

Tomatoes, cream, butter, and fortified margarine also add a goodly amount to the vitamin A in the diet. Liver is especially high in vitamin A.

A 2-ounce portion yields more than twice the average daily recommendation for the growing child.

Many investigations have disclosed that American children do not get enough vitamin C, largely because they do not eat enough citrus fruit, tomatoes, raw cabbage, raw fruit, and vegetables.

In planning meals for children, parents ought to give special attention to including the following each day:

Milk in each meal, as a drink, if possible;

Another protein-high food, such as meat, fish, poultry, cheese, or an egg, in each meal;

At least one serving of a raw fruit and a raw vegetable in each meal. Special attention should be given to citrus fruit and juices (canned, fresh, or frozen) and tomato juice;

At least two good servings of cooked vegetables, especially dark-green and bright-yellow vegetables;

Three to four servings of enriched or whole-grain cereals and breads;

Mildly sweet desserts, which mostly contain either milk and eggs or fruit or a combination of them;

A vitamin D preparation.

We need to know how to help children to eat happily the foods they need. I mention here only the foods that are hard to get children to eat enough of.

MANY CHILDREN do not like all vegetables. If we are to do something about it, we need to understand what children do like and why.

Children generally like crisp, raw vegetables better than cooked vegetables. If young children develop a habit of eating raw vegetables and if their parents eat salads with at least the appearance of enjoyment, the child usually will eat raw vegetables well.

As soon as children can chew pieces of raw carrots or celery, leaves of green lettuce, wedges of raw cabbage, and other crisp foods, they should appear in at least one meal a day—preferably two.

Even if young children may prefer raw vegetables, however, they cannot eat enough of them to get the nutrients we expect from vegetables.

As we study the eating patterns of children, we get clues as to what they do and do not like about cooked vegetables.

I have observed that the most important factor probably is flavor. Children in general have keener senses of taste and smell than adults. Strong flavors and odors in some of the vegetables may be really obnoxious to young children. The sulfurous vegetables, such as cabbage, onions, and turnips, become more popular with children when they are cooked in an excess of water, so that much of the strong flavor is washed away. Some valuable food nutrients are lost in doing this, but that loss may be less important than that children eat them.

Texture of vegetables is important. A child prefers celery or green beans that do not have tough strings on them and carrots that are tender. He finds tough parts difficult to manage, and he will not bother with them. When he first encounters sticks of raw celery and finds part of it inedible, he has no past memory of the food to tell him that some celery does not have tough strings on it. It requires only a small amount of effort by the parent to choose frozen or canned green beans that do not have strings in them or to remove them from fresh beans. It is easy to break a piece of celery in two and remove the strings.

The consistency of vegetables is another point. Many children refuse dry or gummy mashed potatoes and dry baked potatoes. Because they prefer their food lukewarm in temperature, mashed potatoes that were soft and fluffy when hot may become too dry or gummy when the child lets them cool to lukewarm.

The combination of vegetables also should be thought of in planning meals for children. They find it hard to eat at one time two vegetables that are not well liked.

Cooked, dried lima beans and beets, for instance, make a poor combination from this standpoint—but a child may eat willingly even a large serving of fluffy mashed potatoes with a small serving of tender, cubed, buttered beets.

NOT ALL children dislike all vegetables. There are some cooked vegetables that even a finicky child does like, and because we have such an array of dark-green, bright-yellow, and other vegetables, it is always possible to find some that any child likes.

Adults should not become discouraged and stop serving vegetables because some are unpopular, because that leads to inadequacies in children's diets. At times, however, when the mother does become discouraged, she can give her children fruit in place of vegetables: Waning young appetites often perk up when only fruit appears on the child's dinner plate.

FRUIT generally is popular with young children, although for some children 2 to 4 years old some fruit, especially orange and grapefruit juices, may be too acid in flavor. Dilution with water or even blending in a small amount of some sweetening, such as honey, may take off this sting.

Children seem to prefer combinations of fruit that include some mild, sweet fruits, like cooked or raw peaches or pears and fresh, tart fruit, like oranges, pineapple, and grapefruit.

A young child likes to choose what he wants for his dessert from a plate of pieces of raw apple, sections of oranges, slices of banana, wedges of fresh pineapple, and pieces of other fruit, such as peaches.

The child also appreciates being able to choose from a plate of raw vegetable pieces or even the color he wants in a fruited gelatin.

SOME CHILDREN find drinking even 2 cups of milk a day too much. Adults who can manage to make the child feel successful when he drinks only an ounce of milk from a tiny glass find that success leads to further success as it does in so many other segments of life and among so many of us.

Among a group of children up to 5 years old who were physically healthy and those whose patterns of drinking milk were observed, the amount of milk taken daily declined after age 2. When the children became of school age, they again increased their consumption of milk. We can expect that many children of these ages will drink less milk than they did earlier. If mothers expect such a development and allow them to drink as much as they want, with neither direct nor indirect forcing, the children will not become unfriendly toward milk as a food.

IN MY OBSERVATIONS of the milk-drinking tendencies of thousands of children in nursery schools, I have found that the amount a child takes is related directly to the temperature of the milk. The child of 2, 3, or often 4 years prefers his milk lukewarm and not icy cold.

In two large nursery schools conducted for the children of workers in a shipyard during the war, the milk sometimes was served ice cold when the kitchen workers had not followed directions. Far less milk was drunk on those days. On days the supervisor checked carefully to be sure that the milk was at room temperature, each child drank 8 ounces of milk at a meal without any urging.

I have verified this in my work with mothers and in feeding children in their homes. I believe, therefore, that attention to temperature is important in giving milk to children 2 to 6 years old. I found that children had come to appreciate cold milk at about 5 or 6 years (sometimes even at 4 years).

Another factor of seeming importance in serving milk to children in groups is the way in which the milk is offered to them. Small glasses that hold about three-fourths of a measuring cup of milk when full have been found to

be best. These can be poured about two-thirds full. This gives only 4 ounces, or about one-half of a measuring cup of milk in the serving. One glass presented with the main part of the meal and one given with dessert may be taken readily by most of the children in a group. The small glasses are easily handled by small hands, and the goal looks possible to the young child.

The child who cannot drink milk easily can be given Cheddar-type cheese and cottage cheese and extra portions of meat, eggs, fish, and poultry. Certainly he should not be forced to drink milk, and the mother should not transfer to him her concern or worry about the lack of milk.

With this, as with other foods (and other people), it is not unusual for a young child to ride a food hobby. Some days he wants several eggs. Some days or weeks he may want a lot of meat.

If the family diet is varied and is built on milk and dairy products, meat, eggs, fish, poultry, vegetables, and fruit, and enriched and whole-grain cereals, the child cannot go far wrong as he goes on food jags. Only when highly sweetened foods are chosen as the exclusive food by a young child do we have to be concerned about him as an erratic eater.

When the child is served slightly less than the adult thinks he will eat, he has a chance to be successful. This rule also holds for all foods for most children. Children also like to set their own goals by pouring their milk from small pitchers, and they often drink more when they pour it themselves.

Forced feeding is or should be a dead issue. It leads nowhere. Yet the adult who sets the stage for children's eating must always have future goals in mind, as does a high school football coach when he compliments an inexperienced freshman candidate for the team.

Some milk can be "eaten" in drinkable soups, custards, puddings, and cereals or vegetables cooked in milk. Nonfat dried milk can be added to many cooked foods. We may count about 4 tablespoons of dried milk as equal in nutritive value to a cup of skim milk. It can be used to fortify many foods, such as gravies, sauces, puddings, and cooked starchy vegetables. Cheddar cheese and cottage cheese, often eaten by children who refuse to drink milk, add to the protein, calcium, and riboflavin content of the day's food. Many times interruptions in drinking milk are just a temporary whim; if other foods are substituted for milk and no special attention is called to it, the child comes back to liking it again.

Children usually like meats, fish, and poultry that are tender and mild in flavor and do not require much chewing. Ground meats, which need little chewing, are the most popular. Next in popularity are small strips of meat, which the child can pick up in his fingers and eat.

Children in general, be they 2 or 12 years of age, prefer light seasonings, especially of spices, in meat dishes.

CHILDREN differ in their patterns of hunger. Some are satisfied with three meals, yet many young children need a midmorning and midafternoon meal. Well-spaced and regular meals satisfy the child physically and emotionally and prevent fatigue.

Of all the factors involved, tiredness is the most defeating to a good appetite. Often the child who seems not to be hungry is a tired child. Meals so spaced that food is given when he is hungry help prevent emotional upsets that follow fatigue. Many preschool and most school children therefore need a food, such as milk or fruit, at midmorning and a substantial lunch, such as a protein-loaded sandwich with milk or fruit, in midafternoon.

Children often consume as much as 10 to 17 percent of their total day's calories in snacks. Milk drunk 2 hours before a meal does not usually interfere with the appetite at mealtime. It is wise, therefore, to consider the foods

eaten between the three regular meals as important.

Children choose as snacks the foods that are readily available and freely offered. A mother, as the gatekeeper of her family's food, has in snacks an excellent opportunity to influence her children's eating habits.

Any snack food that can be proudly placed by a conscientious adult on a child's table in an attractive cover will satisfy the requirements of a good snack. Snacks eaten outside the home with the gang are less nutritious foods than those eaten in the home. From them a mother can get a clue as to how to handle snacks. Children whose hunger is satisfied at home with good food have less drive to buy the so-called empty-caloric foods—the ones that supply calories and nothing else.

Children thrive on regularity and rhythm of routines. This applies to regular meals and food between meals. The child who knows that he will have a meal at 11:30 a.m. or 5:30 p.m., when he is usually hungry, has a basis for the sense of security he needs. Because he is dependent on adults, he needs to know what to expect.

Adults can help children by setting mealtimes when children are really hungry, insofar as all members of a family can fit into the schedule. That does not mean meals at all hours. Rather, it means that the 2- or 3-year-old needs special consideration when other family members must have meals 4 or 5 hours apart. Many young children cannot go that long without food. Snacks or between-meal foods therefore are necessary for many children.

BREAKFAST commonly is the day's poorest meal. Children who skip breakfasts are less well fed than those who regularly eat breakfasts. In other words, children do not generally make up at other meals the nutrients which they miss in skipped breakfasts. We have indications from research studies that the children who do not eat breakfast do less well in school, perform physical tasks less well, and may be more irritable and emotionally unstable.

The breakfast pattern (as well as total nutritive intake) tends to become progressively worse from the early elementary school years to adolescence. Girls in general eat less well than boys.

Poor breakfasts often have been blamed on lack of hunger, rushing to get to school, no regular family breakfast time, and dislike of the foods commonly served at breakfast. Young children give the same reasons as do their parents. Only by placing the blame where it belongs and by removing the underlying causes can we solve the problem.

Nutritionists who have compared groups of children who eat nutritionally adequate breakfasts with those who do not find that the former feel less rushed, enjoy eating breakfast with their families, and appreciate the fact that their mother prepares an appealing breakfast.

Efforts to lessen the tensions of the overorganized life of the young child and to serve the breakfasts that appeal to him are positive ways in which to improve his breakfast habits.

Our breakfasts have become too trite in pattern. No one needs to eat an egg and toast or cooked cereal for breakfast every day to be well nourished. A ham sandwich, a hamburger in a bun made of enriched flour, or a toasted cheese sandwich are excellent foods, which many children seem to prefer.

To be adequate, breakfast need only contain a protein-high food, at least one food for energy, some milk, and a piece of fruit or a serving of fruit juice. Many families find that the habit of having fruit high in vitamin C or fruit juice at breakfast insures that such a food is included in the day's meals. Children who regularly have a vitamin C fruit at breakfast very likely have good diets in general, perhaps because the informed and conscientious mother who includes such a fruit in the breakfast is giving greater care to the plan-

ning of adequate meals for her family. If the fruit is preferred at another time and is eaten regularly some time or other every day, there is no need to include it in the breakfast.

Some nutritionists believe that breakfast served at school is an answer. Some schools that have tried this plan report that the children and the teachers are enthusiastic about the idea.

THE NOON MEAL should receive its full share of attention.

An adequate lunch for a child must have a protein-high food, some foods for energy, and some mineral and vitamin-high foods.

Time to eat without hurry at school or at home and a dining area or lunchroom suited to the tempo and needs of children of different ages are important considerations. Everyone knows that foods hastily purchased over the counter to be eaten without sitting down, or grabbed at home, do not often furnish the needed nutrients.

THE EVENING MEAL often is the best one of the day, but even so food prejudices and dislikes sometimes keep it from being adequate. Meals planned for nutritional adequacy, time to eat and enjoy food at meals, a chance to choose a varied diet from the many foods available, and absence of stress and anxiety are well worth striving for.

Children vary in the amounts of food which they can take comfortably at one time. As I said, children are happier and eat better when they are served slightly less than they are expected to eat and are given a chance to ask for seconds.

To follow the principles of the self-regulation of diet by infants, one should allow a child 2 to 13 years old to determine how much of a food he will eat at a certain time.

This advice must of course be tempered with reason. In one research study we learned of children who, unguided, ate nine hard-cooked eggs at a meal. Of course, mothers or lunch supervisors cannot provide unusual amounts of a given food at a time. Children can learn that circumstances set reasonable limits.

A parent's attitudes are important. The parent who expects the child to eat fosters good eating habits—probably because the child is relaxed when he knows that meals are happy occasions. The child also is allowed to continue to regard food as good, because it eases the pain of hunger. He learns this from the time of the first hunger pains after he is born.

If every time he is hungry, an understanding adult, usually his mother, gives him food and shows warmth and affection as she does it, he learns that food is good.

Only when the sequence is broken do other ideas concerning food enter his mind. If he and the other members of his family enjoy and expect to enjoy food, good food habits are fostered. It takes thought, knowledge, and the desire to give all members of the family lastingly good attitudes about eating.

Children from families of higher economic levels may have better diets than children of poorer families. It is true, though, that the mother's experience and knowledge is more important than the economic level of the family in this regard.

More consideration may well be given to making children comfortable at the family table and in the school lunchroom. Also, if children are to learn to be acceptable members of a group at meals, they need to be included in the conversation for at least a part of the time. At about the age of 6 years, a child can be helped to learn how to fit into the group at the table. He can be helped to understand how to handle food dislikes so that he does not make an unpleasant display of them. Many children at this age are becoming socially conscious and want to be acceptable to the group.

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