Nutrition News For Health Care Providers

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Commonsense Nutrition for Children

Children today have an almost endless number of food choices dozens of different breakfast cereals, juices and juice combinations, yogurts, shapes of chicken nuggets, and so on. So one might expect that today's children eat more nutritiously than children did even 10 years ago. Sadly, the truth is just the opposite. French fries are by far the most popular vegetable in this country. Many children skip breakfast. Calcium consumption falls well below recommended levels, particularly among teenage girls. Children eat fast foods sometimes several times a week. And obesity is a growing problem among American children.

A return to a commonsense approach to feeding children, along with encouragement of physical activity, could help improve the nutrition health of our children and might offset the development of chronic diseases like cancer, heart disease, and diabetes later in life.

Parents decide what to serve; children decide whether to eat

Parents and caregivers know or can learn how to prepare healthful meals and snacks. On the other hand, children, particularly young children, typically lack the knowledge and maturity to plan meals that are balanced and varied. For this reason, parents and caregivers need to take charge when it comes to meal planning. But it's the child who decides what to eat, how much to eat, and whether to eat at all.

It can be difficult for parents and caregivers to refrain from pushing, cajoling, or rewarding to encourage a child to eat. What tends to happen, however, is that the more a parent or caregiver forces a child to eat, the less the child wants to eat and the more difficult mealtime becomes.

Drop out of the Clean Plate Club

Children have a natural ability to adjust the amount they eat to their appetite. When they're hungry, like during a growth spurt or following an afternoon of sports, they tend to eat large amounts. If they've been at an afternoon birthday party, they may not want to eat dinner. Parents and caregivers who force children to clean their plates can interfere with this "food thermostat." Children then can lose touch with their body's signals of fullness and hunger, eating more food than they actually need just because it's mealtime or because they have to finish. The end result too many calories and too many pounds.

Return to the fundamentals

The Food Guide Pyramid is a simple tool that can be used for planning balanced meals for the family. It depicts five basic food groups grains, vegetables, fruits, dairy foods, and proteins (meat, poultry, fish, eggs, beans, and nuts) along with recommended numbers of daily servings, for example, three to five vegetables per day. Children's servings might be smaller than adult servings, depending on the age of the child, say,

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In This Issue...

OBESITY & *Exercise*

More children today are overweight then ever before, and obesity has reached epidemic proportions. Nearly 4.7 million children ages 6 to 17 are overweight, one child out of five, is overweight making childhood obesity one of the most prevalent health problems in the United States. Childhood obesity can develop into a lifelong problem and many overweight children become overweight adults. The younger a child is when he or she becomes obese, the greater the chance that the obesity will persist into adulthood. The health risks associated with obesity include cardiovascular disease, high blood pressure, hypercholesterolemia, gallbladder disease, respiratory disease, some types of cancer, diabetes, eating disorders, sleep apnea, orthopedic problems, and an enormous economic impact. Obese children may also suffer from social and psychological pressures.

Overweight is caused by energy imbalance, excess consumption of energy (calories) coupled with not enough energy expenditure. Although eating habits contribute to this health problem, physical inactivity also plays a role. Multiple factors contribute to a caloric imbalance including genetic and environmental factors. Environmental factors include the overall diet, levels of physical activity, culture, and socioeconomic status. Studies have confirmed that if both parents are obese, a child's chance of becoming obese is significantly greater. However, genetics alone cannot account for the large increase in childhood obesity occurring today. Yet parents can effect many parts of a child's nutritional life. Parents shape the child's eating environment, select the foods, and serve as models of portion and weight control. A child learns about food, portions, and eating by observing their parents behaviors. Today it is common that both parents work outside the home and children are making more food choices on their own. Families are buying more prepared convenience foods along with more fast food and snack items than ever before. Inexpensive high calorie foods, which contain limited nutrients, are found in most households, and children often select flavorful empty calories to nutrient dense foods. All of these lifestyle factors can increase a child's overall energy and fat intake.

A low level of physical activity is the other lifestyle factor contributing to childhood obesity in America. Opportunities for children to exercise have decreased for several reasons. These include school curricula with a low priority on physical education classes and the fact that parents have safety concerns about their child going outside alone to play. Parents' work habits, and the availability of computer games also contribute to a reduced level of physical activity. Children spend more time today watching television than they spend in school and television viewing contributes to overweight in children by taking time away from physical activities. Children who spend the most time watching television tend to be more overweight than their peers who watch less television. The American Academy of Pediatrics suggests that children only watch one to two hours of television a day.

Health experts recommend that children participate in 30 - 60 minutes daily of moderate intensity physical activity. The activity can last from 10 - 15 minutes or more, mixed together with brief periods of rest and recovery, but as long as the activity is done for 30 minutes or longer. Whatever the activity, it needs to be done regularly and at a level of exertion to increase the metabolic rate for 30 minutes. Physical activity provides many health benefits ranging from weight management, increased strength and coordination, stress reduction, self-confidence, and over a lifetime reduced risk of heart disease, diabetes and high blood pressure.

Preventing childhood obesity in American youth requires a coordinated effort by parents, schools, communities, health care professionals, the media, and public policy makers. Children need to be provided with an environment which allows for a healthful lifestyle as they grow as well as the opportunity to continue that lifestyle throughout their adult life.

Diet and Exercise: What Kids Need Today. The National Dairy Council Digest. Rosemont, IL. 1996.

Physical Activity for Young People. The President's Council on Physical Fitness and Sports Research Digest. Department of Health & Human Services. Washington, DC. 1998.

Facts About Childhood Obesity and Overweightness. The United States Department of Agriculture. Washington, DC. 1998.

NUTRITION *realities*

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QUESTIONS FROM the clinic

Q: I have a child who is a picky eater, what can I do?

a: Having a picky eater can be frustrating for parents. Remember that a healthy child will not starve themselves, and forcing a child to eat is often impossible. Children are less likely to eat when there is tension and pressure from parents. Parents need to remember to be flexible and not force food, and that picky eaters often do better when they are not feeling rushed or upset. Remember that children go through different stages when it comes to eating, including different appetite levels. Getting a picky eater involved in meal planning and preparing can help because it will be their food and more likely to be eaten! Keep mealtimes relaxing and pleasant with the focus on being together.

Q: Is fiber important in a child's diet?

a: Dietary fiber promotes regular bowel movements, helps prevent gastrointestinal disorders, can lower blood cholesterol, and help prevent childhood obesity. With all of these benefits it is disappointing that American children are still not eating sufficient dietary fiber. It is recommended that children older than two years consume grams of fiber totaling their age + five every day. A child can increase its dietary fiber by eating fruits, vegetables, and complex carbohydrates such as whole grain products at each meal.

Q: My child wants to eat eggs everyday, is this too many?

a: Parents and their kids will be happy to know that everyone can enjoy eggs every day! Many studies over the past decades have shown that healthy people can eat up to two eggs a day without measurably raising their blood cholesterol levels. These clinical studies have also shown that reducing saturated fat in the diet has the greatest effect on blood cholesterol levels; it's not the food cholesterol that raises blood cholesterol, it is the saturated fat. And, one large egg contains only 1.5 grams of saturated fat.

Q: What are food allergies and what foods can trigger allergies?

a: Many children have food allergies and symptoms can start within minutes to an hour after eating. The protein in the food causes the allergic reaction when an abnormal immune response occurs because the body creates IgE antibodies to that food. When these IgE antibodies react with the food, histamine and other chemical mediators are released and cause hives, asthma, or other symptoms of an allergic reaction. The most common food allergies are for milk, peanuts, tree nuts, wheat, soy, eggs, fish, and shellfish. Children who develop food allergies under the age of three often outgrow them. Sensitivities to cows' milk, eggs, soy, and wheat seem to disappear with age. Allergies that continue into adulthood are the most dangerous and can cause severe reactions, even death. If you think your child has a food allergy you should see your doctor before making significant changes in the child's diet.

Nutrition Realities welcomes your Questions from the Clinic. If you have questions or comments, please send them by mail, FAX, or e-mail to:

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Nutrition Realities

Contrary to what many believe, fat is an essential part of a well-balanced diet. The 1995 Dietary Guidelines for Americans does not recommend restricting fat intake in children younger than two years and suggests that children between the ages of two and five should gradually change to a diet containing no more than 30% of calories from fat. Applying the recommendation of less than 30% of calories from fat to children brings up much controversy. There is no direct scientific evidence that restricting a child's fat intake will significantly reduce its risk of coronary heart disease in adulthood. And some health professionals are concerned that reducing children's fat intakes could potentially have negative effects.

Studies that have included children report that a fat-restricted diet has little effect on blood-cholesterol levels. The Diet Intervention Study of Children, (DISC) tested children who had high blood-cholesterol levels, and were instructed to reduce their dietary fat intake to 28% of calories. The investigators reported only a small decrease in blood-cholesterol levels in the intervention children compared to the controls.

Some nutritionist suggest that children could be put at risk for nutrient deficiencies and growth failure by following an overly fat restricted diet. Children who consume less than 30% of fat can have lower intakes of energy and of some key nutrients like calcium, iron, and protein compared to children with higher fat intakes. Unfortunately, some parents believe that if a modest reduction of dietary fat has benefit, a more drastic reduction might be even better. This thinking has resulted in delayed growth and development, "failure to thrive" in some children. An over emphasis on fat also gives the dietary message that all fat is bad which can contribute to eating disorders.

Canadian health groups suggest that children, because of their nutrient needs for growth and development, need to have flexibility in their fat intake and food choices. Current Canadian guidelines recommend a gradual decrease in fat intake from the typical high-fat diet of infancy to a diet which provides less than 30% of energy from fat over the time

Fat

frame of linear growth or when adolescence is reached at age 18. A Joint Working Group from the Canadian Paediatric Society and Health Canada evaluated information on children's nutritional needs for growth and development as well as evidence that related diet to risk of nutrition related diseases. The Working Group concluded that the few intervention studies to lower children's fat intake found little or no changes in blood-cholesterol levels; that there is no evidence that reduction in blood-cholesterol levels in childhood continues into adulthood; that there are no controlled studies showing that children who follow a low-fat diet lower their risk of coronary heart disease in adulthood; and that children differ greatly from one another in their growth and development. And finally, they concluded that individual foods do not need to be restricted or eliminated in children's diets because of fat content. The primary goal of childhood nutrition is to provide adequate energy and essential nutrients to promote growth and development. Overly restricting a child's fat intake in an attempt to prevent or treat excess weight can actually cause adverse effects on growth and development, eating behaviors, and parent-child relationships. For balanced nutrition it is important to include all types of food from each of the food groups every day for variety in a child's diet. Portion sizes need to be adjusted in most children's diets also. And, daily exercise is important to incorporate as well. When variety and moderation of diet are achieved along with daily exercise and fitness a balance of all of these factors will produce overall positive health benefits.

American Academy of Pediatrics Committee on Nutrition. Statement on Cholesterol. *Pediatrics.* 1992; 90: 469 - 473.

Joint Working Group of the Canadian Paediatric Society and Health Canada. Nutrition recommendations update: dietary fats and children. *Nutr. Rev.* 1995; 53 (12): 367.

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AMINO ACIDS

Amino acids are the building blocks of proteins which the body uses for the structure of all cells and tissues, for the regulation of many body processes, and as a potential source of energy. An adequate intake of protein is essential for normal growth of a child to occur. Proteins are composed of combinations of twenty different amino acids which are found in foods and many of which are produced by the body. The human body needs all 20 amino acids for the synthesis of its wide range of proteins. The body can synthesize 11 of these amino acids, but is unable to make 9 others, the essential amino acids, which must be obtained from dietary sources. The diet must regularly supply sources of proteins which contain these essential amino acids so that the body will have enough for new protein synthesis.

Amino acid requirements for growing children are greater than for adults. For example, a child aged 10 - 12 years needs 44 milligrams of lysine per kilogram body weight per day compared to 12 milligrams per kilogram per day that an adult needs. This increased need is due to growth spurts which occur during childhood and adolescence when new tissues are being built. During these times the amount of protein consumed must be higher since protein is not only being replaced but there is the need to build new muscle tissue. Protein needs for growth decrease as rates of growth decline.

When a food contains amino acids in the proportions and amounts needed by the body for tissue replacement and growth, it is providing protein of high biological value. Such protein is referred to as complete protein. Eggs are an example of a food source of complete protein. Eggs contain all of the essential amino acids (histidine, isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan, and valine) as well as the 9 nonessential amino acids. In fact, egg protein has such an ideal mix of amino acids to satisfy human protein needs that the World Health Organization uses egg protein as the standard by which protein quality of foods is measured. This is one reason why the egg is classified with meat in food categories. One large egg equals one ounce of lean meat, fish, or poultry. Eggs also contain varying amounts of many other essential nutrients which contribute to nutritional balance. Since eggs are such good sources of protein it is wise to include eggs in the diets of children.

Breakfast

Research has found that eating breakfast improves overall diet quality and nutrient intake as well as enhances cognition and academic performance. The Bogalusa Heart Study of school children and lifestyle factors related to cardiovascular risk, found that children who ate breakfast had higher dietary intakes of protein, fat, carbohydrate, cholesterol, sodium, and potassium compared to those who did not eat breakfast. Children who ate breakfast met a larger portion of the RDA for certain vitamins and minerals than children who did not eat breakfast. Children who skipped breakfast could not make up for the missed energy and nutrient intakes of breakfast during other meals compared to those who did eat breakfast.

Eating breakfast not only improves daily nutrient intake and nutritional status but also enhances children's ability to learn. Children who are hungry regardless of income level have difficulty learning. When a child is hungry it reduces the ability to pay attention, respond to the environment, and obtain information. Low income is not the only reason children go to school without breakfast. Parents' work schedules often limit their time to prepare and serve breakfasts. Some children have long bus rides to school and do not make time to eat breakfast. Some children say that they are not hungry in the mornings and would rather sleep than eat breakfast.

The impact of breakfast on children's school performance was evaluated in a pilot study in Minnesota. Four elementary schools were used and breakfast was served free to all students. Results showed that student attention increased, there were fewer behavioral problems, less visits to the nurse, and an increase in math and reading scores. The availability of breakfast, whether at home or school, can result in a general increase in learning and achievement.

Breakfast may also be the only time during the day when a child consumes milk or fruit juice. This makes breakfast an important meal to ensure adequate intakes of vitamins C and D, calcium and other nutrients which are critical during the years of growth and development. Breakfast may also be the only meal that children regularly eat at home and when parents might have some say about what is consumed. Breakfast should supply one-quarter to one-third of the days protein plus fiber-rich complex carbohydrates and a small amount of fat, which is a major part of a child's daily energy supply. The breakfasts served in school programs usually meet most, if not all, of these nutrient needs.

Miller, G., Forgoa, T,. Cline, T., McBean, L. Breakfast Benefits Children in the US and Abroad. *Am J. Coll. Nutr*. 1998; 17: 4 -5.

School Breakfast Programs: Energizing the Classroom. Minnesota Department of Children, Families & Learning, Food and Nutrition Service. St. Paul, Minnesota.1997.

Preventing **overweight** children

Encourage parents to:

- Provide children with a wide variety of foods from the Food Guide Pyramid food groups. Nutrient dense foods are foods that contain high concentrations of nutrients in relation to having a reasonable amount of calories. Eggs are a nutrient dense food as they provide vitamins A, D, E, K, the B-complex, and many minerals including iron. The key to good nutrition is to balance food choices over time and offer a variety of foods.

- Encourage children to be physically active. Remember that time spent watching television or playing computer games takes away from time that can be spent being physically active. Increasing physical activity will allow children to burn more calories which can increase the flexibility in their food and calorie intake. Select physical activities that the entire family can participate in, are enjoyable, and focus on fun so that children will want to do them often. Promoting physical activity and exercising together may also be a good way to spend time with your child.

- It is important to promote positive attitudes about food and activity. Children look to parents as models on eating and physical activity. Parents can be role models for children by consuming a nutritionally balanced diet, by being physically active, and making healthful food choices.

- Help children feel good about themselves no matter what the number on the scale is. Weight and food intake should not become a main issue between child and parent. Fitness should take priority over body weight or body size. Excessive parental concern about children's diets and their weight may contribute to eating disorders.

- Diets for overweight children should provide enough calories and essential nutrients for growth without further weight gain. Energy needs of individual children will vary due to their own physical growth, stage of development, physical activity, and metabolic rate. Regular monitoring of children's growth determines whether or not calorie intake is sufficient to maintain weight. Parent's do not often know how to incorporate all of these factors so a registered dietitian (RD) can be helpful. It is also important to remember to teach healthful food choices rather than obsessing, dieting, or restricting certain foods.

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one-quarter cup of vegetables for a three-year-old and one-half cup for a seven-year-old. The recommended numbers of servings for each food group should be distributed throughout the day. To limit excess fat, sugar, and calories, the Pyramid recommends including fats, oils, and sweets, along with high fat or sugary foods, only sparingly.

Just say no

Children need to learn that they cannot eat everything that they want to eat. Just say no to a soft drink at the fast food restaurant if your child should drink milk to get his calcium for the day. Just say no to a second serving of ice cream if your child skimped on lunch. Offer her more lunch instead. Just say no to the endless stream of cookies, chips, and candy that so many children eat after school. Offer a reasonable amount, along with fruit, a sandwich, and other more healthful options. By setting limits, parents can teach their children how to exercise moderation when enjoying treat-type foods.

Make time for meals

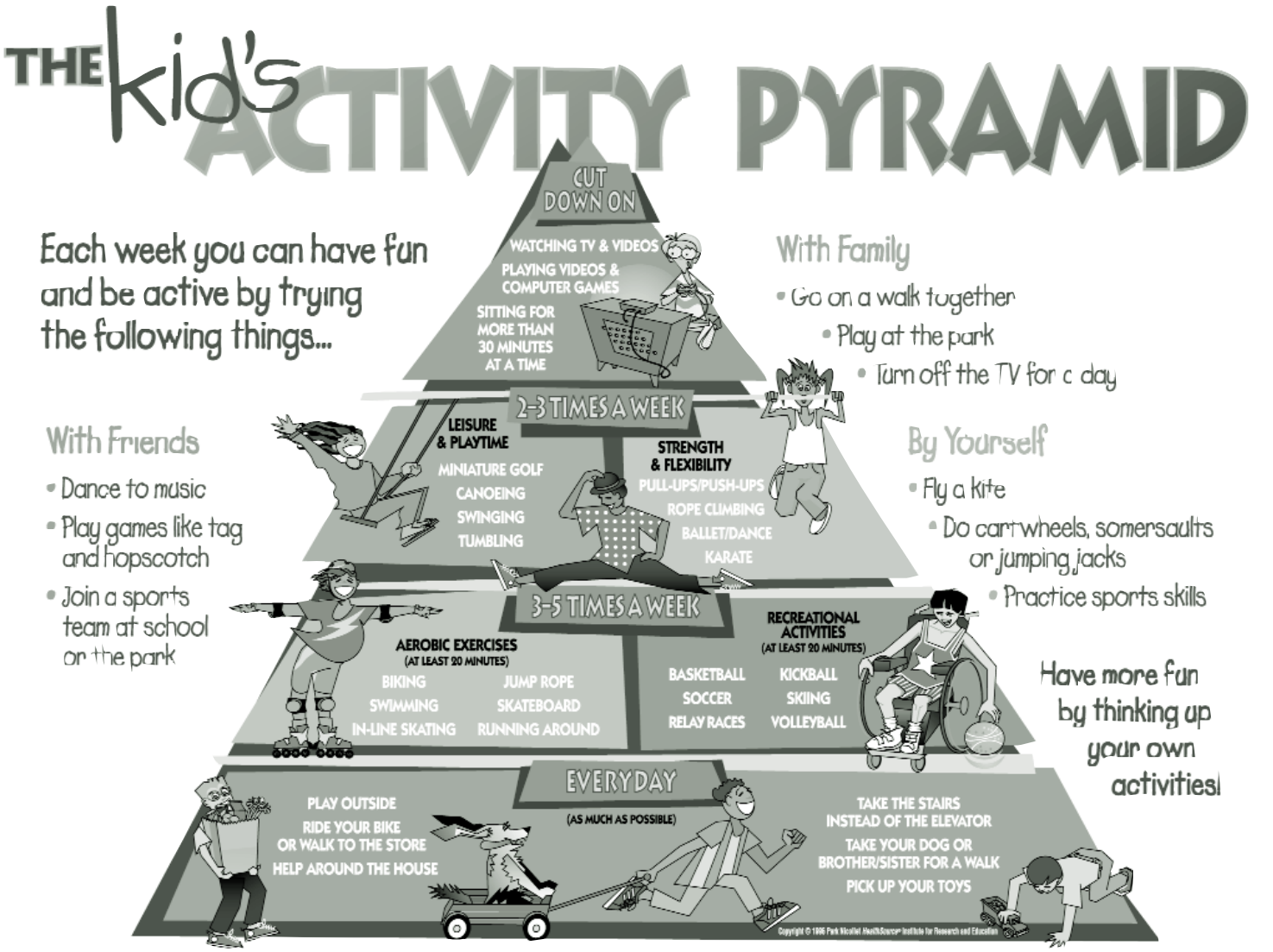
The benefits of mealtime go far beyond nutrition. Family meals are a time for family members to talk about their day and to discuss their thoughts. Even just a few meals together per week will help a child grow and develop in a healthy way.

Even if parents make time for meals, many have little time to cook, hence the popularity of fast food, "home meal replacements" (take-out food from delis, supermarkets, and restaurants), and frozen dinners. But family meals do not need to be fancy or complicated. Simple, quick suppers like soup and sandwiches, scrambled eggs and toast, or pasta tossed with vegetables take minutes to prepare and are just as tasty.

Set a good example

Children learn by example from their parents, caregivers, and teachers. Children are more apt to eat healthfully if the adults around them eat meals that are balanced and include plenty of variety. Picky eater children often have picky eater parents. The same holds true with physical activity children may be more active if their parents are active and encourage physical exercise that the entire family can enjoy. Parents who maintain a healthy attitude toward eating and exercise pass that attitude onto their children.

Written by Mindy Hermann, RD



The Kid's Activity Pyramid is a new educational piece that has been developed especially for children by Park Nicollet HealthSource. This handout emphasizes how physical activity can be fun and exciting. The handout lists all different types of physical activities that children can do along with their families or friends as well as physical activities that they can do individually. It also is a reminder of sedentary activities that need to be limited. To purchase copies of The Kid's Activity Pyramid and additional materials call 1-800-372-7776.