

Lincoln Pediatrics

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Healthy Diet

Health Problems Related to Diet

At least 7 health problems have been proven to relate to diet. The first 4 problems occur in children as well as in adults. The last 3 occur primarily in adults.

1. **Iron deficiency anemia** This type of anemia usually occurs between 6 months and 2 years of age. Many children have no symptoms. If they do, the most common symptoms are fatigue, pale skin, becoming tired easily, and delayed motor development. Iron deficiency anemia can also cause behavioral symptoms such as restlessness, irritability, and poor attention span.
2. **Overweight** Obesity is one of the most common nutritional problems in this country. Obesity is also one of the most important contributing factors in heart disease, hypertension, type 2 diabetes, and some cancers.
3. **Tooth decay** Tooth decay is more likely if a child has a lot of sugar in his diet. (Poor toothbrushing habits also contribute to tooth decay.)
4. **Intestinal symptoms** Too little fiber in the diet can cause intestinal problems such as constipation, abdominal discomfort, appendicitis, gallstones, and some intestinal cancers.
5. **Osteoporosis** Soft bones (osteoporosis) in later adulthood causes curvature of the spine and increased fractures (especially hip fractures). Most of the calcium that gives strong bone density is laid down between 9 and 18 years of age.
6. **Coronary artery disease** A lot of animal fat (especially cholesterol) in the diet contributes to coronary artery disease. This disease hardly exists in poor countries where the population subsists on low-fat, high-carbohydrate diets. It is also less common among vegetarians.
7. **High blood pressure** High blood pressure is mainly due to narrowed arteries from a high fat diet. An increased amount of salt or a decreased amount of calcium in the diet contributes to high blood pressure in some susceptible persons. Most people, however, get rid of extra salt through their kidneys and don't develop high blood pressure.

Recommendations for a Healthy Diet

- **Learn the 5 basic food groups.** Food can be divided into 5 basic groups: milk products, meat/eggs, grains, fruits, and vegetables. The USDA revised the Dietary Guidelines for Americans in 2005. The recommended servings per day as listed are for teens and adults.
 - milk products (milk, cheese, yogurt, ice cream) 2 to 3 servings per day (8 ounces is 1 serving)
 - meat/eggs (red meats, poultry, fish, and eggs) 2 servings per day (5 ounces per day total)
 - grains (breads, cereals, rice, pasta) 6 to 11 servings per day (1 slice of bread is 1 serving)
 - fruits (juice or solid fruit): 2 to 4 servings per day (1/2 cup is 1 serving)
 - vegetables (juice or vegetables): 3 to 5 servings per day (1/2 cup is 1 serving) 20% of a healthy diet should consist of milk, meat and eggs, and 80% should be vegetables, fruits, and grains. (Fiber is found in grains, fruits, and vegetables.)
- **Eat 3 meals a day.** Breakfast is essential for children. Research has shown that missing breakfast interferes with alertness, attention span, thinking, and memory. If your child is on a weight loss diet, you should know that skipping breakfast usually doesn't lead to weight loss. All meals should contain fruits or vegetables, as well as grains. Meat or milk should be included in 2 of the meals. Eating snacks is largely a habit. Snacks are unnecessary for good nutrition but harmless unless your child is overweight. If your child likes snacks (and most children do), encourage fruits, vegetables, and grains. Only allow 1 snack between meals and don't give it close to mealtime.
- **Decrease the amount of fat (meat and milk products) in the diet.** Americans eat excessive amounts of meat and dairy products. Although cholesterol is important for rapid growth, children over age 2 should consume it in moderation (not eliminate it). To decrease the amount of fat in the diet, follow these guidelines:
 - Remember that 1 serving of meat per day is adequate for normal growth and development. (Don't serve meat more than twice a day.)
 - Serve more fish and poultry and fewer red meats, since the latter have the highest cholesterol levels. Lean red meats are lean ground beef, pork loin, veal, and lamb.
 - Trim fat off meats and the skin from poultry.
 - Don't serve bacon, sausages, spareribs, pastrami, and other meats that have a high fat content. Cut back on hot dogs, lunch meats, and corned beef.
 - Limit the number of eggs to 3 or 4 per week. (Eggs have the highest cholesterol content of any of the commonly eaten foods. The cholesterol in 1 egg is equivalent to the cholesterol in 14 ounces of beef, 1-and-1/2 quarts of whole milk, or 1 quart of ice cream.)
 - Serve 1% or 2% milk or skim milk instead of whole milk for children over 2 years of age.

- Decrease the amount of milk your child drinks to 2 or 3 cups per day. (Encourage your child to drink water to satisfy thirst.) On the other hand, some teenage girls may need to be reminded to consume adequate milk products (the equivalent of 3 glasses of milk) to lay down the bone mass required to prevent osteoporosis later in life.
- Buy a vegetable oil spread with no trans fats instead of butter.
- Keep in mind that red meat may be hard to give up because of the widespread misconception that red meat helps to build muscle mass and strength. Other foods such as fish, chicken, and beans also have lots of protein.
- **Increase the amount of fruits, vegetables, and grains in the diet.** Follow these guidelines:
 - Children should consume at least 8 servings (4 cups total) of fruits and vegetables per day. (50% of American children eat only 1 fruit or vegetable per day.)
 - Try to serve a fruit at every meal.
 - Offer fruits as dessert and snacks.
 - Start every day with a glass of fruit juice. Avoid excessive fruit juice which can cause diarrhea or decrease your child's appetite for other foods. The American Academy of Pediatrics recommends the following limits for fruit juice per day: 6 ounces for children age 6 months to 6 years and 12 ounces for children 7 to 18 years. Serve 100% fruit juices, not fruit drinks. Fruit drinks mainly contain water and sugars. They don't count as a serving of fruit.
 - From a practical stand point, fruits and vegetables are interchangeable. Don't force children to eat vegetables they don't like. Offer ones they do like or substitute a fruit.
 - When making casseroles, increase the amount of vegetables and decrease the amount of meat.
 - Serve more soups.
 - Encourage more cereals for breakfast.
 - Use more whole-grain bread in making sandwiches.
- **Include an adequate amount of iron in the diet.** Throughout our lives we need enough iron in our diets to prevent anemia. Everyone should know which foods are good sources of iron. Red meats, fish, poultry, and eggs are best. Having 2 servings per day of these foods will provide adequate iron. Although liver is a good source of iron, it has 16 times more cholesterol than beef and should be avoided. For young children who refuse meats in general, use some low-fat luncheon meats as a meat source. Iron is also found in iron-enriched cereals, beans of all types, peanut butter, raisins, prune juice, sweet potatoes, spinach, and egg yolks. The iron in these foods is better absorbed if the meal also contains fruit juice or meat.
- **Maintain an adequate calcium intake.** Calcium is important for building strong bones, thereby preventing broken bones in children and soft bones (osteoporosis) in later adulthood. Most of the calcium that gives healthy bone density is laid down between ages 9 and 18 years. During this time calcium intake should be 1200 mg per day. A cup (8 ounces) of milk contains 300 mg, so optimal intake is 4 servings of milk products per day. One cup of milk is equal to 8 ounces of yogurt, 1.5 ounces of cheese (approximately 2 slices) or 1 cup of calcium-fortified fruit juice. Whole, 2%, 1% and skim milk all contain the same amount of calcium per cup. Children age 1 to 4 years need 2 servings of calcium per day and those 4 to 9 years need 3 servings per day. If a child of any age doesn't like the taste of milk, intake can easily be improved by serving flavored milk.
- **Cut back on salt.** Eating less salt may reduce the risk of high blood pressure. The taste for salt is mainly a habit. Help infants develop healthy habits by not adding salt to their foods. Take the salt shaker off the dinner table. Use other herbs and spices instead of salt. Do not buy a lot of salty foods such as potato chips and pretzels.
- **Avoid excessive pure sugars.** Sweets are not harmful, but they should be eaten in moderation. Most humans are born with a "sweet tooth." They seek out and enjoy candy, soft drinks, and desserts. The main side effect of eating candy is tooth decay if the teeth are not brushed afterward. Eating food with a lot of sugar ("a sugar binge") can cause jitters, sweating, dizziness, sleepiness, and intense hunger 2 to 3 hours later. This temporary reaction is not harmful and can be relieved by eating some food. A love of sweets is not related to obesity (if the total calories per day are normal) or hyperactivity.
- **Know what to eat before exercise.** Eating meat does not improve athletic performance. The best foods to eat before prolonged exercise are complex carbohydrates. These include bread, pasta (noodles), potatoes, and rice. These should be eaten 3 to 4 hours before the athletic event so they have passed out of the stomach. Drinking water continues to be important up to the time of the activity and every 20 to 30 minutes during the activity.