

Eating Well

Children's nutrition is a wide-ranging topic that may well seem overwhelming to a new mother, or to a family looking to make a change to a healthier lifestyle. What follows are some tips to get you started, but please consult some of my references for more detailed and interesting information. Remember that one of the best ways to help your child learn to eat a healthy diet is to have parents do so, as well.

FATS:

These are necessary for energy (9 cal per gram), brain development, use of fat-soluble vitamins, healthy skin, production of hormones, and to carry foods' flavors. We all need fat in our diets, but choose wisely - look for the "good" **monounsaturated** and **polyunsaturated** fats (liquid fats, found in canola, olive and nut oils) rather than the "bad" saturated (or hydrogenated) fats found in meats, dairy, margarines and many processed foods (the solid fats). The **omega-3 fatty acids**, found in canola, soy, flax, walnuts and seafood are particularly beneficial in reducing heart disease and contributing to brain development.

- Infants require about 50% of calories from fat, children around 30% and adults 10-25% with less than 10% coming from saturated fats.
- Look for natural peanut-butters, avocado, hummus, pumpkin/sunflower seeds, soy products, nuts, eggs (in moderation), low fat dairy products.
- Beware of "non-fat" treats - these often have a lot of added sugars to improve taste and texture.
- Try to pair carbohydrates with a protein or small amount of fat - the snack will be more satisfying and longer-lasting.
- Don't ban favorite high-fat, high-calorie snacks, try to find acceptable replacements (i.e. low fat frozen yogurt for ice-cream) or limit portion size and pair with a healthier alternative (one oreo with graham crackers)
- Poach, broil, or bake foods with a light spray of canola or olive oil instead of sautéing or frying.
- DO NOT put children on very low fat diets (concentrate on the good fats).

CARBOHYDRATES:

The body's main source of energy, carbohydrates may make up over 50% of your daily calories. Try to maximize **complex carbohydrates** (starches and fibers) which take longer to digest and avoid "sugar highs", while minimizing simple carbohydrates (sucrose-table sugar, corn syrup, glucose/dextrose, lactose, and honey.)

- Sorbitol, a common sugar replacer, can cause gas, bloating and diarrhea. It is also found in prunes, pears and cherries (good for constipation!)
- A food's **glycemic index (GI)** is a measure of how quickly a carbohydrate is absorbed. Foods with a low GI are absorbed into the bloodstream more slowly and trigger a slower insulin response, giving a steadier blood-sugar level and a steadier mood. A low glycemic diet may decrease the risk of **diabetes**. Low GI foods include soy, beans, lentils, dairy, chickpeas, oatmeal, sweet potatoes.
- The fructose in fruits, while a simple sugar, is digested more slowly because of the fibers in fruit- therefore **fruit** is a great sweet snack (while fruit juice, without the fiber, is NOT.)

PROTEIN:

Proteins are needed to grow and repair organs, muscles, antibodies, hormones and enzymes. Infants need at least 14 grams per day, children ages 1-6 need 16-24 grams, and ages 7-15 between 28-75 grams. However, it is rare, even in picky toddler diets, to not get enough protein. While protein is also hard to overdose, we do not recommend the "high-protein, Atkin type" diet for children (ask your MD about individual cases.)

Proteins are made up of amino-acids, of which there are the non-essential form (the body can make these) and the **essential** form (which the body must obtain from foods.) A **complete protein** contains all of the essential amino acids (i.e. animal proteins, soybeans). Plant proteins are incomplete, meaning you must mix and match these sources to obtain all of the essential proteins (important in a vegetarian diet). Common combinations include whole grains plus legumes (rice and beans), grains plus dairy (pizza), and vegetables plus dairy (broccoli with cheese sauce).

- Vegetarians should get special dietary guidance to ensure they receive "complete" proteins as well as adequate vitamins and minerals.
- Great protein sources - fish, egg white, low or nonfat dairy products, skinless poultry, beans, tofu, peanut butter, nuts/seeds, whole wheat products.

CALCIUM:

Most children do not get nearly enough calcium in their diets. Calcium is needed for bony growth, nerve and muscle function, and proper blood clotting. The best way to avoid osteoporosis of the bones is to combine a calcium-rich diet and exercise **early** in life. Daily minimum calcium requirements are;

Infants to 1 yr:	400-600 mg
Children 1-10 yr:	800 mg
Preteen, teens:	1,200-1,500 mg
Adults:	1,200 mg

- Calcium is best absorbed in small frequent amounts (do not take large supplements once a day.) Lactose, found in dairy, and vitamin C facilitates absorption of calcium (OJ with calcium). Soft drinks actually decrease calcium absorption.
- Best calcium sources: Dairy products, sardines, Ca fortified OJ and cereals/ breads, tofu, salmon, beans, broccoli, spinach, greens, almonds, papaya, oranges.

IRON:

Iron is necessary to make hemoglobin, which helps red cells carry oxygen throughout the body. Iron also helps nerves function. Iron deficiency can cause both mental and physical fatigue. Iron is found in animal tissue (the darker the meat, the more iron-rich), as well as egg yolk and dairy. Iron is also found in plant foods, but is much harder to absorb. Vitamin C and meats can enhance absorption of plant iron.

Babies are born with large iron reserves, which last between 6-12 months, however, without breastmilk or iron-fortified formula these reserves are quickly outgrown. We check childrens' hemoglobin levels at 9 mos, 1/2/4 years of age since picky toddlers often do not get enough iron. Infants, if not breast-fed, should always receive **iron-fortified formula** with rare exception. Teens and menstruating females also need extra iron.

- Best iron sources: meats and poultry, seafood, beans, chickpeas, potatoes with skin, lentils, artichoke, sweet potato, tomato paste, whole wheat bread, Cream of Wheat, amaranth, barley and quinoa (grains), dried apricots, peaches, prune juice, raisins, tofu, blackstrap molasses, nuts.

VITAMINS:

Vitamins provide no calories yet are vital in helping your body metabolize foods. Most children eating a reasonable diet do not need vitamin supplements. Fruits contain mostly the same vitamins as vegetables, so maximize fruits for your picky eaters. You cannot overdose on vitamins in food (other than vitamin A, in extreme cases.) However, overdoing vitamin supplements in children can be harmful- treat these as medications, not “healthy candies.”

GENERAL HEALTHY EATING TIPS

Don't use the word “diet” - we try to eat healthy foods to feel good, have energy and stay well - not just to lose weight.

Try to limit TV and computer time to 1-2 hours per day (more if needed for homework) and focus on physical activities; limit snacking/meals in front of TV (mindless eating).

Don't force child to finish meals (although limit between-meal snacks to healthy alternatives).

Don't use food as a reward, or make dessert contingent on finishing dinner (try to make dessert a part of a healthy dinner-i.e. fruit, yogurt with mix-ins, milkshakes).

Encourage children to cook with you, they will usually eat/try something new if they helped prepare it.

Challenge your child to eat a “rainbow” everyday (each color fruit and vegetable contains different vitamins).

SNACKING IDEAS

Breads:

Low fat crackers

Bread sticks

Bagels

graham crackers

pretzels

baked chips

Apple/pear slices with cheese or peanut butter

Pretzels with peanut butter

“Ants on a log”-Celery sticks with peanut butter or cream cheese and raisins

Tortillas with lean chicken breast, reduced-fat cheese and reduced fat sour cream

Juice with seltzer instead of soda

Baked fries (slice potatoes, shake in plastic bag with small amount canola oil, salt, pepper and other seasonings, roast at 400 degrees)

Omelets made with 1 whole egg to 1-2 egg whites- add low fat cheese, veggies

RESOURCES:

The Yale Guide to Children’s Nutrition, edited by William V. Tamborlane M.D.

The Family Nutrition Book, by William Sears M.D. and Martha Sears R.N.

Good Enough to Eat- a kids guide to food and nutrition, by Lizzy Rockwell

Ending the Food Fight, by David Ludwig, M.D., Ph.D.

In Defense of Food, by Michael Pollan

Cooking Light magazine