

Heart Healthy Eating for Kids



We all know that Valentine's Day is in February. Most kids look forward to getting valentines and candy. Instead of a valentine, what can you give to your child's heart for Valentine's Day? **A heart healthy diet!** This website can help you learn how to turn your child's diet into a diet that can help to prevent heart disease later in life, starting now!

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Heart Healthy Lingo

Before we start into the foods and nutrients that are part of a heart healthy diet, let's look into some words that will help you to understand why these foods are (or aren't) heart healthy.

LDL Cholesterol

LDL cholesterol is also known as "bad cholesterol." LDL cholesterol can cause the build up of plaque in arteries and can narrow the arteries, leading to a decrease in blood flow. Higher levels of LDL cholesterol increase the risk of heart disease. LDL cholesterol should be less than 100.

HDL Cholesterol

HDL cholesterol is also known as "good cholesterol." HDL cholesterol helps remove bad cholesterol from the body. Higher HDL levels have been shown to decrease the risk of heart disease. HDL levels should be above 60.

Total Cholesterol

Total cholesterol is a combined measurement of LDL cholesterol, HDL cholesterol, and other compounds. Total cholesterol should be below 200.

Triglycerides

Triglycerides are a type of fat in the body. High triglycerides and high LDL cholesterol or low HDL cholesterol can increase the risk of heart disease. Triglycerides should be less than 150.

What does heart healthy eating look like?

There are many nutrients that can help or hurt when it comes to heart healthy eating. We'll explore these foods and nutrients in the following pages!

Fats

The first thing most people think of when thinking of heart healthy eating is fats. Here's what you need to know when it comes to fats in your child's diet...

Fats are necessary for growth and development and should not be restricted in children under 2 years of age.

Saturated Fats

What is it?

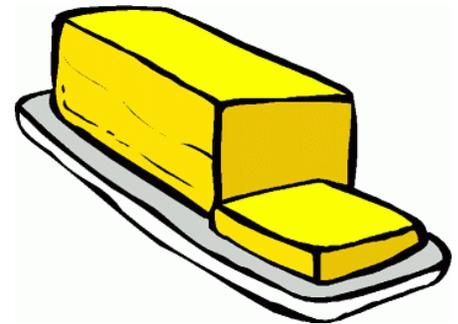
Saturated fats are a type of fat that is solid at room temperature and can increase blood cholesterol more than any other type of fat.

Where is it found?

Fatty cuts of meats, dairy and dairy products made with whole and 2% milk, butter, lard, ice cream, coconut oil, palm oil

How much should my child consume?

Foods high in saturated fat (listed above) should be limited in children over 2 years old. The 2010 Dietary Guidelines recommend that less than 10% of calories come from saturated fats.



Unsaturated Fats

What is it?

Unsaturated fats are either polyunsaturated or monounsaturated. Both types do not raise cholesterol and can help to lower cholesterol when they are used in place of saturated and *trans* fats.

Where is it found?

Polyunsaturated: Sunflower, corn, soy, and safflower oils, salmon, and trout

Monounsaturated: Olive, canola, and peanut oils, avocados, and nuts

How much should my child consume?

Most of the fats that your child consumes should come from unsaturated fats.



Trans Fats

What is it?

Trans fats are fats made during hydrogenation, a process used to keep polyunsaturated fats solid at room temperature and to make the fats last longer. *Trans* fats raise LDL and increase the risk of heart disease.

Where is it found?

Deep-fried foods (French fries, doughnuts), baked goods (cookies, cakes, crackers, pies, muffins), margarine, and shortening. *Trans* fats are also found naturally in small amounts in beef, pork, lamb, butter, and milk.

How much should my child consume?

Foods with *trans* fats should be limited; aim for your child to eat as little as possible.



Cholesterol

What is it?

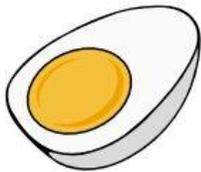
Cholesterol is a wax-like substance that the body makes for normal body functions. Cholesterol is also found in certain foods. Too much cholesterol can contribute to heart disease.

Where is it found?

Eggs (specifically egg yolks), dairy and dairy products, meats, poultry, and shellfish

How much should my child consume?

Cholesterol should be limited to 300 milligrams daily. However, cholesterol should not be restricted in children under 2 years of age since it is necessary for growth and development.



Sodium

What is it?

Sodium, also known as salt or sodium chloride, is a necessary compound for many body functions. However, too much sodium can increase blood pressure.

Where is it found?

Processed foods (lunch meats, sausages, canned foods, salted nuts, frozen dinners, ketchup, salad dressings, sauces, and chips)

How much should my child consume?

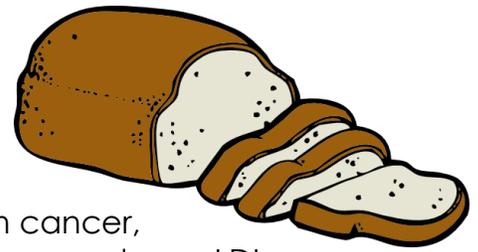
Sodium intake should be less than 2,300 milligrams each day.



Fiber

What is it?

Fiber is a food component that the body cannot digest or absorb. There are two types of fiber: soluble and insoluble. While insoluble fiber is important in preventing constipation and decreasing the risk of colon cancer, soluble fiber helps with cholesterol levels. Diets high in fiber can lower LDL cholesterol.



Where is it found?

Whole grains, fruits (with skin!), vegetables, beans, legumes, nuts, and seeds

How much should my child consume?

Aim for at least half of your child's grains to be whole grains (from the sources listed above).

TIP:

Look for breads that have "whole-wheat" as the first ingredient. These breads are made from whole grains and contain more fiber. Also, try brown rice, barley, and whole-wheat pasta in recipes for even more fiber!

Omega 3

What is it?

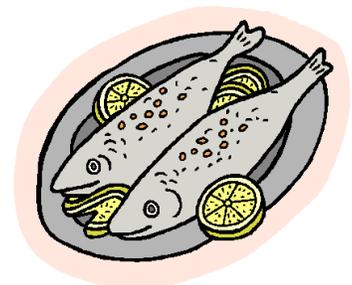
Omega 3 fatty acids are fats that the body needs to carry out normal body functions. The body cannot make these fats, so these fats need to come from the diet. Omega 3 fats have been shown to reduce the risk of heart disease.

Where is it found?

Fatty fish (salmon, herring, tuna, mackerel, and sardines)

How much should my child consume?

Encourage your child to eat 2 servings of fish each week.



The FDA recommends that children's intake of fish be limited to 2 servings per week due to the potential for mercury content. Make sure to avoid shark, swordfish, king mackerel, and tilefish due to high mercury content.

Is heart healthy eating effective?

Here, we'll take a look at 3 different studies, each measuring the effectiveness of reducing fat intake and increasing fiber intake.

Fiber and Total Cholesterol

This study looked at children who followed a high fiber diet. Researchers found that the children who ate more fiber had lower LDL cholesterol levels. Researchers also found that LDL cholesterol decreased further with a reduction in saturated fat intake, as well as an increase in fiber.

Bottom line: Fiber can help to decrease LDL cholesterol in children. LDL cholesterol can be further reduced with a decrease in saturated fat intake.

Ruottinen S, Lagstrom HK, Niinikoski H, et al. Dietary fiber does not displace energy but is associated with decreased serum cholesterol concentrations in healthy children. *Am J Clin Nutr.* 2010;91:651-61.

Low Fat Diet and LDL cholesterol

This study evaluated the safety and effectiveness of a diet low in fat, especially saturated fat, and cholesterol. The children in the study were followed for 7 ½ years. Researchers found that children who ate a diet low in fat and cholesterol had lower LDL cholesterol than children who did not.

Bottom line: A diet low in fat and cholesterol in children is safe and effective in lowering cholesterol.

Obarzanek E, Kimm SYS, Barton BA, et al. Long-term safety and efficacy of a cholesterol-lowering diet in children with elevated low-density lipoprotein cholesterol: seven-year results of the Dietary Intervention Study in Children (DISC). *Pediatrics.* 2001;107(2):256-64.

Blood Pressure

This study followed children for 18 years to examine the long-term effects of a diet low in saturated fat and cholesterol and high in fiber (with emphasis on fruits, vegetables, and whole grains). The researchers found that the children who followed a low fat diet continued this diet in adulthood and had lower blood pressure as adults.

Bottom line: A low fat diet in childhood can instill healthy habits into adulthood and lead to a decreased blood pressure in adulthood.

Dorgan JF, Liu L, Barton B, et al. Adolescent diet and metabolic syndrome in young women: Results of the Dietary Intervention Study in Children (DISC) follow-up study. *J Clin Endocrinol Meta.* 2011;96(12):E1999-E2008.

Modifying Recipes

There are many ways to change a recipe to make it heart healthy. Use this chart of substitutions to help you modify your favorite recipes! Print this chart out and post on the refrigerator for easy access!



Heart Healthy Substitutions

Ingredient	Substitution
Butter	Vegetable oil or tub (soft) margarine
Whole milk	Fat-free milk
Whole eggs	2 egg whites per 1 egg
Cream	Evaporated fat-free milk
Cheese	Part-skim cheese
Mayonnaise/salad dressing	Fat-free salad dressing
Sour Cream	Yogurt or cottage cheese with lemon juice
Salt	Herbs and spices
Garlic or onion salt	Garlic or onion powder
Canned foods/soups	Salt-free or reduced-sodium canned foods/soups
Lunch meats, ham, bacon, hot dogs, sausage	Fresh meats, low-sodium lunch meats

Adapted from the American Dietetic Association: Tips for Families of Children with Cardiac Conditions

Making Better Food Choices

Simple changes to the food your child eats can make a big difference! Try to switch some of your child's usual foods with healthier options.

Food Category	Eat less of...	Instead, eat more of...
Meats	Beef, pork, lamb, fatty cuts of meat Fried meats, poultry, and fish	Lean cuts of meat Poultry without skin Fish Nuts, seeds, tofu, dried beans Baked, broiled, roasted, or stewed meats, fish, and poultry
Dairy	Whole and 2% milk Whole milk yogurt Regular cheeses Regular ice cream	Skim and low-fat milk Nonfat or low-fat yogurt Nonfat or low-fat cheese Nonfat or low-fat ice cream and frozen yogurt
Fats and Oils	Butter, lard, mayonnaise, sour cream, cream cheese, salad dressings, coconut oil, palm oil	Canola, olive, soybean, peanut, and safflower oils Fat-free or low-fat mayonnaise, sour cream, cream cheese, and salad dressings
Grains	Refined grains, fried rice, biscuits, cornbread, waffles, pancakes, muffins	Whole-grain breads and pastas, brown rice, cereals without added fat
Vegetables	Fried vegetables Vegetables with cream sauce, butter, and cheese	Fresh, frozen, or canned (no salt added) vegetables without sauce
Fruits	Fried fruit Fruit with cream sauce or butter	Fresh, frozen, canned, or dried fruits

Adapted from the Detroit Medical Center Health Library: Heart Healthy Eating

Recipes

Want to try some new heart healthy recipes that both you and your child will like? Here are just a few to get you started...

Garden Turkey Meatloaf

Makes 4 - 2 slice servings

2 cups assorted vegetables, chopped (try mushrooms, zucchini, red peppers, and spinach)

12 oz 99% lean ground turkey

½ cup whole-wheat breadcrumbs

¼ cup fat-free evaporated milk

¼ tsp ground black pepper

2 Tbsp ketchup

1 tsp dried chives

1 tsp dried parsley

Nonstick cooking spray

For glaze:

1 Tbsp ketchup

1 Tbsp honey

1 Tbsp Dijon mustard

1. Preheat oven to 350°F.

2. Steam or lightly sauté the assortment of vegetables.

3. Combine vegetables and the rest of the meatloaf ingredients in a large bowl. Mix well. Spray a loaf pan with cooking spray, and spread meatloaf mixture evenly in the pan.

4. Combine glaze ingredients. Brush glaze on top of the meatloaf.

5. Bake meatloaf in the oven for 45–50 minutes (to a minimum internal temperature of 165 °F).

6. Let stand for 5 minutes before cutting into eight even slices.

Recipe source: *Deliciously Healthy Family Meals*, National Heart Lung and Blood Institute



Quick Beef Casserole

Makes 8 - 1½ cup servings

- ½ lb lean ground beef
- 1 cup onion, chopped
- 1 cup celery, rinsed and chopped
- 1 cup green bell pepper, rinsed, seeded, and cubed
- 3½ cups tomatoes, rinsed and diced (or no-salt added canned tomatoes)
- ¼ tsp salt
- ½ tsp ground black pepper
- ¼ tsp paprika
- 1 cup frozen peas
- 2 small carrots, rinsed, peeled, and diced
- 1 cup uncooked rice
- 1½ cup water



1. In a sauté pan, brown the ground beef. Drain off the extra fat by tilting the sauté pan over a disposable cup in the sink to collect the fat. Use the lid to shield the meat from falling out. After the fat has turned solid, discard the cup in the trash.
2. Add the rest of the ingredients to the sauté pan, and mix well.
3. Cover sauté pan with lid, and cook over medium heat until boiling.
4. Reduce to low heat and simmer for 35 minutes. Serve hot.

Recipe source: *Deliciously Healthy Family Meals*, National Heart Lung and Blood Institute

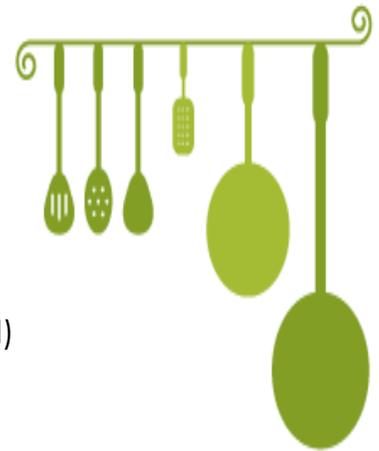
Pita Pizzas

Makes 4 pizzas

- 1 cup low sodium pizza sauce
- 1 cup grilled boneless, skinless chicken breast,
diced (about 2 small breasts)
- 1 cup broccoli, rinsed, chopped, and cooked
- 2 Tbsp grated parmesan cheese
- 1 Tbsp fresh basil, rinsed, dried, and chopped (or 1 tsp dried)
- 4 (6½-inch) whole-wheat pitas

1. Preheat oven or toaster oven to 450 °F.
2. For each pizza, spread ¼ cup tomato sauce on a pita and top with ¼ cup chicken, ¼ cup broccoli, ½ tablespoon parmesan cheese, and ¼ tablespoon chopped basil.
3. Place pitas on a nonstick baking sheet and bake for about 5–8 minutes until golden brown and chicken is heated through. Serve immediately.

Recipe source: *Deliciously Healthy Family Meals*, National Heart Lung and Blood Institute



What's in the News?

Have you heard anything about heart health in the news lately? Here are just a couple of the stories that have been in the news lately on the topic of heart health.



Heart Health of US Teens

A recent study of federal data revealed that US children's heart health has room for improvement. Of the 5,450 12-19 year old adolescents in the study, none of them met the American Heart Association's standards for a heart healthy diet. Specifically, no adolescents reported meeting each of the following categories: eating 4½ servings of fruits and vegetables each day, 3 whole grain servings each day, 2 or more servings of fish each week, less than 1,500 milligrams of sodium each day, and less than 36 ounces of sugar sweetened beverages each week. Poor diet, in addition to smoking and lack of physical activity, is contributing to the poor heart health of US teens.

<http://online.wsj.com/article/SB10001424052970204517204577042412501431378.html>

Fish and Heart Health

Researchers found that women who rarely or never ate fish experienced 50% more cardiovascular problems (such as high blood pressure [hypertension], stroke, and heart attack) than those who ate fish regularly. Furthermore, compared to women who ate fish on a weekly basis, those who rarely or never consumed fish had 90% more cardiovascular events. The women in this study were between the ages of 15-49 years, showing the importance of fish consumption from a young age.

<http://www.sciencedaily.com/releases/2011/12/111205165118.htm>

Win a Prize!

One lucky child (or parent!) will win a prize pack that includes:

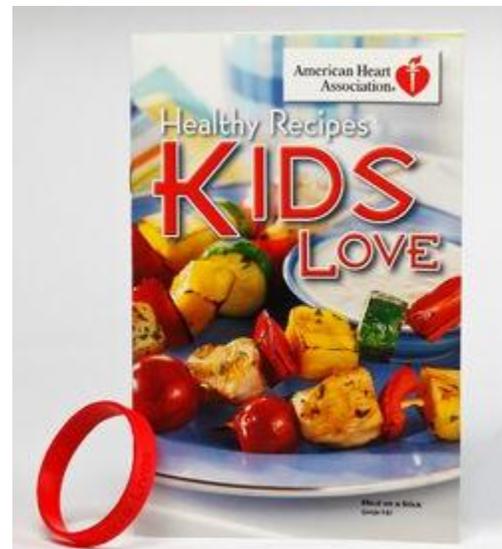
American Heart Association “I heart my heart” teddy bear



This cute and cuddly teddy bear is a great way to remind your child to remember to take good care of their heart by eating heart healthy foods.

American Heart Association “Healthy Recipes Kids Love” cookbook and wristband

This great cookbook includes many recipes that children and adults will all like. The cookbook also includes a wristband for your child to wear to show their support in the fight against heart disease!



Stop by the Healthy Eating Tip of the Month display in the hospital cafeteria for details on how to enter and win this great prize!

While you're there, pick up some handouts on heart healthy eating, including a coloring page for your child.

References and Resources

Visit the following websites for more information on heart healthy eating.

www.heart.org

On the American Heart Association's website, you can learn more about heart health, heart healthy eating, news, and other resources.

www.eatright.org

The American Dietetic Association's website has more information on heart healthy eating and healthy eating for all ages.

<http://www.nhlbi.nih.gov/health/public/heart/index.htm>

The National Heart, Lung, and Blood Institute's website is a great resource for learning more about heart disease and related conditions. You'll also find more heart healthy recipes, current research, and further resources.

http://kidshealth.org/kid/centers/valentine_center.html

This website has kid-friendly information on the heart, heart healthy recipes, and much more!

www.nourishinteractive.com

This site has nutrition information, tips, and resources for parents on healthy eating. It also includes interactive games and pages for kids!

