**The Food Pyramid and Healthy Eating Tips From Harvard**

**The Nutrition Source**

[**http://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/**](http://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/)

**Carbohydrates: Good Carbs Guide the Way**

**Introduction**

Don't be misled by the blanket pronouncements on the dangers of carbohydrates. They are an important part of a healthy diet. Carbohydrates provide the body with the fuel it needs for physical activity and for proper organ function. The best sources of carbohydrates—fruits, vegetables, and whole grains—deliver essential vitamins and minerals, fiber, and a host of important phytonutrients.

**What Are Carbohydrates?**

Carbohydrates are found in a wide array of foods—bread, beans, milk, popcorn, potatoes, cookies, spaghetti, soft drinks, corn, and cherry pie. They also come in a variety of forms. The most common and abundant forms are sugars, fibers, and starches.

The basic building block of every carbohydrate is a sugar molecule, a simple union of carbon, hydrogen, and oxygen. Starches and fibers are essentially chains of sugar molecules. Some contain hundreds of sugars. Some chains are straight, others branch wildly.

Carbohydrates were once grouped into two main categories. Simple carbohydrates included sugars such as fruit sugar (fructose), corn or grape sugar (dextrose or glucose), and table sugar (sucrose). Complex carbohydrates included everything made of three or more linked sugars. Complex carbohydrates were thought to be the healthiest to eat, while simple carbohydrates weren't so great. It turns out that the picture is more complicated than that.

The digestive system handles all carbohydrates in much the same way—it breaks them down (or tries to break them down) into single sugar molecules, since only these are small enough to cross into the bloodstream. It also converts most digestible carbohydrates into glucose (also known as blood sugar), because cells are designed to use this as a universal energy source.

**Fiber**

Fiber is an exception. It is put together in such a way that it can't be broken down into sugar molecules, and so it passes through the body undigested. Fiber comes in two varieties: soluble fiber dissolves in water, while insoluble fiber does not. Although neither type nourishes the body, they promote health in many ways. Soluble fiber binds to fatty substances in the intestines and carries them out as a waste, thus lowering low-density lipoprotein (LDL, or bad cholesterol). It also helps regulate the body's use of sugars, helping to keep hunger and blood sugar in check. Insoluble fiber helps push food through the intestinal tract, promoting regularity and helping prevent constipation

**Good Carbohydrates**

For optimal health, get your grains intact from foods such as whole wheat bread, brown rice, whole grain pasta, and other possibly unfamiliar grains like quinoa, whole oats, and bulgur. Not only will these foods help protect you against a range of chronic diseases, they can also please your palate and your eyes.

Here are some suggestions for adding more good carbohydrates to your diet:

* **Start the day with whole grains.** If you're partial to hot cereals, try old-fashioned or steel-cut oats. If you're a cold cereal person, look for one that lists whole wheat, whole oats, or other whole grain first on the ingredient list.
* **Use whole grain breads for lunch or snacks.** Check the label to make sure that whole wheat or another whole grain is the first ingredient listed.
* **Bag the potatoes.** Instead, try brown rice or even "newer" grains like bulgur, wheat berries, millet, or hulled barley with your dinner.
* **Pick up some whole wheat pasta.** If the whole grain products are too chewy for you, look for those that are made with half whole-wheat flour and half white flour.
* **Bring on the beans.** Beans are an excellent source of slowly digested carbohydrates as well as a great source of protein

**VEGETABLES**

##### Choose more vegetables and fruits. Go for color and variety—dark green, yellow, orange, and red.

It's hard to argue with the health benefits of a diet rich in vegetables and fruits: [Lower blood pressure](http://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/vegetables-full-story/index.html#blood_pressure); reduced risk of [heart disease](http://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/vegetables-full-story/index.html#cvd), stroke, and probably some [cancers](http://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/vegetables-full-story/index.html#cancer); lower risk of [eye](http://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/vegetables-full-story/index.html#Vision) and [digestive problems](http://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/vegetables-full-story/index.html#GI_health); and a mellowing effect on blood sugar that can help keep appetite in check.

Most people should aim for at least nine servings (at least 4½ cups) of vegetables and fruits a day, and potatoes don't count. Go for a variety of kinds and colors of produce, to give your body the mix of nutrients it needs. Best bets? Dark leafy greens, cooked tomatoes, and anything that's a rich yellow, orange, or red color.



**1. Keep fruit out where you can see it**. That way you'll be more likely to eat it. Keep it out on the counter or in the front of the fridge.

**2. Get some every meal, every day.** Try filling half your plate with vegetables at each meal. Serving up salads, stir fry, or other vegetable-rich fare makes it easier to reach this goal. Bonus points if you can get some fruits and vegetables at snack time, too.

**3. Explore the produce aisle and choose something new**. Variety is the key to a healthy diet. Get out of a rut and try some new fruits and vegetables.

**4. Bag the potatoes**. Choose other vegetables that are packed with more nutrients and more slowly digested carbs. Read the "[Carbohydrates](http://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/carbohydrates/index.html)" section of The Nutrition Source to [learn how to add good carbs to your diet](http://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/carbohydrates/index.html). Or try one of these [delicious whole grains recipes](http://www.hsph.harvard.edu/nutritionsource/recipes/home-cooking/index.html#Whole_grains) as an alternative to potatoes.

**5. Make it a meal**. Try some new [healthy recipes](http://www.hsph.harvard.edu/nutritionsource/recipes/home-cooking/index.html#vegetables) where vegetables take center stage, such as Mollie Katzen's[asparagus with warm tarragon-pecan vinaigrette](http://www.hsph.harvard.edu/nutritionsource/recipes/asparagus-with-warm-tarragon-pecan-vinaigrette/index.html), or Nina Simonds' [spicy broccolini with red pepper](http://www.hsph.harvard.edu/nutritionsource/recipes/spicy-broccolini/index.html).

It's hard to argue with the health

**Proteins** Pay attention to the protein package. Fish, poultry, and beans are your best bets.

Animal protein and vegetable protein probably have the same effects on health. It's the protein package that's likely to make a difference. A 6-ounce broiled porterhouse steak is a great source of protein—38 grams worth. But it also delivers 44 grams of fat, 16 of them saturated. That's almost three-fourths of the recommended daily intake for [saturated fat](http://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/fats-and-cholesterol/index.html). The same amount of salmon gives you 34 grams of protein and 18 grams of fat, 4 of them saturated. A cup of cooked lentils has 18 grams of protein, but under 1 gram of fat.

So, when choosing protein-rich foods, pay attention to what comes along with the protein. Vegetable sources of protein, such as beans, nuts, and whole grains, are excellent choices, and they offer healthy [fiber](http://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/fiber/index.html), vitamins and minerals. The best animal protein choices are fish and poultry. If you are partial to red meat, stick with the leanest cuts, choose moderate portion sizes, and make it only an occasional part of your diet.

Healthy Tips for Proteins

**1. Mix it up.** Most reasonable diets provide enough protein for healthy people. Eating a variety of foods will ensure that you get all of the amino acids you need.

**2. Go low on saturated fat.** Beans, fish and poultry provide plenty of protein, without much saturated fat. Steer clear of fatty meats and use whole-milk dairy products sparingly. For more information on saturated fat, read "[Fats and Cholesterol: Out with the Bad, In with the Good](http://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/fats-full-story/index.html)."

**3. Limit red meat—and avoid processed meat.** Research suggests that people who eat more than 18 ounces a week of red meat have a higher risk of colon cancer. So make red meat—beef, pork, lamb—only an occasional part of your diet, if you eat it at all. And skip the processed stuff—bacon, hot dogs, and deli meats—since that's also been linked to higher cancer risk.

**4. Eat soy in moderation.** Tofu and other soy foods are an excellent red meat alternative. In some cultures, tofu and soy foods are a protein staple, and we don’t suggest any change. But if you haven't grown up eating lots of soy, there's no reason to go overboard: Two to 4 servings a week is a good target; eating more than that likely won't offer any health benefits and we can’t be sure that there is no harm. And stay away from supplements that contain concentrated soy protein or extracts, such as isoflavones, as we just don't know the long term effects**5. Balance carbs and protein.** Cutting back on highly processed carbohydrates and increasing protein improves levels of blood triglycerides and HDL, and so may reduce your chances of having a heart attack, stroke, or other form of cardiovascular disease. It may also make you feel full longer, and stave off hunger pangs.

**FATS**

##### Choose healthy fats, limit saturated fat, and avoid trans fat.

The total amount of fat you eat, whether high or low, isn't really linked with disease. What really matters is the type of fat you eat.

#### Good Fats: Unsaturated Fats

Unsaturated fats are called good fats because they can improve blood cholesterol levels, ease inflammation, stabilize heart rhythms, and play a number of other beneficial roles. Unsaturated fats are predominantly found in foods from plants, such as vegetable oils, nuts, and seeds. They are liquids at room temperature.

There are two types of unsaturated fats:

* **Monounsaturated fats** are found in high concentrations in canola, peanut, and olive oils; avocados; nuts such as almonds, hazelnuts, and pecans; and seeds such as pumpkin and sesame seeds.
* **Polyunsaturated fats** are found in high concentrations in sunflower, corn, soybean, and flaxseed oils, and also in foods such as walnuts, flax seeds, and fish. [Omega-3 fats](http://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/omega-3-fats/index.html), which are fast becoming the darling of the supplement industry, are an important type of polyunsaturated fat. The body can't make these, so they must come from food. An excellent way to get omega-3 fats is by eating fish two or three times a week. Good plant sources of omega-3 fats include chia seeds (sold as Salvia), flax seeds, walnuts, and oils such as flaxseed, canola, and soybean.

The "bad" fats—saturated and trans fats—increase the risk for certain diseases. The "good" fats—monounsaturated and polyunsaturated fats—lower disease risk. The key to a healthy diet is to substitute good fats for bad fats—and to avoid trans fats.

Although it is still important to limit the amount of cholesterol you eat, especially if you have diabetes, dietary cholesterol isn't nearly the villain it's been portrayed to be. Cholesterol in the bloodstream is what's most important. And the biggest influence on blood cholesterol level is the mix of fats in your diet—not the amount of cholesterol you eat from food.

**Tips for Choosing Healthy Fats**

**1. Use liquid plant oils for cooking and baking.** Olive, canola, and other plant-based oils are rich in heart-healthy unsaturated fats. Try dressing up a salad or spring vegetables with a delicious, olive oil-based vinaigrette, such as this recipe for [fresh mint vinaigrette](http://www.hsph.harvard.edu/nutritionsource/recipes/mint-vinaigrette/index.html).

**2. Ditch the trans fat.** In the supermarket, read the label to find foods that are trans free. In restaurants, steer clear of fried foods, biscuits, and other baked goods, unless you know that the restaurant has eliminated trans fat. Read more about [how to spot trans fats](http://www.hsph.harvard.edu/nutritionsource/nutrition-news/transfats/index.html)—and how to avoid them.

**3. Switch from butter to soft tub margarine.** Choose a product that has zero grams of trans fat, and scan the ingredient list to make sure it does not contain partially hydrogenated oils.

**4. Eat at least one good source of omega-3 fats each day.** Fatty fish, walnuts, and canola oil all provide omega-3 fatty acids. Read more about [omega-3 fatty acids](http://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/omega-3-fats/index.html) and why they are so important to good health.

**5. Go lean on meat and milk.** Beef, pork, lamb, and dairy products are high in saturated fat. Choose low-fat milk, and savor full-fat cheeses in small amounts; also, choose lean cuts of meat.

**Healthy Drinks**

##### Water is best to quench your thirst. Skip the sugary drinks, and go easy on the milk and juice.

There are many options for what to drink, but without a doubt, water is the best choice: It's calorie-free, and it's as easy to find as the nearest tap.

Drinks that are loaded with sugar are the worst choice: They provide lots of calories and virtually no other nutrients. Drinking them routinely can lead to weight gain and increase the risk of type 2 diabetes.

## Salt and Sodium

**Eating less salt is good for everyone's health. Choose more fresh foods and fewer processed foods.**



Americans consume one-and-a-half or more teaspoons of salt a day. That's far more than is needed to satisfy the body's need for sodium, the main element we get from salt. And that’s a big problem: A high-sodium diet can raise your risk of high blood pressure, heart disease, and stroke.

The government says we should limit sodium to 2,300 milligrams, and that people at high risk of health problems from salt should make 1,500 milligrams their limit. Who’s at high risk? Nearly 70 percent of U.S. adults! The high-risk group includes people who are over age 40, people who have high blood pressure or slightly elevated blood pressure, people who have diabetes, and African Americans.

If we get used to eating high-salt diets in childhood, it can be harder to cut back later on. That’s why it’s a smart choice for everyone to make 1,500 milligrams their daily sodium budget.

5 tips for Salt:

**1. Get fresh.** Most processed foods are high in sodium. Choose fresh foods and season them with herbs, spices, and citrus—not salt.

**2. Scan the label.** Look for canned, boxed, frozen, and prepared foods with less than 300 milligrams of sodium per serving.

**3. Downsize your portions.** A good rule of thumb is that the more calories a meal has, the more sodium it has. So skip the supersize. Share a dish and you can cut your salt by half.

**4. Seek low-salt options when dining out.** Check restaurant websites for sodium info. Ask the server for dishes that use salt sparingly. Use a light hand on salty condiments.

**5. Call for action.** Food makers and restaurants listen to consumers. If more people ask them to slash the salt, they will. Call, e-mail, text, or just ask to speak to the chef.

## Calcium and Milk

The Bottom Line

**Calcium is important. But milk isn’t the only, or even best, source.**

It’s not a news flash that calcium is key for healthy bones. Getting enough calcium from childhood through adulthood helps build bones up and then helps slow the loss of bone as we age. It’s not clear, though, that we need as much calcium as is generally recommended, and it’s also not clear that dairy products are really the best source of calcium for most people.

While calcium and dairy can lower the risk of osteoporosis and colon cancer, high intake can increase the risk of prostate cancer and possibly ovarian cancer.

Plus, dairy products can be high in saturated fat as well as retinol (vitamin A), which at high levels can paradoxically weaken bones.

Good, non-dairy sources of calcium include collards, bokchoy, fortified soy milk, baked beans, and supplements that contain both calcium and vitamin D (a better choice than taking calcium alone).

## Alcohol

The Bottom Line

**Moderate drinking can be healthy—but not for everyone. You must weigh the benefits and risks.**

Alcohol's link with health is a bit Dr. Jekyll and a bit Mr. Hyde. Exactly which face it shows depends largely on who's drinking and how much. For most moderate drinkers, alcohol has overall health benefits. While moderate drinking can increase the risk of colon and breast cancer, these risks are trumped by the boost in cardiovascular health—especially in middle age, when heart disease begins to account for an increasingly large share of disease and deaths.

Non-drinkers, however, shouldn't feel the need to start drinking to improve their health. Heavy drinkers, with their increased risk of cancer, heart disease, high blood pressure, cirrhosis, and dependence should cut back or stop drinking altogether. A pregnant woman should also avoid alcohol, since it can cause brain damage to the unborn child.

What's considered moderate drinking? For women, it's up to one drink per day; for men, it's up to two drinks per day. What's considered a drink? A general guideline is 12 ounces of beer, 5 ounces of wine, or 1½ ounces of hard liquor, such as vodka or whiskey