

Nutrition experts from the Harvard School of Public Health created the Healthy Eating Pyramid, and updated it in 2008. In September 2011, working with colleagues at Harvard Health Publications, they created the Healthy Eating Plate. The Healthy Eating Pyramid and the Healthy Eating Plate are based on the best available scientific evidence about the links between diet and health.

The Healthy Eating Pyramid sits on a foundation of daily exercise and weight control. Why? These two related elements strongly influence your chances of staying healthy. They also affect what you eat and how your food affects you. Exercise and weight control are also linked through the simple rule of energy balance: $\text{Weight change} = \text{calories in} - \text{calories out}$. If you burn as many calories as you take in each day, there's nothing left over for storage in fat cells, and weight remains the same. Eat more than you burn, though, and you end up adding fat and pounds. Regular exercise can help you control your weight, and it is a key part of any weight-loss effort. The other bricks of the Healthy Eating Pyramid include the following:

whole grains: The body uses carbohydrates mainly for energy, and it can get them from many sources – some healthful (beans, vegetables, fruit, whole grains), and some not (sugary sodas and other drinks, sweets). The best grain sources of carbohydrates are whole grains such as oatmeal, whole wheat bread, and brown rice. They deliver the outer (bran) and inner (germ) layers along with energy-rich starch. The body can't digest whole grains as quickly as it can highly processed carbohydrates such as white flour. This keeps blood sugar and insulin levels from rising, then falling, too quickly. Better control of blood sugar and insulin can keep hunger at bay and prevent the development of type 2 diabetes and heart disease.

healthy fats and oils: Surprised that the Healthy Eating Pyramid puts some fats near the base, indicating they are okay to eat? Although this recommendation seems to go against conventional wisdom, it's exactly in line with the evidence and with common eating habits. The average American gets one-third or more of his or her daily calories from fats, so placing them near the foundation of the pyramid makes sense. Note, though, that it specifically mentions healthy fats and oils, not all types of fat. Good sources of healthy unsaturated fats include olive, canola (rapeseed), soy, corn, sunflower, peanut, and other vegetable oils; trans fat-free margarines; nuts, seeds, and avocados; and fatty fish such as salmon. These healthy fats not only improve cholesterol levels (when eaten in place of highly processed carbohydrates), but the fats in fish can also protect the heart from sudden and potentially deadly rhythm problems.

vegetables and fruits: A diet rich in vegetables and fruits has bountiful benefits. Among them: It can decrease the chances of having a heart attack or stroke; possibly protect against some types of cancers; lower blood pressure; help you avoid the painful intestinal ailment called diverticulitis; guard against cataract and macular degeneration, the major causes of vision loss among people over age 65; and add variety to your diet and wake up your palate. On the Healthy Eating Pyramid, potatoes don't count as a vegetable, since they are chock full of rapidly digested starch, and they have the same effect on blood sugar as refined grains and sweets. That's why potatoes are in the "Use Sparingly" tip.

nuts, seeds, beans, and tofu: These plant foods are excellent sources of protein, fiber, vitamins, and minerals. Beans include black beans, navy beans, garbanzos, lentils, and other beans that are usually sold dried. Many kinds of nuts contain healthy fats, and packages of some varieties (almonds, walnuts, pecans, peanuts, hazelnuts, and pistachios) can carry a label saying they're good for your heart. Eating nuts and beans in place of red meat or processed meat can lower the risk of heart disease and diabetes. .

fish, poultry, and eggs: These foods are also important sources of protein. A wealth of research suggests that eating fish can reduce the risk of heart disease, since fish is rich in heart-healthy omega-3 fats. Chicken and turkey are also good sources of protein and can be low in saturated fat. Eggs, which have long been demonized because they contain fairly high **[Cont.]**

levels of cholesterol, aren't as bad as they've been cracked up to be. In fact, an egg is a much better breakfast than a doughnut cooked in an oil rich in trans fats or a bagel made from refined flour. People with diabetes or heart disease should limit their egg yolk consumption to no more than three a week; they can try egg whites, instead, which are very high in protein and are a fine substitute for whole eggs in omelettes and baking.

dairy (1 to 2 servings per day) or vitamin D/calcium supplements: Building bone and keeping it strong takes calcium, vitamin D, exercise, and a whole lot more. So why does the Healthy Eating Pyramid recommend limiting dairy products, which have traditionally been Americans' main source of calcium and vitamin D? Because most people need more vitamin D than they can get from drinking three glasses of milk – and they need less calcium than three glasses of milk provide. Though there are some health benefits from modest dairy intake, high dairy intakes are associated with increased risk of fatal prostate and maybe ovarian cancers. There are other healthier ways to get calcium than from milk and cheese, which can contain a lot of saturated fat; cheese is also high in sodium. If you enjoy dairy foods, stick to one to two servings a day; you may also need to take a multivitamin or vitamin D supplement to get enough vitamin D. If you don't like dairy products, taking a vitamin D and calcium supplement (or taking the right multivitamin) offers an easy and inexpensive way to meet your needs for these micronutrients. .

use sparingly: red meat, processed meat, and butter: These foods sit at the top of the Healthy Eating Pyramid because they contain lots of saturated fat. Processed meats, such as bacon, hot dogs, and deli meats are also very high in added sodium. Eating a lot of red meat and processed meat has been linked to increased risk of heart disease, diabetes, and colon cancer. So it's best to avoid processed meat, and to limit red meat to no more than twice a week. Switching to fish, chicken, nuts, or beans in place of red meat and processed meat can improve cholesterol levels and can lower the risk of heart disease and diabetes. So can switching from butter to olive oil. And eating fish has other benefits for the heart.

use sparingly: refined grains—white bread, rice, and pasta; potatoes; sugary drinks and sweets; salt: Why are these all-American staples at the top, rather than the bottom, of the Healthy Eating Pyramid? White bread, white rice, white pasta, other refined grains, potatoes, sugary drinks, and sweets can cause fast and furious increases in blood sugar that can lead to weight gain, diabetes, heart disease, and other chronic disorders. Whole grains cause slower, steadier increases in blood sugar that don't overwhelm the body's ability to handle carbohydrate. The salt shaker should be used sparingly, based on extensive research linking high-sodium diets to increased risk of heart attack and stroke. Since most of the sodium in our diets comes from processed foods, such as cheese, breads, deli meats, spaghetti with sauce, and food prepared away from home, make sure to compare food labels and choose foods with the lowest sodium values.

multivitamin with extra vitamin D (for most people): A daily multivitamin, multi-mineral supplement offers a kind of nutritional backup, especially when it includes some extra vitamin D. While a multivitamin can't in any way replace healthy eating, or make up for unhealthy eating, it can fill in the nutrient holes that may sometimes affect even the most careful eaters. You don't need an expensive name-brand or designer vitamin. Look for a multivitamin that meets the requirements of the USP (U.S. Pharmacopeia), an organization that sets standards for drugs and supplements. A standard, store-brand, RDA-level one is fine for most nutrients—except vitamin D. In addition to its bone-health benefits, there's growing evidence that getting some extra vitamin D can help lower the risk of colon and breast cancer. Aim for getting at least 800 to 1,000 IU (international units) of vitamin D per day; multiple vitamins are now available with this amount. (Many people, especially those who spend the winter in the northern U.S. or have darker skin, will need extra vitamin D, often a total of 2,000 IU per day or more, to bring their blood levels up to an adequate range. If you fall into one of these groups, which would include ***[Cont.]***

most of the U.S. population, taking 2,000 IU is reasonable and well within the safe range. As always, it's a good idea to discuss use of supplements with your doctor, and he or she may want to order a vitamin D blood test.)

optional: alcohol in moderation (not for everyone): Scores of studies suggest that having an alcoholic drink a day lowers the risk of heart disease. Moderation is clearly important, since alcohol has risks as well as benefits. For men, a good balance point is one to two drinks a day; in general, however, the risks of drinking, even in moderation, exceed benefits until middle age. For women, it's at most one drink a day; women should avoid alcohol during pregnancy.

focus on food quality: You'll notice that the Healthy Eating Pyramid does not give specific advice about the numbers of cups or ounces to have each day of specific foods. That's because it's not meant to be a rigid road map, and the amounts can vary depending on your body size and physical activity. It's a simple, general, flexible guide to how you should eat when you eat. To follow the Healthy Eating Pyramid, there's just one basic guideline to remember: A healthy diet includes more foods from the base of the pyramid than from the higher levels of the pyramid. Within this guideline, however, there's plenty of flexibility for different styles of eating & different food choices. A vegetarian can follow the Healthy Eating Pyramid by emphasizing nuts, beans, and other plant sources of protein, and choosing non-dairy sources of calcium and vitamin D; someone who eats animal products can choose fish or chicken for protein, with occasional red meat. Choosing a variety of fresh, whole foods from all the food groups below the "Use Sparingly" category in the Healthy Eating Pyramid will ensure that you get the nutrients you need. It will also dramatically lower your salt intake, since most of the salt in the U.S. diet lurks in processed food – canned soups, frozen dinners, deli meats, snack chips, and the like. Perhaps the only foods that are truly off-limits are foods that contain trans fat from partially hydrogenated oils. Luckily, in the U.S. and Canada, trans fats must be listed on nutrition labels. More and more food manufacturers, restaurants, and even entire communities are going trans fat-free, making it easier to avoid this health-damaging type of fat.

using the healthy eating pyramid and the healthy eating plate: The Healthy Eating Pyramid and the Healthy Eating Plate complement each other. Both emphasize foods that promote good health. And both encourage people to limit or avoid foods and drinks that are harmful, or that provide lots of calories but have little nutritional value. Think of the Healthy Eating Pyramid as your grocery list: Vegetables, fruits, whole grains, healthy oils, and healthy proteins like nuts, beans, fish, and chicken should make it into your shopping cart every week. Add a little yogurt or milk if you like. Skip the soda and snack food aisle, the deli counter, and the steaks and chops at the butcher counter. Let the Healthy Eating Plate be your guide to planning a healthy, balanced meal and serving it on a dinner plate – or packing it in a lunch box. Put a copy on the refrigerator at home or at work, to give you a visual guide to portioning out a healthy plate, and a reminder to pump up the produce. The Healthy Eating Pyramid also addresses other aspects of a healthy lifestyle – exercise, weight control, vitamin D and multivitamin supplements, and moderation in alcohol for people who drink – so it's a useful tool for health professionals and health educators.

other alternatives: The Healthy Eating Pyramid and the companion Healthy Eating Plate summarize the best dietary information available today. They aren't set in stone, though, because nutrition researchers will undoubtedly turn up new information in the years ahead. The Healthy Eating Pyramid and the Healthy Eating Plate will change to reflect important new evidence. They ... aren't the only alternatives. The Asian, Latin, Mediterranean, and vegetarian pyramids promoted by Oldways Preservation and Exchange Trust are also good, evidence-based guides for healthy eating. The Healthy Eating Pyramid and the Healthy Eating Plate take advantage of even more extensive research and offer a broader guide that is not based on a specific culture. The original Healthy Eating Pyramid is described in greater detail in *Eat, Drink, and Be Healthy: The Harvard Medical School Guide to Healthy Eating*, by Walter C. Willett, M.D. (the Fredrick **[Cont.]**

John Stare Professor of Epidemiology and Nutrition in the Departments of Nutrition and Epidemiology at Harvard School of Public Health) with Patrick J. Skerrett (published by Simon & Schuster, 2001, and Free Press, 2005).

evidence that following the healthy eating pyramid and healthy eating plate lowers disease risk: What's the payoff for following the Healthy Eating Pyramid and Healthy Eating Plate? A lower risk of heart disease and premature death, according to research done at Harvard School of Public Health and elsewhere. (7-9) ... To see how well the principles embodied in the Healthy Eating Pyramid stacked up ... Harvard School of Public Health researchers created an Alternate Healthy Eating Index ... scores on the Alternate Healthy Eating Index created at the Harvard School of Public Health did appear to correlate more closely with better health in both sexes. Men with high scores (those whose diets most closely followed the Healthy Eating Pyramid guidelines) were 20 percent less likely to have developed a major chronic disease than those with low scores. Women with high scores lowered their overall risk by 11 percent. Men whose diets most closely followed the Healthy Eating Pyramid lowered their risk of cardiovascular disease by almost 40 percent; women with high scores lowered their risk by almost 30 percent. Two recent studies offer further evidence of the disease prevention benefits that accrue from following a diet similar to the Healthy Eating Pyramid: A study that tracked 7,319 British civil servants for 18 years found that men and women with the highest scores on the Alternate Healthy Eating Index had a 25 percent lower risk of dying from any cause, and a 42 percent lower risk of dying from heart disease, than people with the lowest scores. (7) Another observational study in 93,676 postmenopausal women found that following a Healthy Eating Pyramid-style diet (as measured by adherence to the Alternative Healthy Eating Index) was superior to following a low-fat diet at lowering cardiovascular disease and heart failure risk. (8)

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*This very helpful nutritional advice & many more useful suggestions can be found at
"The Nutrition Source" – www.hsph.harvard.edu/nutritionsource/*
