

[Home](#)[Interpreting News
on Diet](#)[Food Pyramids](#)[Fats & Cholesterol](#)[Carbohydrates](#)[Protein](#)[Fiber](#)[Fruits & Vegetables](#)[Calcium & Milk](#)[Alcohol](#)[Vitamins](#)[Healthy Weight](#)[Diabetes](#)[More Information](#)

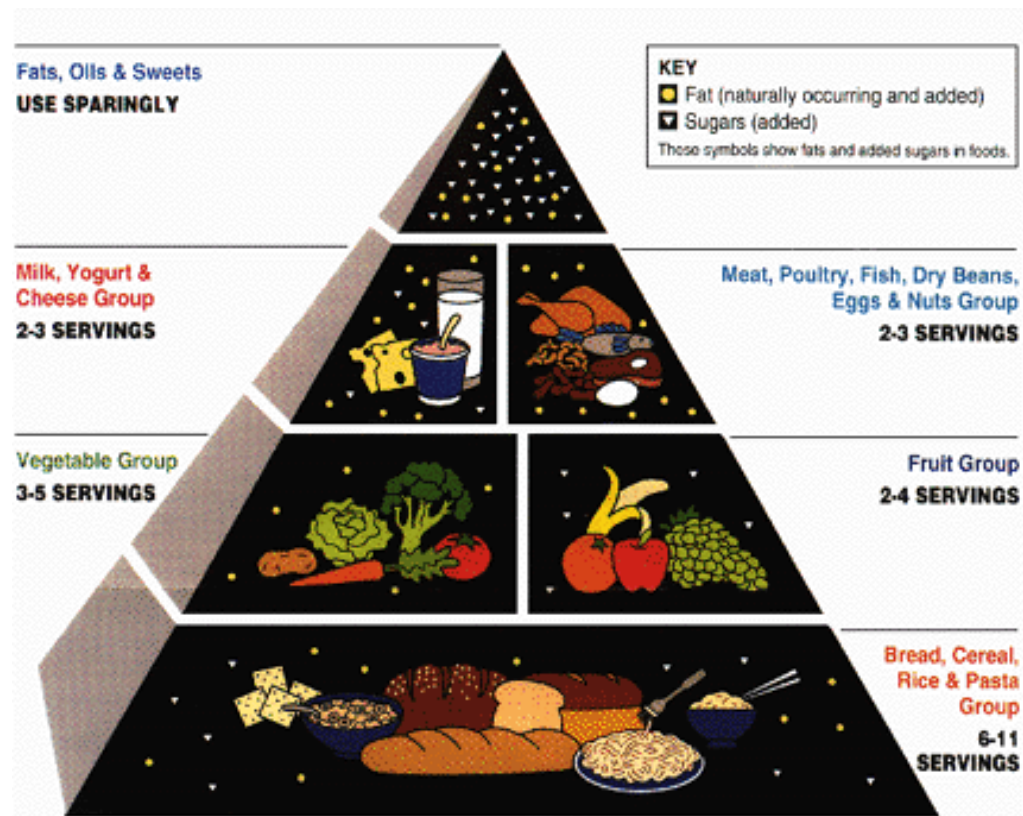
Food Pyramids

What Should You Really Eat?

Every five years, the United States Department of Agriculture (USDA) and Department of Health and Human Services (DHHS) release dietary guidelines that provide nutritional advice to Americans. These guidelines are meant to serve as the basis for the familiar "Food Guide Pyramid" (see figure below) that categorizes foods and suggests the number of servings people should eat from each food group.



The pyramid shape shows the proportions that various food groups should contribute to the total diet. Food groups at the wide base of the pyramid, for example, are to be eaten in greater quantity than food groups that appear toward the narrower top.



USDA and the US Department of Health and Human Services

When the new recommendations are due, a committee of invited experts suggests changes to the guidelines based on the findings from recent research. The USDA and DHHS then review these recommendations and release the new, revised guidelines. The latest set of Dietary Guidelines for Americans was issued in May 2000.

The 2000 guidelines emphasize, for example, the importance of eating grains (especially whole grains), vegetables, and fruits, and for the first time describe ways in which to keep food safe to eat. The guidelines also urge Americans to be physically active and achieve and maintain a healthy weight.

While Harvard researchers concur in some of these recommendations, they question or actively disagree with a number of others.

Harvard experts did not sit idly by when these guidelines were being promulgated. [Dr. Meir Stampfer](#), Professor in the Departments of Epidemiology and Nutrition and Chair of the Department of Epidemiology at the Harvard School of Public Health, served on the committee for the 2000 guidelines. Nonetheless, he feels that additional changes should have been made to the final recommendations.

Dr. Stampfer is a world-renowned investigator whose research has shown strong associations between dietary and other lifestyle modifications and the prevention of disease, such as heart disease and cancer. An authority in this area, he believes that the current recommendations have not incorporated the latest research findings for fear of confusing the public with dietary advice that may appear to contradict long-ingrained recommendations. He hopes that future revisions of the guidelines and

food pyramid will reflect this accumulating evidence.

Carbohydrates

Over the past two decades, dietary recommendations have emphasized the importance of consuming more carbohydrates--which includes such foods as bread, pasta, potatoes, and rice--in place of dietary fat. The original rationale behind the suggestion, says Dr. Stampfer, is that people who fill up on carbohydrates are less likely to eat fat. Many studies, however, have provided evidence that not all fats are bad (see [Fats and Cholesterol](#)) and that not all carbohydrates are good (see [Carbohydrates](#)). Based on this evidence, Dr. Stampfer says the current guidelines promote overconsumption of carbohydrates.

The current food pyramid suggests between 6 and 11 servings of bread, cereal, rice, or pasta every day. Dr. Stampfer says that whole-grain sources of carbohydrates are good. But otherwise he believes this food group is overemphasized.

Whole grains still have their outer (bran) layer and inner (germ) layer. During the milling and production of refined grains (like white flour), the healthful bran and germ layers are removed--and with them go many important nutrients, like vitamins, minerals, and fiber. Eating too many refined-grain foods has been linked to diabetes as well as heart disease.

Dietary Fat

Not all fat is bad, Dr. Stampfer points out. Trans fat and saturated fats are unhealthy because they can adversely effect blood cholesterol levels and increase the risk of heart disease. However, unsaturated fats can have the opposite effect--improving blood cholesterol levels and lowering the risk of heart disease in other ways (for more information, see [Fats and Cholesterol](#)).

The main sources of trans fat are processed and ready-to-eat foods, commercially fried foods, stick margarine, and snack foods. Saturated fats are found mainly in meats, butter, and high-fat dairy products. The main sources of unsaturated fats are vegetable oils, as well as nuts and seeds, which Dr. Stampfer would like to see receive greater positive emphasis. Rich in heart-healthy nutrients and unsaturated fats, a number of studies have reported that nuts are linked to a lower risk of developing heart disease.

Fruits, Vegetables, and Dairy Products

The current guidelines recommend three to five servings per day of vegetables, two to four servings per day of fruits, and two to three servings per day from the milk, cheese, and yogurt group. Dr. Stampfer believes that Americans should be eating more servings of fruits and vegetables, while eating fewer dairy products. He says that most healthy adults do not need two to three servings of dairy in their daily diets.

Of course, it's necessary to get adequate calcium to promote normal bone development and maintenance. But most people do not need the amount of calcium provided by two to three daily servings of dairy products. Moreover, there's some question about the benefits of dairy products as a tool for preventing osteoporosis. In studies of adult women, Dr. Stampfer and his colleagues have found that greater consumption of milk or other food sources of calcium does not substantially protect against hip or forearm fractures.

This, combined with other findings that suggest that high calcium intake may increase the risk for certain cancers, suggests the value of reducing dairy in the diet, seeking calcium from other sources if necessary, and finding other, more effective means of preventing osteoporosis. For more information, see [Calcium and Milk](#).

Meat Group

Currently, red meat, poultry, fish, dry beans, eggs, and nuts are grouped together in the USDA's Food Guide Pyramid. These foods share the property that they are higher sources of protein than the other food groups, providing the body with the amino acid building blocks it requires to make any protein it needs. However, these dietary proteins are not all equally healthy.

For example, Dr. Stampfer would like to see more emphasis on fish (the American Heart Association now recommends two servings of fish per week), with red meat limited in its recommendations for consumption. This is because intake of red meat has been associated with increased risk for colon cancer. Also, within the category of meat, some types are especially bad for health, including processed and preserved meats, such as bacon, sausage, and luncheon (salami-type and cured) meats. These meats are high in salt and preservatives and are generally higher in saturated fat (see the [Fats and Cholesterol](#)).

There is also considerable evidence that replacing red meat with nuts, legumes, chicken, and fish reduces the risk of developing heart disease. Dried beans, peas, and other legumes are very low in saturated fat, yet they are high in dietary fiber and good sources of protein.

Alcohol

During the last several years, convincing research has shown that moderate alcohol consumption can reduce risk of heart disease and ischemic stroke. In future revisions of the pyramid, Dr. Stampfer would like to add moderate alcohol consumption to the list of recommendations.



Dr. Eric Rimm, Associate Professor of

Epidemiology and Nutrition, was lead author on a paper that analyzed the findings from several studies of alcohol intake. The studies, which included research from the United States, Britain, Denmark, and France, investigated the relationship between alcohol intake and the development of heart disease. The combined analysis revealed that moderate drinking (about one to two drinks per day for women, and two to three for men) reduces the risk of heart attack in healthy individuals by at least 25 percent. The authors found equal benefit for beer, wine, and spirits.

One negative consequence of moderate alcohol use is an increase in breast cancer risk. (One drink per day is associated with about a 9 percent increase in risk.) However, recent studies suggest that this risk may be avoided with adequate intake of folate. No other adverse health effects of moderate alcohol intake have been established.

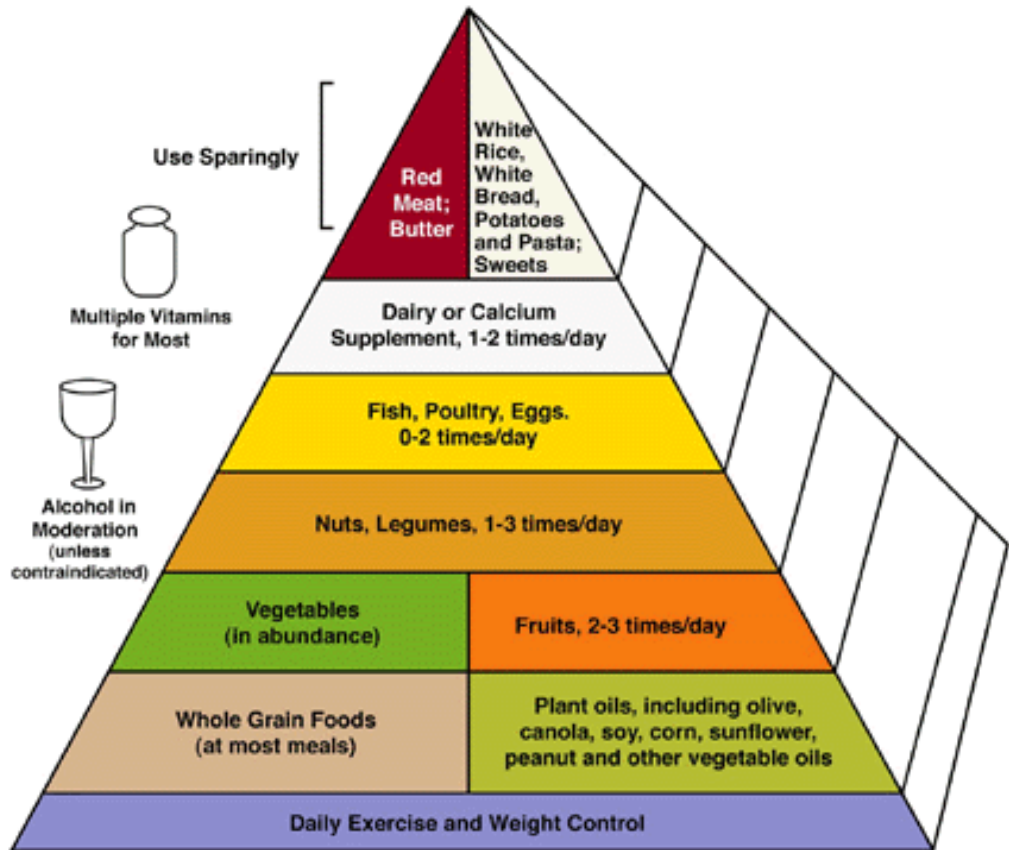
On the other hand, the adverse health and societal impact of excessive alcohol consumption is well-documented. Clearly, it's better not to drink at all than to drink to excess. However, studies consistently show that moderate drinkers have the lowest mortality rates. Since each person is different, the best advice is to discuss these risks and benefits with your physician. Certainly, pregnant women should avoid alcohol altogether, as should people with a history of alcohol abuse.

A New Healthy Eating Pyramid

In response to the federal government's Food Guide Pyramid, Dr. Stampfer and his colleagues, including Dr. Walter Willett, Chair of the Department of Nutrition, have developed a new healthy eating pyramid that reflects the latest research on optimal diet (see figure below). Some highlights of this version:

- **Whole grain foods, vegetable oils, and fruits and vegetables are emphasized.**
- **Physical activity and weight control are emphasized.**
- **Red meat and refined grains (like white bread and white rice) are de-emphasized and listed as items that should only be eaten sparingly.**
- **Nuts and legumes receive their own category.**
- **Dairy products are de-emphasized and placed in a category with calcium supplements.**
- **A daily multivitamin tablet is recommended for most people, and moderate daily alcohol intake is a healthy option unless this does not make sense for the individual.**

Healthy Eating Pyramid



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