



2008 MEDITERRANEAN DIET PYRAMID

The **2008 Mediterranean Diet Pyramid** and its supporting text combine the original 1993 Mediterranean Diet Pyramid with updates based on hundreds of contemporary nutrition and health science studies reported in peer-reviewed scientific journals during the last fifteen years.

This updated pyramid and text were developed by an international group of leading nutrition and health experts who convened for a three-day conference in Cambridge, Massachusetts in November 2008. The purpose of this conference was to review the public health benefits of the continuing accumulation of scientific evidence that supports the healthfulness of traditional Mediterranean eating and drinking patterns.

The original Mediterranean Diet Pyramid was developed and presented at the January 1993 International Conference on the Diets of the Mediterranean in Cambridge, Massachusetts. It was based on the definitive scientific evidence for the healthfulness of Mediterranean eating and drinking patterns. Its development was guided by international nutrition science experts whose published papers and books confirmed the strong positive relationships between the Mediterranean diet and life-long-term good health.

This 1993 conference was also organized by Oldways, as were important subsequent Mediterranean diet international consensus conferences in 1998 (Cambridge), 2000 (London), and 2003 (Boston).

This 2008 Mediterranean Diet Pyramid presents in a simple graphic format the most up-to-date international scientific evidence supporting the health benefits and culinary pleasures of the healthy, traditional Mediterranean eating and drinking pattern. It is intended to replace previous Mediterranean Diet Pyramids and texts.

Three principal modifications are incorporated in this 2008 updated Mediterranean Diet Pyramid. Each modification is based on strong, current scientific evidence that clearly supports their positive contributions to health:

- (a) All plant foods (fruits, vegetables, grains, nuts, legumes, seeds, olives and olive oil) are placed in a single group at the base of the Pyramid, indicating that they should be the basis of most meals;
- (b) The frequency of consuming fish and shellfish is increased to at least two times per week, indicating their multiple contributions to brain and reproductive organ health; and
- (c) Herbs and spices are added to the Pyramid to reflect increased evidence of their health-promoting characteristics and the role they play in increasing the palatability of foods.

Characteristics of Traditional Healthy Mediterranean Diets

The healthfulness of the Mediterranean dietary pattern continues to receive strong corroboration through nutrition research and by large epidemiological studies published in hundreds of peer-reviewed journal articles.

This healthful dietary pattern has the following food and drink characteristics.

1. Grains, **vegetables and fruits** should be eaten at most meals, because they are important sources of vitamins, minerals, energy, antioxidants and fiber. An eating pattern high in these foods promotes good health and weight control when consumed wisely.

Grains. The majority of grains in a person's eating pattern should be whole grains, including wheat, oats, rice, rye, barley, and corn. These grains are best consumed in minimally-processed forms, because processing normally removes some valuable nutrients such as fiber and bran.

Vegetables. Vegetables are an important staple of eating patterns of peoples in all the countries bordering the Mediterranean Sea, providing valuable nutrients and satiety. These benefits are amplified because the vegetables are normally cooked or drizzled with olive oil. Raw vegetables are also a healthy vegetable option.

Fruits. Fresh fruit is ever-present in the Mediterranean. Fruit juices from whole fruits provide similar nutrition benefits as whole fruits, but attention to portion control and total calories is wise. Fruit drinks do not have the benefits of fruit juice.

- **2. Olives and olive oil** are central to the Mediterranean diet. Olives are universally eaten whole and used for cooking and flavoring in the countries that border the Mediterranean Sea. Olive oil is the principal source of dietary fat used for cooking, baking, and for dressing salads and vegetables. Extra virgin olive oil is highest in health-promoting fats, phytonutrients and other important micronutrients.
- **3. Fish and shellfish** are important sources of healthy protein for Mediterranean populations. Tuna, herring, sardines, salmon and bream are rich in essential heart-healthy omega-3 fatty acids, and shellfish and crustaceans including mussels, clams and shrimp have similar benefits. Fish and shellfish are not typically battered and fried in Mediterranean countries, as they are in many other countries, including the U.S.
- **4. Cheese and yogurt** are eaten regularly in the traditional Mediterranean diet, but in low to moderate amounts. The calcium in cheese and yogurt is important for bone and heart health. Low fat and nonfat dairy products ease concerns of adverse consequences of somewhat higher consumption of dairy products.
- **5. Nuts, legumes and seeds** are good sources of healthy fats, protein, and fiber. They add flavor and texture to Mediterranean dishes.
- **6. Herbs and spices** add flavors and aromas to foods, reducing the need to add salt or fat when cooking. They are also rich in a broad range of health-promoting antioxidants, and are used liberally in Mediterranean cuisines. Herbs and spices also contribute to the national identities of the various Mediterranean cuisines.
- **7. Eggs** are a good source of high-quality protein, and can be especially beneficial for individuals who do not eat meat. Eggs are regularly used in baking in Mediterranean countries.
- **8. Meats** are eaten in small portions by Mediterranean peoples, who prefer lean cuts. Poultry is a good source of lean protein without the high levels of saturated fat found in some cuts of red meat. With ground meats, 90 percent lean/10 percent fat is a sound choice.
- **9. Sweets** are consumed in small portions in the Mediterranean. Fruits are ever-present on Mediterranean tables, and are a normal way

to end a meal. Gelato and sorbet are consumed a few times a week, in small portions.

- **10. Wine** is consumed regularly but moderately in the Mediterranean, unless discouraged by religious beliefs. "Moderately" means one five-ounce glass of wine per day for women and two five-ounce glasses for men. Individuals should only drink wine if they are medically able to do so, and should ask their doctors for more information.
- **11. Water** is essential for life, and proper hydration contributes to health, well being and energy levels. Individual variations in body sizes, metabolic rates and activity levels mean that some people should drink more water every day than others.
- **12. Portion size.** Because foods in the bottom section of the Pyramid may be eaten in larger amounts and more frequently, portion sizes and frequency of consumption decline in the Pyramid's upper sections.
- **13. Moderation is a wise approach**. A balanced and healthy diet accommodates most foods and drinks, so long as moderation and wise choices are the key characteristics. For example, enjoying a small piece of birthday cake, savoring a few slices of grilled steak, or relaxing with family and friends with a glass or two of wine or beer) are important aspects of being human. As always, moderation is the wise watchword.
- **14. Healthy lifestyle habits.** Daily physical activity is important for overall good health. This includes strenuous exercise like running and aerobics, as well as more leisurely activities such as walking and housework or yard-work, or taking the stairs instead of the elevator.
- **15. Meals in the company of others.** The Mediterranean Diet is grounded on the principles of enjoyment and pleasure. Foods, drinks and meals are best eaten with others, when possible, and savored.
- **16. Weight control** is very important for good health. Establish your healthy weight range from your doctor or from reputable web sites, and let this healthy weight range be your guide. If you are above this range, cut back on the food and drink you consume, add more exercise, or both. For most people, counting calories obsessively not only detracts from enjoying foods, drinks, and meals, but also doesn't work very well in the long term.

17. Applicability of these guidelines. These

recommendations and the updated Mediterranean Diet Pyramid are reliable for most adults. However, children and pregnant women (and other populations) with special dietary needs may require dietary supplementation. These needs can be accommodated within the Mediterranean Diet in most circumstances.

Note

The Scientific Committee made clear that the 1993 Mediterranean Diet Pyramid remain an accurate and valid representation of the scientific considerations of the Mediterranean Diet Pyramid, on the basis of the best available at those times. These considerations specifically include this language from the report of the 1993 Conference:

"This preliminary concept of a pyramid to represent a healthy, traditional Mediterranean Diet is based on the dietary traditions of Crete, much of the rest of Greece and southern Italy circa 1960, structured in light of current nutrition research. The selections of these regions and this time period as a basis for the design follows from these three considerations:

- Recognition that the rates of chronic diseases were among the lowest in the world and adult life expectancy was among the highest for these populations at that time, even though medical services were limited;
- 2. Availability of data describing the character of food consumption patterns of those areas at that time; and
- 3. The convergence of the dietary patterns revealed by these data and our current understandings of optimal nutrition based on epidemiological studies and clinical trial worldwide."

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