

MEDITERRANEAN DIET: CHOOSE THIS HEART-HEALTHY DIET OPTION

The Mediterranean diet is a heart-healthy eating plan combining elements of Mediterranean-style cooking. Here's how to adopt the Mediterranean diet.

By Mayo Clinic

If you're looking for a heart-healthy eating plan, the Mediterranean diet might be right for you. The Mediterranean diet incorporates the basics of healthy eating — plus a splash of flavorful olive oil and perhaps a glass of red wine — among other components characterizing the traditional cooking style of countries bordering the Mediterranean Sea.

Most healthy diets include fruits, vegetables, fish and whole grains, and limit unhealthy fats. While these parts of a healthy diet remain tried-and-true, subtle variations or differences in proportions of certain foods may make a difference in your risk of heart disease.



Benefits of the Mediterranean diet

Research has shown that the traditional Mediterranean diet reduces the risk of heart disease. In fact, a recent analysis of more than 1.5 million healthy adults demonstrated that following a Mediterranean diet was associated with a reduced risk of overall and cardiovascular mortality, a reduced incidence of cancer and cancer mortality, and a reduced incidence of Parkinson's and Alzheimer's diseases.

For this reason, most if not all major scientific organizations encourage healthy adults to adapt a style of eating like that of the Mediterranean diet for prevention of major chronic diseases.

Key components of the Mediterranean diet

The Mediterranean diet emphasizes:

- Getting plenty of exercise
- Eating primarily plant-based foods, such as fruits and vegetables, whole grains, legumes and nuts
- Replacing butter with healthy fats such as olive oil and canola oil
- Using herbs and spices instead of salt to flavor foods
- Limiting red meat to no more than a few times a month
- Eating fish and poultry at least twice a week
- Drinking red wine in moderation or other beverages high in antioxidants particularly resveratrol.

The diet also recognizes the importance of enjoying meals with family and friends.

Fruits, vegetables, nuts and grains

The Mediterranean diet traditionally includes fruits, vegetables, pasta and rice. For example, residents of Greece eat very little red meat and average nine servings a day of antioxidant-rich fruits and vegetables. The Mediterranean diet has been associated with a lower level of oxidized low-density lipoprotein (LDL) cholesterol — the “bad” cholesterol that’s more likely to build up deposits in your arteries.

Grains in the Mediterranean region are typically whole grain and usually contain very few unhealthy trans fats, and bread is an important part of the diet there. However, throughout the Mediterranean region, bread is eaten plain or dipped in olive oil — not eaten with butter or margarines, which contain saturated or trans fats.



Healthy fats

The focus of the Mediterranean diet isn’t on limiting total fat consumption, but rather to make wise choices about the types of fat you eat. The Mediterranean diet discourages saturated fats and hydrogenated oils (trans fats), both of which contribute to heart disease.

The Mediterranean diet features olive oil as the primary source of fat. Olive oil provides monounsaturated fat — a type of fat that can help reduce LDL cholesterol levels when used in place of saturated or trans fats. “Extra-virgin” and “virgin” olive oils — the least processed forms — also contain the highest levels of the protective plant compounds that provide antioxidant effects.

Monounsaturated fats and polyunsaturated fats contain the beneficial linolenic acid (a type of omega-3 fatty acid). Omega-3 fatty acids lower triglycerides, decrease blood clotting, are associated with decreased sudden heart attack, improve the health of your blood vessels, and help moderate blood pressure.

Mediterranean diet, antioxidants and cancer:

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In nutritional epidemiology the traditional approach has been to assess single nutrients or food items. Now, a growing interest exists in dietary patterns. The study of dietary patterns with a whole-diet approach represents a needed and complementary methodology. Among a priori de-

finer patterns, the highly palatable traditional Mediterranean diet has many options to be the first choice in the dietary prevention of cancer.

The growing scientific interest in the Mediterranean dietary pattern as a model for healthy eating and for the primary prevention of cancer has pointed to specific evidence of the preventive benefits of cancer. The incidence of certain cancers (e.g. breast and colon cancers) is lowest in the Mediterranean area. In contrast with northern European and American diets, traditional Mediterranean diets provide large amount of plant foods. Ancient diets in Mediterranean countries were characterized by abundant consumption of fruits, vegetables, breads, nuts, seeds, wine and olive oil. All these items are important sources of dietary antioxidants. Apart from the most



widely known antioxidants contained in fruits and vegetables, other compounds such as oleuropein, hydroxytyrosol and other polyphenols present in olive oil and olive leaf and resveratrol, from red wine, possess a marked antioxidant activity and other advantageous biological properties. The role of free radical production in carcinogenesis together with many epidemiologic studies linking antioxidant intake with a reduced incidence of cancer indicates that dietary antioxidants play a protective role. Therefore, the highly palatable traditional Mediterranean diet has many options to be the first choice in the dietary prevention of cancer.

The adherence to a Mediterranean diet has in fact been consistently associated with a lower mortality from all causes of cancer. Many studies have also reported a lower cancer mortality associated with a higher adherence to the Mediterranean dietary pattern (Trichopoulou et al., 2003).

Four Major contributing nutrients to the effectiveness of the Mediterranean Diet

- The Olive Leaf Constituent Oleuropein
- Omega 3 Essential Fats from Extra Virgin Olive Oil
- The Powerful Antioxidant found in Grapes – Resveratrol
- Lycopene, the key nutrient from Tomatoes

The Olive Leaf Constituent Oleuropein

The leaf of the olive tree contains an active phytochemical called oleuropein. This is the chemical that attacks and neutralizes viruses and bacteria alike. Oleuropein foils viruses in a number of different ways including: interfering with amino acid production processes needed for viruses to replicate; penetrating infected cells and irreversibly inhibiting the ability of the virus to replicate; neutralising enzymes needed for replication and growth of viruses. Clinical trials have shown olive leaf extract has a significant benefit in the treatment of some viral threats such as herpes, HIV, pneumonia, flu, viral meningitis and shingles.

Olive leaf extract is a powerful cocktail of antioxidants, many times more potent than green tea, goji, grape seed or vitamin C. It is these antioxidant compounds that account for some of the other therapeutic benefits of olive leaf extract. While it is boosting your natural immunity, olive leaf can also do impressive things for your cardiovascular system. As far back as 1962, research-

ers found that olive leaf extract effectively lowers blood pressure; increases blood flow through arteries by relaxing the smooth muscle lining the arteries; and helps restore normal heart rhythm in cases of arrhythmia. The antioxidant compounds in olive leaf also prevent the oxidation of cholesterol in the bloodstream, “bad” cholesterol only becomes a threat when it is attacked by free radicals and oxidised, so preventing this from happening will lower the risk of cardiovascular disease if you have high LDL cholesterol levels.



Omega 3 Essential Fats from Extra Virgin Olive Oil

There are many health benefits of omega-3 fatty acids. Research shows strong evidence that the omega-3s EPA and DHA can boost heart health and lower triglycerides. And there are studies showing that omega-3 fatty acids may help with other conditions -- rheumatoid arthritis, depression, and many more.

Recent research conducted at Puleva Biotech in Spain explored how the introduction of the antioxidant compound hydroxytyrosol found in olive oil extract lowers levels of LDL cholesterol. The hydroxytyrosol binds to LDL cholesterol in the blood stream and prevents oxidation and damage to the blood vessel walls. The protective powers of hydroxytyrosol against cell oxidation is a benefit to the heart, brain, and skin. The lipid profile of olive oil extract is similar to that of human skin.

Olive oil extract contains a variety of antioxidants including vitamin E, carotenoids and phenolic compounds, such as hydroxytyrosol. The consumption of antioxidants is important because they balance the level of damaging free radicals in the body. An influx of free radicals can cause oxidative stress, which results in abnormal cell function and possibly the death of cells. The antioxidants and vitamins present in olive oil are truly unique because they come from the only oil that is extracted from a fruit, the olive.

The Powerful Antioxidant found in Grapes – Resveratrol

Resveratrol is a member of a group of plant compounds called polyphenols. These have antioxidant properties, protecting the body against the kind of damage linked to increased risk for conditions such as cancer and heart disease. Resveratrol is mostly sourced from the skin of red grapes.

Resveratrol has antiaging and disease-combating benefits. Early research, suggests that resveratrol might help protect the body against a number of diseases, including: Heart disease. Resveratrol helps reduce inflammation, prevents the oxidation of LDL “bad” cholesterol, and makes it more difficult for platelets to stick together and form the clots that can lead to a heart attack.

Cancer. Resveratrol is thought to limit the spread of cancer cells and trigger the process of cancer cell death (apoptosis).



Alzheimer's disease. Resveratrol may protect nerve cells from damage and the buildup of plaque that can lead to Alzheimer's.

Diabetes. Resveratrol helps prevent insulin resistance, a condition in which the body becomes less sensitive to the effects of the blood sugar-lowering hormone, insulin. Insulin resistance is a precursor to diabetes.

Lycopene, the key nutrient from Tomatoes

Lycopene is an antioxidant compound that gives tomatoes and certain other fruits and vegetables their color. People who have diets rich in toma-

atoes, which contain lycopene, appear in some studies to have a lower risk of certain types of cancer, especially cancers of the prostate, lung, and stomach.

Lycopene may lower the risk of heart disease; macular degenerative disease, an age-related illness that can lead to blindness; and lipid oxidation, the damage to normal fat molecules that can cause inflammation and disease. It is also said to lower LDL ("bad" cholesterol), enhance the body's defenses, and protect enzymes, DNA, and cellular fats.

Lycopene may be effective in the prevention and treatment of cancers of the lung, prostate, stomach, bladder, cervix, skin, and, especially, prostate. Lycopene is a powerful antioxidant that blocks the action of free radicals that can damage cells, and that several scientific studies have found lower risk of cancer among people who eat lycopene-rich foods.

