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## Super FOODS

### OLIVE OIL

#### Powerful Protection Against Heart Disease, Cancer, and Inflammation

By Debora Yost



Nutritional scientists now recognize that one of the most powerful ways you can protect yourself against degenerative disease and premature death is by consuming a Mediterranean-style diet.<sup>1</sup> In contrast to the typical American diet, which is high in artery-clogging saturated and trans fats, the Mediterranean diet features olive oil as the dominant source of dietary fat.

Olive oil is a rich source of monounsaturated fats, which reduce the risk of heart disease by decreasing levels of artery-clogging lipids in the blood.<sup>1</sup> Additionally, olive oil is a rich source of polyphenols—powerful antioxidants that are increasingly attracting attention for their ability to promote good health.<sup>2</sup>

New research suggests that by incorporating healthful virgin olive oil in your daily diet, you may be able to protect yourself against not only cardiovascular disease, but also cancer and inflammatory conditions such as rheumatoid arthritis.<sup>2</sup> While many olive oils crowd the supermarket shelves, studies suggests that unrefined virgin olive oil may confer the greatest health-promoting benefits due to its high content of beneficial polyphenols.<sup>3</sup>

#### PROMOTING CARDIOVASCULAR HEALTH

Abundant evidence supports the role of virgin olive oil in protecting against cardiovascular disease. While it has long been known that olive oil helps decrease total cholesterol and low-density lipoprotein (LDL) levels,<sup>4</sup> new research is shedding light on its additional cardiovascular benefits.

A recent study set out to measure the effects of three different classes of olive oil (containing low, medium, or high content of polyphenols) on plasma lipid levels and measures of oxidative stress. In a crossover, controlled study design, 200 healthy men were randomly assigned to consume 25 mL of each type of olive oil each day for three weeks, preceded by a two-week washout period. Levels of LDL, HDL, blood sugar, triglycerides, and oxidative stress markers were measured following each intervention. While triglyceride levels decreased similarly with all three types of olive oil, the polyphenol-rich virgin olive oil produced the greatest improvements in HDL level and the most dramatic decreases in oxidative stress markers.<sup>3</sup>

A study conducted in Spain found that virgin olive oil helps fight other factors linked to heart disease. Researchers measured the effect of consuming refined olive oil versus virgin oil on inflammatory markers in 28 stable heart disease patients. Each subject sequentially consumed 50 grams (just under two ounces) of virgin olive oil and refined olive oil over two periods of three weeks, preceded by two-week washout periods. Consumption of virgin olive oil produced significant reductions in interleukin-6 and C-reactive protein, inflammatory markers that are associated with an increased risk of heart disease in men. The researchers concluded that consuming virgin olive oil “could provide beneficial effects in stable coronary heart disease patients as an additional intervention to the pharmacological treatment.”<sup>5</sup>

According to the Food and Drug Administration, “Eating about 2 tablespoons of olive oil daily may reduce the risk of coronary heart disease. To achieve this possible benefit, olive oil is to replace a similar amount of saturated fat and not increase the total number of calories you eat in a day.”<sup>6</sup>

#### STAVING OFF CANCER



Epidemiological studies have long suggested that a Medi-terranean-style diet rich in olive oil is associated with a decreased risk of numerous types of cancer. Scientists have proposed that several constituents of olive oil may be responsible for its anti-cancer effects. These include its anti-oxidant polyphenols as well as the lipid oleic acid, which is highly resistant to peroxidation.<sup>7</sup>



Recently, oncology researchers were excited to discover that oleic acid, the main monounsaturated fatty acid in olive oil, may fight cancer by interacting with the human genome. Oleic acid actually works to suppress the over-expression of a well-characterized oncogene that plays a key role in the etiology, invasive progression, and metastasis of several human cancers.<sup>8</sup> This remarkable finding could lead to the development of novel olive-oil-based cancer therapeutics.

### QUELLING PAIN, INFLAMMATION

Increased olive oil consumption has been linked with a decreased risk of developing rheumatoid arthritis, an autoimmune disease characterized by inflammation and pain, particularly in the joints.<sup>2</sup> A clinical trial revealed that rheumatoid arthritis patients who supplemented with olive oil and fish oil experienced greater improvements in clinical measurements of the disease than did patients who supplemented with fish oil alone.<sup>9</sup> These exciting observations suggest that olive oil could help prevent rheumatoid arthritis and may restore mobility and function in those already affected by the disease.

Scientists have discovered that olive oil contains an anti-inflammatory substance called oleocanthal. During preliminary studies, they noted that oleocanthal displayed a similar anti-inflammatory potency and profile to ibuprofen (Advil®), which is frequently used to relieve aches and pains.<sup>10</sup> These promising findings suggest that consuming olive oil might lessen the need to use common pain relievers.

### PROTECTING STOMACH HEALTH

Olive oil may help to protect against ulcers and stomach cancer by fighting *Helicobacter pylori*. Found in the stomach's lining, *H. pylori* is a species of bacteria that has been linked to peptic (esophagus, stomach, or duodenum) ulcers and gastric (stomach) cancer. Preliminary research showed that virgin olive oil contains compounds that exert "strong bactericidal activity against eight strains of *Helicobacter pylori*, three of which are resistant to some anti-biotics. These results open the possibility of considering virgin olive oil a chemopreventive agent for peptic ulcer or gastric cancer," reported the researchers.<sup>11</sup>

### CHOOSING AND USING OLIVE OIL

Most of the world's olive oil is produced in the Mediterranean regions of Greece, Spain, France, and Italy. Many varieties of olive oil are available in grocery stores. The quality of olive oil is dependent on its acid content, expressed as oleic acid—the more refining or filtering it goes through, the higher the acid level. The greener the oil, the less acid it contains. Virgin olive oils are deep gold to brilliant green in color. Virgin olive oils come from the first pressing of the olives, and contain no more than 2% acidity. They are considered to have a superior taste compared to refined olive oils. Virgin olive oil contains no refined oil.<sup>12</sup> Given all the evidence about the health benefits of polyphenol-rich olive oil, it is worth the extra cost to purchase virgin olive oil.

Exposure to light and heat can cause olive oil to turn rancid. Be sure to store it in a cool place and keep it in an opaque bottle. Virgin olive oil has a low smoking point, so it is not ideal for the frying pan. Reserve it for salad dressings, sauces, and as a flavoring for vegetables. This is also the way to best appreciate its full-bodied flavor.

### NUTRITIONAL CONTENT OF VIRGIN OLIVE OIL

Given all that we know about the health benefits of virgin olive oil, incorporating it into one's daily diet is a sound nutritional strategy for promoting good health. Aim for one or two tablespoons per day in place of other dietary fats. One tablespoon (14 grams) of virgin olive oil contains:<sup>13</sup>

Calories: 119

Calories from fat: 119

Total fat: 14 grams

Monounsaturated fat: 9.8 grams

Saturated fat: 1.9 grams

Polyunsaturated fat: 1.4 grams

Trans fat: 0 grams

Vitamin E: 1.6 mg

Vitamin K: 8.1 mcg

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