

## Olive oil

Choosing extra virgin olive oil as your main source of dietary fat, combined with eating a healthy diet that is high in plant foods, may reduce your risk of cardiovascular disease and diabetes. Moderate amounts of olive oil may also reduce abdominal fat, if eaten as part of a diet high in plant foods.

### Olive oil in the Mediterranean diet

In the 1960s, it was found that the people of Greece (Crete) consumed a great deal of salt and fat (but also a lot of plant foods). They were living longer than the Japanese, who were also eating a lot of salt but whose diet was low in fat and lower in plant foods.

The people of Crete lived longer because they had lower rates of stroke, stomach cancer, heart disease and other cancers. Researchers also noticed that people living in countries around the Mediterranean had a lower incidence of heart disease, despite their high intake of mono-unsaturated fats, such as olive oil. This led to investigations into what is known as 'the Mediterranean diet', of which olive oil is a major part.

### Research supports the health benefits of olive oil

Recent studies into the health benefits of olive oil have found that it can lower the risk of coronary heart disease by reducing blood cholesterol levels. According to one study, a person's risk of fatal heart attack is halved in just two to four years once they switch to 'the Mediterranean diet', which includes using olive oil as the main dietary fat, increasing vegetable intake, and limiting meat and dairy foods. Research has also found that olive oil may influence body fat distribution, with less fat stored around the stomach.

### Dietary fats

There are three types of fat: saturated, polyunsaturated and mono-unsaturated (these terms describe the type of chemical bonding between the atoms). Each type consists of fatty acids, which are chains of carbon and hydrogen atoms, in varying combinations. Both polyunsaturated and mono-unsaturated fats can lower blood cholesterol levels. Olive oil is a mono-unsaturated fat. Other foods containing mostly mono-unsaturated fats include avocado, canola oil and peanuts.

### Types of olive oil

Generally, olive oil is extracted by pressing or crushing olives. Olive oil comes in different varieties, depending on the amount of processing involved. Varieties include:

- **Extra virgin** - considered the best; this oil comes from the first pressing of the olives
- **Virgin** - from the second pressing
- **Pure** - undergoes some processing, such as filtering and refining
- **Extra light** - undergoes considerable processing and only retains a very mild olive flavour.

### Blood cholesterol and atherosclerosis

Low density lipoprotein cholesterol (LDL) is considered the 'bad' cholesterol. This is because it can stick to artery walls and cause atherosclerosis, which increases the risk of coronary heart disease and stroke.

Studies into LDL cholesterol have suggested that oxidation is an important step in the development of atherosclerosis. It seems that mono-unsaturated fats reduce the capacity of LDL cholesterol to oxidise, which may explain the protective properties of olive oil. However, extra virgin olive oil also contains around 40 antioxidant phytochemicals. Antioxidants have been associated with reduced oxidation of LDL cholesterol, so perhaps these phytochemicals are the factors responsible for the health benefits.

### Blood fats

Once a fatty meal is eaten, it takes the liver around six to 12 hours to scour dietary fats from the blood and change them into compounds such as LDL and HDL (high density lipoprotein) cholesterol.

There is evidence that this six to 12 hour period may be a crucial contributing factor in atherosclerosis. Mono-unsaturated fats like olive oil are cleared from the blood much faster than saturated fats, and this reduces the window of opportunity for the development of atherosclerosis. Mono-unsaturated fats also help to prevent the blood from becoming sticky after a fatty meal and forming dangerous clots.

### **Weight loss benefits**

Mono-unsaturated fats have the same kilojoule content as other fats (around 37kJ per gram); however, some research suggests that it may be more difficult to put on weight from mono-unsaturated fats.

Researchers compared the weight loss results from one group of people, following 'the Mediterranean diet', to another group who were sticking to low fat and high carbohydrate diets. They found that those following the Mediterranean diet shed excess pounds from both the upper and lower body, but the other group mainly lost fat from the lower body. People who store their body fat around the waist and abdomen ('apple shaped') have a higher risk of heart disease than those people who carry their weight at the hips and thighs ('pear shaped').

### **Other potential benefits**

Olive oil is thought to offer a number of other health benefits, including reduced risk of some cancers (such as breast cancer), reduced risk of diabetes and, possibly, a delayed onset of complications in established diabetes.

### **Where to get help**

- Your doctor
- Dietitian.

### **Things to remember**

- Choosing olive oil as your main source of dietary fat, combined with a high intake of plant food, may reduce your risk of cardiovascular disease and diabetes.
- When part of a healthy diet, moderate amounts of olive oil may help to reduce excess body fat, especially around the abdomen.
- Extra virgin varieties of olive oil are believed to offer the greatest health benefits.

### **Want to know more?**

For references, related links and support group information, go to More information.

### **This page has been produced in consultation with, and approved by:**

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