

## Kitchen Guide

### The structure of edible oils

Edible oils are mainly composed by four main structural fatty acids with different ratio:

#### **Monounsaturated Fat:**

Monounsaturated fats are at the heart of the highly touted Mediterranean diet. These types of fats are tied to cholesterol regulation in the blood, promoting healthy cardiovascular function. Olive, canola, avocado and sunflower are examples of oils with high monounsaturated fat content.

#### **Polyunsaturated Fat:**

Polyunsaturated fats include the 'essential' Omega-3 and Omega-6 fatty acids. These play an integral role in several areas—from strengthening our cell structure to reducing the risk of heart attack and stroke. Oils high in Omega-3 fats include flaxseed and fish.

#### **Saturated Fat:**

There are two main types of saturated fats—animal based, like lard, and plant-based, such as coconut and palm oils. Most of what we consume is artery-clogging, 'long-chain' saturated fats derived from animals. But plant-based saturated fats are made up of 'short- and medium-chain' fatty acids which our bodies use for energy—the reason oils like coconut oil are popular with athletes.

#### **Trans-Fatty Acids:**

Trans-fats may well be our worst enemy. Trans-fats are formed during a chemical process called hydrogenation whereby cellular chains of fats are artificially altered to create a more solid, stable substance. The result is a fat that is virtually impossible for our bodies to break down.

### The benefits of fatty acids

The two fatty acids that are essential to our health, but that our bodies cannot manufacture on their own, are Omega-3 fatty acid, such as Alpha Linolenic Acid (ALA), and Omega-6 fatty acid, like Gamma Linolenic Acid (GLA).

These fatty acids are often called 'Essential Fatty Acids' (EFAs) precisely for this reason. There is another fatty acid intrinsic to good health that our bodies do produce naturally, and that is Omega-9 fatty acid. Read on for how to incorporate each into your diet.

**Omega-3:** Omega-3 is particularly critical to our body because it's put to use literally everywhere—our eyes, hair and skin, brain, heart, nerves and joints. Every cell in our bodies needs Omega-3 fatty acids to thrive and survive. Studies show that populations that consume a diet high in Omega-3 fatty acids have the lowest mortality rate from cardiovascular disease. But about 80% of people are deficient in Omega-3. Nutritionists suggest off-setting this imbalance through adding an Omega-3 supplement to our diets, of which flaxseed and fish oils are the richest sources.

**Omega-6:** Omega-6 fatty acids are more plentiful, and can be found in many vegetable oils including walnut, soy and corn, and in supplement oils such as borage and evening primrose oil. Omega-6 fatty acids are broken down by the body into AA (Arachidonic Acid) and GLA (Gamma Linolenic Acid) which has been shown to help with skin disorders like eczema and psoriasis.

**Omega-9:** Omega-9 fatty acids are important monounsaturated fats that occur naturally in our bodies. But they are also prevalent in kitchen staples—olive oil, canola oil, sunflower oil and almond oil. Much of the praise showered on the Mediterranean diet is due to the cardiovascular benefits derived from Omega-9 fatty acids. Olive oil has been proven to raise good cholesterol (HDL) and lower bad cholesterol (LDL), and has more antioxidants than any other oil, including hydroxytyrosol, a polyphenol with a high level of free radical scavenging activity. Another role Omega-9 plays is to help offset the over consumption of Omega-6 rich oils like corn and soy. By consuming more Omega-9, we are balancing out our fatty acid profile to a ratio our bodies prefer.

### The temperature & oils' using

**High Heat Oil:** up to 265°C

Oils with a high 'smoke point' are ideal for sautéing, frying and other high heat applications.

**Medium High Heat Oil:** up to 220°C

Oils with a medium-high 'smoke point' are best for sautéing at medium-high heat or, because of their neutral flavor, for baking.

**Medium Heat Oil:** up to 180°C

Oils normally have rich flavor, making them ideal for sauces and salad dressings or for sautéing at medium heat where the oil's flavor is intended as an integral part of the finished dish.

**No Direct Heat Oil:** no heat

Oils with low 'smoke points' have delicious flavor and fragile structure that they're best poured directly onto a finished dish, or blended into a dressing, simple sauce or taken directly.