



Fats explained

Confused about fats and oils?

We all need some fat in our diet to help provide energy, some essential fats that our bodies cannot make and to help us obtain and absorb the fat soluble vitamins A, D, E and K.

Most foods contain some fat. Here we explain the differences between dietary fats (good and bad fats) and explain how they affect your cholesterol and triglyceride levels.

There are 3 main types of fat: saturated, monounsaturated and polyunsaturated. Most foods contain a mixture of these. Some foods also contain trans fats and we explain more about these below.

Good fats: Unsaturated fats

All unsaturated fats are considered good fats. They can be divided into monounsaturated and polyunsaturated fats. Sometimes these fats are also referred to as Omega 3, 6 and 9's. Unsaturated fats are usually soft or liquid at room temperature. They come mainly from nuts, seeds and oily fish. Some foods are a source of omega 3's, 6's and 9's.

Bad fats: Saturated fat

(also called saturates or saturated fatty acids)

We all need some saturated fat, but as a Nation we still eat too much. Saturated fats are usually solid at room temperature. Most foods that contain high levels of saturated fat come from animals.

Foods rich in saturated fats include:

- Butter, ghee, lard, hard margarines and foods made from these (cakes, biscuits, puddings, Indian sweets, pies, pastries and pasties)
- Dairy fats (full cream milk, cheese, full fat yoghurt, crème fraiche and cream)
- Fatty meats and meat products (sausages, burgers, salami)
- Coconut and palm oils

GOOD FATS	POLYUNSATURATED FATS		MONOUNSATURATED FATS
	Omega 3's	Omega 6's	Omega 9's
Oils and spreads	Rapeseed oil, flaxseed oil, soyabean oil, *algae and krill oils	Corn oil, sunflower oil, soyabean oil, spreads based on these	Olive oil, rapeseed oil, sunflower oil, peanut oil, flaxseed
Nuts	Walnuts	Almonds, cashews, hazelnuts, peanuts, pecans, pistachios, walnuts	Almonds, cashews, hazelnuts, macadamias, peanuts, pecans, pistachios, walnuts
Other foods	Foods fortified with omega 3's, omega 3 eggs, flaxseed, linseeds, hemp	Eggs, edible seeds	Avocado, eggs, poultry
Fish	*Oily fish – herring, pilchards, sardines, mackerel, salmon, trout, fresh tuna,		

*a source of long chain omega 3 fats (EPA and DHA)

Bad fats: Trans fats

(also called trans fatty acids)

Most trans fats are artificially made during the industrial processing of unsaturated fats. This is a process called partial hydrogenation. It is used to convert oils into solid fats, often for bakery products like cakes and biscuits. They are also found in some dairy products.

Many food companies have already taken trans fats out of their product recipes. This means that most of us are already having less than the maximum amount set by the government. You can keep your trans fat intake low by limiting the amount of processed and takeaway foods that you eat.

How much fat should we eat?

About a third of our energy should come from fat. Of this, less than a third should be saturated fat. The remaining two thirds should be unsaturated fat. In some countries experts recommend even less saturated fat. Here is a handy guide.

UK GUIDELINES (PER DAY)	MEN	WOMEN
Average energy needs (kcal)	2500	2000
Total fat (no more than)	95g	70g
Saturated fat (no more than)	30g	20g

If you are restricting your energy intake in order to lose or maintain your weight, you will need to reduce your fat intake proportionately. This is because all fats are a concentrated source of calories. See our factsheet on losing weight.

Nutrition Labels

Look out for traffic light nutritional labelling on the front of food packs. You can also check the nutritional information and ingredients list on the back of packs to help you identify good fats.

- Choose foods that have more unsaturated than saturated fats
- Try to choose more foods that are labelled green or orange for saturated fat
- Some foods that are high in fat such as oily fish, nuts, oils and spreads may be red for saturated fat. This is OK because they contain a higher proportion of the healthy unsaturated fats
- Avoid foods that contain partially hydrogenated fats/oils as these are a source of trans fats

Use the table below to help you identify healthy foods

PER 100G FOOD	LOW	MEDIUM	HIGH
Fat	3g or less	3-17.5g	17.5g or more
Saturates	1.5 g or less	1.5-5g	5g or more
Sugars	5g or less	5 – 22.5g	22.5g or more
Salt	0.3g or less	0.3-1.5g	1.5g or more

How do fats affect cholesterol and heart health?

There is strong evidence from clinical trials that having a healthy balance of fats in your diet can help to reduce both the quantity of cholesterol in your blood as well as improve the quality. To reduce both total and LDL cholesterol the main advice is to:

- Eat fewer foods that contain saturated fat and replace them with foods that contain more unsaturated fats (omega 3s, 6s and 9s)
- Keep trans fats low by eating fewer processed foods

Omega 3 fats

Long chain omega 3 fats from fish and algae have also been shown to have heart health benefits. These benefits are linked to two long chain fatty acids: Eicosapentaenoic acid (EPA) and Docosahexaenoic acid (DHA). Humans can make both EPA and DHA from another omega 3 fat (alpha linoleic acid - ALA) which is found in some nuts and seeds and their oils (see table). Unfortunately the rate at which humans convert ALA to EPA and DHA is very slow, hence the advice to eat oily fish at least once a week.

Long chain omega 3's help to maintain a healthy heart and circulation. In particular they can help:

- Lower triglyceride levels in the blood
- Maintain normal blood pressure
- Reduce the stickiness of the blood
- Maintain healthier arteries
- Maintain the normal rhythm of the heart

Best Choice

Everyone has an opinion about which spread, cooking fat or oil is best to use. But with so many confusing news stories, personal opinions and food marketing campaigns no wonder we get confused. Here are HEART UK's recommendations for best choice:

Spreads

Always choose a spread that is made from unsaturated fats like rapeseed, olive and sunflower oil.

- **Want to lose weight?** Choose a low fat or light spread
- **Want to reduce cholesterol?** Consider a cholesterol lowering spread

AVOID or Use Sparingly: Butter, ghee, dripping, hard margarine, soft butters

Salad dressings

Drizzle oil on your salad but keep portions modest. Always choose an oil based dressing:

- **Want more flavour?** Opt for virgin olive and rapeseed oils
- **Want fewer calories?** Try a vinaigrette made with a seed or nut oil
- **Like mayonnaise?** Choose a light version

AVOID or Use Sparingly: Ranch, Caesar and other creamy dressings

Baking

Choose baking fats and oils that are mainly unsaturated

- **Need a yellow spread?** Use a spread made from rapeseed, sunflower or olive oil
- **Need a cholesterol lowering spread?** Some cholesterol lowering spreads can be used in baking - check packs for details
- **Got a recipe that calls for an oil?** – Use sunflower oil with its mild flavour

AVOID or Use Sparingly: Butter, hard margarine, ghee, soft butters, suet, lard, coconut oil.

Frying, roasting, grilling, barbecues

When cooking at high temperatures you really need to use oils that have:

- A high smoke point
- Are more stable at high temperatures

The smoke point is the temperature at which an oil starts to smoke. Every oil has a different smoke point. When the oil smokes it means that the fat is breaking down and that harmful substances are being produced. It is best not to heat an oil beyond its smoke point but if you do then throw away the oil, wipe the pan clean and start again.

Repeat frying has a similar effect. Over time the oil can become more saturated, lose some of its protective antioxidant properties and harmful trans fats and free radicals can be made. So best to throw the deep fat fryer away altogether.

Some oils are less stable and more susceptible to change during high temperature cooking. Oils rich in polyunsaturated fats are more prone to damage than those that are rich in monounsaturated fats or indeed saturated fat.

- Choose rapeseed*, sunflower and corn oils most often
- Only use the oil once and then throw it away
- Use oil sparingly as it contains a lot of calories
- Marinate meat and fish in an oil and vegetable rich marinade before you barbecue

AVOID or Use Sparingly: Coconut oil, goose fat, lard, dripping, butter

*most oil that is sold as vegetable oil is in fact rapeseed

Palm, coconut oils and eating out

Why is palm oil commonly used in food products?

In the past the food industry have use processed oils that have been hardened to make them more stable and versatile. However this kind of processing also results in the production of harmful trans fats. Trans fats are "double trouble" because they not only increase harmful LDL cholesterol, they also decrease good (HDL) cholesterol. The good news is that many food manufacturers no longer use these processed oils. However its not all good news because manufacturers often use palm oil instead. Palm oil is mainly saturated fat. It is used in food processing because it is a very stable and functional fat. If you see palm oil on the list of food ingredients remember to check the nutritional information to see just how much saturated fat is in the food before you buy.

What about food that is cooked in restaurants, cafés and chippies?

If you eat out regularly then it might be worth asking which fat the restaurant uses for deep frying or high temperature cooking. The food industry commonly use palm oil or a palm oil blend because these types of oils are also more stable and have a longer fry life. A new range of rapeseed and sunflower oils are now becoming available to the food service industry which are both stable and heart healthy and also have a longer fry life.

Why is coconut oil so popular?

A very clever marketing programme has seen coconut oil become a popular choice in health food stores and supermarkets. There are lots of stories about its health benefits but the evidence is sparse and scientists are far from convinced. Coconut oil is highly saturated - the highest of any oil - so not surprisingly it is also solid at room temperature. The heart benefits claimed for coconut oil rest on the suggestion that it can increase good (HDL) cholesterol and that the type of saturated fat is more quickly metabolised. However the fats in coconut oil significantly raise bad (LDL) cholesterol and this is of a far greater concern. So for now it's best to avoid coconut oil completely.

The composition of oils, spreads and hard fats

