

Fasting for Health

What is fasting?

Fasting is defined as 'a willing abstinence or reduction from some or all food, drink, or both, for a period of time'.



The notion of fasting sounds a bit extreme to some people – the idea that you would choose to avoid food or drink for any period of time often horrifies people with thoughts of starvation. In fact, most of us are fasting overnight every night (the word *breakfast* came about from the **breaking** of the overnight **fast**). Entry level fasting simply involves extending the overnight fast. As hunter-gatherers we would have had to fast for long periods while we hunted animals or searched for food such as edible nuts and berries. During these periods of fasting, it was a beneficial adaptation to actually become better at finding food rather than worse – those who flagged early would have died out, and not passed on this advantage – so it may be that our brain actually works better in a fasted state.

Why should you fast?

Evidence is increasingly pointing to health benefits from fasting. It may reduce blood pressure, increase insulin sensitivity, aid sustainable weight loss, support anti-ageing, reduce risk of diabetes and maybe even dementia. Fasting is a key activator of a process called autophagy. The word derives from the Greek auto (self) and phagein (to eat), so autophagy literally means to eat oneself. It is a form of cellular cleansing, the body's mechanism of clearing out old cellular junk. Fasting also stimulates growth hormone, which tells our body to start producing shiny new components to replace all the old junk. It's like a renovation process. The grumbling sound that you might hear coming from your abdomen if you haven't eaten for a while which you probably interpret as a signal that you should eat is actually telling you that your gut is undergoing a routine maintenance process called Migrating Motor Complex (MMC). MMC is the 'intestinal housekeeper' that gently wafts undigested matter and displaced bacteria (amongst other things) down the digestive tract. This process only occurs in the fasted state, so it is limited in those who eat frequently. In this way, fasting supports digestive health. Fasting also improves our capacity to use fat as a fuel – including fat that we have already stored in our body and dietary fat that we eat.

Burning fat for fuel

Both the carbohydrates and the fats in our diet can be burnt for fuel. Carbohydrates are converted into sugar (glucose) when they are digested, and this circulating glucose is a relatively quick-acting fuel, with limited storage. A small amount of the carbohydrates which we eat that are excess to our immediate requirements are stored as glycogen (sugar

stores) and the remainder is converted to fat for storage. When our levels of circulating glucose drops (because we have used the limited amount in the

blood stream and haven't taken in any more), we can use the limited sugar stores (glycogen). A typical person holds around 2,000 calories worth of energy stored as glycogen. Once these glycogen stores are depleted, we can switch to burning our fat stores. A lean person has around 40,000 calories worth of energy stored as fat. But most people don't get to burn this stored fat because they have already refuelled with carbohydrates, so the fat-burning mechanism gets a bit rusty through lack of use. Many people will say that if they don't eat 'little and often' to keep their blood sugar stable, they feel unwell - weak, shaky, light-headed, grumpy and so on. This is because their blood glucose levels are low, glycogen stores are empty, and the fat-burning mechanism is not working well. So, what is the answer: re-tune your fat-burner! This means that your body can efficiently burn fat for energy (fat that you eat and fat that is already in storage).

Why fat is the best fuel

High carbohydrate diets lead to elevated blood glucose and insulin levels, and can lead to insulin resistance (where your body no longer responds properly to insulin), dyslipidaemia (unhealthy balance of fats and cholesterol in the blood) and Type II Diabetes. This type of diet is also pro-inflammatory - leading to chronic low-grade levels of inflammation throughout the body and brain which contributes to premature ageing and disease. Conversely, fats are a much cleaner fuel - they can be burnt for energy (by conversion to ketones) which fuels all cells in the body and brain.



Fasting for beginners

Firstly, you need to start shifting the balance of fats and carbohydrates in your diet away from carbohydrates and towards fats. There is no set ratio that suits all people.

Next you should ensure that you extend your overnight fast to 12 hours as often as possible. For example, if you finish your evening meal at 8pm, don't have breakfast until 8am. If you are doing this successfully, then begin to increase the duration of the overnight fast gradually up to 18 hours. Most people should be fasting for 18 hours overnight, every night. Typically, this means skipping breakfast (no, it really isn't the most important meal of the day - this is a myth generated by food manufacturers who want to sell you breakfast cereal!), and just eating lunch and an evening meal. We try to avoid encouraging calorie-counting (because this makes people veer towards a low fat diet), but it is important to ensure that your daily calorie intake doesn't drop as this causes a slowing of your metabolism. You are aiming to take in all of your day's calories within a 6 hour window which is easier to achieve if you have increased your fat intake.

Once you are comfortable with 18:6 most days, you can try 24-hour or even 36-hour fasts. A 24-hour fast involves fasting from lunchtime to lunchtime or dinner to dinner. A 36-hour fast is usually achieved by fasting from the evening meal on one day until breakfast two days later.

If this is all going well, then you could try some longer fasts of 7-14 days. Surprisingly, the longer fasts actually get easier, with the most challenging time during the first 2-3 days.

During fasting

During a fasting period, you could be a purist and just take in water and salt, but you can also take in some very high fat food – the high fat food doesn't interrupt your fat burning (because it is almost entirely fat) but carbohydrate food does switch off fat-burning.

During a fast, you can take:

Water (with a squeeze of fresh lime or lemon), tea/coffee with a dash of whole milk or double cream, bone broth.

Salt - your body's requirement for salt increases dramatically during fasting -the longer the fasting period, you more salt you need. Lack of salt is one of the main reasons for feeling unwell during a fast. Salt tastes better when you need it, so you may find you can happily take it directly off a spoon.



See **Good Fats, Bad Fats** for more information on which types of fats to eat.

Side-effects of fasting

If you feel dizzy, light-headed or in any way unwell whilst fasting, you should eat something. These types of symptoms might simply be due to dehydration or lack of salt, but we don't recommend taking any chances – you can always have another attempt at your fast on another day.

Safety issues

If you are taking medication to manage blood sugar (such as insulin or other anti-diabetic medication) you must not fast or make other fundamental changes to your eating habits without consulting an appropriate healthcare professional first. Other medication may need adjusting too – for example, fasting may reduce blood pressure so if you are taking medication for blood pressure your medication may need to be adjusted. Some medication must be taken with food - in some cases a little bone broth or double cream will be sufficient.

If you are not in robust health or you are taking medication, we recommend that you get appropriate advice first before embarking on a fast of any duration.

Further reading and resources:

The Complete Guide to Fasting – Dr Jason Fung

The Salt Fix – Dr James Nicolantonio