

# Intermittent fasting for beginners

[Dr. Jason Fung, MD](#) – Updated October 23, 2019

**What is intermittent fasting?**

**Weight loss**

**Benefits**

**How to**

**FAQ**

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Intermittent fasting is a way to cycle between periods of fasting and eating. It's currently a very popular method to lose weight and improve health.

Intermittent fasting might actually be an ancient secret of health. It is ancient because it has been practiced throughout all of human history.

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It's a secret because this potentially powerful habit had until recently in many ways been virtually forgotten especially regarding our health.

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However, many people are now re-discovering this dietary intervention. Since 2010, the number of online searches for “intermittent fasting” has increased by about 10,000 percent, with most of the increase happening in the last few years.

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Intermittent fasting might provide huge benefits if it is done right, including

loss of excess weight, reversal of type 2 diabetes and many other things.

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Plus, it can *save* you time and money.

The goal of this beginner's guide is to provide everything you need to know about intermittent fasting, in order to get started.

**Disclaimer:** While intermittent fasting has many proven benefits, it's still controversial. A potential danger regards medications, especially for diabetes, where doses often need to be adapted. Discuss any changes in medication and relevant lifestyle changes with your doctor. [Full disclaimer](#)

This guide is written for adults with health issues, including obesity, that could benefit from intermittent fasting. [Learn more.](#)

People who should NOT fast include those who are **underweight** or have **eating disorders like anorexia**, women who are **pregnant or breastfeeding**, and people **under the age of 18**. [Learn more.](#)

## What is intermittent fasting?

Intermittent fasting – isn't that starvation?

No. Fasting differs from starvation in one crucial way: control. Starvation is the *involuntary* absence of food for a long time, leading to severe suffering or even death.

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It is neither deliberate nor controlled.

Fasting, on the other hand, is the *voluntary* withholding of food for spiritual, health, or other reasons. It's done by someone who is not underweight and thus has enough stored body fat to live off. Intermittent fasting done right should not cause suffering, and certainly never death.

Food is easily available, but you *choose* not to eat it. This can be for any period of time, from a few hours up to a few days or – with medical supervision – even a week or more. You may begin a fast at any time of your choosing, and you may end a fast at will, too. You can start or stop a fast for any reason or no reason at all.

Fasting has no standard duration, as it is merely the absence of eating.

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Anytime that you are not eating, you are intermittently fasting. For example, you may fast between dinner and breakfast the next day, a period of approximately 12-14 hours. In that sense, intermittent fasting should be considered a part of everyday life.

***It is perhaps the oldest and most powerful dietary intervention imaginable.***

Consider the term “break fast”. This refers to the meal that breaks your fast – which is done daily. Rather than being some sort of cruel and unusual punishment, the English language implicitly acknowledges that fasting should be performed daily, even if only for a short duration.

Intermittent fasting is not something queer and curious, but a part of everyday, normal life. It is perhaps the oldest and most powerful dietary intervention imaginable.

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Yet somehow we have missed its power and overlooked its therapeutic

potential.

Learning how to fast properly gives us the option of using it or not.

To get started, either watch our brief video course on intermittent fasting, or keep reading below.

Do you want to keep watching? [Part 2: How to maximize fat burning](#) 337,809 views

**Intermittent fasting for weight loss**

At its very core, intermittent fasting simply allows the body to use its stored energy. For example, by burning off excess body fat.

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It is important to realize that this is normal and humans have evolved to fast for shorter time periods – hours or days – without detrimental health consequences.

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Body fat is merely food energy that has been stored away. If you don't eat, your body will simply “eat” its own fat for energy.

Life is about balance. The good and the bad, the yin and the yang. The same applies to eating and fasting. Fasting, after all, is simply the flip side of eating. If you are not eating, you are fasting. Here's how it works:

When we eat, more food energy is ingested than can immediately be used. Some of this energy must be stored away for later use. Insulin is the key hormone involved in the storage of food energy.

Insulin rises when we eat, helping to store the excess energy in two separate ways. Carbohydrates are broken down into individual glucose (sugar) units, which can be linked into long chains to form glycogen, which is then stored in the liver or muscle.

There is, however, very limited storage space for carbohydrates; and once that is reached, the liver starts to turn the excess glucose into fat. This process is called de-novo lipogenesis (meaning literally “making new fat”).

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Some of this newly created fat is stored in the liver, but most of it is exported to other fat deposits in the body. While this is a more complicated process,

there is almost no limit to the amount of fat that can be created.

So, two complementary food energy storage systems exist in our bodies. One is easily accessible but with limited storage space (glycogen), and the other is more difficult to access but has almost unlimited storage space (body fat).

The process goes in reverse when we do not eat (intermittent fasting). Insulin levels fall, signaling the body to start burning stored energy as no more is coming through food. Blood glucose falls, so the body must now pull glucose out of storage to burn for energy.

Glycogen is the most easily accessible energy source. It is broken down into glucose molecules to provide energy for the body's other cells. This can provide enough energy to power much of the body's needs for 24-36 hours. After that, the body will primarily be breaking down fat for energy.

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So the body only really exists in two states – the fed (insulin high) state and the fasted (insulin low) state. Either we are storing food energy (increasing stores), or we are burning stored energy (decreasing stores). It's one or the other. If eating and fasting are balanced, then there should be no net weight change.

If we start eating the minute we roll out of bed, and do not stop until we go to sleep, we spend almost all our time in the fed state. Over time, we may gain weight, because we have not allowed our body any time to burn stored food energy.

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To restore balance or to lose weight, we may simply need to increase the amount of time spent burning food energy.

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That's intermittent fasting.

In essence, intermittent fasting allows the body to use its stored energy. After all, that's what it is there for. The important thing to understand is that there is *nothing wrong with that*. That is how our bodies are designed. That's what dogs, cats, lions and bears do. That's what humans do.

If you are eating every third hour, as is often recommended, then your body will constantly use the incoming food energy. It may not need to burn much body fat, if any. You may just be storing fat.

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Your body may be saving it for a time when there is nothing to eat.

If this happens, you lack balance. You lack intermittent fasting.

Intermittent fasting's most obvious benefit is weight loss.

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However, there are a many potential benefits beyond this, some of which have been known since ancient times.

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The fasting periods were often called 'cleanses', 'detoxifications', or 'purifications', but the idea is similar – e.g. to abstain from eating food for a certain period of time, often for health reasons. People imagined that this period of abstinence from food would clear their bodies' systems of toxins and rejuvenate them. They may have been more correct than they knew.

Some of the purported health benefits of intermittent fasting include:

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- [Weight and body fat loss](#)

**18**

- [Increased fat burning](#)

**19**

- [Lowered blood insulin and sugar levels](#)

**20**

- Possibly [reversal of type 2 diabetes](#)

**21**

- Possibly [improved mental clarity and concentration](#)

**22**

- Possibly increased energy

**23**

- Possibly [increased growth hormone](#), at least in the short term

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- Possibly an [improved blood cholesterol profile](#)

**25**

- Possibly longer life

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- Possibly [activation of cellular cleansing](#) by stimulating [autophagy](#)

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- Possibly reduction of inflammation



Fasting offers many important unique advantages that are not available in typical diets.

Where diets can complicate life, intermittent fasting may simplify it. Where diets can be expensive, intermittent fasting can be free. Where diets can take time, fasting saves time. Where diets may be limited in their availability, fasting is available anywhere. And as discussed earlier, fasting is a potentially powerful method for lowering insulin and decreasing body weight.

Here are even more reasons to try it, along with more details: [The 7 practical benefits of intermittent fasting](#)

## **Intermittent fasting results**

Keto and intermittent fasting: "I am completely blown away by the changes"

How Gino reversed his type 2 diabetes by doing the opposite

Intermittent fasting: down 42 pounds in 14 months

[More intermittent fasting results](#)

## **How to intermittent fast**

### **Shorter fasts (<24hrs)**

Intermittent fasting offers plenty of flexibility. You can fast for as long or short as you like, but fasts longer than a few days may require medical supervision. Here are some popular regimens. Generally, shorter fasts are

done more frequently.

## **16:8**

This way of doing intermittent fasting involves daily fasting for 16 hours. Sometimes this is also referred to as an 8-hour eating ‘window’. You eat all your meals within an 8-hour time period and fast for the remaining 16 hours. Generally, this is done daily or almost daily.

For example, you may eat all your meals within the time period of 11:00 am and 7:00 pm. Generally, this means skipping breakfast, but some people prefer to skip dinner instead. You typically eat two or three meals within this 8-hour period.

## **20:4**

This involves a 4-hour eating window and a 20-hour fast. For example, you might eat between 2:00 pm and 6:00 pm every day and fast for the other 20 hours. Generally, this would involve eating either one meal or two smaller meals within this period.

[Learn more about shorter fasts](#)

## **Longer fasts (>24 hours)**

### **24-hour fasts**

This way of doing intermittent fasting involves fasting from dinner to dinner (or lunch to lunch). If you eat dinner on day 1, you would skip the next day’s breakfast and lunch and eat dinner again on day 2. This means that you are still eating daily, but only once during that day. This would generally be done two to three times per week. [Learn more](#)

### **5:2 fast**

This is the version of intermittent fasting that has the most scientific support, as most studies on intermittent fasting has featured similar advice.

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Dr. Michael Mosley popularized this variation of intermittent fasting in his book ‘The Fast Diet’.

5:2 involves five regular eating days and two fasting days. However, on these two fasting days, you are allowed to eat 500 calories on each day. These calories can be consumed at any time during the day – either spread throughout the day or as a single meal. [Learn more](#)

### **Alternate-day fasting**

Another related approach to 5:2 is to have “fasting” days with 500 calories not just twice a week, but every other day. [Learn more](#)

### **36-hour fasts**

This involves fasting for the entire day. For example, if you eat dinner on day 1, you would fast for all of day 2 and not eat again until breakfast on day 3. This is generally 36 hours of fasting. This might provide a more powerful weight loss benefit. The other great benefit is that it avoids the temptation to overeat dinner on day 2. [Learn more](#)

### **Extended fasting**

The first rule of extended fasts is to always check with your health care provider to ensure you are not at risk for fasting complications.

Generally for fasts greater than 48 hours, I recommend a general multivitamin to avoid micronutrient deficiency. The world record for fasting is 382 days (although we don’t recommend this!), and going 7-14 days may be possible for some people.

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I discourage people from fasting for more than 14 days due to high risk of [refeeding syndrome](#), a dangerous shift in fluids and minerals that can occur when food is re-introduced after a long fast.

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[Learn more about longer fasts](#)

## Who should NOT fast?

You should not do intermittent fasting if you are:

- **Underweight** (BMI < 18.5) or have an **eating disorder like anorexia**.
- **Pregnant** – you need extra nutrients for your child.
- **Breastfeeding** – you need extra nutrients for your child.
- **A child under 18** – you need extra nutrients to grow.

You can probably fast, but may need medical supervision, under these conditions:

- If you have diabetes mellitus – [type 1](#) or [type 2](#).
- If you take prescription medication.
- If you have gout or high uric acid.
- If you have any serious medical conditions, such as liver disease, kidney disease, or heart disease.

## Won't intermittent fasting put me into starvation mode?

Not likely. This is the most common myth about intermittent fasting, and

generally it's not true.

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In fact, some studies indicate that intermittent fasting may even increase the basal metabolic rate (at least initially) and might potentially improve overall body composition.

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[Learn more](#)

## **Can I exercise during fasting?**

Yes. You can continue all your usual activities, including exercise, while fasting. You do not need to eat before exercising to provide energy.

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Instead, your body can burn stored energy (like body fat) for energy.

However, for long duration aerobic exercise, eating before exercise may increase performance.

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This is good to know if you're competing.

Keep in mind that it may be important to drink fluids and replenish sodium (salt) around exercise when fasting. [Learn more](#)

## **What are the possible side effects?**

There can be a number of possible nuisance side effects of intermittent fasting.

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Here's what to do if you encounter them:

- **Hunger** is the most common side effect of intermittent fasting. This may be less of an issue if you're already on a [keto](#) or [low-carb, higher-fat diet](#).

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Learn more.

- **Constipation** is common. Less going in means less going out. You don't need medications unless you experience discomfort. Standard laxatives can be used to help.
- **Headaches** are common and tend to disappear after the first few times on fasts.

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Taking some extra salt often helps mitigate such headaches.

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- Mineral water may help if your stomach tends to gurgle.
- Other possible side effects include **dizziness**, **heartburn** and **muscle cramps**. [Learn more](#)

A more serious side effect is the **refeeding syndrome**. Fortunately, this is rare and generally only happens with extended fasts (5-10 days or more) when one is undernourished. [Learn more](#)

[Learn more about common side effects of fasting](#)

## Why does my blood sugar go up during fasting?

While this does not happen with everyone, it can occur due to hormonal changes that occur during intermittent fasting. Your body is producing sugar in order to provide energy for your system. This is a variation of the Dawn

Phenomenon and in general is not a concern as long as blood sugars are not elevated the rest of the day.

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[Learn more](#)

## **How do I manage hunger?**

The most important thing to realize is that hunger usually passes like a wave. Many people worry that hunger during intermittent fasting will continue to build until it is intolerable, but this does not normally happen.

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Instead, hunger comes in a wave. If you simply ignore it and drink a cup of tea or coffee, it will often pass.

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During extended fasts, hunger will often increase into the second day. After that, it gradually recedes; and many people report a complete loss of hunger sensation by day 3-4.

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Your body is now being powered by fat. In essence, your body is ‘eating’ its own fat for breakfast, lunch and dinner and therefore is no longer hungry.

[Learn more](#)

## **Won't intermittent fasting burn muscle?**

That depends on the person and the duration of the fast. During fasting, the body first breaks down glycogen into glucose for energy. After that, the body increases fat breakdown to provide energy. Excess amino acids (the building blocks of proteins) are also used for energy, but the body does not burn its own muscle for fuel unless it has to.

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Some studies, however, suggest that leaner individuals are at higher risk of lean body mass loss, and even reduced metabolic rate. Yet it appears this is less of a concern with obese subjects.

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In my experience with over 1,000 patients on various intermittent fasting regimens, I have not yet seen a single case of significant muscle loss.

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[Learn more](#)

## What are your top tips for intermittent fasting?

Here are the nine top tips, briefly:

- Drink water
- Stay busy

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- Drink coffee or tea

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- Ride out the hunger waves
- Give yourself one month to see if intermittent fasting (such as 16:8) is a good fit for you
- Follow a [low-carb diet](#) between fasting periods. This reduces hunger and makes intermittent fasting easier.

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It may also increase the effect on weight loss and type 2 diabetes reversal, etc.



- Don't binge after fasting

[Learn more practical intermittent fasting tips](#)

## How do I break a fast?

Gently. The longer the fast, the more gentle you might have to be.

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Eating too large a meal after fasting (a mistake that we have ALL done, myself included) can give you a stomach ache. While this is hardly serious, people usually learn quickly to eat as normally as possible after a fast.

## Isn't it important to have breakfast every morning?

Not necessarily. This appears to be an old misconception, based on speculation and statistics, and it does not hold up when it's tested.

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Skipping your morning meal gives your body more time to burn fat for energy. Since hunger is lowest in the morning, it may be easiest to skip it and break your fast later in the day.

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Learn more:

- [Skipping breakfast does not lead to eating more](#)
- [NYT: Sorry, there's nothing magical about breakfast](#)

## Can women fast?

Yes, but there are exceptions. Women who are underweight, pregnant or

breastfeeding should not fast.

Furthermore, for women trying to conceive, be aware that – perhaps especially for athletic women with low body fat percentage – intermittent fasting might increase the risk of irregular menses, and lower the chance of conception.

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Other than that, there is no special reason why women should not fast.

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Women can have problems during intermittent fasting, but so can men. Sometimes women do not get the results they want, but that happens to men, too.

Studies show that the average weight loss for women and men who fast is similar.

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[Learn more about women and intermittent fasting](#)

## **Isn't fasting the same as reducing calories?**

No, not necessarily. Fasting can reduce the time you spend eating and primarily addresses the question of “when to eat”.

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Calorie reduction addresses the question of “what and how much to eat”. They are separate issues and should not be confused with each other.

Fasting may reduce calories but its benefits extend far beyond that.

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[Learn more](#)

## **Will I lose weight?**

Most likely.

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It is almost inconceivable that you will not lose weight if you do not eat.

In theory it's of course possible to eat more after fasting, cancelling out the weight lost. But studies generally show that people tend to end up eating significantly less overall.

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I call intermittent fasting “the ancient secret of weight loss” because it might be one of the most powerful dietary interventions for weight loss, yet it has been mostly ignored by doctors and dieticians for a long time.

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[Learn more](#)

## **More Q&A**

[Many more questions and answers about intermittent fasting](#)

**Sharing is caring. In our private Facebook group, we welcome your questions and stories.**

[Join now](#)

# How to get started

Now that you know more about intermittent fasting, how do you get started? I suggest following these steps:

- Decide [what type of fast](#) you want to do
- Decide upon the length of time you want to fast
- Start fasting. If you do not feel well, or if you have any concerns, then stop
- Continue all your usual activities outside of eating. Stay busy and live normally. Imagine you're "eating" a full meal of your own fat
- Break the fast gently
- Repeat

Yes. It can be that simple.

## Extra video preparation

If you feel that you want more preparation first, then watch our [intermittent fasting video course](#).

If you want to, you can jump straight to the get-started sections of the course:

- The left one below is about how to do a 24-hour fast (it's surprisingly simple).
- The right one is a real challenge, a 7-day fast (are you up for it?).

# Resources to learn more

## The intermittent fasting video course

### Books

Dr. Fung's books [\*The Obesity Code\*](#), [\*The Complete Guide to Fasting\*](#) and [\*The Diabetes Code\*](#) are available on Amazon.

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### Website

Dr. Fung's website: [IDMprogram.com](http://IDMprogram.com)

### More

[Time-restricted eating – a detailed intermittent fasting guide](#)

[Obesity – solving the two-compartment problem](#)

[How intermittent fasting could reverse type 2 diabetes](#)

[How fasting affects your physiology and hormones](#)

[Low carb for beginners](#)

[How to lose weight](#)

# How to reverse type 2 diabetes