



# INTERMITTENT FASTING

Intermittent fasting, also known as intermittent energy restriction, is an umbrella term for various meal timing schedules that cycle between voluntary fasting and non-fasting over a given period. Methods of intermittent fasting include alternate-day fasting, periodic fasting, and daily time-restricted feeding.

But... before embarking on an intermittent fast or deciding how often you should fast, you should speak with a healthcare professional first.

## 6 METHODS OF INTERMITTENT FASTING

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### 1. THE 16/8 METHOD

The 16/8 method involves fasting every day for about 16 hours and restricting your daily eating window to approximately 8 hours. Within the eating window, you can fit in two, three, or more meals.

This method is also known as the Leangains protocol and was popularized by fitness expert Martin Berkhan. Doing this method of fasting can be as simple as not eating anything after dinner and skipping breakfast.

For example, if you finish your last meal at 8 p.m. and don't eat until noon the next day, you're technically fasting for 16 hours.

For people who get hungry in the morning and like to eat breakfast, this method may be hard to get used to. However, many breakfast skippers instinctively eat this way. You can drink water, coffee, and other zero-calorie beverages during the fast, which can help reduce feelings of hunger.

It's very important to primarily eat healthy foods during your eating window. This method won't work if you eat lots of processed foods or an excessive number of calories.

### 2. THE 5:2 DIET

The 5:2 diet involves eating what you typically eat 5 days of the week and restricting your calorie intake to 500-600 for 2 days of the week.

This diet is also called the Fast Diet and was popularized by British journalist Michael Mosley.

On the fasting days, it's recommended that women eat

500 calories and men eat 600.

For example, you might eat normally every day of the week except Mondays and Thursdays. For those 2 days, you eat 2 small meals of 250 calories each for women and 300 calories each for men.

The 5:2 diet has been found to be effective at helping with weight loss.

### 3. EAT STOP EAT

Eat Stop Eat involves a 24-hour fast once or twice per week. This method was popularized by fitness expert Brad Pilon and has been quite popular for a few years. Fasting from dinner one day to dinner the next day amounts to a full 24-hour fast.

For example, if you finish dinner at 7 p.m. Monday and don't eat until dinner at 7 p.m. Tuesday, you've completed a full 24-hour fast. You can also fast from breakfast to breakfast or lunch to lunch — the result is the same. Water, coffee, and other zero-calorie beverages are allowed during the fast, but no solid foods are permitted.

If you're doing this to manage your weight, it's very important that you stick to your regular diet during the eating periods. In other words, you should eat the same amount of food as if you hadn't been fasting at all.

The potential downside of this method is that a full 24-hour fast may be difficult for many people. However, you don't need to go all in right away. It's fine to start with 14-16 hours and then move upward from there.

### 4. ALTERNATE-DAY FASTING

In alternate-day fasting, you fast about every other day. There are several different versions of this method.

Some of them allow about 500 calories during the fasting days.

However, one study found that alternate-day fasting wasn't any more effective at producing weight loss or weight maintenance than a typical calorie-restrictive diet.

A full fast every other day can seem rather extreme, so it's not recommended for beginners.

With this method, you may go to bed very hungry several times per week, which is not very pleasant and probably unsustainable in the long term.



## 5. THE WARRIOR DIET

The Warrior Diet was popularized by fitness expert Ori Hofmekler. It involves eating small amounts of raw fruits and vegetables during the day and eating one huge meal at night.

Basically, you fast all day and feast at night within a 4- hour eating window. The Warrior Diet was one of the first popular diets to include a form of intermittent fasting. This diet's food choices are quite like those of the paleo diet — mostly whole, unprocessed foods.

## 6. SPONTANEOUS MEAL SKIPPING

You don't need to follow a structured intermittent fasting plan to reap some of its benefits. Another option is to simply skip meals from time to time, such as when you don't feel hungry or are too busy to cook and eat.

However, some people eat every few hours lest they hit starvation mode or lose muscle. Others' bodies are well equipped to handle long periods of famine and can miss one or two meals from time to time. You know yourself best.

So, if you're not hungry one day, skip breakfast and just eat a healthy lunch and dinner. Or, if you're traveling somewhere and can't find anything you want to eat, you may be able to do a short fast.

Skipping one or two meals when you feel inclined to do so is basically a spontaneous intermittent fast.

Just make sure to eat healthy, balanced meals during the non-fasting periods.

# EVIDENCE-BASED HEALTH BENEFITS OF INTERMITTENT FASTING

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Numerous studies show that it can have powerful benefits for your body and brain.

Here are 10 evidence-based health benefits of intermittent fasting.

### 1. CHANGES THE FUNCTION OF HORMONES, CELLS, AND GENES

When you don't eat for a while, several things happen in your body. For example, your body

changes hormone levels to make stored body fat more accessible and initiates important cellular repair processes.

Here are some of the changes that occur in your body during fasting:

- **INSULIN LEVELS:** Blood levels of insulin drop significantly, which facilitates fat burning.
- **HUMAN GROWTH HORMONE (HGH) LEVELS:** The blood levels of human growth hormone (HGH) may increase dramatically. Higher levels of this hormone facilitate fat burning and muscle gain, and have numerous other benefits.
- **CELLULAR REPAIR:** The body induces important cellular repair processes, such as removing waste material from cells.
- **GENE EXPRESSION:** There are beneficial changes in several genes and molecules related to longevity and protection against disease.

Many of the benefits of intermittent fasting are related to these changes in hormones, the function of cells, and gene expression.

### 2. CAN HELP YOU LOSE WEIGHT AND VISCERAL FAT

Many of those who try intermittent fasting are doing it to lose weight. Intermittent fasting will make you eat fewer meals. Unless you compensate by eating much more during the other meals, you'll end up taking in fewer calories.

Additionally, intermittent fasting enhances hormone function to facilitate weight loss. Lower insulin levels, higher HGH levels, and increased amounts of norepinephrine (noradrenaline) all increase the breakdown of body fat and facilitate its use for energy.

For this reason, short-term fasting increases your metabolic rate, helping you burn even more calories.

In other words, intermittent fasting works on both sides of the calorie equation. It boosts your metabolic rate (increases calories out) and reduces the amount of food you eat (reduces calories in).

Studies have shown that intermittent fasting can cause weight loss of 3–8% over 3–24 weeks. This is a huge amount. Also, a loss 4–7% off the waist circumference over 6–24 weeks, which indicates that people lost visceral fat.



### **3. CAN REDUCE INSULIN RESISTANCE, LOWERING YOUR RISK FOR TYPE 2 DIABETES**

Type 2 diabetes has become a very common diagnosis in recent decades. Its main feature is high blood sugar levels in the context of insulin resistance.

Anything that reduces insulin resistance should help lower blood sugar levels and protect against type 2 diabetes.

Intermittent fasting has been shown to have major benefits for insulin resistance and to lead to an impressive reduction in blood sugar levels. Intermittent fasting may also be highly protective for people who are at risk for developing type 2 diabetes.

### **4. CAN REDUCE OXIDATIVE STRESS AND INFLAMMATION IN THE BODY**

Oxidative stress is one of the steps toward aging and many chronic diseases.

It involves unstable molecules called free radicals. Free radicals react with other important molecules, such as protein and DNA, and damage them.

Several studies show that intermittent fasting may enhance the body's resistance to oxidative stress. Additionally, studies show that intermittent fasting can help fight inflammation, another key driver of many common diseases.

### **5. MAY BE BENEFICIAL FOR HEART HEALTH**

Heart disease is currently the world's biggest killer. It's known that various health markers (so-called "risk factors") are associated with either an increased or decreased risk of heart disease. Intermittent fasting has been shown to improve numerous different risk factors, including:

- Blood sugar levels.
- Blood pressure.
- Blood triglycerides.
- Total and LDL (bad) cholesterol.
- Inflammatory markers.

The effects of fasting on heart health need to be studied more in-depth before recommendations can be made.

### **6. INTERMITTENT FASTING INDUCES VARIOUS CELLULAR REPAIR PROCESSES**

When we fast, the cells in the body initiate a cellular "waste removal" process called autophagy.

This involves the cells breaking down and metabolizing broken and dysfunctional proteins that build up inside cells over time.

Increased autophagy may provide protection against several diseases, including cancer and neurodegenerative diseases such as Alzheimer's disease.

### **7. MAY HELP PREVENT CANCER**

Cancer is characterized by uncontrolled growth of cells.

Fasting has been shown to have many beneficial effects on the metabolism that may lead to reduced risk of cancer.

Promising evidence from studies indicates that intermittent fasting or diets that mimic fasting may help prevent cancer.

There's also some evidence showing that fasting reduced various side effects of chemotherapy in humans.

### **8. HAS BENEFITS FOR YOUR BRAIN**

What's good for the body is often good for the brain as well. Intermittent fasting improves various metabolic features known to be important for brain health.

Intermittent fasting helps reduce:

- Oxidative stress.
- Inflammation.
- Blood sugar levels.
- Insulin resistance.

Fasting also increases levels of a brain hormone called brain-derived neurotrophic factor (BDNF). A BDNF deficiency has been implicated in depression and various other brain problems.

### **9. MAY HELP PREVENT ALZHEIMER'S DISEASE**

Alzheimer's disease is the world's most common neurodegenerative disease. There's no cure currently available for Alzheimer's, so preventing it from showing up in the first place is critical.

Studies show that intermittent fasting may delay the onset of Alzheimer's or reduce its severity. In



a series of case reports, a lifestyle intervention that included daily short-term fasts was able to significantly improve

Alzheimer's symptoms in 9 out of 10 people.

## 10. MAY EXTEND YOUR LIFESPAN, HELPING YOU LIVE LONGER

One of the most exciting applications of intermittent fasting may be its ability to extend lifespan.

Small studies have shown that intermittent fasting extends lifespan in a similar way as continuous calorie restriction.

Although this is far from being fully determined in humans, intermittent fasting has become very popular among the anti-aging crowd. Given the known benefits for metabolism and all sorts of health markers, it makes sense that intermittent fasting could help you live a longer and healthier life.

## POTENTIAL INTERMITTENT FASTING SIDE EFFECTS

Intermittent fasting is safe for most people. However, studies have shown that intermittent fasting does have some minor side effects. Plus, it's not the right choice for everyone.

### 1. HUNGER AND CRAVINGS

It may be no surprise that hunger is one of the most common side effects related to intermittent fasting. When you reduce your calorie intake or go long periods without taking in calories, you may experience increased hunger. Studies suggest that hunger is a symptom people typically experience during the first days of a fasting regimen.

One 2020 study looked at 1,422 people who participated in fasting regimens lasting 4-21 days. They tended to experience hunger symptoms only during the first few days of the regimens.

So, symptoms like hunger may resolve as your body adapts to regular fasting periods.

### 2. HEADACHES AND LIGHT-HEADEDNESS

Headaches are a common side effect of intermittent fasting. They typically occur during the first few days of a fasting protocol.

A 2020 review looked at 18 studies of people undergoing intermittent fasting regimens. In the four studies that reported side effects, some participants said they had mild headaches. Interestingly, researchers have found that "fasting headaches" are usually located in the frontal region of the brain and that the pain is typically mild or moderate in intensity.

What's more, people who commonly get headaches are more likely to experience headaches during fasting than those who don't. Researchers have suggested that low blood sugar and caffeine withdrawal may contribute to headaches during intermittent fasting.

### 3. IRRITABILITY AND OTHER MOOD CHANGES

Some people may experience irritability and other mood disturbances when they practice intermittent fasting.

When your blood sugar is low, it may cause you to feel irritated.

Low blood sugar, or hypoglycaemia, can occur during periods of calorie restriction or over periods of fasting. This can lead to irritability, anxiety, and poor concentration.

Studies in women found that participants were significantly more irritable during an 18-hour fasting period than they were during a non-fasting period. Interestingly, the researchers found that, although the women were more irritable, they also experienced a higher sense of achievement, pride, and self-control at the end of the fasting period than they reported at the start of fasting.

### 4. FATIGUE AND LOW ENERGY

Studies show that some people practicing various methods of intermittent fasting experience fatigue and low energy levels.

Low blood sugar related to intermittent fasting can cause you to feel tired and weak. Plus, intermittent fasting may lead to sleep disturbances in some people, which can cause tiredness during the day.

However, some studies show that intermittent fasting can reduce fatigue, especially as your body becomes adapted to regular fasting periods.





## 5. MALNUTRITION

If a person engages in very long fasting periods and doesn't replenish their body with enough nutrients, this could result in malnutrition. The same goes for poorly planned continuous energy restriction diets.

People are generally able to meet their calorie and nutrient needs on various types of intermittent fasting programs.

However, if you don't plan or practice your fasting program carefully over a long time period or restrict calories to an extreme level, you might experience malnutrition along with other health complications. That's why it's essential to consume a well-rounded, nutritious diet while practicing intermittent fasting. Make sure you never overly restrict your calorie intake.

A healthcare professional who's experienced in intermittent fasting can help you come up with a safe plan that provides an appropriate number of calories and the right amounts of nutrients for you.

## WHO SHOULD AVOID INTERMITTENT FASTING?

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Although intermittent fasting may be a smart choice for some people, it's not appropriate or safe for others. Some people may be at risk of dangerous side effects if they participate in intermittent fasting.

Healthcare professionals generally advise that the following people avoid intermittent fasting:

- People who are pregnant or breastfeeding.
- Young children and teens.
- Older adults who experience weakness.
- People with immunodeficiencies.
- People with current or past eating disorders.
- People with dementia.
- Those with a history of traumatic brain injury or post concussive syndrome.

This list is not exhaustive and there are exceptions. For example, healthcare professionals have used fasting to treat epilepsy in children.

If you have a medical condition or are currently taking medications, it's important to discuss the benefits and risks of intermittent fasting with a trusted healthcare professional.

Certain people may be more at risk of adverse side effects related to fasting, so it's important to determine whether intermittent fasting is the safe choice for your specific needs.

Additionally, if you experience prolonged side effects when practicing intermittent fasting, this may be a sign that it isn't working for your body. These side effects could include:

- Extreme hunger.
- Nausea.
- Irritability.
- Headaches.
- Fatigue.
- Faintness.

Don't continue intermittent fasting if the program makes you feel miserable. Even though this way of eating has been tied to many health benefits, there are many other things you can do to benefit your health that don't involve fasting. Follow a balanced and nutritious diet, get proper sleep, engage in regular physical activity, and manage stress — these are much more important for promoting overall health.

## THE BOTTOM LINE

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Intermittent fasting is a very popular weight-loss method, but its benefits extend beyond that. It can help you live a longer and all-around healthier life too, according to studies, but it doesn't work for everyone.

If you decide to try intermittent fasting, keep in mind that diet quality is crucial. There are many apps can help with this and even have timers on this (like the FREE Fastic app).

If you're interested in starting intermittent fasting, consider speaking with your doctor or a nutrition expert today. They can help you determine whether it's safe for you.

