**Intermittent fasting (IF)** is an eating pattern that cycles between periods of fasting and eating.Intermittent Fasting 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.

**Affects On Your Cells and Hormones**

When you fast, several things happen in your body on the cellular and molecular level.For example, your body adjusts hormone levels to make stored body fat more accessible.Your cells also initiate important repair processes and change the expression of genes.

Here are some changes that occur in your body when you fast:

* Human Growth Hormone (HGH): The levels of growth hormone skyrocket, increasing as much as 5-fold. This has benefits for fat loss and muscle gain, to name a few.
* Insulin: Insulin sensitivity improves and levels of insulin drop dramatically. Lower insulin levels make stored body fat more accessible.
* Cellular repair: When fasted, your cells initiate cellular repair processes. This includes autophagy, where cells digest and remove old and dysfunctional proteins that build up inside cells.
* Gene expression: There are changes in the function of genes related to longevity and protection against disease.

These changes in hormone levels, cell function and gene expression are responsible for the health benefits of intermittent fasting.Additionally, intermittent fasting changes hormone levels to facilitate weight loss.In addition to lowering insulin and increasing growth hormone levels, it increases the release of the fat burning hormone norepinephrine (noradrenaline).Because of these changes in hormones, short-term fasting may increase your metabolic rate by 3.6–14%.By helping you eat fewer and burn more calories, intermittent fasting causes weight loss by changing both sides of the calorie equation.Studies show that intermittent fasting can be a very powerful weight loss tool.A 2014 review study found that this eating pattern can cause 3–8% weight loss over 3–24 weeks, which is a significant amount, compared to most weight loss studies.According to the same study, people also lost 4–7% of their waist circumference, indicating a significant loss of harmful belly fat that builds up around your organs and causes disease .

Another study showed that intermittent fasting causes less muscle loss than the more standard method of continuous calorie restriction.However, keep in mind that the main reason for its success is that intermittent fasting helps you eat fewer calories overall. If you binge and eat massive amounts during your eating periods, you may not lose any weight at all.

**Health Benefits:**

Many studies have been done on intermittent fasting, in both animals and humans.

These studies have shown that it can have powerful benefits for weight control and the health of your body and brain. It may even help you live longer.

Here are the main health benefits of intermittent fasting:

**Weight loss**: As mentioned above, intermittent fasting can help you lose weight and belly fat, without having to consciously restrict calories.

**Insulin resistance**: Intermittent fasting can reduce insulin resistance, lowering blood sugar by 3–6% and fasting insulin levels by 20–31%, which should protect against type 2 diabetes .

**Inflammation:** Some studies show reductions in markers of inflammation, a key driver of many chronic diseases.

**Heart health**: Intermittent fasting may reduce “bad” LDL cholesterol, blood triglycerides, inflammatory markers, blood sugar and insulin resistance — all risk factors for heart disease.

**Cancer:** Animal studies suggest that intermittent fasting may prevent cancer

Brain health: Intermittent fasting increases the brain hormone BDNF and may aid the growth of new nerve cells. It may also protect against Alzheimer’s disease.

**Anti-aging**: Intermittent fasting can extend lifespan in rats. Studies showed that fasted rats lived 36–83% .

Keep in mind that research is still in its early stages

**Drawbacks**

Intermittent fasting is certainly not for everyone.

If you’re underweight or have a history of eating disorders, you should not fast without consulting with a health professional first.There is some evidence that intermittent fasting may not be as beneficial for women as it is for men.

For example, one study showed that it improved insulin sensitivity in men, but worsened blood sugar control in women .

Though human studies on this topic are unavailable, studies in rats have found that intermittent fasting can make female rats emaciated, masculinized, infertile and cause them to miss cycles.There are a number of anecdotal reports of women whose menstrual period stopped when they started doing IF and went back to normal when they resumed their previous eating pattern.For these reasons, women should be careful with intermittent fasting.

If you have issues with fertility and/or are trying to conceive, consider holding off on intermittent fasting for now. This eating pattern is likely also a bad idea if you’re pregnant or breastfeeding.

Hunger is the main side effect of intermittent fasting.You may also feel weak and your brain may not perform as well as you’re used to.This may only be temporary, as it can take some time for your body to adapt to the new meal schedule.If you have a medical condition, you should consult with your doctor before trying intermittent fasting.

This is particularly important if you:

* Have diabetes.
* Have problems with blood sugar regulation.
* Have low blood pressure.
* Take medications.
* Are underweight.
* Have a history of eating disorders.
* Are a woman who is trying to conceive.
* Are a woman with a history of amenorrhea.
* Are pregnant or breastfeeding.

All that being said, intermittent fasting has an outstanding safety profile. There is nothing dangerous about not eating for a while if you’re healthy and well-nourished overall.

Coffee can be particularly beneficial during a fast, as it can blunt hunger.

All weight loss methods can cause muscle loss, which is why it’s important to lift weights and keep your protein intake high. One study showed that intermittent fasting causes less muscle loss than regular calorie restriction.Studies show that short-term fasts actually boost metabolism . However, longer fasts of 3 or more days can suppress metabolism .If you find it easy and feel good during the fast, then maybe try moving on to more advanced fasts like 24-hour fasts 1–2 times per week (Eat-Stop-Eat) or only eating 500–600 calories 1–2 days per week (5:2 diet).Another approach is to simply fast whenever it’s convenient — simply skip meals from time to time when you’re not hungry or don’t have time to cook.

There is no need to follow a structured intermittent fasting plan to derive at least some of the benefits.

Experiment with the different approaches and find something that you enjoy and fits your schedule.

**6 Popular Ways to Do Intermittent Fasting**

Intermittent fasting has recently become a health trend. It’s claimed to cause weight loss, improve metabolic health, and perhaps even extend lifespan.

Several methods of this eating pattern exist.

Every method can be effective, but figuring out which one works best depends on the individual.

Here are 6 popular ways to do intermittent fasting.

**1. The 16/8 method**

The 16/8 method involves fasting every day for 14–16 hours and restricting your daily eating window to 8–10 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 actually 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.It’s generally recommended that women only fast 14–15 hours because they seem to do better with slightly shorter fasts.

For people who get hungry in the morning and like to eat breakfast, this method may be hard to get used to at first. 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 junk food or an excessive number of calories.



**2. The 5:2 diet**

The 5:2 diet involves eating normally 5 days of the week while 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 600.

For example, you might eat normally every day of the week except Mondays and Thursdays. For those two days, you eat 2 small meals of 250 calories each for women and 300 calories each for men.As critics correctly point out, there are no studies testing the 5:2 diet itself, but there are plenty of studies on the benefits of intermittent fasting.



**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.By fasting from dinner one day to dinner the next day, this 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. the next day, you've completed a full 24-hour fast. You can also fast from breakfast to breakfast or lunch to lunch — the end 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 lose weight, it’s very important that you eat normally 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 fairly difficult for many people. However, you don't need to go all in right away. It's fine to start with 14–16 hours, then move upward from there.



**4. Alternate-day fasting**

In alternate-day fasting, you fast every other day.

There are several different versions of this method. Some of them allow about 500 calories during the fasting days.Many of the test-tube studies showing health benefits of intermittent fasting used some version of this method.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 four-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 similar to that of the paleo diet — mostly whole, unprocessed foods.



\*\* eating only small amount of vegetable and fruits

**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.



If you decide to try intermittent fasting, keep in mind that diet quality is crucial. It’s not possible to binge on junk foods during the eating periods and expect to lose weight and boost your health.