

Intermittent Fasting



Chances are you have heard about intermittent fasting (IF). In fact, it was the number one search under “Diets” on [Google in 2019](#). The recent interest in this might make you think that everyone should be trying intermittent fasting, but the research is not that straightforward.

Intermittent fasting as a weight loss method has been around in various forms for many years. Understanding the difference between fasting and intermittent fasting can help explain why many diets fail: the all or nothing approach. Long-term fasting is when a person does not eat or severely limits nutrition for long periods of time, which can be harmful to the body. Most experts agree that people should seek advice from their medical provider before starting any fast to avoid potential damage to the gastrointestinal system or circadian rhythm (Mattson, 2014). Also, when used as part of a diet plan, most people who fast often regain the weight they lost (Anson, 2003). As an alternative to a full fast, intermittent fasting involves limiting food intake for shorter and more specific periods of time. There are three common ways intermittent fasting can be implemented:

- Time-restricted feeding: Fasting 12 to 21 hours per day and having a specified time to consume food without restricting calories.
- Alternate-day fasting: Going a full day without eating.
- Modified fasting: Periods of severely limited food intake (5:2= 5 days normal eating, 2 days restricted intake).

Intermittent Fasting and Weight Management

IF as a means for weight loss may not be any better than simply reducing caloric intake. A 2015 meta-analysis of 12 clinical trials focused on IF found weight-loss results comparable between fasting and caloric restriction groups. When comparing the fasting group with the continuous caloric restriction group, researchers concluded, “There was no significant difference in weight loss amounts or body composition changes” (Seimon et al., 2015).

So why do people seem to lose weight with IF?

The food we eat is broken down by enzymes and ultimately end up as molecules in our bloodstream. Carbohydrates, particularly sugars and refined grains are quickly broken down into sugar, which our cells utilize for energy. What our cells do not use is then stored in our fat cells as fat. But sugar can only enter our cells with insulin - insulin brings sugar into the fat cells and keeps it there.

Between meals, as long as we do not snack, our insulin levels will go down and our fat cells can then release the stored sugar for energy. We lose weight if we let our insulin levels go down. The entire idea of IF is to allow the insulin levels to go down far enough and for long enough that we burn off the stored fat.

When it comes to any diet or eating plan, the reason people lose weight is typically due to reduced caloric intake, being aware of what food they are eating, and portion sizes - rather than the specific dietary plan they are following. This seems to be true for fasting as well. IF may be a useful tool but it is not superior for weight loss.

Intermittent Fasting and Managing Cholesterol and Glucose

Researchers have also been interested in the use of IF to help manage both cholesterol and glucose. The results, however, have not been consistent.

One randomized controlled trial that followed 100 obese participants for 12 months found “no significant differences in blood pressure, heart rate, fasting glucose, and fasting insulin. At 12 months, although there were no differences in total cholesterol and triglycerides, the alternate-day fasting group showed significantly increased low-density lipoprotein (LDL) cholesterol levels” (Trepanowski et al., 2017).

While Trepanowski et al. noted an increase in LDL cholesterol among subjects who fasted, a 2018 [study](#) conducted by Ganesen and colleagues noted a decrease in LDL cholesterol levels in a meta-analysis of four studies on IF.

While the research results on IF are mixed, previous studies have shown that the strategies that have the biggest impact on managing cholesterol and glucose/A1c are increasing fiber intake with fruits, vegetables, and whole grains - in addition to increasing exercise (Mcrae, 2017).

Intermittent Fasting and Female Hormones

While there is no specific research on IF and female hormones, there are some studies that suggest fasting could adversely impact ovulation and fertility in women. For example, Fujiwara and Nakata (2010) found that skipping breakfast was related to menstruation disorders in college women.

Practical Concerns of Intermittent Fasting

Supporters of IF argue that fasting is simple because tracking calories or eating specific food is not necessary – if you eat only during your specific days or eating windows you will lose weight. However, as research suggests, that implementation is not that simple.

In the 12-month randomized control trial mentioned above, the dropout rate was higher in the alternate-day fasting group, which suggests that fasting may be more challenging to follow. Going without food for a whole day or following a very low-calorie intake plan a few days a week may not be practical over a long period of time (Trepanowski et al., 2017).

Putting fasting into practice in daily life becomes more complicated due to social events, cravings, or high stress levels. One recent study tracked individuals who intended to fast to determine whether or not they followed through. The study found “emotional, stress eating, and food craving are disinhibiting traits that seem to increase intention-behavior gaps” (Reichenberger et al, 2019). The take-away is that despite our best intentions, aspects of our daily life can get in the way of being able to maintain an IF diet.

Intermittent fasting can be hard... but maybe it doesn't have to be

New research is suggesting that not all IF approaches are the same, and some are actually very reasonable and effective.

Based on this, researchers from the University of Alabama conducted [a study](#) with a small group of obese men with prediabetes. They compared a form of intermittent fasting called “early time-restricted feeding,” where all meals were fit into an early eight-hour period of the day (7 am to 3 pm) or spread out over 12 hours (between 7 am and 7 pm). Both groups maintained their weight but after five weeks, the eight-hours group had noticeably lower insulin levels and significantly improved insulin sensitivity, as well as lower blood pressure. The eight-hours group also reported decreased appetite. By eating earlier in the day and extending the overnight fast, metabolism greatly improved - even in people who did not lose any weight.

Conclusion: More Research is Needed

A lack of large-scale controlled studies and longitudinal data from the current research makes it difficult to make a recommendation. So, what should you do if you are interested in intermittent fasting? You can follow the basic principles of a healthy diet: eat a variety of whole, fresh, real foods; practice portion control, and reduce the amount of saturated fats and processed food you consume. In doing so, you can improve your overall health and well-being over the long-term.

Four Ways to Use This Information to Improve Your Health

1. **Avoid sugars and refined grains.** Instead, eat fruits, vegetables, beans, lentils, whole grains, lean proteins, and healthy fats (a sensible, plant-based, Mediterranean-style diet).
2. **Let your body burn fat between meals.** Don't snack. Be active throughout your day. Build muscle tone.
3. **Consider a simple form of intermittent fasting.** Limit the hours of the day when you eat, and for best effect, make it earlier in the day (between 7 am to 3 pm, or even 10 am to 6 pm).
4. **Avoid snacking or eating at nighttime** (Tello, 2018).

It should be noted that there are groups of people who should **NOT** try intermittent fasting. These include:

- Pregnant or breastfeeding women.
- Anyone with an unhealthy relationship with food, or a history of eating disorders or disordered eating habits.
- Anyone with diabetes or low blood sugar.
- Women with a history of irregular periods or who are trying to conceive are urged to proceed with caution, as IF may adversely impact hormone levels.

References

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