

# Intermittent Fasting vs. High Small-Meal Frequency: Which Is Better?

These last few years has seen a rise in popularity between two distinct methods of meal scheduling: Intermittent Fasting (the act of reducing your number of meals per day down to one or two meals and not consuming any calories outside the few hours you permit yourself to eat), and High Small-Meal Frequency (the act of consuming approximately four or more small meals and snacks throughout the entire day). Health enthusiasts have been touting the health and fitness benefits of both methods of dieting, and we have a plethora of anecdotal evidence of success with both methods of meal scheduling. But is one method inherently better than the other?

Research has found that while both Intermittent Fasting and High Small-Meal Frequency have their own benefits, they have also found deficits. In this paper, we'll be reviewing both the pros and cons of both from two perspectives: weight loss and athletic ability, as these aspects are directly tied to nutrition and caloric intake.

## History of Intermittent Fasting

Intermittent Fasting and the fasting state has always been a prevalent phenomenon in human history. Fasting has a place in various religious practices and cultures, and there has been a deep-seated belief that fasting is beneficial to health. The earliest written recordings of the health benefits of fasting date back as early as the mid-1800's when scientists, such as E.H. Dewey, Tanner, Alexander Jacques, and F. Penny, M.D., published their research on health outcomes from fasting (Kerndt, 1982). Advocacy and research for fasting as a method of weight-loss occurred as early as the 1900s, when clinical trials of fasting as a method of combating obesity were released for public review (Kerndt, 1982).

It was in the 2000s however when Intermittent Fasting was highly popularized thanks to the TV documentary made by Dr. Michael Mosley, "*Eat Fast, Live Longer*" in 2012. and the subsequent publishing of the books "*The 5:2 Diet*" by Kate Harrison, and 2016's "*The Obesity Code*" by Dr. Jason Fung (Tello, 2021).

How does Intermittent Fasting help? Changing the frequency of meals and meal timing is said to correlate with change to several body mechanics and how the body breaks down and distributes nutrients throughout the day. Specifically, the body's circadian rhythm and glycaemic control. The body is able to benefit more from macronutrients during the day without keeping excess energy, than at night (Paoli, 2019). In preventing the body from storing an excess of energy at night, the likelihood of that energy turning into fat and body weight is reduced exponentially, and weight loss is more likely to occur. Concurrently, the prevalence of comorbidities such as high blood pressure, diabetes, and other diseases, is reduced.

### The Idea of High Small-Meal Frequency

High Small-Meal Frequency is essentially the opposite of Intermittent Fasting: Eating much smaller meals throughout the entire day, also known as 'snacking' or 'grazing' throughout the day. This method of meal scheduling was popularized roughly around the 1900s as the common-man got busier during the day, making actual "meals" impractical.

High Small-Meal Frequency has also grown to become a common form of post-procedural rehabilitation, especially for post-GI surgeries, where you want to maintain caloric intake while minimizing stomach extension; and also functioned as a clinical treatment strategy for anorexia (Dashti, 2015). Overall, High Small-Meal Frequency seems to reduce hunger throughout the day and improve satiety from the meals that are consumed, and, like Intermittent Fasting, also increases glycaemic control (Papakonstantinou, 2018).

While historical accounts of High Small-Meal Frequency aren't extensive, they are tied to treatments of various eating disorders and conditions where caloric intake is at risk. And such treatments date back as early as the mid-1800s. High Small-Meal Frequency treatments appear to focus on weight and energy maintenance, and provide individuals with a steady source of energy throughout the entire day, while functioning as an easy alternative to more restrictive meal plans for those who lose motivation easily (Papakonstantinou, 2018). Results for weight loss however seem mixed, however, and seem to depend on the macronutrients consumed over the twenty-four-hour cycle.

## Weight Loss

For weight loss, we'll look at the efficacy of Intermittent Fasting and High Small-Meal Frequency in terms of overall weight loss and prevention of long-term weight gain, and also assess ease of adherence to both of the programs. From our recounts of both these methods of meal scheduling, we already know that they have potential to assist with weight loss, assuming macronutrient needs are being met throughout.

Intermittent Fasting for weight loss has a more extensive history than High Small-Meal Frequency, as written earlier. There are diets out there like the Mediterranean Diet that put a greater emphasis on making sure you are meeting your daily needs in the time you may eat. Studies also show that eating less over the twenty-four-hour period positively affects glucose tolerance and insulin resistance (Kahleova, 2017). When controlling for other factors such as age and activity level, those who follow an Intermittent Fasting routine experience a change of BMI of up to -3%, or roughly 12-15 pounds on average (Kahleavao, 2017).

Intermittent Fasting, however, is more effective when meals comprise breakfast or lunch earlier in the day than eating meals later into the evening. In fact, some studies have suggested that consuming enormous meals in the afternoon or evening has a more negative impact on weight loss than consuming large meals in the morning or early afternoon (Hutchison, 2015). This has some issues when we're looking at adherence to Intermittent Fasting for maximum effect, as the recommended schedule for the fasting period may not be convenient for those who work busy schedules during the morning and into the day. The ability to eat breakfast in the morning seems to provide a major advantage to those who're Intermittent Fasting.

High Small-Meal Frequency also has the *potential* for weight loss. The margins though are smaller than Intermittent Fasting. High Small-Meal Frequency does provide for greater control and leniency over energy intake, and additional benefits including reduced fluctuations in glucose that can cause cellular stress tied to cardiovascular disease (Papakonstantinou, 2018). This meal schedule also has the added benefit of reducing overall hunger and increased satiety, which reduces the need to eat (Papakonstantinou, 2018). 'Grazing' throughout the day also has additional benefits for the elderly because it is better for ensuring more nutrient intake and recording (Dashti, 2015).

The research also suggested that High Small-Meal Frequency also has the potential to promote increased fat loss, and improve lean muscle retention while in a hypocaloric state, assuming macronutrient and exercise needs were being met (Hutchison, 2015). However, the research also shows that High Small-Meal Frequency can have a higher negative impact in the event the body is in a hyper-caloric state, more so than with Intermittent Fasting. This makes monitoring exactly what you are eating a must (Hutchison, 2015). So while High Small-Meal Frequency meal scheduling for weight loss is easier to adhere to than Intermittent Fasting, there are several additional factors to consider ensuring optimal weight loss.

## Athletic Ability

Research on athletic ability and how it is affected by both Intermittent Fasting and High Small-Meal Frequency have been fairly mixed. Across multiple studies, some suggest that the frequency of meals throughout the twenty-four-hour period has no effect on energy expenditure in either men or women (Hutchison, 2015). Assuming efficient macronutrient intake and acclimation to the chosen meal schedule, neither Intermittent Fasting and High Small-Meal Frequency seems to have a distinct advantage over the other in terms of performance in athletic ability, sports, or exercise.

However, this is assuming sufficient nutrient intake and a proper diet. Different fields of athleticism heavily depend on the right diet to maintain good health and performance. In endurance exercise, for example, a sufficient intake of carbohydrates appears to be beneficial to performance in running (Ormsbee, 2014). As far as meal timing is concerned, there does not appear to be substantial evidence on how athletic performance is affected by when your last meal was.

## Discussion

So what is a better meal schedule to follow? Intermittent Fasting or High Small-Meal Frequency? Unfortunately, there is no simple answer for which is better, and depends on several circumstances. Athletic ability and performance do not appear to be largely affected by either of the two schedules, so we are left with how the two schedules affect weight loss. Again, it depends. Intermittent Fasting has greater margins of potential for weight loss and BMI reduction

than its counterpart, but it also has a very high barrier of entry in the form of proper meal timing. That Intermittent Fasting works the best when the fasting period is in the evening, makes it difficult to adhere to for people whose schedules do not allow for easy access to healthy meals during the morning. It requires a good understanding of the body's circadian rhythm, and an acknowledgement that eating in the evening has less of a beneficial effect than eating in the morning.

High Small-Meal Frequency, in contrast, is an easier meal schedule for people to follow because it is less restrictive in terms of meal timing. It is a good potential schedule to follow for people with low motivation to diet or follow stricter plans. However, weight loss results appear to be of a lower margin of potential than Intermittent Fasting. It is also much easier to ruin a diet under this meal schedule, as smaller meals can often come as easy to access and easy to consume snacks that are not good for you. Adherence to this meal schedule is a challenge in its own way as it will heavily depend on you to plan the snacks and meals you are to consume without going into a hyper-caloric and excess energy state.

Which meal schedule is better than the other? It depends on which one will be more accessible to you. For total success with either plan, different conditions, including age, work schedule, and accessibility to a sustainable source of healthy nutrients, will have to be considered. You may find that one meal schedule will overall be more accessible to you than the other, and sustainable. While the research that we have now does not provide a definitive answer, we hope this information can help you make an informed decision on which meal schedule is right for you.

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