

## Fasting

Forget juice cleanses and detox diets. Drinking your weight in liquid kale, it won't flush out toxins any faster than if you were eating, you know, actual food.

The good news: There's a little-known way your body does cleanse itself, and it's a process you can optimise. It leads to a whole host of amazing benefits from weight loss to enhanced mental performance to reversal of many age related syndromes.

All you need to do is practice a little self-cannibalism.

### ***What?***

#### **How Autophagy Works**

Yes, you can actually train your body to eat itself — and, believe it or not, you want it to. It's a natural process called autophagy (the word literally means "self-eating").

It's one way your body cleans house. In this process, your cells create membranes that hunt down scraps of dead, diseased, or worn-out cells; gobble them up; strip 'em for parts; and use the resulting molecules for energy or to make new cell parts

*"Think of it as our body's innate recycling program,"* says Colin Champ, MD, an assistant professor at the University of Pittsburgh Medical Center.

Champ is also the author of "Misguided Medicine," a book that questions many traditional health recommendations and provides evidence-based advice on diet and lifestyle.

#### **The benefits of Autophagy**

There's some evidence to suggest that autophagy ("ah-TAH-fah-gee") plays a role in controlling inflammation and boosting immunity (are you paying attention!), among other benefits.

In one 2012 study on mice, researchers found that autophagy protected against:

- Cancer
- Neurodegenerative disorders
- Infections
- Inflammatory diseases
- Ageing
- Insulin resistance

Another study from that year showed how a lack of autophagy can be harmful.

Researchers found that removing the autophagy gene in mice caused weight gain, lethargy, higher cholesterol, and impaired brain function.

*"Autophagy makes us more efficient machines to get rid of faulty parts, stop cancerous growths, and stop metabolic dysfunction like obesity and diabetes,"* Champ says.

#### **How to kick-start Autophagy**

*"So how do I eat myself?"* is a question you probably have never asked, but we're about to tell you how. Autophagy is a response to stress, so you're going to want to put your body through some hardship to drum up a little extra self-cannibalism.

Note. AUTOPHAGY IS A STRESS. So we need to get the balance right. A bit is great, too much which kick start our body into starvation mode where it locks down fat as it thinks we're going to need it for the coming ice age and raises cortisol and adrenaline in an effort to get us up off our ass and go searching for food.

(We know this keeps getting weirder, but trust me.)

As is often the case, short-term discomfort can bring long-term benefits.

*"It's our ancestral and evolutionary response to dealing with feast and famine in times of stress," Champ says. "Since a lot of these things would kill us, like starvation and exercise, it only makes sense that after millions of years we adapted those mechanisms to make them positive."*

Here are the three main ways to boost autophagy in your body.

### **1. Lower your carb intake**

There's a great way to activate autophagy without forgoing your favorite rib eye — though you'll probably need to quit candy.

It's called ketosis. The idea is to reduce carbohydrates to such low levels that the body has no choice but to use fat as a fuel source. This is the magic behind the wildly popular ketogenic diet.

Keto diets are high in fat and low in carbs (steak, bacon, and peanut butter shakes are a bonus for the keto crowd). Between 60 and 70 percent of your overall calories come from fat.

Protein makes up 20 to 30 percent of calories, while only 5 percent comes from carbs.

Being in ketosis can help people lose body fat while retaining muscle. There's some evidence that it also may help the body fight cancerous tumors, lower the risk of diabetes, and protect against brain disorders, particularly epilepsy.

In fact, in a 2018 study, rats fed a keto diet had less brain damage during seizures.

"Ketosis is like an autophagy hack," Champ says. "You get a lot of the same metabolic changes and benefits of fasting without actually fasting."

If staying in ketosis sounds too hard, take heart. A 2012 study noted similar benefits in people who followed a diet in which no more than 30 percent of their overall calories came from carbs, Champ says.

Note: Anyone with health issues, especially kidney or liver problems, should talk to a doctor before beginning a keto diet. I would also let me know on the calls that you're going to do it so we can talk through some of the potential pitfalls before you start.

### **2. Intermittent Fasting**

Skipping meals is another stressful act that the body may not immediately love but ultimately benefits from. Research has shown there are loads of positives to an occasional fast.

One research review found that intermittent fasting and autophagy can make cancer treatments more effective while protecting normal cells and reducing side effects.

In another mouse study, intermittent fasting was shown to improve cognitive function, brain structure, and neuroplasticity, which is fancy-speak for the brain's ability to reorganize and rebuild itself.

That said, it wasn't totally clear if autophagy was the cause. Plus, the study was done on mice.

In the meantime, give fasting a shot. While Champ fasts for 18 hours per day a couple of times per week, he knows that can be a tough routine for most of us.

Different variations (anything from 12 - 22 hours) of intermittent fasting seem to show pretty awesome health benefits. A review of the research concluded that it may have an array of positive effects, ranging from a healthier body weight and lower risk of diseases to an increased lifespan.

Keep in mind that fasting is generally not recommended for children, for some people with diabetes or other issues with blood sugar, or for pregnant women. Women will also react differently to men, again if you're thinking of giving it a go let me know on one of the calls and we can talk it through.

Right with this one I want to give you a few options.

Most experts out there recommend choosing a feeding window which works for you and sticking to it. However like exercise I believe we are best mixing this up. Your body is extremely efficient and if it knows it has to fast for 16 hour EVERY SINGLE day it will adapt to this pattern and the benefits will reduce (just like if you do the same workout every day at the same time your body simply stores the amount of energy needed for that workout so any benefits are minimal).

For this reason I prefer a more random IF protocol.

## My IF Protocol

Once a week 1 x 24 hour fast (*for me this has been a game changer in resetting my psychological relationship with food and is for me, a **MUST***)

For the rest of the week I will have at least 1 day (sometimes 2) where I have as big a feeding window as I can possible have, often 18 - 20 hours.

For the rest of the week I will alternate between 12 - 16 hour feeding windows depending on how I'm feeling.

Every 3 months I will do a longer 48 - 72 hour fast.

Now this is what works for me. I want you to use this as a baseline and adapt it for you. I would really recommend you do the 24 hour fast as this is a game changer but to start with you might want to do it just once a month as you adapt.

Just like you wouldn't jump straight off the sofa and go and run a marathon, build up to this. If you've never done OF before in your life start with 12 hour windows and build up.

## WOMEN AND FASTING

Women are MUCH more sensitive to environmental cues than men. For **many** women (not all) following the above IF protocol could result in hormonal imbalances. For women I recommend starting on a different protocol, monitor your periods and your mood. If your periods start to become more irregular or you're grumpy more than often ease back:

Once every 2 weeks 1 x 24 hour fast

For the rest of the week have at least 1 day (sometimes 2) where you have as big a feeding window as you can possible can, often 16 hours.

For the rest of the week alternate between 12 - 14 hour feeding windows depending on how you're feeling.

Every 3 months do a longer 48 - 72 hour fast.

### 3. Exercise regularly

As we've already said, Exercise puts stress on your body.

Working out actually damages your muscles, causing microscopic tears that your body then rushes to heal. This makes your muscles stronger and more resistant to any further "damage" you might cause them.

Regular exercise is the most popular way people unintentionally help their bodies cleanse themselves. (So there's actually something to that fresh, renewed feeling you get after working out.)

A 2012 study looked at autophagosomes, structures that form around pieces of cells the body has decided to recycle. After engineering mice to have glowing green autophagosomes (as one does), scientists found something interesting.

The rate at which the mice were healthily demolishing their own cells drastically increased after they ran for 30 minutes on a treadmill. The rate continued to increase until the little guys had been running for 80 minutes.

So, what about humans?

It's hard to figure out the amount of exercise required to switch on the autophagy boost. "[These] are hard questions to answer at the moment," says Daniel Klionsky, PhD, a cellular biologist at the University of Michigan who specializes in autophagy.

*"Clearly exercise has many benefits, aside from the possible role of autophagy."*

#### Is there an easier way?

Not yet. But there's a lot of money to be made if researchers can distill the benefits of autophagy into a pill, so you can be sure they're trying.

*"Of course people are looking for ways to induce autophagy through chemicals, because it would be easier than dieting,"* Klionsky says, but he warns that we're a long way off.

Champ notes that anti-epileptic drugs that mimic ketosis already exist.

In 2018, for instance, the FDA approved stiripentol, which can imitate the effects of a ketogenic diet. It's used for the treatment of seizures associated with Dravet syndrome, a rare form of epilepsy.

Exogenous ketones can also be added to a normal diet to speed up time to ketosis.

However *"There are so many metabolic changes that take place during ketosis that mimicking all of them with a pill might not be possible,"* Champ says. *"The bodily stress that comes with entering ketosis might be necessary for the benefits."*

Just remember: You don't have to stay in ketosis, fast, or exercise intensely all day, every day to experience these benefits. Even a few hours here and there can help.

#### The bottom line

Klionsky notes that there's still a lot we don't know about autophagy, and it's too early to definitively say that the process will cure cancer, make you a genius, or stave off ageing.

*“One fundamental problem is that it is still difficult to monitor autophagy in a living organism, especially a human,” Klionsky says. Still, there’s a pretty strong case to be made that some stress on the body is a good thing.*

The takeaway? Occasional carbohydrate restriction, fasting, and regular exercise all carry mountains of benefits in addition to their impact on autophagy. The best that could happen is a stronger, leaner, and cleaner body.

One more thing: Drink plenty of nature’s own best liquid cleanser — pure, clean water.

Now that’s my kind of detox.

## **Types of Intermittent Fasting**

**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.

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.

### **SUMMARY**

The 16/8 method involves daily fasts of 16 hours for men and 14–15 hours for women. Each day you'll restrict your eating to an 8–10-hour eating window during which you fit in 2, 3, or more meals.

### **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.

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.

## **SUMMARY**

The 5:2 diet, or the Fast Diet, involves eating 500–600 calories for 2 days out of the week and eating normally the other 5 days.

### **3. Eat Stop Eat**

Eat Stop Eat involves a 24-hour fast once or twice per week.

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.

## **SUMMARY**

Eat Stop Eat is an intermittent fasting program with one or two 24-hour fasts per week.

### **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.

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.

## **SUMMARY**

Alternate-day fasting has you fast every other day, either by not eating anything or only eating a few hundred calories.

### **5. The Warrior Diet**

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.

## **SUMMARY**

The Warrior Diet encourages subsisting on only small amounts of vegetables and fruits during the day, then eating one huge meal at night.

## **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.

It's a myth that people need to eat every few hours lest they hit starvation mode or lose muscle.

Your body is well equipped to handle long periods of famine, let alone missing one or two meals from time to time.

Thus, if you're really not hungry one day, skip breakfast and just eat a healthy lunch and dinner. Or, if you're travelling somewhere and can't find anything you want to eat, 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 foods during the other meals.

### **SUMMARY**

Another way to do intermittent fasting is to simply skip one or two meals when you don't feel hungry or don't have time to eat.

### **The Bottom Line**

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, perform better and boost your health.