What Happens in Your Body During a 24 Hour Fast Transcript

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What a 24-Hour Fast Does

Hey, doctor David Jockers here. And today I'm going to tell you what happens in your body when you do a 24 hour fast. What that means is when you eat a meal, let's say you ate lunch on Wednesday at 12:00.

You finished at 1:00, and then you fast to, let's say, 12 or 1:00 the next day. So in a sense, it's one meal in roughly, you know, a 23, 24 hour period.

What's happening in your body when that happens? Well, first off, the first 4 to 6 hours or so, your body is burning the energy you took from your last meal.

So the first 4 to 6 hours, you're just breaking down the fats, the proteins, the carbohydrates, and particularly using the carbohydrates for energy. Some of the dietary fats that you consume, you're going to use those for energy as well.

The proteins are usually using to make new cellular complexes, new enzymes and things like that, and regenerate muscle tissue. Then after roughly six hours or so, your body starts to break down a stored form of sugar.

We call it glycogen. So you start breaking down glycogen in your tissues, right in your liver and in your muscles. And as you're breaking that down, you're producing energy, but you only have a certain amount of glycogen and your body wants to spare a certain amount just in case you get into some sort of survival or life threatening situation.

So you're only going to burn glycogen for a period of time, you know, and that's going to take you roughly to somewhere around 14 to 16 hours after your last meal.

And then at that point, you're going to start really burning fat for fuel. And this is where if your body is not metabolically flexible, if you're not good at burning fat, which, you know, the studies say around 90% of our society is actually very bad at burning fat.

They're very insulin resistant and poor at burning fat. They have dysfunctional mitochondria, so they're not able to actually use fat for fuel very effectively.

And this is why for most people, they really struggle to fast after, let's say, 14 or 16 hours. They feel hypoglycemic. They feel like they've got very low blood sugar.

They feel irritable, hungry cravings, low energy fatigue.

Fuel Use: Glycogen to Fat Burning

They have a lot of different issues. If you're metabolically flexible at this point, you can go longer and your body starts really burning fat for fuel.

So a 24 hour fast is one of the best ways to help your body burn fat, particularly visceral fat, the type of fat that is very inflammatory and surrounds our major organ systems and drives up our risk of chronic disease.

If you're looking to lose weight and improve your lean body tissue, your ratio of fat to muscle, if you want to improve that and reduce the fat and and either preserve or build lean body tissue, doing something like a 24 hour fast once a week can actually be really, really helpful.

One of the most helpful tools for that. So fat burnings number one. Number two is ketones. After roughly 14 to 16

hours, the amount of sugar circulating in your bloodstream from your glycogen stores, from the meal that you consume before has lowered pretty significantly.

And you probably don't have enough sugar there to actually provide enough fuel for your brain. Your brain is one of the most metabolically, metabolically active organs in your system.

It's it's roughly, you know, consuming about 20% of your calories on a day to day basis. And your brain really needs to burn glucose or a byproduct of fatty acid metabolism.

We call that ketones. The reason why we can't burn fat in our brain is because the blood brain barrier is kind of like this protective layer that protects a lot of different toxins and pathogens from getting into the brain.

Will the long chain fatty acids or fatty acids, triglycerides in our system can't cross that blood brain barrier either. So we can't use fatty acids for fuel.

So our liver converts these fatty acids into something called ketones, which are a smaller, water soluble molecule, water soluble byproduct of of fatty acids that can cross the blood brain barrier and get into the brain and be a great fuel source for the brain cells.

Not only that, but ketones. When they elevate in our bloodstream particularly, we can measure this by doing a blood test and looking at a ketone called beta hydroxybutyrate.

And when beta hydroxybutyrate starts elevating above zero 5 or 0.5 million moles, I should say 0.5 million moles. And up into that 1.0 mole range, we start getting tremendous brain benefits from the ketones.

It actually reduces inflammation in our brain. It shuts down something we call the neuroinflammation, which is this this inflammation amplifying system in our brain.

So it shuts that down and it helps regulate our neurotransmitters. It helps all the brain cells get rid of toxins. So they're able to drain toxins and regenerate mitochondria.

We're going to come back to that topic. Another great benefit of ketones is it helps stabilize the glutamate to Gaba ratio in our brain. So glutamate is an excitatory neurotransmitter.

Think about it like if you're driving a car it's like stepping on the gas, right.

Ketones and Brain Benefits

So when you're glutamate is elevated you're you're you're accelerating the car, which is good. You're able to think sharply and quickly, but you also need a really good brake system.

And that's Gabba Gabba is the brakes to the brain. So when you have a poor glutamate to Gaba ratio, which a lot of people out there. Do you end up with anxiety, ADHD, impulsiveness, irritability, anger problems, oftentimes depression, because actually the brain cells start to burn out because they're being we're stepping on the gas too much.

And so we end up getting neuro excitotoxicity in our brain, which can lead to depression. So we end up with a lot of different mood disorders related to this poor glutamate to Gaba ratio.

As we're fasting, the ketones become elevated, which balances the glutamate to Gaba ratio and actually gives us an improved mood. We also get an elevation of endorphins which make us feel good.

And this is why, believe it or not, actually doing a fasting strategy like this has actually been shown in research to improve symptoms of depression, symptoms of anxiety, symptoms of bipolar disorder.

So there are some great benefits that come when we start burning fat and producing these ketones. I mentioned how the ketones reduces inflammation in the brain.

But we also get this overall inflammatory reduction. So inflammation throughout our whole body becomes reduced as we're pushing into this fast 1618, 20 and into that 24 hour range.

All the inflammatory pathways are going down. And so that'll allows more allows our systems to start to heal and regenerate. We know inflammation is part of the healing process, but most people are chronically inflamed because they have insulin resistance.

They're very metabolically inflexible. They've got a high amount of toxicity in their system, and they're driving up oxidative stress. When we start to fast like this, oxidative stress, which is basically like a rusting effect in the body, and it's one of the major precursors to inflammation, the oxidative stress goes down and that shuts down inflammation in the system.

So we reduce overall inflammation in our body. We also get a microbiome reset. What does that mean. Well when we're fasting like this it allows the tight junctions in our gut and on our gut lining to start to heal and repair.

We get less obviously less mechanical stress because we don't have food going through our system. So there's less wear and tear on the gut. So we start to get a healing and repair repair process that gets stimulated.

Also in our gut, when we talk about the bacterial balance in our gut, the microbiome researchers have been looking at this for the last 20 years, and they found that the higher amount of diversity, or the more the larger number of different types of bacterial species in your gut, the healthier metabolically you're going to be in the lower levels of inflammation, you're going to be.

Well, we used to think that we had to eat all this plant fiber in order to create diversity. But what actually what research has shown is that actually eating every few hours is one of the worst things you can do for diversity.

See, we have two categories of feeders in our gut. We have one category is called our primary feeders. They live right above the gut mucosa. So right on top of the intestinal lining we have a layer of mucus and that helps protect the gut lining.

It's also where the immune system in the gut. In fact, about 80% of our immune system is in that mucosa, the mucosa that lines the intestinal tract. And so when we're eating all the time, we're feeding the primary feeders.

The secondary feeders live within the mucosa, so they live deep within the mucosa. And if we're eating every few hours we over feed the primary feeders.

Inflammation and Gut Microbiome Reset

So they get a lot of fuel and they actually crowd out and they release compounds that kill or reduce the amount of secondary feeders in that gut mucosa, which actually makes the mucosa weaker.

And it lowers the amount of mucosa. So we get less of an immune response in our gut, and we're more susceptible to breaking down our gut, creating a condition called intestinal permeability or leaky gut, which drives up whole body inflammation.

And it can increase the risk of autoimmune conditions and chronic inflammatory conditions. So by fasting, taking time away from meals, well, we actually do is we start to trim down the primary feeders.

And that allows the secondary feeders. There's one in particular called Acker Mantia mucin. Mucin means mucus loving. And that means it can actually eat mucus.

So when food is not around, it will actually eat the mucus. And it will actually stimulate the goblet cells in the

intestinal in the intestinal surface to produce more mucus.

And so now we're producing more thicker, healthier mucus lining, which increases the immune capacity in our gut and reduces the overall tension and stress on the intestinal lining.

And Acker Mantia higher amounts of occur have actually been shown that with lower levels of inflammatory diseases and better metabolic overall metabolic health, lower risk of fatty liver disease, diabetes, obesity, better overall metabolic health, and lower risk of autoimmune conditions.

And so, Ackerman, what it does is when it eats food. So now we do the fast. Now we're consuming food, okay. When we consume food, particularly food that's rich in polyphenols, like, for example, extra virgin olive oil or oregano or rosemary or green tea or broccoli.

You know, all these plant foods that are rich in polyphenols. Those polyphenols occur eats those. And it produces something called euro lithium A and euro lithium A actually stimulates the mitochondria within the intestinal cells to break down damage, increase what we call mitos.

So they break down damage mitochondria, regenerate new healthy mitochondria, and we create a stronger, more stress resilient intestinal lining. And again, the integrity of that that intestinal lining is absolutely critical to keeping inflammation under control and as well as our overall metabolic rate.

So amazing things happen when we're doing a 24 hour fast. One of the best ways to reset the microbiome is going through a really a 20 to up to 24 hour fast.

Incredible. For that, we also get overall autophagy. And autophagy means self eating. And that's where the cells of our body actually start to break down old damaged cellular organelles.

So within all the cells we have a whole bunch of different components. And these components become rusted from oxidative stress just from the process of producing energy throughout its existence.

And so as they become rusted, they become less efficient. And they even become very, very just diseased forming. Right. We call them senescent, right?

So they're old aged and not functioning. Right. We need to get rid of these. And so fasting brings down insulin and actually turns on this autophagy mechanism where the body actually breaks down these damaged senescent organelles, takes the raw materials and turns them into new, healthy cellular organelles.

The most well-studied way of doing this is with the mitochondria. And we call this might be where we break down the old damaged, senescent mitochondria that are not metabolically flexible, not good at burning fat for fuel, and they're just sputtering out very little amount of cellular energy.

And they're just kind of taking up space within our cells. So we break those down, we take the raw materials and we turn them into new, healthy, stress resilient mitochondria that can now burn fat for fuel and produce rampant amounts of cellular energy.

And the healthier, stronger, more stress resilient your mitochondria are in all the cells of your body.

Autophagy and Mitochondrial Renewal

We talked about the gut lining, but really all the cells of your body that's going to give you better energy, better mental clarity, better fat burning, less pain, better mood, better sleep quality.

I mean, literally, it's going to have a huge impact on your overall wellness and quality of life. And so that's one of the great benefits here. We're also going to produce more mitochondria.

It's this powerful word called mitochondrial biogenesis. This phrase that means we produce more mitochondria. And so the the greater number of mitochondria that are functioning at a really high level and are very stress resilient within ourselves, the healthier we're going to be, the better overall quality of life we're going to have.

And that that is the amazing benefits to take that take place when you do a 24 hour fast. So what do I do every week? I do a 24 hour fast. For me, the best day is Wednesday.

I usually don't I don't work out that day. I might take a walk, but I don't lift weights. I'll eat lunch. I like to do a lunch to lunch. Some people will do a dinner to dinner.

My wife, she likes to do it from dinner to dinner. It's just easier for her. She can just work throughout the day and do things throughout the day and it keeps her busy.

For me, I just feel better. I sleep better at night that night when I do the fast, when I do it from lunch to lunch. So I usually eat lunch somewhere around between 1 and 2 p.m.

and then I fast until Thursday. Somewhere in that same time frame, 1 to 2 p.m. that's when I break the fast. Now, before I break it, what I actually do is exercise.

So I'll do strength training where I'll lift heavy weights 23 hours fasted. So around 1230 or so I lift heavy weights for 30 minutes or so, and then after I lift weights, I break my fast with amino acids, essential amino acids, to get them right into my system to help drive a lean body tissue development.

And then roughly 15 20 minutes later, usually a really good protein shake with grass fed raw milk avocado in their high quality protein powder, grass fed way protein berries tastes great, and it's loaded with great amino acids to help fuel muscle recovery, healthy fats to help keep me satiated.

And then later on, a few hours later, I might have a little snack, or I might just feel good enough to where I can just go right to dinner and just have a really good, healthy dinner at night.

And that process really helps me regenerate from the inside out.

How to Do a Weekly 24-Hour Fast

Gives me incredible energy, better brain function, better mood, memory, sleep quality. I just feel like I'm cleaning my entire system, resetting my gut microbiome, and ready to go for the rest of the week.

And so if you want to dramatically improve your health, this would be a great strategy. Doing a 24 hour fast, roughly 20, I'll tell people 20 to 24 hours somewhere in that range doesn't have to be exactly at 24.

A lot of these benefits are getting between that 18 to 20 hour range. So if you can do a 20 to 24 hour fast one day a week, don't do any intense exercise on that day.

Stay hydrated. Try to keep your stress under control. That is going to give you incredible metabolic benefits, reduce inflammation, and literally regenerate your body from the inside out.

You'll get incredible benefits and you'll be telling other people to do this as well, because you'll see this is the most powerful form of natural medicine, is actually just going through a fast and allowing your body to do the healing, to do the regenerative capacity that it has the potential to do.

This is ancient medicine right here. All of our ancestors had to fast because food wasn't around. They didn't have access to food all the time. They didn't have pantries and things like that.

Now we've got to be more intentional about it. But I guarantee you, if you practice something like this, you will see incredible health benefits. And if you have not subscribed to our channel, now is the time to do that and hit the bell

button.

That way you get notified whenever we put up one of these important trainings. Thanks so much for doing that. Thank you for being a part of our community, and we'll see you in the next video.

Be blessed.