



**THE SPECTRUM
OF HEALTH**
— P O D C A S T —

Podcast Session #69

The Intermittent Fasting Transformation

With Dr. David Jockers

*Dr. David Jockers, the author of *The Keto Metabolic Breakthrough* and the podcast host of *Dr. Jockers Functional Nutrition*, gives us the simplified and thorough break down of intermittent fasting. It's a vast and open conversation that gives you fresh perspectives and approaches to how you can implement this lifestyle yourself. Even Dr. Christine opens up in this episode, sharing her own lifestyle struggles and the next steps she's taking in her own journey through pregnancy.*

To get more info and regular content from Dr. Jockers, head to www.DrJockers.com

To read the blog mentioned in the episode, go to drjockers.com/menstrual-cycle/

His new book, which is being released October 2020, is called *Fasting Transformation*

Dr. Christine Schaffner: Hi, everyone. I'm Dr. Christine Schaffner, and welcome to the Spectrum of Health Podcast. Today, my guest is Dr. David Jockers, and we're talking about using intermittent fasting to burn fat, reduce inflammation and improve energy and brain health. Dr. David Jockers is a doctor of natural medicine, and he runs one of the most popular natural websites at drjockers.com, which has gotten over 1 million monthly views. His work has been seen on the popular media such as The Dr. Oz Show and Hallmark Home and Family. Dr. Jockers is also the author of the best-selling book, *The Keto Metabolic Breakthrough* by Victoria Belt Publishing, and is a world-renowned expert in the areas of ketosis, fasting and the ketogenic diet. He's also the host of the popular Dr. Jockers Functional Nutrition Podcast. I hope you enjoy this podcast. Intermittent fasting is something I'm trying to incorporate more in my daily life and then into my patient's health, and I think it's one of the best strategies you can do to improve your health and your longevity, so enjoy the show.

01:04 DS: Welcome Dr. Jockers, it's really an honor to interview you today.

01:08 Dr. David Jockers: Well, absolutely. Great to be on with you, Dr. Christine.

01:11 DS: Well, we have a really fun topic, it's something that I've been exploring not only in my personal health but also with my patients more and more, and that's the topic about intermittent fasting. There's so much information on the internet these days and you have an awesome website, you do a really great job of breaking this topic down. For people who might be new to this topic, what are we talking about when we say intermittent fasting?

01:35 DJ: Intermittent fasting is really something all of us do at some period of time during the day, typically at night while we're sleeping. Fasting basically just means going without food, and intermittent is, you're doing it for a period of time. Another term for it is time-restricted feeding. And many of the listeners may have heard of people that are trying to basically condense their eating window, getting the time they start eating to the time they finish eating during the day into a certain window of time, maybe eight hours or something like that. And the way I try to explain it to people is, we have a building phase and we have a cleansing phase. When we're eating, from the time of our first meal of the day until our last meal of the day, that's our building phase. When we're eating, we're going to be producing insulin. Insulin is a hormone that tells our body to build, it tells our body to store. And then when we're not eating, insulin goes down and we activate different hormones that help us to cleanse and heal and repair.

02:37 DJ: So the time between our last meal of the day and our first meal the following day is our cleansing phase. So if we ate, let's say, from 8:00 AM to 8:00 PM, that would be a 12-hour building phase, and then if we fasted from 8:00 PM to 8:00 AM the next morning, that would be a 12-hour cleansing phase or fasting phase, and so that would be a one-to-one ratio of building to cleansing. For kids and pregnant women and things like that, that's usually a good window, for people that really need to build, young children, pregnant women, things like that. However, as you become an adult, unless you're a high-level athlete, you really don't need to be spending so much time building, you want to actually spend a lot more time cleansing, healing and repairing. And so that's where we start to try to switch this ratio up a little bit, and we might try to condense the meal time to where you're eating in an eight-hour window, for example, like a 10:00 AM to 6:00 PM, and then you cleanse and

fast from 6:00 PM to 10:00 AM the next morning, so that would be a 16-hour cleansing period and an eight-hour building or eating window, and that would be a 2:1 cleansing to building ratio.

03:53 DJ: So, you're going to get more hormones that are activated with things like autophagy, which is basically where your body starts to break down all damaged cellular organelles like mitochondria and endoplasmic reticulum and all these different organelles that are within the cells, we actually break those down and we take the proteins that are in them and we form new healthier mitochondria, new healthier cellular organelles, so it's like cellular recycling. And we can also start to stimulate embryonic cells and stem cells and things like that, so we get stronger, healthier, more stress-resilient cells when we open up that cleansing window and start to push into a fast. That's basically what an intermittent fast is, and there's different ways of doing it, a lot of different ways of doing it. You can do a 18:6 fast, you can do a one day 24-hour fast. Basically, intermittent fasting is considered anything less than 48 hours. After 48 hours, we start to call it an extended fast. For some people, they will do alternate day fasting, and these are people typically that have a lot of weight to lose.

05:03 DJ: They may eat Monday, Wednesday, Friday, for example. Monday, Wednesday, Friday, and then eat on the weekends, but fast Tuesday and Thursday or something along those lines, so they're eating every other day. That's also an example of an intermittent fast. So there's a lot of different ways to go about this. We could talk about it from a daily perspective, we could talk about it inside a specific window within a day, but it's a practice that really teaches the body to become more metabolically flexible, that's really the goal of it. Metabolic flexibility means that our body is very good at burning

both sugar for fuel and fat for fuel. When we're eating all the time, we create metabolic inflexibility, we lose that metabolic flexibility and we depend on sugar. If you can't go three hours, three or four hours without food and you get dizzy, light-headed, you get hangry, you have a headache...If you have symptoms like that, that's a sign that your body is a sugar burner and it's metabolically inflexible and it's not able to burn your own body fat.

06:11 DJ: And for some people, they think, "Well, I'm very lean, I'm typically under 10% body fat, I'm about 8% body fat, very, very lean." I do a 24-hour fast twice a week, so I do two of those a week. I do what's called a 5:2 fasting, and I have no problem doing it. In fact, I feel amazing doing it because my body is good at going into the bank and taking out my stored...Even though I don't have a lot of body fat, I have plenty there to be able to fuel me for that 24-hour fast. And that's what we want to do, is create that level of metabolic flexibility. I know you work with a lot of chronically ill people. Typically people with chronic illness are very metabolically inflexible, and just like exercise, we can't go from no activity, living a sedentary lifestyle, to all of a sudden running a 5K.

07:02 DJ: You could try it but it's not going to be comfortable, it's going to be torture. You're going to be really, really sore for probably a week afterwards, have higher susceptibility for injuries, things like that. Well, the same thing if you have chronic illness, you don't want to all of a sudden be doing a 24-hour fast or a three-day or five-day fast, that could be really, really traumatic on your body. It can be really, really challenging and actually leave you in a worse place, so you've got to build up over time. Just like fitness, you slowly start to use this principle of progressive overload to strengthen your muscles.

So it's the same thing, you build a fasting muscle over time through regular practice.

07:41 DS: Awesome, that was a really great overview and it really makes this information accessible. So lots of different directions we can go, but I just want to reinforce the intelligence that our body has, that we only get out of the way and let the body do its work. It's amazing how we can really have vibrant health, and a lot of our work is around detoxification. The modern life is full of these environmental toxicants that really overburden our bodies and make us ill if we don't take out the trash regularly. And we have all sorts of sophisticated detoxification strategies, but the more I learn about intermittent fasting, it's like this is foundational lifestyle more than a therapy. Would you consider this a lifestyle rather than a therapy? What's your view on that?

08:31 DJ: Yes, I'm in complete agreement. I think it's absolutely a lifestyle, I call it the fasting lifestyle. It's something you're practicing on a regular basis, it's not like you just do a five-day fast once a year and then that's it. You're practicing some level of intermittent fasting, time-restricted feeding on a regular basis to really get the best results. And depending on where you're starting from, your level of metabolic flexibility, your level of stress resilience, your body fat percentage or activity level, things like that, it's going to help you understand how to customize it to yourself. But you're right, it's definitely a lifestyle therapy, and I consider it the most ancient, inexpensive and perhaps the most powerful healing strategy known to mankind.

09:16 DJ: All of our ancestors did it, they didn't have access to food like we do, they didn't have pantries, they didn't have refrigerators, they were de-

pendent upon whatever they killed or harvested in the moment, and sometimes they had famine where they couldn't find food, so they would go days without food at times. And the interesting thing is, you would think "Well, if you go days without food, you're not going to have any energy." But the interesting thing is, the way that we're wired, we actually get an activation of things like human growth hormone and cortisol and adrenaline and different activity that goes on, different neurotransmitter balances that take place that give us better mental clarity.

09:58 DJ: We get a huge downregulation of inflammation in our brain. For example, there's something called the neuroinflammasome and fasting has been shown to dramatically reduce that. So we get better mental clarity, we get a better level of clairvoyance, a greater level of intuition, we're more mentally sharp, we're physically very, very sharp, and that gives us a better survivability. So our ancestors actually got sharper and they had more drive during these periods of time when they would go without food and that allowed them to then find an animal and kill it or go out and travel for miles to scavenge for food and survive. And so it's really interesting how that works. In fact, there's even cultures that tapped into this. For example, there's a popular movie called *The 300*, it's more of a male masculine movie talking about the Spartans and how this army of 300 was able to take on an army of hundreds of thousands of Persians, and they were renowned for their military ability.

11:06 DJ: Now the Spartans, one thing that they practiced was one feast meal a day. So they would fast all day, they would train, they would work, and then they would eat in the evening. So at night, they're at the fire and they would feast for whatever that was, two hours or whatever. And so, they eat

this one really large meal and then they would fast all throughout the day, and they were known for this amazing level of resilience. And there's athletes, too. Interesting, there's an athlete named Herschel Walker. I live out here in Georgia, and he was a phenomenon. He played at the University of Georgia, one of the best college football players of all time, a great NFL player, and he was a running back. Running backs take a lot of hits, really high-impact hits. Most of them, by the time they're 40, they've got multiple surgeries, they're on a bunch of pain medications and they basically sacrifice their life. Instead, he felt so good in his 40s that he actually became a mixed martial arts fighter, and into his 50s, he was beating up 20-year-olds. Now, Herschel Walker says he only ate one meal a day, which is hard to believe, especially when you're a high-level athlete, but he said he would eat one meal a day, typically healthy foods too, salads, fish, lean meat, lots of vegetables, things like that.

12:32 DJ: Obviously, he was genetically gifted, but at the same time, there's a lot of genetically-gifted athletes that aren't able to do what he was able to do. And so, practicing this level of intermittent fasting can really give us more resilience and we actually increase our mitochondria. So not only the number of mitochondria, that's what produces the energy within all of our cells, but also the efficiency of the mitochondria to produce energy within our cells. Our body just gets really energy efficient when we do this. So just some powerful stories there about how we've practiced intermittent fasting throughout history.

13:14 DS: I love that, we're wired to do this. And we might all be at different places in our health and how long it will take us to adapt this, but we're all wired to do this. I'm a naturopathic doctor, so we even learned about fasting

in school and there are all these amazing stories, and so I was always imprinted with that, and just trying to figure out how to apply that to my own life and to my patients' lives. One thing you've already touched on, there's so many diets out there. There's so many diets from paleo to keto, to blood type, to vegan, to whatever. How do you intersect actually what you're eating to the actual benefits of the intermittent fasting? My sense is that intermittent fasting, no matter what you eat, is actually probably one of the healthiest things you do, but we can fine-tune it and perfect it with diet, of course, and what we're actually eating. How do you guide people who want to choose what to eat when they're eating in these windows of time?

14:14 DJ: I'm a big advocate of a very clean, healthy diet and ideally a diet that helps our body to use fat as fuel. I'm a fan of a lower carbohydrate diet. I have three basic principles: Reduce sugar and grains, get rid of bad fats, so bad vegetable oils like corn oil, soy bean, cottonseed, peanut, sunflower oil. All those types of processed oils, canola oil, get rid of those. Eat more good fats, avocados, coconut oil, olive oil, different things like that, grass-fed butter, and then clean meat, so organic, grass-fed, organic pasture-raised animal products. So that's the typical three rules that we follow. And then if people feel good getting their body into ketosis and going very low carb, great. If they don't feel as good there and then they want to do more carbs, that's fine, but typically it's going to be a lower carb template, foods that provoke less inflammation in the system is what we want to go with. And when you do eat, you want to eat well, so you want to feast, you want to eat until you're satiated. We're not trying to count calories or anything like that. We're trying to compartmentalize the eating window or condense it, but when we do eat, we eat really well.

15:36 DJ: So eat until you're fully satiated and do things to help support your digestive system, whether it's digestive enzymes, probiotics, things like that can all be very helpful, making sure that you're extracting the full amount of nutrients, producing the least amount of metabolic waste from consuming those foods. I think all of that is important, but the interesting thing is, intermittent fasting, I've seen it, not that I recommend this, but I've seen it for people that just are experimenting or just not interested in eating healthy, I've seen it give them more leeway. Like there's a guy on YouTube that for whatever reason, he'll eat like one meal a day at midnight, which is a really odd time, I don't recommend eating like that, but he'll eat just a really big pizza and things like that, really bad food, but he's lost over 100 pounds. He's in better shape, better energy. He talks about how great he feels compared to how he used to feel and he's only eating one meal a day. So, I don't recommend that. That's not how I live, I don't recommend that, but I do feel like utilizing intermittent fasting can basically provide more resilience, your body is able to handle other stressors more effectively.

16:58 DS: I like to tell my patients health is resilience so I totally buy into that. So within that time-restricted window, you're eating until you're full, and we're in alignment with a lot of the recommendations about foods that we actually recommend. What about snacking? Do you feel that snacking is okay in that window of time or should you really focus on those one to two meals a day within that window of time?

17:21 DJ: That's a great question. It always really depends on the individual. I'll tell you how I start people, especially somebody that's chronically ill. Again, just like exercise, if somebody is sedentary, they haven't exercised, we're not going to start them out with heavy weights, we're going to start them out very

light and start gradually building strength, building neuromuscular activity to where they're getting stronger and they're able to handle more. So same thing here, we start out with a 12-hour fast between our last meal and our first meal, and then what I recommend people do is in the morning, when we first wake up, we're already dehydrated, because we breathe out water vapor all night. All of us are dehydrated when we first wake up, so you want to start your day drinking good clean water.

18:03 DJ: I recommend drinking at least 8-16 ounces of water in the morning before you even think about food, and you could do other things like putting some lemon in it, doing some warm lemon water can be a really great idea for cleansing and herbal tea can be a good strategy, things like that. Get your body hydrated, I think that's always the first thing. And what happens is, if you're used to eating a big breakfast, that's because you have a hormone called ghrelin that is released from your stomach whenever it feels like there's nothing in the stomach, and it's also a conditioned response. So if we're used to eating at a certain period of time, we're going to release more ghrelin. Ghrelin is a hunger hormone, it tells the brain 'I'm hungry, I need to eat.' It's more of a psychological hunger than it is a true physical hunger.

18:47 DJ: So when you hydrate well, you actually suppress ghrelin because you're going to extend the stomach as the water comes in, you're going to get less ghrelin release, so it's easier to push off hunger. So, if you hydrate well and you start with 8-16 ounces of water, then you could possibly move it up to, let's say, 32 ounces of water before you even think about food. Over time, you'll see it's pretty easy to fast to 14 hours and then possibly even to 16 hours, like we were talking about, that 16/8 window, and that's a great strat-

egy to apply. The toughest population that I've had to get doing regular intermittent fast is usually young, highly active women who are very low in body fat and also exercise on a regular basis, and are Type A personalities and oftentimes have young kids. There's just too much stress going on there.

19:42 DJ: So for those women, oftentimes what we'll do is something called crescendo fasting, where we'll do a 12 to 14-hour fast on a daily basis and then two days a week, nonconsecutive days, like a Monday, Thursday or something like that, we'll try to push it up to 16 hours. That way, they get a few days. So any sort of new dietary strategy, if you're not used to eating breakfast and you eat breakfast, that's actually a stressor. If you're used to eating breakfast and you don't eat breakfast, that's a stressor. So, any sort of change is a stressor on your body. So, we don't want too much stress all of a sudden, too quickly. So the two days a week, spacing it out, tends to work really well. A lot of people feel like, "Oh, I can do this. This feels good." Then if they're feeling good there, we'll move to three days a week, like every other day doing something like a 16-hour fast, and you try to find the window that works best for you. For some people, they do better eating earlier in the day and then fasting through dinner.

20:39 DJ: For some people, they have trouble sleeping when they do that, they do better fasting through breakfast and eating lunch and dinner. And in some cases, some people do better with a breakfast-dinner, but a fast throughout the day and they feel better there. So experimentation, there's no real dogmatic strategy to it. We are very open to experimentation, trying to figure out what's going to work best for you and your body. I do like to get people down to one to two meals a day; at most, three meals, okay? No

snacks. So if you're doing three meals, three small meals, especially for people, let's say, that perhaps have had their gallbladder taken out or something like that and they can't handle a very large meal, gastric bypass, whatever it is, doing something like three small meals in, let's say, an eight-hour eating window can be very effective as well, but we don't want to be adding in snacks.

21:35 DJ: The average individual is eating 6-8 times a day, they don't think they are, but they're sipping on kombucha or they're drinking something that has got some sort of sweetener in it. They don't think of it as a meal but every time they do that, they're stimulating insulin. Because insulin is coming out to grab up the sugar or even in response. For some people drinking a stevia-sweetened drink, for example, can stimulate more of an insulin release. So as long as insulin is being triggered, that's considered a meal. It might even just be like a small handful of nuts or half an apple, but that's still considered a meal because you're getting this hormone response, this hormonal response from your body. So, we want to avoid that. When we eat, you eat well. So take an hour or so, take your time, eat a really great meal until you're fully satiated and then stop eating.

22:32 DS: Great points. I have to ask a question because I'm sure a lot of people are still conflicted about this. So, people have a little bit of coffee in the morning. How do you see coffee? Is that included within the time restrictive window of eating? Or will that break a fast? What are your thoughts on coffee?

22:48 DJ: That's a really good question and I think it's highly variable. Typically, coffee really should be a performance enhancement tool. The research

says that chlorogenic acid and caffeic acid that are in the coffee actually help stimulate autophagy and enhance the benefits of fasting. However, I found it to be a very individual type of situation where if you drink coffee, you should feel great, you should feel fantastic, it should actually help you fast longer. If you feel like you're getting more hungry, you're having more cravings, that's a sign you're not getting a good response, either you're a slow caffeine metabolizer, or you might be magnesium deficient. For me, I do best when I put in some unsweetened magnesium L-threonate. I got a combination L-threonate and glycinate, and I actually put that in my coffee.

23:44 DJ: The coffee plant has magnesium, but the effect it has on your adrenal glands actually depletes magnesium and so sometimes, just adding a little bit of that and maybe a little bit of salts, because you're going to lose a little bit of electrolytes, can help you have a better blood sugar response to where you are not having more cravings. You can also test your blood sugar. Let's say your fasting blood sugar is 85 and it jumps up to 95, 100...that's a sign that you're having too much of a stress response to that coffee. You're going to have a little bit of an increase, that's normal because it's activating the glucocorticoids, the cortisol and things like that. They're going to increase your blood sugar a little bit, but you don't want too much of an increase because then, insulin is going to come out, then your blood sugar is going to drop and you're going to feel what most people think of as "the crash" and you're going to be hungry and have cravings.

24:40 DJ: So, you have to manage that. A lot of times, the dose matters, and possibly taking adaptogens with it. For example, the coffee that I like is Four Sigmatic, which has lion's mane and stuff like that, which can help you adapt

a little bit more effectively. So, that's adapting you back to homeostasis, balancing you a little bit better so you don't get too much stimulation. So you've got to watch how much caffeine you're taking in. You've got to watch what you're putting in it, of course. If you're putting in creamers and things like that, that can all have an impact. Anything that's going to have really more than 10 calories is going to reduce the amount of autophagy and the amount of benefits you're going to get from fasting. However, again, it depends on your goals. If you do a Bulletproof coffee with butter and the MCT oil, that can increase ketones in your system.

25:32 DJ: It's going to slow down autophagy, but it's going to increase ketones and that may allow you to fast for a longer period of time, and you're still going to be in a calorie-restricted state to where you are going to get some of the benefits of fasting. If you do the Bulletproof coffee and it makes it easy for you to fast until 2:00 PM in the afternoon, then you're probably going to get some of the benefits of autophagy. Most likely, that's going to happen, better fat-burning, things like that, as opposed to if you didn't do that and you were hungry at 10:00 AM or 11:00 AM. So, you're going to be able to push that caloric-restricted window a little bit longer and get some of those benefits. So it's very variable, very individual, you just have to see how your body is responding.

26:18 DS: Thanks for clarifying that. I think that's a great tool, to measure before and after the coffee or whatever concoction you prepare to see its impact on your blood sugar. Coffee is just one of those things, for some people their body does really well with it and then some people, of course, they know that caffeine and coffee is not good for them, and so don't even try that. I hadn't heard of the magnesium threonate in the coffee, that's a great idea and also

the electrolytes, I think that's really fun as well. Coffee is always a big one. And then you answered some of the questions around women. What about women with their hormonal cycle, do you find their needs change throughout their cycle? For females who are still menstruating, are their carb needs going to change throughout their cycle, and how do you navigate that if you do?

27:09 DJ: Absolutely, and that's a really good question. So typically, day one of the menstrual cycle is menstruation. Usually, when menstruation happens, that's actually a great time to do fasting or a very low-carb ketogenic diet. But as you get closer to ovulation, typically like day 12 or so, a few days before ovulation, you need more estrogen and oftentimes, estrogen follows insulin. So with suppressing insulin, we're not going to get as good a release of estrogen, you may end up missing your cycle or having it be delayed. So I recommend feasting, eating a lot more healthy carbs usually from day 12 and sometimes, we'll do that till about day 17, okay? So for four or five days there, it's your feast window, doing more sweet potatoes and pumpkin and different things like that, beets, carrots, a lot of these more healthy starches, it's really a great idea to do that during that period of time.

28:11 DJ: And then you can definitely go back to fasting for about a week there, right before the last week of your menstrual cycle, most women notice that they have more cravings. So usually, from day 23 to 28, the cravings start to increase because, again, you need more hormones to be produced there, more progesterone, more estrogen there for the menstrual cycle. So that last five days or so, back to feasting. So it's kind of this feast/famine cycle. If you're going to do an extended fast, it's probably going to be in that day 1 to 10, like after you've menstruate, right in that period of time. Oftentimes, women notice that they just feel a lot better as they're having their menstrual

cycle. Fasting or going into ketosis or doing one meal a day or something along those lines, they feel really good. But if they continue that, they often-times will miss their cycle and have different issues.

29:10 DJ: I do have an article on my website on the menstrual cycle and feast/famine cycling around that, where I explain more of that but typically, it's like day 1 through 10, 1 through 12 is a really good time for fasting, ketosis. Roughly, day 10 to 12, somewhere in that range, up to maybe day 17, is a really good time for feasting. Then day 17 to day 22 or 23 is really good for fasting, and then day 23 through 28, really good for feasting. So it's a true feast/famine cycle and I'm not fully clear on those windows because for women that are very low body fat, they might need a little bit like an extra day or two of feasting. For women that are overweight, they might need a little less feasting and they can handle more fasting.

29:56 DS: I love how this lifestyle really connects us to these rhythms in life. Especially women know that they have these monthly cycles that we go through, but we all have a daily cycle, we have monthly cycles. Within my practice, I see how the full moon cycle even affects people's health and so I think living in this cyclical kind of rhythm really connects us to how our body works and also the rhythms of life and how to reflect on them. I think it's a very intentional way to live and with your comments around fasting and feasting around the menstrual cycle, something that my patients just share with me, I've called it the luteal phase player--after ovulation, a lot of my women, especially who have Lyme or chronic illnesses that have chronic pathogenic loads, they tend to be more flared, they're more symptomatic, especially that week leading up to their menstrual cycle, so it's after ovulation. How I've made sense of it is that around ovulation and after, the immune system is

starting to get suppressed in case, in preparation for a pregnancy, if that's going to happen that month, and then, that immunosuppression can also have these pathogens be more overactive.

31:17 DS: And then as you get closer to shedding the lining, if you're not pregnant, prostaglandins can increase and then more inflammation can mount. I haven't done this with enough women, but you inspired me to do this. It's like, how can we also use this feast/famine cycle to maybe give more immune resilience and maybe they might not be symptomatic, because a lot of my patients are low carb and they just can't tolerate grains and carbs, so they're doing those diets, and maybe they need to get themselves more carbs during those times and they might not feel as bad. So, it's just something I've been reflecting on, and you're helping me think that through.

31:54 DJ: I think it's especially important for very lean women because, again, the body is so sensitive to the amount of body fat. So, you get those very lean women and especially, a lot of women that have chronic illness...Certainly not all, but there are a high percentage that are very catabolic, they have trouble keeping any muscle mass on, things like that. So, yes, the feast/famine cycling can really, really help.

32:20 DS: Awesome. So you mentioned that kombucha can break a fast, or trigger insulin. I find a lot of people like their nighttime rituals. Nighttime can be a time where people have cravings, or they might be tempted to eat. How can we replace rituals that maybe people don't notice are not setting them up for success, like having that chocolate, or having that kombucha? And what do you do at night? Or do you just go to bed early? [laughter]

32:57 DJ: For me I just try to make sure that I eat a really good, satiating dinner. I think that really helps. In some cases some people do better with a little bit of carb back-loading, especially active people, where they are very low-carb during the day, and then at night they have a little bit more carbs. And it may not be every day, it might be every other day, or something like that, and that could be something simple like a little bit of sweet potato, or it could be beets, or carrots, or some sort of healthy approach. Or berries, which can be really satiating, or coconut whipped cream, or some sort of like a healthy type of thing like that. And for some people, just having some sort of healthy, lower-carb, healthier-variety dessert after dinner can be really helpful for staying that off.

33:52 DJ: Now there's also some different products out there, and herbs, and things like that that can really help, and herbal teas. There is an herbal tea from Pique Tea, a company that they actually makes fasting teas, they've got one with cinnamon in it. So it's a cinnamon herbal tea, and it's got some other things, like ginger in there. Cinnamon can be really good for helping get rid of cravings. Gymnema is another good one. There's actually a company, I can't remember exactly the name of it, but it has to do with stopping cravings, and they have a gum, they also have little pieces of candy that have natural ingredients that you can just throw in after your meal, and its main ingredient is gymnema, which is a great herb for helping stabilize blood sugar and reduce cravings. That can be helpful.

34:44 DJ: Chamomile tea can be really helpful. Kava, also, is another good one, kava tea. So drinking some herbal tea, some warm tea, oftentimes, can help get rid of those types of cravings. Hydration, in general, throughout the day, I find to be really important for cravings. A lot of times we think we're

hungry but we're really thirsty. The part of our brain, our hypothalamus, where our hunger center and our thirst center are, they are right next to each other. And food is so prevalent in our society, and whenever we eat we get a dopamine release, meaning we feel good. And that's a great thing, however, we oftentimes get addicted to that dopamine release, and so we're typically going for food when we're really thirsty, when really our body needs water.

35:31 DJ: So hydrating well between meals makes it easier to fast between meals, and then after dinner give yourself a little bit of time to break down that food, make sure you've got good stomach acid production. Give yourself 45 minutes to an hour after your dinner, but then hydrate your body. Get some herbal tea, drink some water, that can really help take away some of those cravings. I find that to be really helpful. You can also supplement, again, with different herbs, berberine, gymnema, banaba leaf. There's a lot of different herbal products that have these types of things. Usually they're marketed for blood sugar support, but they also really work well for helping reduce cravings.

36:13 DS: Awesome ideas, so a lot of people can get their pantries stocked. You want to be set up for success, right?

36:19 DJ: Yes.

36:19 DS: So if this is one of your weaknesses, or your areas that you're concerned about, now Dr. Jockers just gave us a huge list to think about. What do you think about supplements in breaking fasts? Do you feel like the supplements need to be taken within the time-restricted windows of eating? Or do you feel like it's outside of that? Are you okay with that?

36:41 DJ: It depends on the supplement. There are some supplements that you're going to digest better when they're taken with meals. Usually that's going to be things like minerals, like zinc for example, fish oil, vitamin D. So fat-soluble nutrients, things that are actually fatty acids, like fish oil or omega-3s. Always, you want to take that with a meal. Now there are other things that actually can help enhance a fast, so adaptogenic herbs, for example. These extracts, they're going to have literally no calories in them, but at the same time they're going to help. Basically, for some people, fasting increases their cortisol too much and so taking something like an adaptogenic herb is going to help their body release the amount of cortisol that it should be releasing for the environment that it's in. So it's, again, almost like a thermostat. If you're producing too much cortisol, it's going to bring it down a little bit. If you're not producing enough to give you energy and wakefulness, it's going to bring it up a little bit.

37:40 DJ: So I think adaptogens are great. I think that, in some cases, some vitamin C can be helpful. Magnesium, an unsweetened form. There are forms that are sweetened, so you want to avoid those during a fast, but an unsweetened form of magnesium, I think, would be really helpful, because magnesium is really more or less almost like an adaptogen. It really helps our body adapt to stress. Most people are depleted of magnesium. The more stress you're under, the more you're going through magnesium, so I think that can be really helpful.

38:14 DJ: Binders are great during a fast, because your body is usually eliminating more toxins. So whether it's activated charcoal, or bentonite clay, or zeolites, or fulvic acid, humic acid, those bioactive carbons, or chlorella, or

something along those lines, I think that's all great. You can definitely take those. So again, you're trying to avoid things that have calories in them, and usually your supplements will say. So for example, if you were to just take a straight chlorella supplement, that's great, but if you're doing a greens powder that has 20 calories per scoop, it actually would be better let's say, if you were having an eight-hour eating window and you were doing two meals, have your meal and then two hours later, have your greens powder in the water or something like that. You're not going to get much of an insulin release, but that would be a better time to do something like that, and try to keep your fast in the morning. Let's say, if it was in the morning or you have that fasting window a little bit more pure where you're not consuming things that have more calories in them.

39:18 DS: We use a lot of binders in our protocols, and the hard part for people is, when do they fit them in? So this intermittent fasting lifestyle actually naturally gives you the time windows to take your binders, which are also, I believe, a really awesome addition to fasting as your body absorbs those things.

39:40 DJ: Yes, I really think when people have trouble with fasts, it usually has to do with blood sugar instability, so adaptogens can be very helpful, magnesium can be very, very helpful for that. Or, it's a toxin release because your fat cells are breaking out. A lot of times, we're storing different biotoxins in our fat cells, heavy metals, things like that, so as your body starts to break down fat and use it for fuel, we're going to release more of these toxins. We also have bacteria dying, so we can release more endotoxins, so binders are really helpful during those periods of time.

40:16 DS: Yes, I feel like they're so foundational to our protocols and lifestyle in modern day, where our bodies are up against so much, that's one take-away from this podcast. It's not only, of course, adapting this lifestyle, but the importance of binders, I try to share that a lot. You're such a wealth of knowledge with all of this. Just a little bit of a detour, do you have any insight on gestational diabetes? I've got something I actually went through myself and I want to have another child. I noticed my blood sugar in the morning is still higher than I'd like it to be. I'm not in full fasting days. I'm just curious about your insights with working with all the people you've worked with over the years with gestational diabetes.

41:03 DJ: I think it definitely can range. Trying to dial in the diet, obviously, is number one. Getting really good activity, trying to prioritize sleep, so getting all the main lifestyle factors working well is very, very important right off the bat. It's interesting because there's so many warnings about, don't take these supplements when you're pregnant, and this and that. And so to some degree, you have to realize that they just haven't been studied. For example, for most of the herbs it's not known what they're going to do for somebody that's pregnant. But in some cases, I've used things like, again, cinnamon, gymnema, things like that, to help get the blood sugar more stable and then, yes, doing a little bit more intermittent fasting. Even if the woman's pregnant, trying to just compartmentalize it. If they've got gestational diabetes, getting them moving a lot, doing strength training. A lot of women when they get pregnant are afraid to do any sort of strength training. Actually, as we speak right now, my wife's pregnant.

42:11 DS: Oh, congratulations.

42:12 DJ: So as we speak, she's six weeks pregnant with our fourth child. We work out together, just having her regularly do strength training. Obviously, there can come a point when you're in month nine or especially if you have a history of premature births, sometimes doing that activity can promote labor. If you have a history of late births where you go past your due date, then you really can continue to do some level of strength training because that's actually going to help you get more on-date and have a better pregnancy. So strength training, I think, can be extremely important for helping prevent gestational diabetes.

42:54 DJ: Having that lean body tissue and activating those GLUT4 receptors within your muscles, the GLUT4 receptors act as basically like insulin, so they're grabbing up sugar that's in the system. But at the same time, you also need a lot of rest because you don't want to overtrain, you certainly don't want that. Overtraining is going to create a chronic stress response in your body and you're going to end up having higher levels of blood sugar, so try to get the right amount. You don't need much, 20-30 minutes, maybe three to four days a week is really all you need. Take a walk every day, try to get out in the sun as much as you possibly can. I know you're in Seattle, so only sometimes in the year, right?

43:36 DS: Yes.

43:36 DJ: Today, we're outside, it's beautiful fall weather out here in Georgia, I was just outside with my kids playing basketball and stuff like that. We try to get as much sunshine, sun exposure as we can. Believe it or not, sun exposure and also grounding, just getting your bare feet on grass or in sand can have a really positive effect on your stress response and your blood sugar. I

think all of those things are really, really important. So making sure you get the right amount of stress, not too much, not too little. Exercise is a stressor on your body, so is fasting. Those are positive stressors, but we want to get just the right amount, I think that's important. And again, everybody's variable and different, so we've got to balance it out.

44:21 DS: Like you said, for pregnant women, a lot of people don't want to take a stand on how to treat them or what to share because of the risks and implications of saying the wrong things, but I think, of course, there's only more chronic illness in our children and I think we need to really focus on pregnancy in moms and the starting of a healthy life, so this is awesome.

44:48 DJ: Also a ketogenic diet too, if your blood sugars are running really high, dial back the carbs too. Just kind of an obvious thing, right? It doesn't always work, but for a lot of cases it does.

45:00 DS: I'll keep you posted. But the thing with me, it was kind of a curveball because I eat pretty healthy. I'm human, but I'm walking this lifestyle. And then I just think stress, I have practices and employees and all that, and I would love to dive deeper. I haven't done this enough, about how the environmental toxins can also affect gestational diabetes since the mom is mobilizing so much during that time, and how that could also affect blood sugar. But yes, I think blood sugar, the key to health. We know it's so preventative of so many chronic illnesses, cancers and neurologicalism, all the things that we want to prevent.

45:46 DJ: So what are your thoughts on using binders during pregnancy?

45:51 DS: We're really proponents of it being okay. Chlorella, I think there's a lot of good data around chlorella. Chlorella is a superfood and a nutritional supplement and then it can also have that dual role as a binder. I took clorella throughout my pregnancy. My daughter has been really healthy and we had a really amazing birth and all that good stuff. I'm so educated on all this and I felt so sad for the women who don't know how to advocate for themselves once they're in that box of gestational diabetes, because they put you on a time window and they do all this stuff. But we had a natural birth and I wasn't induced so I know I'm grateful, but I did binders. I do a lot of body work, too. I think that also gets underestimated.

46:33 DJ: Yes.

46:34 DS: I did chiropractic, and I had my abdominal massage and acupuncture, and I think that's a huge support for women during their pregnancy and leading up to their birth, because your structure has so much to do with getting your baby out. So I think that's often underestimated.

46:50 DJ: That's a really, really great point. My wife, in her first trimester and over the last two weeks she's had a lot of issues with burping, more so than with our other kids. Now she's 38, so she's a little bit older. But I had to put her on a low-FODMAP diet, it seems to be helping and she's taking some charcoal because she's had a lot of burping all of a sudden.

47:14 DS: Yes. And the immune system's shifting so she's basically in that immunosuppressed state again, you have to have the healthy baby and so

that's when, maybe some underlying dysbiosis...And then, yes, the progesterone increases and that could also be part of it, but I'm glad you have her on the plan.

47:38 DJ: Yes, exactly. We've been experimenting.

47:42 DS: Moms need to see other people walk in this whole completely alternative way of having a child compared to what many people are experiencing. That's just the conventional system, that people have to go outside of that to find all this other knowledge, which I think is so important to change the future for our children.

48:05 DJ: For sure. Well, I see a lot of women will get a lot of nausea and they'll start craving crackers and stuff like that, and they seem to feel better when they do that. I think it has to do with the fact that, again, they've got some level of bacterial overgrowth and also the progesterone reduces the contractility of the esophageal sphincter. Some of the different sphincters don't work quite as well, everything is getting looser. And so the sphincters don't work quite as well so a lot of times, there's things moving through the ileocecal valve back into the small intestine, there's things not moving in through the stomach, and it's causing this sort of disorder.

48:45 DJ: And so even though I'm not a huge fan of a low-FODMAP diet for long term, for a few weeks, while you're producing a lot of these hormones, sometimes that can be helpful because you don't want as much prebiotic, because again, you've got too much bacteria in the system. I think that's my theory of why some women seem to feel better eating things like crackers--obviously, try to get the best sourcing. But normally, I would never recommend

that in a diet even if it's whole grain or gluten free, things like that. But she seems to feel a little better doing it and so I'm like, well, I think we had to take out onions and garlic, and broccoli, all these healthy foods, avocado because she was eating guacamole and just having a massive amount of burping and things like that.

49:33 DJ: So we've had to cut back a lot of these foods that are very, very healthy foods. But unfortunately, she just hasn't been able to respond well to them. And this is really just like the last week or two, that we've been dealing with this, but almost everyday, we're like trying to figure out what the next thing is.

49:49 DS: Well, you're a great team, I'm sure. And she's in good hands. And I'm sure, wow, child four. I'm impressed, what a blessing. Well, keep us posted with how she does, and congratulations. What a joy, especially during this time. I could keep you here all day, I've learned so much from you. I really appreciate your ability to break all this information down and make it really accessible. This is new to people, they just go into overwhelm and can't quite realize how to adopt this into their lifestyle and I think you gave a lot of people some pearls today, so thank you, thank you. How can people find out more about your work or any wonderful things that you're up to at this time?

50:32 DJ: You can find me on drjockers.com. That's my main website and social media, Dr. David Jockers, YouTube. I also have a great book coming out in October, it's called, 'The Fasting Transformation,' where I talk a lot more about these fasting strategies, and how to apply fasting to get the best results.

50:51 DS: Awesome. Well, we'll definitely put that in the show notes. Thank you for all the incredible education you put out into the world. A lot of my patients have used your website as a resource and it has really awesome information, so thank you.

51:04 DJ: Well, thank you. I appreciate you having me on.

51:06 DS: Well, have a beautiful day. Thank you everyone, we'll have all the information in the show notes, and have a great day.