THE MODEL HEALTH SHOW

EPISODE 885

Intermittent Fasting & Autophagy: The Secret Key to Fat Loss Over 40?

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SHAWN STEVENSON: Welcome to the Model Health Show. This is fitness and nutrition expert Shawn Stevenson, and I'm so grateful for you tuning in with me today. Intermittent fasting. Everywhere you turn, we're hearing about intermittent fasting today. We've been talking about intermittent fasting, of course, for many years here on the Model Health Show, but it's just got its grips into popular culture. As a matter of fact, it's showing up in a lot of song verses. I was just listening to a DJ Khaled song, another one, and he had a verse from Jay-Z and Jay-Z said Intermittent fasting, but these meals, I'm not missing none. It's hard to escape this new part of our popular lexicon, but just because it's popular doesn't mean that it's effective.

As you very well know, many things come in and out of fashion, and so today we want to dig in and really look at the facts behind whether or not intermittent fasting can truly and notably, alter in a positive way, our metabolism across the board. Intermittent fasting studies consistently show notable weight loss, fat loss, and other remarkable benefits. But is it merely a mechanism of calorie restriction or is there something more extraordinary at play? Today we're going to explore this and much more. And let's kick things off with a fascinating study conducted by the Salk Institute for Biological Studies, tracking the eating habits of a group of adult test subjects to see how often the average person is actually eating and the impact that was having on their metabolism.

The researchers discovered that not only does the average person not eat three square meals a day. Yeah, most people tended to eat sporadically throughout the day, more of what could be referred to as snacking. And the scientists also know that the average time between the first bite of food somebody eats, so we'd say breakfast to the last bite of dinner or an evening snack or drinks at the bar. From the first bite of food to the last bite of food somebody has in a given day, that time span was 14 hours and 45 minutes. So, the average person is eating something for a span of about 15 hours a day. This combined sporadic eating plus this wide window of eating that the average person has was a leading to what the researchers called metabolic jet lag. And we're going to detail what that means exactly a little bit later in the show.

So keep an ear out for that. But the scientists in the study decided to see. What would happen if they simply shortened the window of eating for the test subjects? Now, this is very important. There was no other dietary advice given. There was no restriction on calories, macronutrient ratios, or anything else. They simply had the study participants reduce their eating to a period of 10 to 12 hours a day. Alright? So their eating window, it was reduced to 10 to 12 hours of their day instead of the 15. Now, here's what happened. After 16 weeks, the study participants lost an average of over seven pounds.

Subjectively, they reported that they were sleeping better and that they were experiencing a lot more energy and analysis of their diets uncovered that they naturally reduce their calorie intake. By about 20%. Even though there were no calorie restrictions placed on them, they were losing weight, eating foods they enjoyed and experiencing a lot more energy. Now, something like this might sound too good to be true on the surface, and it might seem like a simple result of consuming less calories, but there's a lot more that's going on behind the scenes. We are going to break down some of the things that happen with our metabolism when we shorten our eating window, i.e. Intermittent fasting, or time restrictive eating.

And I promise you it's going to knock your metabolic socks off and we're gonna get to that in a moment. But first and foremost, intermittent fasting again, has been growing in popularity recently, and there are many different ways to employ it. But you may be wondering if it's just another newly invented fad that's here today and gone mañana. The truth is intermittent fasting isn't a new invention. Our new culture of constant eating is a study published in the Journal of Applied Physiology states that this new lifestyle of eating constantly throughout the day, "collides with our genome." Disorienting gene expression that was designed for periods of eating and not eating.

They affirmed that these fluctuations are required, keyword required for optimal metabolic function. Now the question is how did we get here to what we're doing today where the average person is eating about 15 hours a day? And how did things change so fast? Because in that study, they were noting how humans have been eating a certain way for tens of thousands of years, hundreds of thousands of years. That was attuned to these different cycles. That was more in tune with the circadian rhythms, the diurnal and nocturnal patterns

of all of life. I can go on and on. We'll talk more about that and only recently we're talking in the last, really, in the last few decades, but. If we wanna stretch it out. The last few centuries, things have changed very rapidly.

And there are three primary factors that are driving the rapidly increased frequency and duration of eating something today that you can remember with this acronym. A is for accessibility, S is for sleep deprivation, and another S for science, the acronym A S S, or ass is a perfect depiction of the current feeding culture. So let's go ahead and dive into this ass and make sense of all this. First up, is that A for accessibility with 24 7 access to hundreds or even thousands of different food items, many at low cost. It's no wonder that the average person's frequency of eating has surged. It may have begun with good intentions to make sure people have enough to eat, but it has quickly devolved into widespread monocrop farming practices of genetically altered high yield, low nutrient cash crops as the basis for the majority of what the average person eats in a day.

And by the way, if you're wondering what those primary crops are, it's mostly corn, wheat, and soy. So it might look like a wide range of diversity of food on store shelves, but the majority of those foods that we're seeing in the average supermarket outside of the produce section are conglomerations and alterations different forms of wheat, corn, and soy. Again, being those top three. You could do a lot with those bad boys, all kinds of cereals and. Cookies and snacks and beverages, because don't sleep on the fact that corn is used majorly as a sweetener. So the list goes on and on. It looks like a lot of diversity in the foods available, but they're primarily made from the same kind of root ingredients.

Indeed. Now, how did this come to be the case? Well, the main foods that our government here in the United States invest in with our tax dollars are those three primary cash crops, and this is now factually showing up on our waistlines. In a recent 15 year period, the US government handed out nearly $200 billion in agricultural subsidies to support the production of major commodity crops and farm foods that make up the majority of what's showing up on our store shelves. A study published in the Journal of the American Medical Association Internal Medicine, analyzed if higher consumption of foods derived from these

government subsidies was associated with adverse risk to our citizens health, specifically US adults in this study, the results were shocking.

After adjusting for age, sex, socioeconomic factors and other confounding factors, the researchers found that people who ate the highest amount of government subsidized foods had nearly 40% greater risk of being obese. They were also significantly more likely to have excess belly fat, higher levels of blood sugar, and higher levels of inflammation measured by C-reactive protein. Hundreds of billions of dollars are being invested into the cash crops that are used to make the ultra processed foods that now make up the majority of the average person's diet. Today we are virtually surrounded by cheap food-like products everywhere we go. Gotta fill your tank up at the gas station.

Well, the gas station is also a hub for over a hundred different snacks and beverages for you to choose from. Wanna go to the movies? Forget about the popcorn and the soda pop. We've got another few dozen ultra processed food items for you to choose from. Not only that, we spend time, the average American shopping and picking up our ultra processed foods, which make up about 60% of the average American's diet today, going through the supermarket. And once you get to the grocery checkout right there, we've got special snacks just for checking out. You know, you didn't waste it and spent a lot of your energy, you might as well get yourself some candy, some of the worst ultra processed foods right there at the checkout. Our culture is now structured in a way that inundates us with low quality ultra processed foods.

And it's this strange paradox because this is not a matter of money anymore. It's not a even a matter of hunger, it's a matter of something that's being termed as food insecurity, which now listen to this is very important. In 2006, the USDA eliminated hunger from their definition of food insecurity, because when I hear food insecurity, I'm thinking, you know, it's not stable system around here with food and access. They took hunger out of that definition. Food insecurity is now defined as limited or uncertain availability of nutritionally adequate foods or the limited ability to acquire food in a socially acceptable way. A recent study cited in the journal, obesity determined that food insecurity causes maladaptive eating behaviors, and the researcher stated, "food insecurity may amplify susceptibility to weight gain via

overeating during times of unlimited food access." To put it simply, less access to healthy food and more access to low quality food, it's making people eat more.

Now, understanding this and this paradigm shift in accessibility and eating more might be pretty simple to understand, but it's very complex underneath the surface. Many ingredients went into this phenomenon where money might be scarce, but we have access to a lot of things that people can eat. Right, but they're food like products. It's really not nutritious food. So we can consume a lot of calories, but we could be starving for nutrition. So the accessibility paradox is something that is generally simple to understand, but the next S in our acronym is a little bit more surprising. So A is for accessibility, S is for sleep deprivation.

It's well established that the average person in our modern society is sleeping significantly less than our ancestors. There's a myriad of reasons for that, and now we know we've got tons, tons of studies on the connection between sleep deprivation and dysfunction with our metabolism. But on the surface, this could be tied to simply if we're sleeping less and we're awake more, that's just more opportunity for us to eat something. And this does hold true as part of the equation that's seen in peer reviewed evidence. For example, the American Journal of Clinical Nutrition took healthy test subjects and had them to stay in a sleep lab for two different 14 day periods with ad lido access, that means they could eat as much as they want, add limited access to tasty foods and treats as well.

So tasty meals and treats. In one part of the study, again, these were two different 14 day periods. In one part of the study, they were allowed about eight and a half hours of sleep. While in another part of the study, another phase, another 14 day period, they were allowed only five and a half hours of sleep. At the end of the study, the researchers found that during times of sleep deprivation, the test subjects did in fact consume significantly more calories. Although, meal intake remained similar. Sleep restriction was accompanied by increased consumption of calories for snacks, especially carbs, and especially at night.

Now, here's the thing, the participants were now eating about 300 more calories a day when they were sleep deprived and they were eating more. But they only gained about one pound over the study period, which might not seem like a lot, but here's what was shocking. Even

though they didn't gain much weight, they had an 11% increase in visceral belly fat accumulation when they were sleep deprived. Alright? This is just a 14 day period and their body started to shift their metabolism, their body composition. Their biology created a recomp where they're now increasing the amount of visceral belly fat, and this is well established to be the most dangerous type of fat. This kind of organ fat or momentum fat surrounding our waist area and our vital organs.

Now, while it's true that being awake more hours of the day creates the opportunity to eat more, there are some major changes to our biology that take place when we're sleep deprived. Another randomized crossover study published in the Annals of Internal Medicine had healthy young adult test subjects go just two days with restricted sleep where they took a few hours away and two other days when they were allowed to get adequate sleep. After compiling the data, when the participants were sleep deprived, their levels of a leptin, their satiety hormone dropped by an average of 18%. Their levels of the hunger hormone ghrelin increased by almost 30%. Feelings of hunger increased by 24%, and appetite increased by 23%. In particular for calorie dense high carbohydrate foods.

Their desire for those specifically increased by upwards of 45%. So there's hormone changes taking place, there's changes happening with body composition. In just a short time span when we're sleep deprived. And to top it off, scientists at UC Berkeley use sophisticated brain imaging to see what happens in the sleep deprived brain. The researchers found that even a short amount of sleep deprivation can dramatically reduce brain activity, specifically in the prefrontal cortex, which is largely responsible for conscious decision making. Distinguishing between right and wrong, problem solving, social control. All these things that are involved in our experience and interaction with food.

So again, if we look at things merely on the surface, we might see some logical things like we're up more and sleeping less so of course we're gonna be eating more. But our biology is changing when we're doing this to ourselves and it's stacking conditions against us. When looking at this overall picture of circadian nutrition, how we evolved eating with phases of having food and not having food and how all of this is getting gummed up. And we're gonna go to our final letter, the acronym ss. We're gonna look at the final bit of this ass. And the final

one is science, specifically food science. And food scientists have effectively better, I mean, we just gotta give 'em the props.

They've designed foods that are hyper palatable, addictive, and in many ways, tricking our biology to wanting more. There are new phenomenon that are intentionally done with this new paradigm, again, of these ultra processed foods. One of them, for example, being vanishing caloric density, where foods are designed, for example, something like a Cheeto, shout out to Chester the cheetah, which I hear he just got out of jail. Eating a Cheeto, for example, we get a brilliant crunch, we get a flavor explosion, a couple of chomps, and then it dissolves. It turns into sandy water and that intense crunch, like your brain is thinking, okay, I'm about to get something big. I'm about, oh, I didn't eat anything, or I didn't eat much. Let me have another, let me have another.

So our bodies are designed and have evolved to interact with an experience of food that I'm chewing and I'm consuming something that is coming along with a certain level of nutrition. And this vanishing caloric density can effectively trick our biology to not be aware that it's consuming as many calories as it's consuming because of this dissolving, disappearing act that these David Blaine Foods can do. Now, another one of these things that has been intentionally designed with our food is something called a Bliss point manipulation. And basically with any food and any natural food we eat, well, let's use a pineapple, because pineapple is pretty, it can get, it can get to you relatively quickly. All right?

So you eat a little bit of pineapples, like, oh, that's nice. A little pineapple, little tropical, little nice. But then after a little while, it's like it starts to taste less good, and then eventually it can kind of bother you or like even give you a bite back. And not feel as good in your mouth and have a little bit of like a pushback saying, Hey, you know what? That's probably good. That's probably enough. Now this isn't across the board for everybody. Different people experience different things with different foods, but using something simple like a baked potato, right? That's a example that's used very often. Eating a plain baked potato is not gonna be that fun.

There's only so much. Maybe if you're really hungry, you eat a couple bites and, oh, this is pretty good. I'm very hungry. But over time that satiety is gonna kick in very quickly so that

your brain's gonna be like, ah, I, I'm not really enjoying this that much. I'm good. And so with natural foods, there's a certain point, certain attraction that we have initially, and over time, with each successive bite, that enjoyment goes down further and further. But by moving the goalpost of dissatiation, right. It's supposed to be a 50 yard line or a hundred yard line, but now we're moving the goalpost. So now you gotta go 200 yards to feel that satiety because the food is designed to be that way. It's pushing back the point at which you feel like you've had enough.

And so manipulating the food bliss point is another thing that brilliant food scientists have done today. And there are many other factors, of course, but one other thing is they've ruined something called post ingestive feedback. So post ingestive feedback, this is when we eat a certain food, that food is giving us back data on all the nutrients that are found within that food. The caloric density, the variety of minerals and vitamins and amino acids. If we were eating a natural food, for example, if we were eating some fresh raspberries that we happened upon, our body would be our cells. Our biology would be taking notes on what it got from that food, right? I got this amount of calories from this amount of volume.

I got these particular vitamins, these minerals, this vitamin C. I've got some really interesting antioxidants. So it's just like logging all that data and we would reach, again, a satiety point. And also our bodies and our minds will be able to seek out when we become deficient on what we found in those raspberries, our biology would drive us to go and seek out those raspberries again, because our cells took notes on, Hey, I could find this nutrient I'm looking for, or nutrients I'm looking for in those raspberries. But with new inventions like gas chromatograph, for example, where we can take the flavors and isolate them, the chemistry of the raspberry, and now we can add the raspberry flavor, to ice cream, to candy, to different desserts. Now the raspberries are no longer needed, but the flavor profile, the chemistry is still there, but it's muddying up those waters for us to healthfully associate with our food.

And again, these are just some of the things that have been manipulated, leading to this big ASS. Again, that's, it's an acronym. Okay? It's an acronym, accessibility, sleep Deprivation, and Science. All right? But it's led to this big ASS confusion with our biology and our interaction with food in our environment. So how do we defend ourselves? How do we reorient our

biology, our bodies, and our brains to healthfully associate with food in our environment, and for our intents and purposes today, to optimize to healthfully support our metabolism so that we're geared for a higher level of fat loss. We're geared for more satiety. We're geared for a higher level of performance and health long term. And the question now is, how does intermittent fasting come in and clean up all this mess? So now we're going to dive in on how intermittent fasting can effectively reset our metabolism and optimize or improve our metabolic health.

And number one, the number one way, a reason that intermittent fasting can do this is that intermittent fasting optimizes your circadian rhythms and your gene expression. Your circadian rhythms or your circadian timing system is defined as the network of interconnected cellular structures that regulate the timing of physiological processes and behaviors. So this circadian timing system is controlling what our physiology is doing every second of every day. Now, where are these circadian clocks and what are they actually controlling? Do we have like one big circadian clock, like right in the middle of our chest? Like flavor flave, you know, used to wear the The clock necklace.

Alright. Or is it just like located in our brain? Where are these circadian clocks? Well, our circadian clocks exist within each of our trillions of cells. All of our cells have these circadian clocks and they're always trying to make sure we are sinking up. We're all meeting together at the right time. And here's what they're controlling, these circadian clocks found within our trillions of cells, control the release of our hormones and neurotransmitters control our digestive function, including nutrient absorption, speed of food transit through our GI tract elimination and more. The behavior of our microbiome and trillions of bacteria that we have, by the way, have circadian clocks.

In fact, a recent study cited in the journal Nature Reviews Endocrinology states, "disruption of a circadian system can alter microbiome communities and can perturb host metabolism, energy, homeostasis, and inflammatory pathways, which leads to metabolic syndrome." So again, this circadian timing system is no joke. This is really, if we're getting to the core, if we're getting to the root of human health and where science is headed and understanding this.

We've been trying to trim the branches for so long. It's addressing what's controlling all this stuff. And if we're not minding our circadian timing system, we're really missing the point.

Also, the circadian clocks within our cells regulate our blood pressure, thermal regulation, sleep efficiency, muscular strength, and reaction time. Again, just think about how our strength and our reaction time can change depending on the time of day. It controls our reproductive cycles and production of our sex hormones, our mental alertness, mental acuity, and so much more. Researchers at the Salk Institute for Biological Studies have uncovered that our biological clocks are themselves. Functional genes and proteins that influence and control are other genes and proteins. Now, how does intermittent fasting connect with all of this? A recent study published in the British Journal of Nutrition provides an eloquent description regarding eating and our circadian timing system.

The analysis states, "the human circadian system anticipates and adapts to daily environmental changes to optimize behavior according to time of day and temporarily partition incompatible physiological processes. At the helm of this system is a master clock in the supra cosmetic nucleus, which is located in the hypothalamus. The supra cosmetic nuclei are primarily synchronized to the 24 hour day by the light and dark cycle." Okay, that's number one. Number one, controller of these clocks. However, feeding and fasting cycles are the primary time cues for clocks in our peripheral tissues. Alright, so number two, controller is when we're eating and when we're not eating.

That's controlling our circadian timing system. Now moving on, they noted that "aligning our feeding and fasting cycles with clock regulated metabolic changes optimizes metabolism, and suggests that feeding at inappropriate times disrupts circadian system, organization, and thereby contributes to adverse metabolic consequences and chronic disease development." So much of what we're experiencing today as a society related to chronic illness and related to dysregulation of our metabolism that so many of us are struggling with is rooted in our separation from our natural rhythms in the circadian timing system. That's controlling all of this stuff behind the scenes.

SHAWN STEVENSON: Dr. Sachin Panda, professor at the Salk Institute studies the genes, molecules and cells that keep the whole body on the same internal clock. His lab has discovered that nearly 80% of our genes follow a circadian rhythm. Circadian disruption has been shown in multiple studies to contribute to metabolic syndrome, insulin resistance, and obesity. A major reason for this impact shown in the data, is the influence that our meal timing has on our genetic expression. The study that we began this episode with conducted by the Salk Institute, noted that compressing our eating time helped to eliminate, "metabolic jet lag" by eliminating erratic eating times.

So this is why beyond the surface, intermittent fasting can be so effective at healing, truly healing our metabolic health. And if we want to throw the reset button on there, that really helps to get things optimized and synced up. So everything is working in flow. And another big part of this, and you're gonna be hearing more and more about, and this is related to gene function, gene expression as well, because we've got this mTOR pathway, which we've talked about on previous episodes. But when mTOR is active, this is when we're in a, in, in a energy surplus or energy consumption. This is about triggering the body towards growth, and it's obviously a big part of life. You know, we need that. But also having periods of house cleaning and metabolic cleanup is very important, and so when mTOR is able to be turned off, autophagy is turned on.

And autophagy again, mTOR and autophagy are heavily related to gene expression that's controlled by when we're eating and when we're not eating. An intermittent fasting increases autophagy in a study titled Targeting Autophagy and Obesity, published in the journal Nature Reviews Endocrinology. It details how autophagy is a powerful force in sustainable weight loss. The researcher stated "cellular quality control through the disposal and recycling of cellular components in the maintenance of cellular homeostasis and organ function." The researcher stated "Cellular quality control through the disposal and recycling of cellular components." That's one aspect of autophagy and also in the maintenance of cellular homeostasis and organ function by selectively, and this is what precisely autophagy does, ridding cells of potentially toxic proteins, lipids, and organelles.

Autophagy comes in and cleans out metabolic clutter. It cleans out the mess and the debris we've got, I mean, we've got, again, trillions and trillions of cells, so there's always an accumulation of these metabolic waste products that need to be cleaned out. And if our energy is constantly dealing with consumption of more and more stuff and we never get a chance to clean, house, to repair, to remove waste, to make room for healthy growth and development. This is a big part of the equation of our suffering and not allowing this natural process to really do the job that it can do. And we're gonna talk more about autophagy in upcoming episodes. It's deeply, deeply tied to many studies now on longevity extending our lifespan. But this doesn't mean a lot of the studies are revolving around like more lengthened amounts of times of fasting.

There's many different forms of fasting, but intermittent fasting is something that can sufficiently, at least sufficiently really ramp up autophagy. And by the way, there are many different types of autophagy. There's macro autophagy, which is more of kind of like a global system-wide autophagy and house cleaning. There's mitophagy, which is a recycling of our mitochondria. So wouldn't it be nice to clear and make space and then rebuild? Our bodies have this capacity to recycle and to rebuild things and getting rid of the things that are not working as effectively. We've got to give our bodies the opportunity. To do the incredible things that it's designed to do.

Then there's ribo phage, the recycling of ribosomes who go on and on and on. This isn't just a global thing. Many of our cell parts have this capacity for house cleaning, for making everything to work better, and the intermittent fasting is one of the most powerful ways to uplevel autophagy, and again, we've got numerous studies affirming how autophagy is related to reducing the risk of obesity and improving our metabolic health. But keep in mind, intermittent fasting is something that supports autophagy and that's part of the equation. But there's something that is potentially according to some studies, even more effective for supporting autophagy, and that's, can you guess what it is?

It's exercise. In exercise we tend to, in our culture, we have this very vanilla, we see exercise, it's like get it fit, working out, trying to shape up so I can ship out or whatever. But exercise is one of the most powerful drivers for exercising, waste materials, for getting garbage out of

our bodies for detoxification. For supporting assimilation of nutrients and also for supporting elimination of, again, metabolic waste that accumulate. And so we don't need to do something too fancy to support our ability to use exercise for autophagy. The simple act of walking consistently is such a nourishing. Exercise because it supports so many functions of our health, including autophagy.

And if you don't know by now, I'm a huge, huge proponent of utilizing walking as really a therapeutic form of exercise for supporting recovery. Yes, for supporting mental health, for supporting fat loss. Because when we're walking, our bodies can more readily grab stored fat to use for energy versus doing something that's more glycolytic and demanding of our bodies to break down stored glycogen to use as fuel. So it's kind of like a strange hack that isn't even a hack. It's just like what we're designed to do. And not only that, I see walking as a nourishing exercise because all of the potential in really helping us to heal, helping us to fix dysfunction. So much of our dysfunction, whether it's knee problems, back problems, you know, neck problems. It's going up this kinetic chain and it really starts with dysfunctional walking from dysfunctional interaction with the ground via our widely dysfunctional feet.

Our culture is. Inspired us to cram our feet into these narrow shoes that have really eliminated a capacity that we have. We have over 200,000 nerve endings in our feet collecting data to determine our movement. And when we don't have that, our bodies start to compensate. That's the brilliant thing about our bodies. It will compensate when movement inputs are not accurate. Our foot has 26 bones, 33 joints, 19 muscles and 107 ligaments. It's a highly sophisticated Ferrari. Alright? It's the Ferrari aspect of our bodies. Yes, our feet help us to go fast, but what happens when we are binding our feet and not getting that?

Intelligence input, and so this is why I'm such a huge fan of utilizing not just shoes with a wider toe box, but shoes that truly allow for more proprioception. Because some studies are indicating that a wide toe box after somebody just going from a typical narrow shoe to going to a shoe with a wide toe box can make certain things more problematic, can make our feet even worse. What we need to do is to rehabilitate by creating some separation in those digits. Having shoes with an individual tow box. Again, we don't gotta do this all the time. I've

got on some fresh air Max right now, but when I get home, guess what I'm gonna do? I'm going to throw on my Peluvas that have individual toe boxes and I'm gonna go for a walk.

I do this every single day, especially after recording and being at the studio all day. As soon as I get home. 'cause you know, when I come to studio, you know you wanna wear different things when you go out. But more and more people, so many people, so many athletes are now full in with Peluvas. And the cool thing is that they have incredible designs for, yes, for athletic training, for just casual walking. But also if you wanna go a little bit more sociable vibe. They have Peluvas designed for that too, and so highly recommend checking them out. Head over to peluva.com/model. That's P-E-L-U-V a.com/model and use the code, this is very important, use the code model at checkout. You've gotta use the code model at checkout and you're gonna get 15% off. Again, huge, huge fan rehabilitate. Your feet rehabilitate your gait, rehabilitate your body. Get some nourishing walking in when you go walking, throwing your PVAs. And I'm telling you, you're gonna notice a huge difference in the way you move and the way you feel. Peluva.com/model use the code model at checkout for 15% off.

Now we covered two specific ways that intermittent fasting can clean up our metabolic mess and help us to heal our metabolism and burn fat more efficiently. We discussed the impact on our circadian rhythms and gene expression. We discussed its impact on autophagy. The third reason I'm gonna share, and I can go on and on, but I wanna share a third reason with you, one more reason, and then get into some tactics. Number three is that intermittent fasting improves our insulin levels. A recent meta-analysis published in the journal, clinical Diabetes and Endocrinology states that, "The majority of available research demonstrates that intermittent fasting is effective at reducing body weight, decreasing fasting glucose, decreasing fasting insulin, decreasing insulin resistance, and increasing levels of adiponectin."

The results were so strong that the researchers stated current evidence suggests that intermittent fasting is an effective non-medical treatment option for type two diabetes. Bonkers. Again, you're not generally hearing this from your general practitioner, but this is what the data is indicating in a big way. Again, this was found to be true in most studies, but not all when it comes to intermittent fasting, but even when studies didn't find notable differences in things like body weight and fasting glucose. Another meta-analysis published in

2023 affirm that intermittent fasting consistently lowers fasting insulin levels for participants. Now, why does this matter in the overall picture of weight loss? Well, here's a segment from my conversation with metabolic scientist, Dr. Ben Bickman.

BEN BIKMAN: You cannot have a fat cell grow unless insulin is elevated. It is totally, completely, utterly impossible. Now, I know people wanna say, oh, well, calories matter too. They do matter. But if you just take out that one single variable, if you deprive a fat cell of insulin, it cannot grow 100% full stop. Take this as from a guy who literally grows fat cells in my lab all the time.

SHAWN STEVENSON: So intermittent fasting is a swift science-backed way to stop insulin from hanging around too often and preventing you from burning stored fat. All right. It's just helping insulin. Insulin doesn't mean no harm, but maybe it's a little tipsy. It's hanging out, lingering, hanging around the bar a little too late, and just like I'm leaving here with somebody and making a bad decision, all right, is helping insulin to go home and not be out here in the streets. Now all of this adds up to what the best studies on intermittent fasting are showing, but this is the thing and why I wanted to do this episode today. It can also be confusing with some of these studies if you don't look deeper, if you don't peer through a more comprehensive set of eyes. For example, a recent study published in the New England Journal of Medicine titled Calorie Restriction, with or without, time restricted eating and weight loss.

This was a remarkable 12 month study, and it randomly placed over 100 participants into either a general calorie restriction diet group or a calorie restriction diet, plus intermittent fasting group. Now, after compiling the data, the researchers stated that the results were not significant enough to say if intermittent fasting was clearly better then just reducing calories overall. Again, same calorie restriction, but one group was instructed to have an eating window and a fasting window each day. But here's the thing, the results of what happened with the intermittent fasting group, they were nothing to glance over participants in the intermittent fasting group.

Lost about four more pounds over the course of the study period. But again, it wasn't substantial enough to rule out other confounding factors for that additional weight loss, but it goes deeper. Participants in the intermittent fasting group lost about three and a half more pounds of actual fat mass. Participants in the intermittent fasting group lost about five centimeters more visceral belly fat. They were measuring subcutaneous and visceral belly fat. Now, the researcher stated that these numbers are not significant enough to pick a clearly better approach, but these numbers are not unremarkable when looking at the big picture of improved metabolic health. Now, there's one other big leverage point that I wanna mention for intermittent fasting, and this is according to the International Association for the Study of Obesity, noting that intermittent fasting is more effective for retaining muscle mass.

Than a standard daily calorie restriction, so we're better able to target and reduce visceral belly fat. We're also better able to retain our valuable lean muscle tissue when utilizing intermittent fasting. Now, how do we do this in a smart and sustainable fashion? Well, my favorite way to go about this and what I've shared with people for many, many years is my fast protocol. So the acronym is fast, FAST, and the F stands for Figure Out Your Ideal Fasting and Eating Windows. There are many versions of intermittent fasting. There's five days, "normal eating" and two days of fasting, or reduced calorie consumption. There's alternate day fasting.

There's, you know, same day intermittent windows fasting and eating each day. The most popular form of intermittent fasting employs 12 to 18 hour fasting windows every day. So our eating, we're eating every day, but we're compressing our eating into specific windows. Now, figuring out your ideal fasting and eating windows is important outta the gate. We don't want to create something that is unsustainable for us. In looking at our goals, the data is indicating that even after 12 hours. We are turning on a "metabolic switch" that improves overall metabolism, starts this process of autophagy, helps to sync up that circadian timing system. All kinds of benefits kick in.

Alright, so we don't need to do something excessively longer, but. Truly, the more you put onto this, right, 14, 16 hours, you are gonna see more of these benefits that we've covered, but do not negate the power of a simple 12 and 12. 12 hours of eating. So this would be like I

eat breakfast at 8:00 AM I have my last bite of food done by 8:00 PM right? That is not a big deal. But sometimes if we're not conscious of this, we don't live by these insights, right? But if we want to extend that, we can open or close the window a little bit more based on what our goals are. All right? So figure out your ideal fasting and eating windows.

And the A in FAST is for adjusted to fit your lifestyle. Okay? This is based on you. If, for example, you tend to be more of a night person and you generally don't get to bed until say, midnight, you could set your fasting window up to be from maybe 10:00 PM until noon the next day. Or if you really love to eat an early breakfast to start your day and you want to eat breakfast at say, 7:00 AM and you want to extend your intermittent fasting window a little bit, you could have 7:00 AM as your first meal and have your last meal of the day by 5:00 PM. Again, adjust it to fit your lifestyle. Some people, they have very busy mornings and they don't want to eat something, so you can intentionally cater it around that and maybe have your eating window being 10:00 AM, which is very common, 10:00 AM to around six or 7:00 PM. But the key here is to adjust it to fit your lifestyle.

We wanna be consistent because the circadian timing system is literally catering itself or lining up to our eating habits. We want to be consistent but not neurotic. Be consistent, but not neurotic. If you are acclimated to only eating, maybe you eat at noon as your first meal, but you got a brunch with some friends that you want to go to and you're just like, oh, I can't, I'm just gonna have water. Have the brunch. You can adjust it to fit your lifestyle. Be consistent, but not neurotic. And then also, this is. Again, if we're looking at what our ancestors were doing, it wasn't just, they weren't going by a, you know, like a physical clock per se. Of course, they were more in touch with the 24 hour solar day, the nocturnal and diurnal patterns of the, the globe and the, you know, life itself.

Absolutely. But sometimes, you know, hey, I might happen upon a little bit of honey out here in the, in the, in these wilderness streets. And you know, so it's not about having everything be consistently the same thing every day, but we do wanna be consistent as we can, but not neurotic. And by the way, this speaks to sometimes food was not available and may be employing occasionally an extended fast or 24 hour fast. I'm a big fan of that. And again, if you look at this the right way, it's not really that challenging, especially if we're

well-nourished. And this is not across the board for everybody as a recommendation, but it's just something for us to consider, which would be, you know, 24 hours maybe we have dinner, we finish our dinner at say 8:00 PM and then we just don't have another meal until 8:00 PM the next day.

That's 24 hours, all right? It doesn't mean we go to bed hungry, which I'm not a big fan of that. I'm not a big fan of, you know, eating, having our last meal super early and then "going to bed hungry." That reminds me of punishment. All right, so, but for some people they feel better having, you know, empty tank, you know, later in the evening. So you gotta figure out your ideal fasting and eating windows and adjust it to fit your lifestyle. The S in FAST is for safeguarding your results with supportive nutrition. The biggest mistake people make with intermittent fasting is not always so obvious because you have a specific eating window.

There is a natural tendency for many people to eat less food over the course of the day. Not because they have to, but because they feel strong and satisfied and they don't necessarily want to. Eating less food is fine, obviously, but I want to make sure that you are proactive about getting all the essential and overlooked nutrients that maximize the benefits of intermittent fasting and your health. When you do eat, the quality of the calories that you bring in, make all the difference in the world. You wanna provide your body with the essential amino acids, essential fatty acids, vitamins, minerals, trace minerals and phytonutrients to optimize your brain, your body, and your overall fat loss. This is incredibly important when you are eating eat real food, predominantly real food.

It's just gonna make this whole process so much easier. If you're eating plentiful amounts of ultra processed foods and you're. Eating window, you're gonna be hungrier when you're fasting. For most people who've employed intermittent fasting while also eating predominantly real food, they're just not hungry. They're the fasting window. It's just not a big deal. And so being mindful of that, and also during that fasting window, it's awesome. It's okay to have, you know, plenty of water. You can have electrolytes, and I'm a huge fan of having tea. This is what I usually do during my fasting window. And certainties are incredible at supporting an intermittent fast.

SHAWN STEVENSON: For example, a study published in clinical interventions in aging took 59 overweight or mildly obese subjects to see if this traditional T called Pu erh makes a notable difference in weight loss. It's a randomized, double-blind placebo controlled trial and at the end of the study, the researchers found that quote, "consumption of pu erh tea was associated with statistically significant weight loss when compared to placebo. Fat loss was seen for the arms, legs, hips, and belly region." The participants who received who wear loss more overall body fat. And what was remarkable was that they maintained more of their lean muscle mass, their lean mass, their muscle tissue that goes so well paired with intermittent fasting.

Again, the tea that I drink most often is called Pu erh, and the only Pu erh that I drink is from peak life. It's triple toxin screen for purity. It's made through their patented cold extraction technology, making it as effective as what's noted in the study. So head over right now to piquelife.com/model. You're gonna get up to 20% off plus some limited time free bonuses, like an electric frother to mix your favorite beverages. That's Piquelife.com/model is P-I-Q-U-E-L-I-F e.com/model. Again, get up to 20% off, plus some incredible bonuses, and of course you get to try Pique tea's risk free with a 30 day money back guarantee. You either love their amazing award-winning tees or you get a full refund. Check them out piquelife.com/model.

Alright, so we've got our FAST acronym we covered. We covered F, figure out your ideal fasting and eating windows. A adjusted to fit your lifestyle, not what somebody else tells you to do. And the S is to safeguard your results with supportive nutrition. And this is very important with anything that we do when it comes to our fitness, is to track, track how you look, feel, and perform. Don't just take my word for it, any studies word for it. Track, pay attention to this for yourself. And this doesn't mean you gotta get all strapped up with all these different monitors and readers and self quantification, simply paying attention to how you look.

How you feel and how you perform will let you know whether or not that this is effective for you. And you can of course track simple things like your hip to waist ratio, something as simple as your waist measurement. You can of course track your weight, body fat and things

like that. We've got access to all those things. But what most people notice when they're employing smart intermittent fasting is that they just simply feel better. They're sleeping better, they have more energy. They're making better food choices. All this stuff goes hand in hand. And of course we've got some other masterclasses on this subject matter.

What about if you are, for example, going through perimenopause or menopause? Do you adjust things based on that? What about if you're a woman? Do you just have the same intermittent fasting protocol during your cycle at all phases? Well, we address this and much more in the conversation with Dr. Mindy Pells on one of our most downloaded episodes ever, got hundreds of thousands of people that have already checked it out. So after this episode, I highly recommend checking that one out. We got that for you in the show notes. But today I wanted to really give you some more solid science-backed evidence on how intermittent fasting can potentially reset your metabolism, improve factors like your fasting insulin levels, improve autophagy, and so much more just improve our metabolism overall.

It's something that our genes expect from us and something that we can employ with some intelligence and some consistency and not look at this as some fad or some new invention, but also not bind ourselves with some crazy intermittent fasting windows that simply don't fit our lifestyle. I appreciate you so much for tuning into this episode today. If you've got a lot of value outta this, please share it out with your friends and family on social media. You could tag me. I'm at Shawn Model on Instagram. We've got some amazing, amazing masterclasses and world-class guests coming your way very, very soon. So make sure to stay tuned. Take care. Have an amazing day.

I'll talk with you soon. And for more after the show, make sure to head over to the model health show.com. That's where you can find all of the show notes. You can find transcriptions videos for each episode. And if you got a comment, you can leave me a comment there as well. And please make sure to head over to iTunes and leave us a rating to let everybody know that the show is awesome. And I appreciate that so much and take care, I promise, to keep giving you more powerful, empowering, great content to help you transform your life. Thanks for tuning in.