The Fasting Method #154 - Fasting Q&A with Dr Jason Fung: The Dawn Effect, Smart Scales, Kombucha, Cortisol/Stress, Nausea from Salt, Fat Adaptation, and More.

Megan [00:00:06] Before we get started with today's episode, I would like to quickly read you our podcast disclaimer.

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[00:01:13] All right. And now we'll get started with today's episode.

Lisa [00:01:19] Welcome everyone. I'm Lisa Chance. I'm a fasting coach here at TFM, and we are here today with our very own Dr.Jason Fung for our monthly Q&A. And a warm welcome to our podcast listeners who will be able to listen to this Q&A with Dr. Fung a few weeks after our Community members. This is a monthly Q&A with Dr. Fung where he answers questions submitted by our TFM Community members, and, since it's recorded, it may be found underneath our Programs section under Past Webinar Q&As in our TFM Community. And just a reminder to you that he cannot give out personalized or medical advice, but you're fasting and nutritional questions he's happy to answer. So good morning, Dr. Fung. Good to see you.

Dr. Fung [00:02:05] Good morning.

Lisa [00:02:07] We're going to start right off here with a question about the dawn effect or the dawn phenomenon. This person says, "If one is glucose sensitive, not insulin resistant, and has a hemoglobin A1C under 5, would they still have the dawn effect happen? If they did, what would the dawn effect bump-up in glucose possibly be?"

Dr. Fung [00:02:30] Yeah. So the dawn effect actually happens in everybody, it's just that the effect is usually quite small. You usually see a little bit more if you are insulin resistant, but, even if you're not, it happens in everybody. So the idea is that, as your body gets ready for the day ahead, it sort of senses that. So at around 5 am, 4 am or 5 am, just before sunup, the body has this normal circadian rhythm, so certain hormones just spike up at that time, and those hormones sort of push some glucose out into the blood to get you ready for the day ahead. So this is natural. It's normal. Everybody has it. In most people, it's a very, very small bump-up in blood glucose, so it's really hard to discern from the usual sort of up-and-down fluctuations of every day, but, when you measure enough people, or you measure over enough time, it's actually a normal phenomena in everybody. So, you know, because it's in everybody, some people will have none and some people probably will have more, but the main thing is that it's normal and it's natural. You shouldn't see much of a rise in blood glucose. So using the Canadian units, mmol/L, you might see 0.1, 0.2. You know, so you might go from say 5.0 to 5.2. So relatively small, almost

indistinguishable, but I'm sure it happens that some people get a big rise because you're more sensitive to the cortisol, for example, growth hormone. Those are some of the hormones that sort of spike up in the morning and then go down to very low levels, and that's natural.

[00:04:10] So this is why you don't necessarily have to eat breakfast, because breakfast is always promoted as saying, "Oh, you have to fuel-up for the day ahead," but your body has actually done that for you. You've got glucose stored, so it's already pushed it out in the system for you and, if you don't eat breakfast, your body is going to figure that out. I was watching a program the other night and they were talking about this, and they were talking about how, in the '50s I think, they had come up with this slogan breakfast being the most important meal of the day because they were trying to sell all their excess cereal. It was after World War II and they had too many grape-nuts, I think they had [laughs], so they came up with this thing. Because I think a lot of people don't get hungry in the morning, so they, you know, in the 50s they were just skipping breakfast but, because they had this huge surplus, they had this big promotional campaign to make breakfast indispensable so that you would never even think about not eating it. But the truth is that your body is much smarter than we give it credit for most of the time. And if you don't eat breakfast, your body has already pushed out that glucose. So it's normal.

Lisa [00:05:15] So, with a lower hemoglobin A1C, like 5.6 to 5.0, it's really going to be more dependent upon your cortisol than it is your hemoglobin A1C - how much you spike on the dawn phenomenon in the morning?

Dr. Fung [00:05:29] Yeah. The A1C is just a three-month average of your blood glucose, so it takes that already into account. But if you have type two diabetes or if you have insulin resistance, if you see a higher A1C, your body is essentially storing more sugar so, therefore, it may push out a bit more sugar. So you may see a higher spike in that glucose. But even in normal people, completely normal people, you will see a little bit of a spike.

Lisa [00:05:54] Great. Thank you. This person says, "I have a smart scale. In addition to weight, it does metabolic rate, body fat percentage, etc. I'm interested in knowing if the relative changes (as opposed to the absolute number) would be useful to know. I am somewhat assuming here that the actual number may not be accurate..." Who knows? They're in their early stages, right? "...but that the relative change may be self-consistent. For example, if I do some fasting and find that my metabolic rate goes down by 10%, would the change decrease be approximately correct? Similarly, if I'm interested in reducing visceral fat, if that number goes down by 10%, might it be a helpful indicator about the direction that things are going in and whether what I'm doing is working?"

Dr. Fung [00:06:47] Those measurements are not super accurate and they do change. So the ones I think you're talking about is the ones that are a scale you sort of step on with your bare feet and it measures the electrical impedance. Basically, it shoots an electric current through the body, which is supposed to-- it tells you the percent body water, which they then use to calculate body fat percentage. It actually goes a bit wonky with fasting. We see this. And this is where people get really crazy because they say, "Oh, I lost 10 pounds of lean mass." So what happens is that, because there is some change in the body-water percentage with fasting, your body actually loses water because insulin is a hormone that tells your body to retain water so, when you fast, your insulin goes down and you actually reduce water, so you pee out more. So some people actually notice that they feel [unintelligible] when they fast. And it's also why people can do dry fasting, for example, which is where you don't even drink but, as you use some of the glycogen, it

releases some of that water, so, therefore, you don't necessarily need it. But, you know, losing that water sort of winds up playing havoc with that scale measurement.

[00:07:55] So what happens is, for a lot of people, when they do sort of extended fasts of likethree, four days, what they find is that they get this massive drop in lean mass. So then they worry, they're like, "Oh my God, I'm losing muscle." You see it all over the place. Like, even so-called 'experts', they don't understand that. There was a study and I have to write about it because I get asked this quite a lot, but what happens is you do a three or four-day fast, you lose like 10 pounds of lean mass or muscle is what the scale says. And they say, "Oh my God, that's terrible." And so you see all these experts and so on saying, "It causes lean mass loss and muscle loss," but it doesn't because what happens is that, the minute you eat-- so if you were to measure it, you'd get this sort of 10-pound loss of muscle and then, within a day of eating, you gain 10 pounds of muscle. It's like, well, do you really think that the body lost 10 pounds of muscle? And then without exercising, you gain 10 pounds of muscle for no reason other than you ate? like, I don't think so. It'd be great if it happened, but it's not. It's actually just the problem with the body water. During fasting you can see a little bit of odd stuff going on, so it's not completely accurate. If you're on a relatively stable schedule, then you're right, then you can use the, you know, the to indicate not the absolute number but the trend, like, is it going in the right direction.

Lisa [00:09:16] What I usually tell my clients is look at the trends on your eating days, after an eating day, and look at your trend after a fasting day. You're going to separate those two bits of data because of that, the way you lose water. That's your better bet, I think, personally.

[00:09:33] Interesting question here, "What's your take on kombucha?"

Dr. Fung [00:09:37] Kombucha... I mean, if you like it, it's great. It's essentially a fermented drink and there's a lot of benefits to fermented foods. Mostly people talk about the microbiota and so on because-- it's like vinegar, too, it's got this sort of great variety of probiotics that go with it. So some people really like it. Some people like the taste, some poeple like-- Does it help for weight loss? There is a small effect with fermented foods, and we talk about this in terms of carbohydrate metabolism. Fermented foods like kimchi and all that sort of stuff (kimchi and sauerkraut and so on) has acid, and the acid can help reduce the speed of absorption of carbohydrates. So if you look at, sort of-- you can take somebody and have them eat white bread and you'll see that there's a huge spike in glucose. If you take white bread with some vinegar, for example, it will significantly lower that spike of glucose. That's because the acid in the food can actually neutralize some of the salivary amylases. So amylase is the hormone that breaks down the carbohydrates. So when you eat bread, saliva has amylases that start breaking it down right away so that by the time it gets down it's just glucose. So it's this massive spike of glucose that hits your bloodstream all at the same time and gives you this big spike. The acidic foods, so lactic acid in fermented foods, acetic acid for vinegar, and lemon juice has citric acid, all of those can actually inactivate some of the salivary amylases and, therefore, it doesn't cause that huge spike. It sort of turns the fast carbs into a little bit slower digestion. You don't absorb as much, and therefore you handle it a lot better. The total insulin effect goes down, so that's why it's beneficial. So kombuch's the same. It's got some of that sort of fermented and also may help with the gut microbiome and all that sort of thing. So I don't think it's a huge effect but, for some people, it may really be beneficial.

Lisa [00:11:31] Thanks. Right. This person has a question about a book that they read called The One Minute Cure: The Secret to Healing Virtually all Diseases. "It is a therapy

with H2O2 in food grade of 35%, with 3% diluted in distilled water. I have tried this therapy and, every time I test my blood sugar after 30 minutes of taking it, it lowers my blood glucose by more than 17mg/dL. I was wondering if you have studied this therapy and what you think about it please?"

Dr. Fung [00:12:07] I haven't read the book and I don't know too much-- H2O2, I think is hydrogen peroxide, so a dilute solution. I mean, I don't know enough about it to say whether it would work or not. If it works for you, consistently, then I always say, then go ahead. It doesn't matter if it works for nobody else. If you find that it works for you, then use it as long as it's not dangerous. It potentially could have an effect. I mean, hydrogen peroxide, again, could have effects in terms of activating or deactivating enzymes, like we just talked about with amylase and so on, so it potentially could have some benefit. I just don't know that there's a lot of research about it. I'd have to take a closer look at it, but, you know, I haven't heard too much about it. So my best advice would be to say that, hey, if it works for you and it's not-- you know, it's a fairly dilute solution so I don't think it would be dangerous, then, yeah, then use it. And then if there's more studies then I can recommend it sort of with more confidence.

Lisa [00:13:08] This person says, "I find it easier to fast during work. However, I have a very stressful job with long hours. Could cortisol or high stress be negating the benefits of my fast? Would I be better off using TRE and fasting on my off days?"

Dr. Fung [00:13:27] They don't sort of negate each other, but the cortisol can certainly-- so if you say, okay, so if you're under a lot of stress, then you have a lot of cortisol, which, in the long term, excessive amounts is not good for you. In the short term, it's a natural phenomenon, but it's only supposed to be sort of short term. So, in the past, these were like if you saw a lion, your stress went up, your cortisol went up, and then it was gone, the stressor was gone. So the kind of chronic stress, like work and stuff that we have these days, is different than what we used to have. Cortisol and insulin are two different hormone systems; they respond differently. So if you take cortisol and you're fasting, it's not that one negates the other, it's, you know, obviously one is good and one is bad, right? Lowering insulin is good but high cortisol is bad. As opposed to if you didn't fast then you'd have no benefit from the insulin and just bad, right? So it's not that one negates the other.

[00:14:21] You can experiment and try and see if it works differently because, certainly, there's a lot of other things that happen. So there's people who have stress eating, for example. So if you're fasting during a period of stress, that might be better because, if you started eating, you might be eating all the wrong things, right? So people under stress will, you know, go grab some chips, or they'll go and get a muffin or, you know, whatever is available. So the fasting might actually be beneficial from that standpoint in that it's going to put at least some barrier between you and the sort of food you wouldn't-- you know, you know you shouldn't be eating, right? But you have to sort of experiment a little bit. If it doesn't make any difference, then, sure, go ahead, but one isn't negating the other. It's just that there's two separate things, and you've got sort of one good thing for your weight, in terms of the insulin, and one bad thing, in terms of stress, as opposed to, sort of, if you did fast, then you just wouldn't get the benefit at all.

Lisa [00:15:14] This question is about this month's Group Challenge - fasting and dairy. There's always questions about dairy. So this month's Group Challenge is 'Giving up your Vices', and Megan's first video discussed A2 dairy, and they want to know what your take is on this. "What is the appropriate amount of A2 dairy each day? Should it be between 1 and 2oz? Some say up to 4 ounces or less. I know, Coach Nadia says 'sparingly', but I'm

not clear on what that means when it comes to sheep, goat, or A2 dairy. Does it make a difference? And do you think it matters what kind of dairy it is? Is it still all insulinogenic?"

Dr. Fung [00:15:56] You know, dairy is a very interesting topic because it's a bit varied. There's sort of good and bad about it, in that there is a lot of lactose, generally, in dairy (because that's the main sugar) but it's not glucose, so, therefore, it doesn't cause the blood glucose to rise and has the same effect on the insulin. So there are a few studies that show that taking dairy (cheese particularly) may actually protect against things like type two diabetes. So there's sort of varied responses. I think that some people do get into trouble with dairy, and a lot of people just tolerate it okay. Keeping in mind that you really get into problems when you sort of go overboard on it, right? Most of us don't drink a lot of milk. I mean, if you look at milk consumption over the last 50 years, it's really dropped off considerably in both children and adults. And so the only other dairy that people tend to get a lot of is cheese, but cheese is kind of expensive so it's often hard to get that much cheese. Certain places do, like Denmark and so on, and they don't-- if you look at the cuisine there-- we have some family in Denmark and they eat cheese like all the time. Like, they constantly always have cheese brought out sort of at every meal. And so they eat a lot and they're not particularly suffering with that. So it's sort of a mixed bag to me - dairy. I think in some people it can be very difficult because a lot of people don't tolerate it very well but, you know, if you eat a lot of it, then that can be a problem. So, for most people, it's probably a sort of a neutral sort of food.

[00:17:34] But again, this is where it's important to sort of see for yourself. The only way to know if you're doing better with it or without it is to take it away. You take it away and, if you notice that you're doing much better, then great because everybody's so different, right? It's like, this is where people get into trouble because somebody will say, "Oh, I gave up dairy and did so much better. Therefore, it must work for everybody." No, it only means it worked for you, right? It's like if somebody else gave up dairy, they may do worse. And it's okay, that's okay. They're different people. So it doesn't mean that what happened for one person, necessarily, is going to be beneficial for the next person. You see this in studies all the time where you do a low-carb diet. Most people lose a bit of weight but some people lose a lot of weight, and there are people who gain weight, but it's the same diet, right? It's because people react differently to it. And that's okay, but it means you have to be a little bit 'trial and error' and figure out what works for you. Dairy is that way. A lot of things are going to be that way because, when you take the average and say, "Okay, on average, dairy is neutral to slightly good," that doesn't mean that it's necessarily good for you. So that's why it's important to do these challenges because, if you don't challenge yourself, you never find out. So I fully encourage people to really see what they feel, how they feel, you know, if they notice anything. Because if you don't notice any benefit, significant benefits, then why give it up? Then stay on it. It may be fine for you.

Lisa [00:19:04] All right. This one says, "I have asked all the TFM coaches and tried their suggestions. Specifically, I've tried small doses of fine salt, rock salt, different brands of salt, unflavored LMNT, olive brine, pickle juice, diluted salt water, and, recently, salt capsules that I make on my own. And yet, without fail, I end up feeling nauseous from the salt shortly after taking it. Is there anything else that I can do to quell the nausea? Do some people just not need the salt or have some sort of potential medical reasons why salt may make them physically nauseous? Are there other alternatives that I haven't tried yet?"

Dr. Fung [00:19:49] I don't think so. So you don't necessarily need the salt. I mean, the salt is-- because, you know, when you fast, you're not taking anything other than, say, water or tea and that sort of thing, and you don't usually put salt in there, so the transition

from going from a normal-salt diet to fasting (which is almost zero salt) can be a lot, and that's-- some people get dizzy and, you know, they have different symptoms. So salt is often beneficial. If it makes you nauseated, then, of course, don't do it. But then the way to get salt would be either through taking something that you can put salt in, so usually something like soups or clear broth or something. You could do a vegetable broth, for example. Like, yes, it's not a total fast but, you know, there's not much else other than the flavors, but then, when you put the salt in, it's not weird, right? It's just soup or broth. So that's a way to get it in into a more natural form that's not so sort of artificial, like salted water, which is, you know, not something that you might necessarily normally take, and, therefore, may make you nauseous. So you can try different things like that.

[00:20:57] You can also try different types of salts. Most salt is sodium chloride, but you can also try taking magnesium salts, for example, if you want. That's a different type of salt. It's not sodium, it's magnesium. You can also take potassium salts. So there are different electrolytes in there that might be more beneficial to you. So mostly it's sodium we're talking about, but if you have enough sodium, then maybe you need some magnesium or potassium. Those are the electrolytes that we mostly recommend and those are-- there's this fasting electrolyte thing from Enzymedica that came out and it's mostly the things we talked about: sodium, potassium, magnesium. So those are the options. I don't have anything-- you know, the coaches, obviously, have a wealth of experience and so there's not much else I can I can recommend.

Lisa [00:21:44] All right. "How high should a [glucose] spike be after a meal? When should your blood sugar levels return to your pre-meal range?"

Dr. Fung [00:21:55] It depends on your carbohydrate intake in that meal. So remember that blood glucose, which is blood sugar--when you eat a meal, you're taking three macronutrients, in varying proportions: carbohydrates, proteins, and fats. So carbohydrates are glucose, right? So if you eat bread, it's glucose. It's a chain of glucose in the form of amylose or amylopectin, and you break it down into glucose. So, therefore, when you eat carbohydrates, your blood glucose goes up. If you eat proteins, you break it into amino acids. And fats, you break into fatty acids. But importantly, proteins and fats don't have glucose. So the whole point is that carbs are glucose. You eat them and your blood glucose goes up. If you eat zero carbs, you really shouldn't see much of a spike in your glucose at all. You may get a little bit from whatever is in there, but not a huge amount. So it all depends on the carbohydrate content of the meal that you ate, and it also depends on the sensitivity of your body, which has some genetic component. I mean, it's not zero genetics involved in there, but if you do have hyperinsulinemia or insulin resistance, which is your body is sort of filling up with glucose already, then, of course, when you put a lot of glucose in, a lot may spill out and it may take more time to come back. So really, within, you know, an hour or two is what people say should do it, but it depends. If you're taking a huge glucose meal, right, then it's going to be-- it can be much longer because there's more glucose to sort of push into the cell. If you eat zero carbs, then it may take a very short time for that glucose to come back down.

Lisa [00:23:36] All right. Great. "How do I know when I'm fat adapted?"

Dr. Fung [00:23:40] That's a difficult question because there's not really any easy measure of that. For most people, when they switch over-- so most people are eating a reasonable, like 25 to 50% carbohydrates with their meals. So most of the time people are using glucose. When you start using fat, then your body sometimes needs a period of adaptation where it's going to increase the necessary hormones to use fat as a fuel. It can take a few

weeks, but mostly you notice it because, you know, that switch is sort of seamless. So if you go from non-fasting to fasting, your body can adapt very, very quickly to that because, as you deplete your storage of glucose, your fat stores go up. And as your fat storage goes up, if you have the sort of necessary machinery to use that fat as a fuel, then it'll be seamless, right? And that's this kind of metabolic switching, which they say, you know, metabolic adaptation and so on. If you find it a very difficult transition (that is you start fasting and then you sort of hit the wall), it's because your glucose is running out and your body doesn't really know how to use fat yet. There's plenty of fat, but your body can't use it very easily. So if you have trouble switching during fasting or during, you know, very low-carb mealtimes, then you're probably not fat adapted. It probably takes a couple of weeks at the most, like two to three weeks is probably all it takes.

[00:25:10] Some people used to measure some ratios and stuff (like glucose to ketone ratios and stuff) because, as glucose goes down, your ketones should go up. And what you find in some people is that the glucose goes down and the ketones don't go up, so you get this period of time in the middle where you actually don't feel very good because you don't have the energy, because you can't burn glucose and you don't have ketones yet. And it differs in different people, but, the more you do it, the more you do the fasting, the easier it becomes. It's easier for your body to switch back and forth between the glucose and the fat. Your body has two fuels that it can use, either glucose (which is carbs, sugar) or fat (which is body fat and dietary fat). So there's two potential sources, sort of like a hybrid car, right? You can go gas or you can go electric. As long as that switch is seamless, that's great. If you don't use one for a long time (like if you don't use fat for a long time), that switch can be difficult. When that switch is very easy, then you know you're fat adapted.

Lisa [00:26:08] "If someone has high triglycerides, is it a pretty good guess that they also have non-alcoholic fatty liver disease?"

Dr. Fung [00:26:15] They certainly go together because both of them are related to excess carbohydrates. So fatty liver... Essentially, the liver produces fat in the form of de novo lipogenesis. So, normally, if you eat a lot of fat-- so people usually say, "Oh, you should eat less fat if you have fatty liver." It doesn't work at all. The reason is, when you eat fat, that fat actually gets absorbed. It never goes to the liver. It gets absorbed through the stomach, through the intestines as chylomicrons and it gets deposited with the rest of your fat cells, right. So dietary fat goes into your fat stores. Your liver is not a place that you are supposed to be storing fat. The reason your liver has so much fat is because when you take too many carbs, that is glucose, your body, your liver will take that glucose stored as glycogen. When you fill up your glycogen and you're still taking in lots of glucose, your body will turn that into fat in a process called de novo lipogenesis. So the liver is taking the glucose and turning it into fat, and that's why you wind up with too much fat stored in the liver. So the fatty liver is really, essentially, an excess of de novo lipogenesis, which is an excess of insulin and glucose, which is carbs. So too much carbs, too much glucose, too much insulin gives you fatty liver. So it also gives you high triglycerides because what happens is that that fatty liver that tries to shove that fat out, when it pushes it out, it pushes it out in a form called VLDL (which is part of the cholesterol panel), which has a lot of triglycerides, which are fat molecules, right? So as it pushes that fat from the liver out into the blood so that it can go to the fat cells, you're pushing a lot of triglycerides into the blood. So, therefore, fatty liver and high triglycerides really go together.

Lisa [00:28:03] "Tips and goals on how I can do intermittent fasting without losing weight. The goal is to lower my hemoglobin A1C and be less dependent on medication while improving my health." So they're a TOFI, right, thin on the outside, fat on the inside.

Dr. Fung [00:28:21] Yeah, there's two possibilities. One is the TOFI, which is that you have a lot of visceral fat but it doesn't show up on the outside, which is sometimes hard to diagnose. But in that case, you do still want to lose that weight because that is fat, right? What happens is that sometimes you have a lot of visceral fat-- and you see this a lot, for some reason, in South Asians and some East Asians too. They have a lot of visceral fat but not a lot of other fat that's noticeable, so they look quite slender but they actually have quite a lot of fat on the inside. So when they lose weight, they lose the fat. They actually get-- you know, their arms might get very thin because they're losing some of the intramuscular fat and so on. So then they don't like it. They're like, "Oh, I'm losing too much weight." That's the complaints that some people get but you really you're losing just the fat that was sort of propping it up. Sometimes if you look at-- it's interesting. You look at the thigh muscle of some people. So some people who are very athletic, it's all muscle there. But then you just look at people who are quite, you know, they don't get around much, right? They don't exercise much, they don't even walk much. It may be the same size, but there's no muscle. It's all fat, right? So as you lose that fat, then you get these really skinny legs or skinny arms and so on, but it was only just fat that was making it look like you had muscle there. [laughs] So, in some people, you actually do need to lose that weight, so it's a good thing.

[00:29:42] The other possibility is that you have, with the A1C it is called LADA (latent autoimmune diabetes) in adults, where it's actually more of a type one type diabetes (or lack of insulin not excess insulin) in adults. It's more common these days, and you can often diagnose it by looking at the fasting insulin, fasting c-peptide. And it actually should be-- in people who have high A1Cs should be high but the fasting insulin tends to be low. If you follow them over years, which I've done in clinic, their insulin levels sort of go down and down and down. And that's a clue that they actually should have LADA and not type two diabetes. It's a different-- you know, it's a totally opposite because there's too little insulin, not too much insulin, and, therefore, giving some insulin back is not necessarily a bad thing. But that's the people you get who are very thin and have diabetes. But because they developed it as adults, they get called type two when, in fact, they're more of a type one.

Lisa [00:30:37] Interesting. This person says, "I'm a lifetime vegetarian and always have eaten very clean food, whole food. I've been fasting since 1979 but it's not too easy for me. I easily fast for weeks, change up the fasting protocol, etc. but the pounds just do not budge. How can I use fasting to drop this weight?"

Dr. Fung [00:30:59] You have to look at some of the other factors. I mean, if you're using a lot of fasting and that's not the problem, then you have to look at the foods that you're eating - perhaps they're not right - but you also have to look at some of the other things, which is like the sleep, the stress, that kind of thing because, you know, that can also play a big role. So we mostly talk about fasting because it lowers insulin, and that's the main problem for a lot of people, but there are people who have, say, chronic pain syndromes and so on who their problem is that excess cortisol. Excess cortisol can make you gain weight, too. We know that because when we give people a synthetic type of cortisol, prednisone, they gain weight. That's what happens. So if the excess cortisol is a problem then dropping your insulin is not going to be a good solution because you're dealing with the wrong thing. If your sleep is disturbed or if you're working night shifts and so on, then

it's an extra problem because it's-- you know, people tend to eat more at night and so on, but you've also got the cortisol issue because your sleep schedule's sort of all messed up. So if it's not working for you, then you have to look at some of these other issues, like what are the foods that you're eating. You know, maybe the foods you're not reacting to too well, right? And this is the same thing that-- just because it works for some people, or even most people, it doesn't mean it necessarily works for you, right? And this is where people sometimes say, "Oh, I added back this, like carbs, and I did way better." It's like, well, if you do better than you should do it. You know, just because it works for most people doesn't mean it works for everybody, and maybe you do have to experiment a little bit in terms of the foods that you're eating that are going to have a better effect for you. And then those other things: the sleep, the stress, the exercise. Like, they're all components. The diet is going to be the biggest component of it, but, for some people, it may be other things.

Lisa [00:32:49] Yeah. So just to kind of ask about, you know, 'adrenal fatigue'. I'll put quotes around that. Somebody that has that, it's good to move their meals earlier in the day so that they're tamping down that cortisol response? True?

Dr. Fung [00:33:05] Earlier in the day is generally better, anyway. So if you take people and you look at the insulin response-- so insulin drives a lot of the weight gain. So if you take the same meal in the morning versus at night, you actually get much more insulin effect at night time, so it generally is better to take it earlier in the day. The other thing is, when you eat earlier in the day, of course, you have the whole day to sort of use it up, use up the energy that you've taken in, as opposed to at nighttime, if you eat at like 10 pm and then go to sleep, well, what's your body going to do with all those calories you took in, right? Well, there's nothing you can really do but store it because you're sleeping. So earlier, in general, is better. In our society, we tend to move later. It's just because of the way we are. So this is where some people get into trouble with fasting is that they'll skip breakfast, for example, and then they'll eat more at night time instead because they're like, "Well, I didn't eat breakfast," but what you're doing is you're shifting all your food later where it's going to have more of an effect on your insulin. So that may negate a lot of the benefits of that fasting. And some people will actually do better just to have something earlier and then less later, right? So you have to sort of see where things go. But, generally, eating earlier is less-- causes less weight gain.

Lisa [00:34:23] But doing an OMAD, say, from breakfast to breakfast would be much more beneficial for somebody with that issue than dinner to dinner.

Dr. Fung [00:34:31] Yeah. And if you're not hungry at breakfast, then do it at, like, you know, noon or 2 pm or something like that, as opposed to like a 7 pm omad, right? That's okay other than the fact that, if you look at, again, the natural rhythm of hunger, the circadian rhythm of hunger, hunger tends to peak at like 8 pm, so if you're doing OMAD at 8 pm, you're going to be more hungry. So, therefore, you're going to naturally tend to eat more, which is not great, right? As opposed to if you did a sort of 10 am or 12 noon sort of OMAD, you're going to be less hungry. That's just the natural rhythm of it. It's due to the circadian rhythm, like you talked about, you know, in the morning, you get the spike and so on. So the hunger follows also a circadian rhythm.

Lisa [00:35:16] Great. I have a lot more questions to ask you but we'll save them for next month. Some great questions in the Q&A box, too. Thank you for staying over Dr. Fung. We really appreciate that and you answering a few more.

[00:35:28] Okay. No problem.

[00:35:30] All right everyone, I'm going to go ahead and sign off here. Thanks, Dr. Fung. Bye.

Dr. Fung [00:35:35] Thank you. Bye.