

Dr. Andy Phung and Ivor Cummins talk about how you can resolve metabolic disease in patients quite easily. Find out more [@ihda.ie](https://www.ihda.ie) and TheFatEmperor.com

Ivor Cummins: 00:00 Hey, Dr. Andy Phung, how you doing?

Andy Phung: 00:03 Hello Ivor. How are you?

Ivor: 00:05 Ah, not too bad, busy, busy and kept going. But, great to talk to you this evening and catch up. You've been out on Twitter, I've only noticed you the last few weeks, we've had a couple of chats. But now you're trying to get out on Twitter to get out the message of how you can actually resolve metabolic disease in your patients quite easily.

Andy: 00:26 That's true, yeah. I started about a month ago. I actually started the low carb and intermittent fasting about two years ago and getting really good results, but have no way to put it out. So I was like, "Well, maybe I should share the good news with more people." That's why I took to Twitter about a month ago.

Ivor: 00:51 Excellent. Well, I've noticed you pretty quickly, I know you tagged me, but all of these dramatic graphs of insulin coming down over a period of weeks dramatically, fasting insulin weights coming down. So you're really excited about actually really helping people now compared to just giving them some pills.

Andy: 01:10 Absolutely. I didn't know this myself until, like two years ago. Before that, I practice traditional medicine, traditional retrainings, so we diagnose, we write them a pill, give them a prescription. I did that for like, seven years after residency. So, you do what you know and that was what I knew, you know?

Ivor: 01:39 Yeah. And you in residency and indeed in college doing medicine, I guess there was no real focus on hyperinsulinemia and metabolic syndrome and how it connects to the majority of modern disease, any of that stuff?

Andy: 01:55 Not really. What they do talk about is in I call them "The Western Medicine" is organ systems. You know, they divide the heart in isolation, the lungs in isolation, the muscle in isolation. So, when you see these tiny pieces, and was it well, but the problem is the body doesn't work like that, you know? You can't just say, "Well, okay, I'll take the heart out and just study the heart." And that's what they do, you know? So that's what we were taught, so that's what I practice for a long time.

Ivor: 02:30 Yeah, that's interesting. Actually, there's an element of piecemeal to all the piece parts, but not the integrated whole.

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Funny enough in engineering as well. If there's a massive project that's really complex, a new product development, there are many, many specialties for different pieces of the technology. But one of our most important people is the Integration Lead. And that person has pretty good depth in nearly all the technology areas and can actually integrate or tie together all of the pieces when the major issue arises, where the individual specialists kind of get lost.

Andy: 03:09 That's actually what happened. It's not that we didn't know a lot of the stuff that we talked about - we do know. Because what you need is you need to do something I call them "conduct connection" but because there was no one to show you the connection, you only know that, "Hey, this is the heart, this is the lung, this is the kidney. Do this for the lung, do this for the heart."

03:40 I mean, one thing they did say in medical school is that no one comes in with a diagnosis on their forehead stamp, because if it is stamp you just write them a pill. So you need to come up with the diagnosis. And that's what we're really good with, "Oh, this is what's wrong with you. Here's a pill for you." "Oh, this is what's wrong for you. Here's two pills for you." And that's what we were taught we to do. And then you know, we're really good at it.

Ivor: 04:04 Well, I mean, for certain afflictions, that'll work pretty well. Good identification of the problem and target a modern pharmaceutical solution. And it works for a lot of things. But I guess not for the kind of epidemic of chronic disease is poorly served by that approach.

Andy: 04:24 That approach works really well for I call them, "acute disease," something that comes in, you know, what's going on, and you say, "Here's an antibiotic," or, "Here's something else," and then it, it goes away. It doesn't stay. When we're talking about chronic diseases like diabetes, high blood pressure, obesity, and things like that, they don't go away; they stay. And year after year after year, we're just like, "Well, here's medicine for you. Just take it, that's what we have."

Ivor: 04:57 Yeah. So, you had a Road to Damascus conversion a couple of years ago. You actually realized and put all the pieces together with some help from some people out there, I guess and people you learn from. So maybe briefly go run through your conversion?

Andy: 05:14 Oh, sure. Yes! I have a family history of diabetes. I was carrying about 25 pounds, a little bit more. But it doesn't show because agents, it's only in the midsection. What I know before that was calorie and calorie out. You know, exercise, if you want to lose weight and eat less, you're really lose weight, and it does work. But the catch for me was before that many, many years ago, I was already running and try to be in shape and not to gain weight, but develop foot pain. And then what happened was I developed that pre diabetes on top of the foot pain and I'm like, "What am I saying supposed to do now? Exercise even more, eating even less?" I'm like, "I can't do this." But you know what I was (thinking), "I have to do something." So I got an elliptical machine where there's no pounding the pavement anymore. But I said, "Okay, I need to exercise. I need to exercise every night." So I go to work, come back, get on the elliptical for like an hour. And then watch the I think it's called the Top Gear, the UK version. They have so many. I watched all of them. All the seasons, show after show after show while doing my elliptical.

06:41 And then I did it for a whole year. I went in 172 pounds, I left 172 pounds. I was like, "Ahh, I didn't lose any weight," and my sugar barely budged. My A1C was 58 to begin with, now it's 56, but I didn't lose any weight. And then at around the same time, my sister sent me a link about Dr. Jason Fung, and the famous one in Canada, said, "Hey, you can reverse diabetes." I'm like, "No way!" He said, "Yes, you can." I'm like, "No, no, no. This is bull because I'm not that," "Oh, I just graduate from medical school and then I did my residency. I only been out for six or seven years. I know my stuff, okay? I go to CME, I go to conferences. I keep everything up to date. It's not possible because diabetes is a chronic, progressive disease. And it's written in big bold letters. I know my stuff okay?" But then in the back of my mind, I'm like, "Come on, you were pre diabetic, you exercise for a whole year, you didn't lose any weight. Maybe there's nothing to lose." So I watched his video. It's called I think "The Two Compartment Syndrome" talking about how the biggest loser, they went in, they exercise, they eat less, and boom, their weight came back. And then he's not talking about insulin. I was like, "Oh, I know insulin. That's easy. The shot you give yourself. Yeah, anybody who's diabetic go on insulin will get fat. And I know that, okay? That's not new." But then he said, "Oh no, it's the refined carbohydrates. The sugar and the starch, they spike your insulin really high compared to

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the protein or fat." I'm like, "No, no, I'm Asian. I eat rice, a lot of rice. Oh my gosh, that's what driving my obesity!"

08:48 At that time, I was like, "Wow, I need to learn a lot more." And I order his book, The first book, "The Obesity Code" and start reading that. And then I found another book that he wrote, "The Ultimate Guide to Fasting," I read that too. And then start going on the internet more and then watch all the videos and start seeing Dr. Hyman. I don't know if you heard Mark Hyman from Cleveland Clinic?

Ivor: 09:13 Yeah.

Andy: 09:14 And he also talked about that. I'm like, "Oh, my gosh! They know all these things around, but how come I don't know any of it?" And then so in the three months, I hit the pavement, I hit the internet, I start learning and then I do low carb, I did intermittent fasting, I dropped like 23 pounds without exercise. I was like, "Wow, this is amazing." And then I was like, "Okay, what are you going to do with your patients?" You know, they're still diabetic, [Inaudible - 00:09:41] pills, what are you going to do about it?" But the good news is because I was learning so much more, I start feeling comfortable to start prescribing to my patients. So that was like almost two years ago.

Ivor: 09:55 Wow. That is a classic story broadly speaking of up the tens, hundreds of thousands, soon, millions, who will be learning what you learned. But it's even more interesting when you're a professional doctor, not long out of college residency. And this can be such a revelation to you. So it's a fascinating.

Andy: 10:20 I can't say more, you know? We were taught the old model, which is like calorie and calorie out, you know? Carb has four calories. Protein has four calories. Fat has nine calories. "Don't be stupid, don't put too much calories in your body; you will get fat. If you worry about fat, burn your calories, exercise." That's what I was told. You know, you do what you're told or at least you do what you're taught.

Ivor: 10:53 Well yeah, that's exactly it Andy. The calories in, calories out; the fat has more calories, it's going to make you fat, all complete BS science but sounds convincing. And the beauty of bad science I often find as it can actually sound pretty intuitive and simple. And it's dead giveaway. If it sounds simplistic and it food companies and people like that love the theory, you gotta start questioning it. So you got the answers. But you know, this

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evening in our chat, I'd love to hear some of the patient stories. You've done really great. Two years ago, you got us and now you deploy it with your patients. So maybe two things, a few stories, and also how it makes you feel as a doctor compared to your old regime.

Andy: 11:44 Sure. I mean, the old regime is, you know, if patients have prediabetes, well, first thing we tell people is like, "Hey, eat less, exercise more. I'll see you in three months." And then they come back three months later, the sugar might come down a little bit and you say, "Okay, we'll see you within three more months." And then sugar discredits, set back up, you're like, "Well, Metformin for you. Here you go. Two times a day. We'll see you in three months." And then shortly after, well, sugar goes up again. Well, we need another medicine, Metformin's not enough." And then we stopped talking about exercise, because it doesn't work. We were like, "Okay, fine, here's another pill for you." And then one pill becomes two, two becomes three, and next thing you know, it's like, "Well, it's not enough to keep you I want to see under seven anymore. I'm using all the pills I know and here you go, insulin starts." Usually the nighttime insulin and then the patients get fatter by the second and then they get sicker by the time.

12:54 What can you say you know, "You're doing what you're told and the patient gets sick?" So you're like, "Well, it didn't bake bow ladder, it's chronic progressive disease. Just tell them to suck it up, that's what they have to do. Which is really sad. That's what I was taught and that's what I practice for like seven years.

Ivor: Oh, yeah. And you know, I suppose in that kind of scenario, when you're comfortable that you do understand the technology, you've got it right, they're not succeeding at all, therefore they must be a bit lazy and not applying themselves.

Andy: 13:33 Exactly. So there are two ways to think about when they are not succeeding. You can say, "Well, you know, you're not succeeding because you didn't listen to me well enough. You didn't exercise hard enough. You didn't eat less enough. You didn't do what I asked you to do." So that's what we always say as a rationale for why they're not succeeding. But when it's you, when is you are having to carry some extra weight, when it's you having pre diabetes, when did you exercise already? Use that really questioning, "What you're doing?" Because anyone else doing it you can always say, Hey, they kept doing what I asked them to, how can they prove to you right? But when it's you doing what you've prescribed to your patient, and that

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doesn't work, "Oh my gosh, you start, when you see the light, oh my God, the door is like wide open.

- Ivor: 14:36 Excellent. And if we talk about a couple of your patients then, you've a couple of pretty stunning success as well, many successes that you've posted, but a couple of the guys does a 100 pound weight loss in a year and insulin moving like a rocket downwards. So maybe a few of those. And when I put this together, this podcast afterwards, I can display in the video version some of these charts.
- Andy: 15:01 Sure. Yeah. The first one, I called the "bypass a patient." And so happened was like, I got a letter from his surgeon - after I learned the low carb intermittent fasting, what drives obesity and all that, insulin by the way - so I got a letter from his surgeon saying, "Hey, we're going to do surgery on your patient to lose weight, and by the way, here's what I tell them to cut back on his calories and exercise more." And I'm like, "No, don't do it. Because that's bullshit! I know what it is."
- 15:41 So I picked up the phone and call him. I said, "Hey you know, I got a letter from your surgeon. You want to get stomach surgery for some weight problem, plus I haven't seen you in some time, so why don't you come in to see me? Yu know? Get some blood work done before you come because I think you have an insulin problem." I talked to him, I think it was like an hour on the phone just after work and then try to convince him it's a right thing to do. And he came in get, some blood work done and that was like about eight months before the last time I saw him and he weighs 295 pounds. And then you know insulin was quite high and I'm like, "Okay, here you go. I'm going to blow your bubble. It's not about calorie in, about calorie out; it's all about insulin. It's all about insulin resistance. It's about what insulin do to your body. It's the instant driving the fat accumulation. It's the instant preventing the fat metabolism. So to fix your problem we have to fix insulin.
- 16:50 And so, to fix insulin is that because the refined carbohydrate and starch does drives the insulin the most, so we have to do low carbohydrate diet. And then so now is the booboo, "Well, you mean I need to eat more fat? But Dr., fat is going to cause heart disease don't you know?" And now I'm like, "Oh yes, I do know." But it's not about fat anymore; about the particle of the cholesterol. That was another another story.
- 17:28 So I started him on this low-carb high fat intermittent fasting. He started at like 295 pounds. Within about six months, he went

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down by 75 pounds. Right now he's at 220. And then if you look at his advanced cholesterol test, the main one is like, the ratio of triglyceride to HDL, triglyceride come from carb, HDL comes from fat and you start seeing the numbers drop, like into the ratio was like about 126 and it dropped to 123. So basically cut down a lot of the carbohydrate.

18:10 What people might not know is the VLDL. The VLDL is synthesized by the liver to carry the triglyceride out. And the triglycerides are made from the refined carbohydrates.

18:33 So the next thing I looked at is the VLDL. VLDL is synthesized by the liver. It's a lipoprotein particle. It is made to carry the triglyceride away from the liver to the adipose tissue. And the triglyceride from the liver come from the refined carbohydrate and sugar. So if you look at his VLDL, it starts at around 20. That means he's making a ton of triglyceride from his refined carbohydrate. And it went from 20 down to 11. And the last was like three, and a normal is less than 2.7. So that's how much triglyceride that he didn't make, that the body didn't need to make the VLDL to transport it out.

Ivor: 19:24 Wow! And those VLDL I sometimes describe to people to simplify it, the mother of LDL.

Andy: 19:31 That's right.

Ivor: 19:32 Yeah, and the LDL particle comes from the VLDL shrinks. But that's fantastic. Because that was in a fasting test, I guess.

Andy: 19:39 Yes, it is in the fasting test.

Ivor: 19:41 Yeah. So that guy had all those VLDLs swamping around on this blood and he gets down to almost the target.

Andy: 19:49 That's right. And then the advanced cholesterol test, it also gives you something called the "lipoprotein insulin resistance score." Like, he max out at 100 when he started.

Ivor: 20:03 Wow!

Andy: 20:04 Yeah, it went from 100 down to 85. And the last is 66. And then, if you look at his insulin level, we started out with 16.9, went down to 15.5 and 4.4. So when he was 295 pounds, he's insulin was sky high at 16.9 and now he's at 220. It's 4.4 fasting.

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- Ivor: 20:30 Under five, which is a really good number. And of course, all that insulin needed to be pumped out for the carb [Inaudible - 00:20:38] eating and also to hold back his fat cells from actually shedding to hold back all those fats. But now he is actually reached a pretty good place but he's still on this journey. He's still moving.
- Andy: 20:50 Absolutely. We're not there yet. I only did one, the A1C number to begin with. It was like 5.4. Basically, he was really good at converting his carb into triglycerides, so the A1C was good.
- 21:14 But the other one I check was the high-sensitivity C-reactive protein. For him it was little bit jumpy. It didn't really come down, but I was also told that it's a little bit more like an acute... It tend to change, fluctuate more. But certainly he still have a lot to do with that one. But he also travels too, so I'm thinking he might be consuming some alcohol in there too that could be driving the high-sensitivity C-reactive protein.
- Ivor: 21:48 Yeah. Well, he's done really well. But I mean, of course, he's on a journey. He may be occasionally doing a little bit of cheating, and also persistent, like decades long damage to the machine. Like his LiPo IR is still very high. It can take a lot of fasting and pretty extreme measures to try and fix something that's been abuse for so long. So yeah, it sounds like he's on a great vector though and he's happy as hell, I'd say.
- Andy: 22:18 Yeah. I told him and I'm like, "Look, you owe me \$25,000 because that's what you were going to do. Get your stomach surgery done."
- Ivor: 22:27 Hey, actually Andy, you told me that the other night when we had a call. If you could just get eight people like that and save 825 Ks you got your yearly salary for the eight patients.
- Andy: 22:37 I know. I know. But unfortunately, that's not how the healthcare system works. So no, I get my average, whatever bill that I put out and that's all I got. Hey, you know, money doesn't fix everything. But I'm really happy for him.
- Ivor: 23:33 Excellent! And you have another person there. I think you were thinking one of your other star pupils?
- Andy: 23:40 Absolutely. Here's another one. He came in and he was quite heavy, and he had fatty liver. And I said, "Well, I know why you have fatty liver. It comes from your food."

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- 23:55 In about 12 months, we started out at 305 pounds. We went down to 210 pounds. So roughly 100 pounds in a year. If you look at his numbers, if you look at the triglycerides, it was started out at 183 (which is carb; it comes from carb,) went down to, the last was 103. And the ratio of triglyceride to HDL was like 1 to about 3.6, and right now is at 1 and 2.3.
- 24:35 And then for this man, his VLDL wasn't as bad as the other one at 30, but it was at 10 to begin with. So quite high. And the last time we measure it was the VLDL went down to less than 0.8. And if you look at his insulin resistance, the LPRI, he was in the middle range at 58%. Now it's under 25. So it's like great! You know, you can't get less than 25.
- Ivor: 25:06 Yeah, and you know, Andy, the LiPo IR from the advanced lipoprotein panel that you've mentioned there, that's a really good metric. That is a really accurate indicator. And what they use is they use the sizes of the particles and other numbers. But even though it's a kind of an advanced cholesterol test and are using cholesterol particle measures, to be honest, some of the best data you can get from cholesterol, particle sizes and distributions is the degree of insulin resistance.
- Andy: 25:37 That's right.
- Ivor: 25:37 So, it's a great measure.
- Andy: 25:39 So I tend to use that a lot as a motivation to get people to change. Most of the time, you know, when you look at that LiPo IR, is, the 45, which is the 50th percentile, and some people would say, "Well Dr. I'm happy at 45." I'm like, "No, it's crap! It's average. Average would sink you. You want great, you don't want average." So that's a way to motivate people.
- Ivor: 26:12 Yeah. You could tell them, "Well, if you're happy having the average heart attack rate and the average cancer rate, right, and the average diabetes and obesity of an average american, "Okay, knock yourself out."
- Andy: 26:26 Yeah. I know, I know. You don't want to be average, you want to be great. So for this man, when we started at 310 pounds, he was making fasting insulin at 20.4. It went from 20.4 to 16.6 to 13.8. And the last was 8.2. So he's not quite at 5, but he dropped 100 pounds already. So I think we'll get there.

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- Ivor: 26:55 Yeah. And I mean, I think below 6 is fantastic, particularly for a previously metabolically deranged person. But for someone with long term issues who's lost a lot of weight and their metrics are going great, you know, getting even down to 8 from 20 is a superb job. So big shout out there to that guy, we won't name him.
- Andy: 27:16 He's doing great. And then, initially, his average sugar (A1C) was at 310 pounds. He was pre diabetic, 5.7. And then after dropping 100 pounds, now he's at 4.8. So that's really, really good.
- Ivor: 27:36 Wow, that is excellent. And again, the HbA1c, you know, you can be very, very diabetic and it still looks okay. But I mean with a fasting insulin of 20, we can only imagine what is post glucose insulin would have been, or post-meal be. Yeah.
- Andy: 27:53 Yeah. I've heard somebody said about... the post-meal insulin goes like this. Doesn't matter whether you're skinny or fat. A skinny one, if you eat a meal, you'll make five to seven times the insulin. If you're a fat man, or a fat person or woman doesn't matter, you still make five to seven times the insulin. But what determines your basal insulin is how much fat you carry. So if you think about that... he started out at 20. 20 times five, his insulin is 200 post-meal.
- Ivor: 28:33 Could be anything like that. Dr. Jeff Gerber, I remember his record. He's a guy, his 2-hour after 75 grams glucose ingested was 530 micro units.
- Andy: 28:47 Yea. I'm trying to incorporate the two hours here. I'm not there yet trying to find those sugar, but having a hard time so I'm just using the fasting insulin for now and then obviously using auto biomarkers to tell me what their diet has been, trying to move them to the right direction.
- Ivor: 29:07 Yeah, and I think in fairness, Andy, you're kind of a firefighter of the medical world. You're dealing with people with major issues and just getting them to relative safety as quickly as possible. But you must be inundated, like in America your East Coast, right?
- Andy: 29:23 Yes.
- Ivor: 29:25 It must be... I mean, what percentage of your patients come in who are not overweight and are very good blood markers?

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- Andy: 29:36 Not very good actually. Adult. I mean, children's are bad already. But adults, I actually had a lady who came in said, "Yeah, my dad was diabetic and I was little bit fat, but I cut out my junk food already." And she said, "My weight is [no more? 00:29:55]." And I checked her fasting insulin. It was like 25. I was like, "No, aren't you supposed to be normal?" Her BMI and everything was normal but her fasting insulin was very high and her inflammation was like 8, the hs-CRP. And I'm like, "Oh, no, you're the skinny fat one now. So now I need to get you in and review what you eat and trying to fix that too."
- 30:25 So, it doesn't mean that you have to be fat to have the disease, these metabolic diseases. You can be thin and still have the same disease too. That's what most people don't know is that you can be thin and still die of a heart attack. You can be thin and still die of a stroke. But you know, nowadays which is like, "Well, the fat one have disease. I know you will have it too if you eat that."
- Ivor: 30:53 Well, actually, that is a great point and it's worth stressing again and again. The biggest tragedy is if someone's really overweight, or they smoke, and they know they break the rules, and they do develop atherosclerosis and have a heart attack, it's tragic, but at least they're not under any illusions. They know they're doing everything wrong. But the real bigger tragedies in ways are the middle aged men or women have a heart attack and die and they were slim, like you said. They didn't smoke and they felt that they ate healthy, lots of whole grains and vegetable oils. They didn't know that that stuff is terrible. So, it's a really important point that we got to get the message out to people. Truly, if you really want to know what middle age, if you've got disease, you want to look and see the calcification scan, a quick CAC scan, and then you get your answer.
- Andy: 31:47 I've been trying to get people to get the calcium scan too, and then I have one scan so far. He's, I think he's like 46, he said, it came back to zero. So I'm like, "Well, but your inflammation (hs-CRP) is 4 and your other mount markers, your triglycerides still high, your HCL is still low." "Well, what does it really mean?" "Well, usually it's going to kill your artery. You don't have any damage now, but if you don't change, you're going to have it." So at least, he might want to say, "Okay, I don't have the plaque, or at least we don't see the plaque now, but you have inflammation literally burning in your arteries. And so you have to fix the root cause of why you're having all these

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inflammation.” So ultimately, is that people have to feel the urgency for them to change.

- 32:49 So not all of my stories are great. I have some people, it's like, you know, dragging and pulling, and coercing and still don't get the result. So, you know, ultimately come down to self determination. That's what I tell my patient.
- Ivor: 33:25 They knew the truth and how to fix it. They take action. That's a lot of people.
- Andy: 33:30 That's a lot! Yes!
- Ivor: 33:32 Yeah, exactly. And, this is a battle, and it's going to be hard. But when everyone knows the truth, like you learned two years ago, the effect of everyone and all medical people and everyone knowing that seed oils and sugars and refined carbs are causing most of the disease will be huge. We're talking just enormous. Just on the point there, yeah, that CAC, I like the way you put that. “Right now you have minimal plaque. But if your blood markers show that you've got an issue, you know, the CAC just means you're lucky so far.”
- Andy: 34:09 That's right.
- Ivor: 34:10 Yeah. So there's great studies which showed that a CAC of zero in someone with reasonable blood markers, for 15 years, there's going to be a relatively very low heart attack rate. But for the people in the group who have any diabetes, or bad blood markers, it showed that the warranty if you will, or the low rates only last for two or three years. So, a zero combined with good blood markers and doing the right thing, super. But a zero with bad blood markers, not so much high LDL or high cholesterol, but real ones, like you've been discussing, that just means you know, you have a short time maybe before you might have an event, but you could have a CAC of 20 or 30 in a year. You could have a CAC of 70 or 80 in two years. You know, that that CAC could be going up above zero any day now.
- Andy: 35:05 That's right. And then if you really, really look deep about these heart event or coronary events, it comes down to endothelial damage; the cells that line those tiny blood vessels. If anybody who wants to know a lot about endothelial damage, Dr. Kraft has a great book. I think it's called “The Diabetes and You.” He goes through a lot, and he said, “Look, if someone who died of a heart attack and wasn't diabetic, and they are diabetic, just not diagnosed. And if you go to look at the septum of the ventricle,

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there are damaged to those small capillaries.” But, you know, it's hard to convince people when they don't think like that.

- Ivor: 36:01 Yeah, I think. In fairness, Dr. Kraft did some fantastic work. And I guess, yeah, the idea, I suppose most heart disease links in some manner to diabetes. Not all because you could have an inflammatory condition like lupus that can damage your endothelium. But to be honest, in the modern world, the latest figures from Europe, over 70% of all ages, coronary artery disease victims, when you look closely with glucose metrics, they're essentially diabetic. And if you use the insulin, it could be 80 or 90%.
- Andy: 36:36 That's right. So the big thing is, you know, yeah, it could be other conditions like autoimmune that could be causing the heart disease. But that is a very small slice in the population, you know? But the rest of them is insulin resistance. Yes, it's important to fix everyone one, but fix the big part first. That's what I tell patient.
- Ivor: 37:05 Yeah. Well, that that is an engineering logic and absolutely. And when we talk to people about cholesterol, I suppose the frustration is that cholesterol has a part to play in heart disease. But the huge irony is that most of the problems that cholesterol causes in the atherosclerosis issue are in turn driven by other causes. It's just so distracting to look at something that's part of the process but it's not the core for most people. But still people got to watch it, their cholesterol numbers and particularly ratios jump around. You know, if they change your diet and things go funny, you gotta look close, or you gotta have a great doctor like Dr. Andy Phung look at you.
- Andy: 37:50 I don't even care about LDL anymore. I care about HDL, I care about triglycerides, I care about small cholesterol particle, and I care about the LPRI. That's what I really care. And then obviously, the VLDL. Because that VLDL catch a lot of cheaters around because, “I don't eat badly. Why are there so many VLDLs around?” It made to this ship [Inaudible 00:38:20] triglyceride out. So that that's a way to... I wouldn't call it cheaters, I would say “non conformers” at times.
- Ivor: 38:29 I sometimes think of drifters. Because even the best of us, you know, you can drift a little. You got a lot of stress, busy at work, people can drift and the main thing is to get them back on track, encourage them. That's what we have to do.

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- Andy: 38:46 The more you look at it is, they actually start having like MRI imaging, functional MRI imaging, that shows the area called the nucleus accumbens that triggers the something called dopamine (the addiction center of the brain.) And unfortunately, that thing is triggered by everything that's bad. It's triggered by tobacco, it's triggered by alcohol, it's triggered by illicit drugs, and sugar and carb. The same thing.
- 39:21 So when you think about that is like, "Done, the food that we thought is good is actually addicted." So that's why when people go fall off the low carb wagon, they don't want to come back because that food is holding them back because it makes them feel good. That's the the lecture I tend to give for people who did well, then fell off. And I'm like, "Hey, you want to see your brain? Why you didn't want to come back to low carb?" So that's what I use?
- Ivor: 39:58 Yeah, yeah, it is dangerous. Falling off the wagon a little, you get caught in that addictive kind of cycle. And then you need a certain activation energy or escape velocity to break back out of it. And it is tough. It's never really the people's fault. There are some small percentage of people who are greedy and indulgent. There are some, but mostly, these people really want to be more slim, they want to feel better, they're worried about their health and their children, and whether they're going to be around. Most people want to live, they just don't know the tricks and the secrets.
- Andy: 40:35 Exactly. Exactly. So for me, when I when I work with my patients, I don't just tell them the food is bad. No, it doesn't work. You can't tell people, "Hey, it's bad. Don't eat this, eat that." I tell them, I showed him the mechanisms. I like to doodle. I draw it out, I say, "Hey, this is what happens when you eat this. This is what happens when you eat that. Insulin here, insulin here, no insulin here." So I showed them the mechanisms of how the food affects their physiology. Because ultimately, you have to understand what the food do to their body for them to stay on why they need to change.
- Ivor: 41:18 That has occurred to me as some time ago, way back, that knowing what happens, not in huge scientific detail, but just knowing what happens when the wrong foods come into your body and what they do and visualizing it. Even for a non technical lay person, it helps so much when you reach out for that croissant or you reach out maybe to take those chocolates or sweets, and then you you know, "That'll go in, it's going to

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flare up in my upper intestine, my insulin is going to go up, I'm going to head back into possibly this addictive, merry go round." And then it might just help them just not do it.

- Andy: 42:01 That's right. Yeah, knowing the mechanism is really, really, I think, crucial for the patients who are doing well. The ones who are not doing well... you know, every patient who comes in to see me with these chronic diseases, I always have some kind of lesson or at least some kind of Top that I have watched. And then I'm like, "Hey, go home and watch this. This is what we talked about." And then for the one who succeed, I think they do their homework at home. But the one who haven't succeed, I'm not sure if they are doing it. I believe they just threw it in trash can on the way out. You never know. But that's what I'm thinking for the one who don't succeed.
- Ivor: 42:46 Yeah. It occurs to me as you talk there, Andy, one more measurement. Because I know you have to get back to work. GGT, the liver enzyme, Dr. David Unwin is having amazing success in the UK. I think you're well familiar with him. He used GGT as his cheat metric. So when people came in, their GGT kept going down, the liver inflammation, fine. They came in and he found that their metrics are going bad, the GGT had all restored or gone back up, and then they'd often admit, "Well, you know, I started eating bread again. I'm sorry."
- Andy: 43:25 Hey, just curious. Is the GGT the same as the ALT?
- Ivor: 43:31 No, no. The ALT and AST, the aminotransferases. It's Gamma-glutamyltransferase. So, GGT. It's measured in Ireland as part of the liver panel test, the liver function. But I've noticed in America, it is generally not done in the liver panel.
- Andy: 43:51 No, it's not.
- Ivor: 43:53 Yeah.
- Andy: 43:53 I tried to find it the other day. I'm like, "Whoa, is GGT the same as the ALT?" I haven't gotten that far to dig into it. I'm gonna have to look into it.
- Ivor: 44:07 No, you're right Andy though. I have seen that very standard in Ireland and maybe the UK, but in America, it's very seldom done. It's like ferritin. We do ferritin a lot in Ireland, and they can pick up inflammation, metabolic syndrome or

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hemochromatosis, which is common in Ireland. But then ferritins are not so common in America.

- Andy: 44:28 No, we don't do it a lot. No.
- Ivor: 44:29 That's it. So what next steps then? You're going to just keep doing what you're doing, helping more and more people? I think you're going to Denver Low Carb, the conference, are you?
- Andy: 44:40 Yes, I am going. Yeah. And this would be my first time traveling out. I did go to one of the talk by Dr. Westman. About an hour from where I lived, just kind of get a taste of it. So I'm like, "You know, I've been reading a lot of books. I read your book." I read Dr. Jason Fung's book and many other doctors book. And I'm like, "Well, you know, I think I need to go and just see what they talk about in person." I also need CME, the right CME that is. Not just CME. So I'm going to Denver to the Low Carb Conference for real, for the first time.
- Ivor: 45:25 Excellent, Andy. Well, we've got to meet in person there, which is fantastic. And I have a talk, I think maybe on the Sunday and also I'm moderating the big debate or panel discussion between Gary Taubes and [\[Darius Musafarian - 00:45:41\]](#)
- Andy: 45:44 So wow!
- Ivor: 45:45 I'll try and be fair and balanced. Is that what they'd say about your best News Corporation in America, fair and balanced?
- Andy: 45:53 I don't know it. I haven't watched like the mainstream news for some time because it's quite... I don't know, it's very noisy.
- Ivor: 46:03 Oh, for sure. I'm just kind of making a joke about is. Is that Fox News, have some tagline or phrase about fair and balanced whereas they might not be so much, but there you go.
- 46:14 Well, listen, that's super! anything else you want to throw in because I know we've got to get back to work.
- Andy: 46:20 Sure. The next thing for my adventure is I'm going to Boston for the Obesity Conference. I want to get Obesity Board certified and so really work on this. You know, treating the body with the right food and then trying to help people to lose weight the right way and maintain it. I am board certified in Family

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Medicine, but Obesity Medicine, I wasn't. So I'm going to try to get board certified in that. That would be my next adventure.

- Ivor: 46:56 Well, you just tell them and it's true that you're way ahead of most of the obesity specialists in understanding the root causes and how to fix them and I'm sure they'll give it to you in no time.
- Andy: 47:08 Well, I think couple of them, they do talk a lot about medicine. But yeah, I'm gonna fix about obesity, but probably more food than medicine for sure.
- Ivor: 47:20 Yeah, well, Hippocrates said food is medicine essentially. So you know, that's perfectly valid.
- Andy: 47:27 That's right.
- Ivor: 47:29 Hey, listen. Thanks a lot, Andy. And we'll catch up again, but certainly will be catching up in Denver in any case.
- Andy: 47:35 Absolutely. We'll see you in Denver, Ivor.
- Ivor: 47:38 Great stuff Andy. Good night! Have a great day!
- Andy: 47:41 All right. Bye.