I'm going to be completely honest with you here, it's important.

I thought that subject matter of glucose was boring until I read your book and then I was like, oh my god!

Jesse Inchospe. The glucose goddess is a biochemist and author teaching us the best hacks to eat right

without giving up the foods that we love.

Glucose is your body's favorite source of energy.

Your brain cells are using glucose to think, speak, move.

So when you flood your body with too much glucose too quickly,

what happens is what I call a glucose spike.

The more spikes you have, the faster you die.

In your book you talk about these 10 hacks.

Yeah.

Eat food in the right order.

Yeah.

After you eat, move.

Drink vinegar before you eat.

Yeah.

You're such a weirdo.

Learn the glucose hacks and then just eat everything you love.

Like that's the thing you have to understand.

Why don't you care about this stuff?

Well, I went through my own sort of health journey.

It was awful and I was like, I need to figure out how to fix myself.

Like I need to understand what's going on because otherwise I just don't want to live anymore.

It was really to that point.

I was like, either I figure out how to fix this or this is just too painful of an existence.

Jesse.

Steven.

What is it that you do and why does it matter?

I teach people about how food impacts their body.

And it matters because most of us are unknowingly eating in a way that causes many of the symptoms

that we suffer from on a daily basis.

So it matters because once people understand how their dietary habits are impacting them and once they make change, their whole universe upgrades, all of the things that they thought were just who they were, the poor energy, the cravings, the acne, the bad sleep,

the hormonal issues, all of a sudden they can vanish.

And so they kind of reconnect with their true selves once they're past all of those symptoms.

Why don't you care about this stuff?

Many different reasons.

One is a personal story.

The other is because I see a lot of people suffering from diseases that they don't understand

and that unknowingly they're making worse.

One big example for me is people who have type 2 diabetes.

And a lot of people who have type 2 diabetes are eating in a way that's making it worse,

but they think they're eating in a way that's good for them.

And that breaks my heart into pieces.

You know, I want to give people the power back.

I want to give people the information back because the landscape we live in,

you know, the marketing messages about food, all the confusing packaging,

the confusing advice, the fads, that's really destructive.

And so I want to help people like clean all that up.

And the personal reason?

Well, I went through my own sort of health journey

that got me to a point where I realized that health is the most important thing in the world.

And if you don't have that, you really don't have much.

And I mean, we can go into some detail into this since I guess we have some time.

And I don't usually go into detail about this topic.

I've sort of learned to, you know, brush over it and just give the short version.

I'm not interested in the short version.

Okay, okay.

Long version.

So I grew up super healthy, happy kid, no health issues.

Nobody in my family had any health issues.

It was very, you know, easy.

And then I'm 19 years old and I'm just, you know, becoming a teenager.

I'm at the peak of this kind of phase where I really want to be cool

and I really want to show that, like, I'm a badass, you know.

And so I'm on vacation with some friends in Hawaii of all places.

And it's four of us, my current best girlfriend and two guy friends.

And we go into the jungle just for a hike.

And the two guy friends were like super fit guys decide to jump off this waterfall.

This like 30 feet, 30 waterfall.

And they're like, Jesse, you should do it too.

And so I was terrified and I did not want to do it.

But I really wanted to be cool.

Really wanted to be like, I don't care.

Like I can do whatever.

Yeah, I'm not scared.

So I decided to also jump off the waterfall.

Spoiler alert, it was not a good idea.

So I'm at the top of the rocks and I'm looking down and like, oh my god.

And my two friends are down there and they're like,

they tell me to land in the water really straight.

They say just make your body like a stick and make sure your feet touch the water first.

And as I'm in the air, as soon as I leap off the edge of the cliff,

of course, when you're falling, you get that sensation in your stomach.

They're like, and I feel that and I just freak out.

Like I am terrified.

And so midair, instead of landing really nice and straight,

I kind of like try to stop the fall.

So I sort of bend my knees a little bit, but like we're talking a really small change.

And as soon as my tailbone hits the water, I feel a huge pain in my back.

Like, like a really intense pain.

And so I go into the water, I come back out and I'm like swearing.

I'm like, wow, wow, wow, wow.

And my friends are like, oh my god, what's happening?

So I managed to climb out of the water of the pool and I'm in so much pain,

but there's nothing visible on my body.

There's no blood, there's no bruising.

My back looks normal.

So I'm like, I don't want to happen.

I'm in so much pain.

They're like, okay, well, let's walk back to the car.

You know, don't know what happened.

So I walk back a mile in the jungle with what I ended up learning was a broken back, which was super dangerous.

Yeah.

Through adrenaline, everything was just pumping and allowing me to do that.

24 hours go by.

I don't know what's happening.

I'm at home with my parents.

I'm like, I don't know, I'm in so much pain,

but you couldn't see anything on my body.

So it was like, I know.

So I decided to just steep it off the next day I wake up.

I'm like, I know.

Next day I wake up, I'm still in a lot of pain.

So I get taken to it like a osteopath or I don't know a chiropractor or something.

And he sees me arrive and he puts like a finger on my back and I like,

ow, ow.

He's like, no, no, you have to go to the hospital.

So 24 hours later, I get to the hospital.

They finally do a scan and they say, yeah, one of your vertebrae is in 13 pieces.

You need to not move anymore.

Here's a corset.

You're not allowed to move until it gets fixed because if you move,

if one of the pieces of your vertebrae like dislodges a little bit,

you could rupture your spinal cord and then you're paralyzed.

So I was like, okay.

I spent two weeks at home in the house in Hawaii.

We're trying to figure out where to get surgery.

So I'm just in bed.

I'm not allowed to move basically just to go to the bathroom.

End up being flown back to Europe on like a medical plane

to a clinic in Zurich, an amazing place.

Once I get there, another week of waiting until the surgery arrives.

So at this point, I'm three weeks in, three weeks with a broken back,

terrified about what's going to happen.

I haven't been able to move my body,

haven't been able to move any stress from my body.

I'm like really not okay.

They're giving me painkillers.

Like the whole thing is intense.

You can't move your body for what, two weeks or so?

Three weeks before the surgery.

I was not allowed to move.

I had to stay in bed because of the risk as we were figuring out what to do

as my parents were like, okay, is she going to get surgery in LA in Zurich?

Like, you know, you have to figure out,

because then I had to stay in the hospital after the surgery.

So it's a real decision of like, where are you going to have the operation?

And so I'm in the clinic in Zurich and this doctor comes up to me.

He's like, okay, so listen, this is what's going to happen.

We're going to open your body from the side.

We're going to take some organs out, clean up the vertebrae,

close the side, flip you over, open from the back, open the spine,

 $put \ metal \ cage \ in, \ put \ the \ broken \ bones \ back \ in, \ drill \ six, \ like \ three \ inch \ nails \ into \ your \ spine,$

and then put some rods and then we'll close you back.

Oh, by the way, there's a risk we're going to perforate along, but like,

hopefully, you know, even what happened, I was like, what the fuck?

Oh, thank you.

Yeah.

So anyway, all this to say that I was really, really,

It was fucking awful.

And I was like, if I just wake up, if I wake up on the other side of this,

I will be filled with gratitude for like the rest of my life.

You know, that was the feeling.

So anyway, surgery happens.

I wake up and instead of gratitude, I start feeling a humongous amount of pain,

like a hundred X the amount of pain from the actual breaking my back.

My entire body is on fire.

All of my legs are just like inflamed like crazy.

They're giving me like sleeping pills and shit.

I'm having the craziest nightmares.

A nurse comes into my room every three hours to inject, you know, like opioids in my leg.

I mean, it's just like fucking nightmare, like total, total nightmare.

I can't move at all because if I move my body, the scars feel like they're going to rip open.

I lose like 20 pounds in 10 days.

I haven't eaten anything.

I don't eat anything for like two weeks.

Anyway, so horrible physical stuff, but the good news is the physical bit actually heals.

Like in three months, I'm totally fine.

No more pain, feeling strong, exercising again, no problem.

But then the real problem starts happening.

My brain starts not feeling okay.

I start feeling like I'm a bit like in a dream, like I have this weird sensation of like every instead of everything being 3D, it's now 2D and I'm kind of feel like I'm in a movie and I look at my hands and they don't look like mine.

And I start having panic attacks when I see myself in the mirror.

So like my brain starts breaking and I had never experienced any mental health issues when I was younger.

So I super clueless.

So anyway, is there a term for that, a medical term for that?

Yeah, the closest thing that I've found is depersonalization,

which is losing touch with reality and yourself.

And I always felt like when those episodes happen, I feel like I leave my body.

Like I'm kind of looking from above and also I become super, super scared of just existence.

So being alive becomes the scariest thing I can ever imagine.

And that still happens today.

Very, very, very rarely.

When was the last time it happened?

Actually, two days ago, I had like 10 minutes of it

because I had just taken the plane all the way here to California and I felt quite

ungrounded and I could tell there was some stress in my body that was not moving.

But now when it happens, like I know how to fix it.

I know what's going on.

But back then I had no clue.

So for a year, I felt like that.

Super clueless.

And I didn't understand what in my surroundings or in how I was living

was making it better or worse.

I was completely clueless.

I was like, I have this horrible thing happening to me.

Nobody understands it.

I feel crazy, but I also feel like, shit, this might be the rest of my life.

Like this might just be my life now.

This immense pain and terror are just existing.

So out of all this nightmare, emerges a very clear thought in my head, which is,

if you don't have your health, you have nothing.

And like it's health first.

Like this is the number one most important thing in life.

And bear in mind, I'm 19 years old, which is kind of a young age to have that realization.

And Stephen, I was like, I need to figure out how to fix myself.

Like I need to understand what's going on, because otherwise I just don't want to live anymore.

It was really to that point.

I was like, either I figure out how to fix this, or this is just too painful of an existence.

Isn't it such a shame that it requires often a traumatic event where our health is tested or we realize the, the fallibility of it.

Is that the right word?

Yeah.

For us to start thinking and caring about it.

I think about this all the time, you know, one of the most pivotal shifts in my life occurred during the pandemic where I vicariously saw the entire world struggling.

And one of the factors that exacerbated that struggle or increased your chances of being susceptible to the illness was your, your health.

And I watched vicariously from this, from this lockdowned apartment in the north of England, through the TV screens, as all of these people were being rushed to hospital, etc.

And it was, it was the moment that the wake up call I needed.

I didn't need something to fail in my health.

I needed to watch the world struggle because of health for me to go, oh my God, okay.

So my health is my first foundation.

It's not the business.

It's not this.

It's not my dog, my cat, my girlfriend, whatever.

Because if you remove my health, I lose everything.

And it seems like you had that because of a tragic incident at 19 years old where you go, oh, you like put your priorities in order.

It's a bit like that saying, you know, you have two lives and your second life starts when you realize you only have one.

Interesting, yeah.

And that's a beautiful, beautiful saying.

And yes, it is tragic that that kind of stuff needs to happen.

I think that life should be lived backwards.

We would have such a better time.

We'd be so much more grateful if we started our life, you know, at 100 years old, with a body that's breaking down, less energy, more difficulty.

And if you just got younger, you know, every year, you'd be so grateful.

Like, oh my God, like I'm getting, you know,

I don't know, my biceps back or my energy back or whatever.

And it's so tragic that we just go through life, never realizing that, you know,

the wealth that's just in front of us and complaining about what's wrong

and then not realizing that in 10 years, it's going to get worse and worse.

But listen, yes, the tragic incident is often a jumping off point

for realizing how important health is, yeah.

You wrote a book called The Glucose Revolution.

The Life-Changing Power of Balancing Your Blood Sugar.

Wrote that book last year.

Why did you write a book about glucose, of all the things in health and food $\ensuremath{\mathsf{N}}$

you could have written about?

Why glucose?

You're right.

It's so interesting.

Essentially, after having this realization that I needed to figure out how my body worked,

I went on like a quest, you know, with different chapters.

And so first chapter was I was living in London before I was studying mathematics.

And I moved to Georgetown and the U.S., Washington, D.C.

to study biochemistry in grad school to learn about how the body worked.

And then I went to Silicon Valley to work in genetics because I wanted to understand our DNA.

You know, I was trying to like piece together as much as I could

to try to understand how my body functioned so that I could feel better,

so that in the morning I could wake up not terrified of being alive.

That was the bar, you know, the bar was quite low.

And even though DNA and studying it was interesting, it actually,

your DNA doesn't give you a lot of information about what you need to do to feel good.

Your DNA can tell you, you know, where you're from, what your traits are.

Maybe if you have an increased risk of a disease in the future,

but your DNA doesn't tell you exactly what you need to do.

What really matters more in terms of determining how we feel on a daily basis

and how guickly we age, and if we can just still kayak when we're 65,

has much more to do with how we live, you know, how we eat,

how we move our environment, what we do.

So I learned that as I was in this genetics company.

And when I was there, something incredible happened.

I discovered the world of glucose.

And now I'm talking about this, you know, on a daily basis and writing books about it.

I discovered that my mental health got worse when my glucose,

also known as blood sugar, was not healthy, steady and balanced.

I discovered that when my blood sugar levels were kind of like a roller coaster,

these episodes of depersonalization happened much more frequently.

There was even this one instance where I had,

and I was able to see my blood sugar levels with a glucose monitor that I wore for a couple weeks.

I was able to see one of the spikes in blood sugar actually triggering the episode.

I was like, whoa, I'm finally understanding a clue how I'm eating and how that affects

my glucose levels is then in turn affecting how I'm feeling and my mental health.

And for me, that was like the jumping off point.

I was like, whoa, this is fascinating.

And I just dove really deep into it.

And I studied it, you know, for four years.

I've been talking about it for that long and ended up writing a book about it

because it's actually really important for all of us to know about this molecule

and to learn to manage it.

They call you the glucose goddess.

I call myself the glucose goddess.

And now they call you the glucose goddess.

Yes, yes, exactly.

I wanted to find a catchy name after, you know,

two years talking about this on social media.

At first, my account was just my name.

Justine Chispe, which is really hard to write and pronounce and spell.

So I needed a catchy name.

So I was like, glucose girl, glucose gal.

And then I thought, glucose goddess.

You said that, you know, watching your glucose monitor, presumably on your phone,

it was connected to your phone, you could identify that the causation between a spike $\frac{1}{2}$

in your glucose and mental health implications.

But okay, what else?

Why else does glucose matter?

Yeah, it's a very good question because, you know,

not everybody has these deep personalization episodes.

So when I first got that piece of information, I was like, okay,

glucose is affecting how I'm feeling.

Let me see in the scientific papers.

What else does glucose matter for?

And I went into like a massive deep dive into all of the scientific studies

about glucose that I could find.

I had like a thousand tabs open on my computer browser.

I just went really, really, really deep.

And I discovered some amazing things.

So first, I discovered that I was not alone.

That most people who don't have diabetes still experience these blood sugar spikes potentially on a daily basis without knowing it.

And that's a really good piece of information because for years,

we thought only if you have diabetes should your glucose levels be of any concern to you.

You know, it was kind of like either you have diabetes and you need to learn how to manage glucose or you don't have diabetes and like don't even worry about it.

Now we know that everybody can be suffering from these spikes without knowing it.

So that was a huge revelation for me.

And that study was very recent.

I think it was from 2018.

So when I discovered it, you know, four years ago, it had just come out.

So I was like, whoa, like stuff is changing on this topic.

We're realizing the importance of it for everybody.

Second, I was like, okay, let's look at all the symptoms that are associated with these spikes from the scientific studies, right?

So the most common symptoms of glucose spikes are things like cravings for sweet foods.

Yeah.

Multiple times a day.

You looked at me as if you know that I have that problem and you're right.

But you should have just said it.

I don't like it being indirect.

No, I was just like, I was just curious.

No, you were looking at me because you knew.

And it's fine.

You've probably heard me talk about the sweets you're in my house that I used to have.

It's gone now, but none of us are perfect, Jesse.

I'm not perfect either.

When you say cravings, does that kind of explain why when I have one cookie,

I don't have cookies these days, you know, I'm a changed man,

but say I were to have one cookie.

Why I then want another cookie.

Yes.

But sometimes I'll get into a, I'm a changed man.

Sometimes I'll get into a cookie week.

Where like, I'll have a cookie on Monday.

And because I've had that cookie on Monday,

like Tuesday, I'm showing up or Wednesday, I'm showing up for a cookie.

Wow

And then I fall out of like a sugar cycle where,

because I've not had sugar in a while, I don't, I don't want sugar.

Yeah.

So what I'm asking that is, does that sugar craving, how long does that last?

How do I get, do you know what I mean?

Yeah, absolutely.

Because I've wondered if it was like a couple of days,

like if I've not had sugar for three days, then I don't have the cravings anymore.

Or is it shorter than that?

Well, listen, from the studies, we know a few things.

We know that one, like if you have a cookie,

so cookies contain, you know, sugar and starches.

And sugar and starches are what increase your glucose levels in your blood.

So when you have a cookie up, glucose spike, okay.

Increasing concentration.

And then a glucose drop after the spike.

This drop has been shown to activate the craving center in your brain.

Literally telling you, Steven, find something else to eat that sweets.

ASAP!

Go back to the draw.

Yeah.

So your brain controls that part of your psyche.

Like your brain is telling you to go find something else that is sweet.

And so when people have cravings, you know, they often may feel something like,

Oh, I feel guilty.

I feel ashamed to have no willpower.

Like I'm so weak.

It's not your fault.

It's absolutely not your fault.

the craving you're experiencing now might have been caused, usually by breakfast by the way, by the breakfast that you had or the thing you ate a couple hours ago. And I call that sort of starting the sugar addiction cycle, right? So let's say it's just one day you have the cookie, spike, drop, you crave something else. Then if you keep having spikes for one day, two day, three days, four days, it's very possible that on day four, you know, that particular drop for some reason is making you want to have a cookie. Most of us are on this glucose roller coaster and have cravings multiple times a day. I knew it wasn't my fault. It's not your fault, babe. It's not your fault. It wasn't my fault. It's not your fault. And then something else that makes that even less your fault is that when we eat something sweet, it releases a molecule called dopamine in our brain. And dopamine is a pleasure molecule. It's the molecule that gets released when we have sex, when we play video games, when we do like illegal drugs. Humans love dopamine.

And so when you eat sugar or something sweet, it's a really easy way to get a hit. And dopamine is addictive. So you have those two things happening that definitely, you know, when you cut out sugar completely, you realize those cravings go away because you no longer have the spikes and the dopamine addiction going on. Some people will hear that and go, it sounds like my body is sabotaging me. Do you see what I mean? It's because that's kind of how it absolutely and that breaks my heart. Your body just wants you to stay alive. Like your body is not sabotaging you. But unfortunately, when we don't realize that the way we're eating is causing some of these symptoms, we might feel like our body is fighting us. We might feel like, oh, my body hates me. My body is always doing this, blah, blah. I'm like, listen, your body is speaking

to you. All those symptoms you're feeling, those cravings, the acne, the, you know, irregular energy levels, all these hormonal issues, whatever. Those are actually messages coming from your body telling you, hey, Steven, there's a glucose roller coaster happening here. Like, help me fix it. I think your body wants you to work in partnership with it and is trying to alert you with all of these symptoms. So instead of like blaming our body or feeling like, oh, bad body for doing this and that, if you shift it a little bit, you're like, okay, let me balance my glucose levels and learn how to do this in an easy way. And then as you balance them, you see that all these symptoms go away. And you feel like, oh, I'm a friend with my body now. I'm taking care of it is taking care of me. And that was a big realization for me in my health journey. Because when I was having those mental health issues, I felt exactly like that. I was like, why is this happening? Like, what did I do? You know, and it was actually my body trying to tell me that there was lots of things that were going wrong, one of them being in my glucose levels. So anyway, yes. I'm all right in thinking that my body is not built or designed for the world that it currently lives in. And that's part of the battle. Like, absolutely, absolutely. Because just if you look at, for example, glucose levels, right? Like, the way nature intended us to consume glucose was in plants, right? And when we consume something sweet, it was usually in a piece of fruit. But pieces of fruit back in the day when nature created them, they were much smaller, much less sweet, they had way more seeds and fiber in them. So it didn't create that big of a glucose spike. But human beings, because of this desire for sweetness and pleasure, have been breeding plants and fruit to be extra sweet, extra juicy. So the bananas in the orange you see today are not natural at all. They're the results of millennia of breeding, a little bit like how we took gray wolves and we bred them into shiwahuas for fun. Basically, shiwahuas are not like natural animals, right? They're the result of breeding. We did the same thing for a lot of pieces of fruit. And then humans were like, how can we make this go even further? How about we extract the sugar from the fruit and get rid of all that fiber and water stuff and concentrate it into table sugar? And then how about we put that in drinks and make like sodas or fruit juice, you know? So as human beings, we've created a food landscape that is 100% causing all these glucose spikes. And my philosophy today is not get rid of sugar, don't eat sugar anymore. And more like, okay, sugar is everywhere. We love it. It gives us pleasure. Let's learn to eat it in a way that doesn't cause these spikes and doesn't harm our physical and mental health so much. We're going to get into exactly how to do that. I want to go a little bit back upstream. We were talking about the symptoms. Absolutely. So you've covered the cravings. Give me some of them, the short and the long-term symptoms of these, the glucose roller coaster. And now I want to know what glucose is because that's probably a better place to start. No, no, I think symptoms is cool because most people will recognize a lot of these in their own lives. So cravings is the most common one. Then unsteady energy levels. So feeling tired throughout the day, maybe you have

chronic fatigue. Maybe you need a lot of coffee to get through the day. Maybe playing with your kids is exhausting. Picking up the groceries is exhausting just like you're tired. You're eating but you're tired. Very common symptom. And we'll get into why that happens maybe in a bit. Those are the two most common short-term ones. Then- What about memory? Ah, that's a good question.

The more glucose spikes you have, the more the neurons in your brain

are going to work less well. So one of the most common symptoms of glucose spikes on the brain is actually brain fog. So feeling like you can't really remember stuff too well. Everything's a little bit blurry. That's basically your neurons not being able to communicate as quickly as they usually do. And it's often felt as brain fog. But then there's a huge link between glucose and long-term brain problems like dementia and Alzheimer's. Some people even call Alzheimer's type 3 diabetes because it's so linked to your glucose levels. So the brain, if you want your brain to be in optimal top shape, steadying your glucose levels is really key. What if I want to sleep like a baby? Yeah, absolutely also. So the more spikes you have, the less restful and deep your sleep will be. So if you want to sleep like a baby, absolutely. If you're somebody going through menopause and you want to reduce menopause symptoms, also looking at your glucose levels is

a very important place to start because the more spikes we have, the worse those symptoms get. Talking about hormones, there's also a huge link between glucose levels and fertility. So in females today, you know, there's more and more rates of infertility. There's something called polycystic ovarian syndrome, which is more and more common. That also is extremely linked to your glucose levels. And again, the first place to look if you want to fix your hormones is balancing your glucose. Other stuff. And there's a lot of symptoms here because glucose affects every single system in the body. So there's not a single disease or condition that doesn't get better when you balance your glucose levels, essentially. But I'll go into a few more examples. Skin. So inflammation is a direct consequence of glucose spikes. And on the skin, inflammation can be seen as acne, eczema, psoriasis. I have no idea. You know, there's two words that have just exploded into like popular conversation over the last, I'm going to say 12 months, but you know, I'm not that deep to know how long this conversation has been happening. But one of those words is the word glucose. I've just seen it everywhere all of a sudden. And the second word, which I've seen even in more places, is that word you just used inflammation. What is inflammation? Inflammation is a stress response from your body that is supposed to help you and clean things up. So for example, when you get sick, when there's a virus or a bug that's attacking you, your body essentially creates inflammation to combat that enemy. The problem is inflammation now often happens

against your own body or just like chronically at a low level. And that causes many, many, many issues. So it's a state of stress of the body. And it happens in all of us. It can happen in all of the cells in our body. Absolutely. And today three out of five people in the world will die of an inflammation based disease. Three out of five. Three out of five. The World Health Organization calls inflammation like one of the biggest problems of our century. It's basically just a way to say that your body is not healthy. There's problems going on within because inflammation can be caused by so many things, you know, by like smoking, alcohol, glucose, by stress, environmental toxins. It's just like a state of unhealth of your body, if you will. And so on the skin, the most common sort of visible consequences of that inflammation are acne, psoriasis, eczema. And then talking about skin. So the more glucose spikes you have in your body, the faster you age. And that shows on your skin as wrinkles, but also on the insides, things slowly deteriorate and break down. And there's a funny image for this. So from the moment you're born, your body is slowly cooking. You slowly cook, let me explain, like a chicken in the oven, from the moment you're born. And then when you're fully cooked, you die. Your face,

this concept of cooking is basically aging. And it's the technical term for it is called glycation. And the more glucose spikes you have, the faster this process happens. So if you want to age less quickly, and if, you know, when you look at two people who are 65, one is clearly younger than the other, like biologically, right? And you can affect, you can impact how quickly that aging is going on, one of the ways being through reducing your glucose spikes. Okay. And then long term, we talked about type two diabetes being the leading sort of long term condition linked to glucose levels. So the more glucose spikes you have, the faster you'll develop pre-diabetes and type two diabetes. And then finally also mentioned that glucose levels are linked to cancer and heart disease. So essentially, to give you a summary, if you have a lot of glucose spikes, things are not going to go super well. You're going to have lots of symptoms, short term, medium term, long term. If you currently feel, if you're like, I could, I could feel better than I do, you know, which most of us probably feel, then balancing your glucose levels is a really, really freaking important place to start. It's like the base, it's the base layer of your physical and mental health. It's really key. But most of us don't have that sorted. So to summarize, there's short and long term symptoms there that I've written down here.

Short term symptoms, if you, if we aren't able to flatten our glucose levels, then we face the chance of having constant hunger and cravings, chronic fatigue, poor sleep, colds. We talked, you talked a little bit about the immune system and the implications there, brain fog, you described as long term brain fog, longer term effects, acne, aging, arthritis, Alzheimer's, dementia, cancer risk, mental health, infertility, challenges. Yeah. And to be clear, like glucose is not everything, right? There's many things that matter in our health, like emotional connection, medical care, you know, sleep, stress, exercise, but learning to balance your glucose levels is like learning, okay, I have a fun image to use for this. It's like, imagine you're walking into an airplane and before you go to your seat, you kind of peek into the cockpit and you're like, whoa, lots of buttons in that cockpit on the ceiling, on the sides, there's all these levers, you're like, oh, I'm happy, I don't have to fly this plane. You're the passenger, right? You're happy the pilots know what they're doing. In the case of our body, it's interesting because we're both the passenger, we feel what's going on, you know, we're kind of victims to what's going on, but we're also the pilots. We're in charge of our decisions. We decide what we eat, what we do, but often we have no clue how to fly the plane. We have no idea how our body works. So it becomes very complicated to figure out where to start and

have all these opinions, this marketing, blah, blah, and it can be really confusing and quite daunting. So to me, learning to balance your glucose levels is like learning about the most important lever in the cockpit of the plane. It's like, if you know about this lever, you can take off, you can fly, you can land. It's like the most important thing and it will help you get to a point where you're kind of cruising and you're like, okay, I kind of have a handle on things, my symptoms are kind of getting better. So to me, that's the way to think about it. So this begs the question, which I probably should have started with, which is, what is glucose? Now,

in my brain, which is a slightly undeveloped brain on this subject matter, I've just always thought of it as sugar. So I've just thought of it as the sugar I eat is turned into this thing

called glucose. And then the glucose runs around in my body and my blood and seeps into everything.

Yeah. Well, that's a pretty good high level definition. And I think that's what most people who know a little bit about the topic think. So let me explain so you know exactly what it is, because that definition, while it's what most people think, it's actually a bit incomplete. So I'm going to give you like the one on one basics. So you understand what's going on. Thank you. Explain it like a 10 year old. Absolutely. So glucose is your body's favorite source of energy. Every single cell in your body uses glucose for energy. So you know, right now, both of our heart cells are using glucose to pump your brain cells are using glucose to think and speak my, you know, hand cells are using glucose to move, etc. So every part of your body uses glucose for energy. It's really, really important. And the main way that us as human beings, we give our body this important substance is through eating foods and specifically

through eating two categories of foods, starchy foods. So that's like bread, pasta, rice, potatoes, and sweet foods. Anything from your favorite cookie to a banana to a Coca-Cola, anything sweet. So starchy and sweet foods contain glucose. And when we eat them, the glucose is given to our body. So now you might think, okay, I want energy, right? My body, I want to give my body as much energy as possible. I want to feel good. I want to have energy. So you might think, okay, I should eat as much starchy and sweet foods as possible to give my body as much energy as possible. The cookies are good for me. Well, this is where the whole logic thing breaks down. It's a bit like plants. So let's say I go on a vacation and I'm like, Stephen, can you please take care of my house plants? And we're like, of course, Jesse. My pleasure. I would love to help you. So you would go to my house and give my plants a little bit of water, right? Because you know the plants need some water. But if you gave the plants too much water, they would end up drowning and dying. And I would come back for my vacation or my plants would be dead. So the plant got a bit too much of a good thing and that caused issues. The human body is the same. Some glucose is good. Too much glucose causes all these issues. And most of us are eating in a way that gives way too much glucose too quickly to our body. And that's why we feel all these symptoms. So what's going on at a cellular level when I flood my body with glucose? So there are three sort of main processes that I want to tell you about on this topic. So when you flood your body with too much glucose too guickly, what happens is what I call a glucose spike. So a glucose spike is just simply a sort of rapid increase in how much glucose is in your system. So it goes, if you have a glucose monitor, you can kind of see it. It goes like, just goes up really fast, the concentration. And so the first thing that we need to look at is your mitochondria. So your mitochondria are like little sort of oval organelles inside of your cells. And they kind of had a squiggly line in the middle when we represent them in drawings. These mitochondria are in charge of turning glucose into energy. They're super freaking important. They take the glucose from the food and they do some magic and outputs energy. So you can do stuff like, I don't know, walk, run, think, whatever. So when a glucose spike happens, all of that glucose heads straight to the mitochondria because that's where it gets processed, right? And your mitochondria, unfortunately, while they like a steady influx of glucose during a spike, when you give them way too much glucose way too guickly, they kind of like shut down. They're like, I just, I cannot too much information. Like I can't deal with this.

They sort of go and strike. They get stressed out. And they kind of break down. So that's a real problem because you just ate all this food because you were like, I want to give my body energy, right? Sugar in the morning energy. Actually, on the inside, your mitochondria, the very things responsible for making energy, they break down when you give them too much glucose to handle. So that's the first thing that happens. And when you mitochondria break down, it increases how much stress there is in your body. And it increases that thing we talked about inflammation, which is not good and creates a lot of like terrain for a lot of diseases to happen. That's the first thing that happened. Glucose spikes, mitochondria break down and you get tired. Not good. Second thing that happens is this thing called glycation that I explain, which is aging. The more spikes you have, the more glycation happens guickly, the faster you age on the outside with your wrinkles, but also on the inside. So the kayak when you're 65 is going to get harder and harder. The more glycation happens when you're young, for example. And then finally, so your body really wants to keep you alive. As I mentioned, like your body is pretty freaking awesome. And it's really trying to protect you. And so it has a technique that it deploys when a glucose spike is happening to get that level of glucose down because it knows like, oof, when glucose is very high, like all this bad stuff happens. So let me get that to go down. Your body releases something called insulin, which comes from your pancreas. And we love insulin. She's dope. She grabs all the extra glucose and she stores it away into your muscles, into your liver, and into your fat cells. And that's one of the ways that you gain fat on your body is by having insulin take this extra glucose and store it away. Can she not just put it in my muscles? Unfortunately, I'll call her and ask, but no, unfortunately, you can't decide where it goes. And then while insulin is cool, like long term too much insulin is the cause of type 2 diabetes. So while she's helpful in the short term, long term, she causes all sorts of issues, especially connected to fertility, which is also something that we might want to talk about. Really fascinating topic. Is that therefore conceivable? I've got a friend that had polycystic ovaries. And she said on a podcast that she has recently that she used to have a problem with binge eating. She talked about it. And as you said, that I kind of connected the two dots, that her insulin spikes from her binge eating challenges might have had an impact on the polycystic ovaries and the infertility challenges she'd had. She had very, very regular periods to the point that one point had periods stopped completely. And I was just wondering if there's, obviously we can't diagnose them when we don't know, but I'm just saying, is there a link there potentially? Well, listen, it's hard for me to say, but what we do know is that, you know, polycystic ovarian syndrome is very tightly linked to glucose. So the more spikes you have, I mean, potentially from the eating disorder, but also just a lot of people, even without an eating disorder, have enough spikes to cause this issue. The more spikes you have, the more insulin you have in your body. And then the more insulin you have in a female body, the higher testosterone levels get. And so PCOS, polycystic ovarian syndrome, is kind of like a grouping of symptoms. So polycystic ovaries, missed periods, balding on the head, hair growth on the face, acne, et cetera, that we kind of put into this package of like, this is PCOS. Actually, a lot of these are symptoms of just excess testosterone in a female body, testosterone being the male sex hormone. So again, if you have PCOS, it's very important to balance your glucose levels to get that testosterone down. It's like the first thing to look at the first thing to fix. And I get on a daily basis, messages from

readers who had PCOS, use the hacks that I share, don't have PCOS anymore, got their periods back, were able to conceive naturally, et cetera. So very tightly linked, glucose and hormones. This drug insulin, so it takes the glucose. And by the way, it's not really a drug, it's like something your body makes. But then you can also take it as a drug, if you have diabetes, for example.

So this chemical insulin, it stores the glucose in my fat, in my muscles, in my liver. How does that have an impact then on weight gain and weight loss? So if I've just had a glucose spike, insulin's been deployed, she's doing her work, she's storing it in all those places. Does that impact my ability to gain and lose weight? Absolutely. So when there's a lot of insulin around, insulin, when she's around, she's like, okay, everybody, stop, we're only going to be putting stuff into fat cells. Nothing can come out of fat cells. So when, when there's high insulin levels, your fat cells become like a one way street. Things can go in to make them grow in size and quantity. So that's one of the ways you gain fat on your body. And nothing can come out. And when people say like, I want to lose fat on my body, what they're really saying is, I want to empty my fat cells so that, you know, my waist size reduces at the same time. So yes, the more insulin, the harder it is to actually lose any fat. I get it. I think I get it now. Is there anything that's like missing from that picture you've painted for me? I now understand the relationship between what I put in my mouth, the impact that has on my glucose levels, it causes spikes and dips that causes a bunch of short and long-term consequences because of what's going on in my mitochondria and insulin. Is there, is there a next step in that process that I need to be aware of? So my insulin is now raised, right? She's shut down my fat cells. She's doing her thing. She's stirring it away. Is it the crop? So the chronic deployment of insulin is what I think they call the type two diabetes. Yeah, it's called insulin resistance. So when you have a lot of insulin, it's a bit like stops working. Basically, exactly. It's like coffee, right? And like first time you drink coffee, you're like, whoa. And then over time, the same amount of coffee doesn't do as much to you. Same with insulin. So over time, your body becomes less sensitive to it. It doesn't really obey it anymore very well. And that's called insulin resistance. And that then leads to type two diabetes. But I think you've got a pretty good overview of, you know, we eat food, creates glucose spikes, all of these biochemical processes, then our body experiences these symptoms, right? Re-experience these symptoms of glucose spikes. And I think the important thing to remember is that these symptoms, again, they're messages, right? They're not something that's happening randomly, just to be annoying. Your body is not against you. Your body is just trying to keep you alive. But as a consequence of maybe some of the ways you're eating, all these symptoms are taking place. Quick word from one of our sponsors. I have to say, I've been on a bit of a journey with this brand, because when I started my business in new territories, when we first moved social chain to New York City, the first place we went to was WeWork. We moved four of our team members out to New York City, and we built the business from there. I have to say, there's something magical about WeWorks. I've spent the last two or three weeks in LA in a WeWork. And as

you walk in the front door every day, it's almost like that sense of community, that sense of magic, excitement, camaraderie is tangible. And you don't get that when you're working at home. You don't get that often when you're sat in your bed on your laptop. There's something about getting out and

getting into a WeWork that makes me feel a sense of entrepreneurship and creativity and building. And the way that WeWorks are designed, both in the way that they offer subscriptions, so that you can work on demand, but also the flexibility of the contracts means that it's just the perfect place for businesses to scale their companies. And if you haven't checked out WeWork and you want to, you can go to we.co slash ceo. And there you can get 50% off a trial day at WeWork close to you. Ladies and gentlemen, our newest brand partnership will come as no surprise to regular listeners on this podcast. The first episode of 2023, I was joined by the incredible Professor Tim Spector to hear more about his work at a company called Zoe, using data to understand our bodies better so that we can live more fulfilled, higher potential lives. Zoe was born from the truth that our overall health is impacted by our gut health by helping you to understand how your body is working. Zoe can help you to reduce your risk of long-term disease and increase your energy levels. For me, this is the future. And that is why I became an investor in the company and that is why they are now a sponsor of this podcast. You can read up about everything they're doing and you can pre-order your Zoe program at joinzoe.com. And they've been kind enough to offer an exclusive 10% off-code CEO10. So you can put that code in it, check out ceo10. Thank you so much. Let's get back to the episode. If this glucose roller coaster is bad for me, the spikes and the crashes, how does one flatten the glucose curve? In your book, you talk about these 10 hacks. Can we go through some of these hacks?

But for sure. I think that's the most important, really, because...

So hack one?

Hack one, yeah.

Eat food in the right order. What did you mean by that?

So to give some context, all the hacks in my books, they are just summaries of scientific studies. So when I was going really deep into all the science, I found all these symptoms and conditions linked to spikes. And I found also these amazing ways we could still eat everything we loved, but without creating these spikes. So still eating everything you love, but reducing any symptoms or any problems you might be having physically or mentally. So eat your food in the right order. So next time you're faced with a meal, listeners, next time you're faced with a meal, there's something amazing that you should know. If you eat the ingredients in the meal in a specific order, you can reduce the glucose spike of that meal by up to 75% without changing how much you're eating, what you're eating. Just the order has a massive impact on your glucose. So you can still eat the same meal with way less spikes and way less consequences. So the right order is veggies first. I should make a t-shirt. Veggies first, proteins and fats second. And starches and sugars last. So let's take an example of a meal, maybe. Steven, what's the typical meal you have? And then we'll add stuff for the example. Okay. So let's say cookies. That's your sugars. Let's say you're having cookies. Let's say, I don't know, you eat fish. Yeah. Okay. Let's say everything to be honest. I just, I'm so, other than snails, I've still got a little bit of a psychological issue there, but I've never tried snails and I'm French. Really? I just grossed me out. Something you need to figure out. Okay. So let's say you have like some fish, some broccoli, some pasta, some olive oil and avocado and a cookie. So the right order for your glucose levels is going to be the broccoli first, then the fish, then the pasta and the cookie and the avocado and olive oil. You can kind of have it like with the, with the fish. Now this is an interesting like theoretical thing to understand.

It might not always be very practical to just separate out your meal and be like, okay, this first, that then, that then. But there's a few things you should note. Number one, you don't actually have to wait between any of these foods. You can just eat them one after the other and still get the amazing impact on your glucose levels. And number two, really the most important thing here that we need to learn from this scientific study is that the veggies should come first. So what I do now and what, you know, my community does is that we all always have a veggie starter at the beginning of a meal and then we just eat the rest of the meal kind of normally. And that already has a massive impact on your glucose levels and how you're going to feel. A lot of people when they do it in the, do it very much in the opposite order in terms of like kind of they leave the veggies on the side of the plate. You know, I think when I was a kid, I'd go for whatever was tasty first. Yeah. When the whatever the green stuff always went for the pasta first. Yeah, exactly. And then it was like a requirement. So often parents will say, eat the fucking greens as well before you get your dessert. You know, that's interesting. Although in restaurants, obviously dessert comes last, which is probably and in restaurants also, you know, bread usually comes first. And so let me explain why it's so important to avoid having the bread first. So bread is a starch. And as I explained, you know, there's starches and sugars, and those are the two things that turn into glucose when we digest them. And so when we eat something that contains glucose on an empty stomach, so when we eat it first, like a piece of bread, the starch breaks down into glucose molecules in your stomach and then makes its way super quickly into your intestine and your bloodstream because there's nothing stopping it. There's like, Hey, just like roller coaster. So it goes straight from your mouth to your bloodstream. So very quickly, the glucose makes its way to your bloodstream and increases the concentration and causes a spike. Now, if you start your meal with veggies instead, this is what happens. Veggies contain another super woman. And I love how all my molecules and substances are female. But anyway, she's a super woman fiber. Have you heard of fiber before fiber? So veggies contain fiber and fiber. When we eat it at the beginning of a meal, she does something absolutely amazing. When she arrives first in your stomach and digestive tract, she makes its way from your stomach to your upper intestine. And there she deploys itself like onto the walls of your intestine, like in a cool viscous protective mesh and just stays there protecting you. That viscous mesh that fiber has created is then going to reduce the spike of your meal because all the glucose molecules arriving later on from like the pasta, for example, are not going to be able to make their way as quickly and as much through your intestine into your bloodstream. Because of the fiber shield, the glucose molecules are going to take way longer to make their way into your bloodstream. As a result, you get a smaller spike, but you still ate the same food just with some veggies first. I know she's amazing. So I want to go to a restaurant, you know, you go to some restaurants, they give you bread, others like the Japanese ones give you like edamame. Yeah, that's much better. That's a veggie, right? So any type of veggie is going to be really helpful. And I try to make it make up about like 30% of my meal and it can be anything. They can be raw, they can be cooked. In my new book, I have like 35 amazing veggie starter recipes. You can dress them, you can put, you know, some, I don't know, olive oil, vinegar, lemon, cheese, whatever onto it to make that veggie starter feel really delicious because it's going to protect you so much. And if you're somebody who suffers from cravings in the afternoon or unsteady energy, I think this hack is a really powerful one to try out. I often, you know, I'm a speedy too,

I'm going to be honest. I'm not going to lie to you. I am, I tend to eat my meals super quick. And I think the excuse I tell myself bullshit or not is that because I'm busy, I just like. Yeah, inhale them. Yeah, yeah, yeah. And when I'm, I know because if I eat something say with my girlfriend or whatever, she's, she, I mean, she like literally blesses the food with her hands first and then she like takes her time. I eat super fast too. I'm like, I treat it like it's a competition, you know. And she's often said to me, she's like, babe, just slow down, like just, and one of the points that someone raised to me at some point about my like super fast eating habit was that it is bad for me. Now I'm wondering from what you said there, if the speed in which we has an impact on our glucose spikes as well, if I ate slower, could I flatten the curve? Absolutely, baby. Yes. Really? Yes. She's right. Well, yes. Then again, listen, I'm a very strong proponent of like pick your battles, right? And like, yes, we could all do better in so many different ways, but also, you know, you're a speedy eater. That's fine. Maybe you just deal with that. I'm trying to live my best life. Okay. So if you want to slow down aging and do all that. So you can do two things. You can either just eat as guickly as you want, but out of veggie starter at the beginning of your meal, right? That already is going to have very powerful impact on your glucose. I would argue it probably will have a stronger impact than just eating the same meal more slowly because you're not going to eat the meal over like two hours, right? You might go from like three minutes to eight minutes. It's not that big of a difference. The veggie starter will have a much bigger impact on your glucose than just increasing that by a few minutes. Do you remember hack number three from your book? Stop counting calories. That's a ghost writer check. I can confirm you wrote your book.

I did. It has so much fun writing the book. Tell me about that one.

So what do you know about calories?

Very little. Yeah, it's fine. But tell me what I think they are.

It's a thing, yes? Thermo.

I'm talking like a much simpler definition. Okay, I was going to try and impress you. Oh, sure. You can if you want to. It's like a thermonuclear reaction where a calorie is the measure of how much heat is required to break down a molecule of food. It's really not bad. Thank you. Wow. You really should give yourself more credit because when before we started, you were like, I know nothing about food and biochemistry. Actually, you know some pretty good things. I know from just like doing this podcast. This is why I really do it because for very selfish reasons. And I realized that it's helping a lot of other people that are also idiots. But that's what I know from quests that have sat here. So that's my definition of a calorie. Fantastic. So I think a lot of people will also stay like, oh, your calories are bad. Like I need to eat not too many calories. Otherwise bad stuff happens and I gain weight or whatever. So I want you to know how calories were actually invented and measured because it is completely mind boggling. So the way that scientists first started measuring the calories in a food is the following. Okay. So let's use our imagination here. The scientists, they took a box. Okay. And they put a food in that box. Let's say that cookie. They put the cookie in a box. Then they put this box with a cookie in it under, I mean, in another box that contains water. So they submerged the cookie box in water. Okay. And then somehow they light the cookie inside the small box on fire. They burn the cookie and they measure by how many degrees the water, the surrounding water increases in temperature.

That is how we measured calories. Literally measuring how much heat happens when we burn that food. So as a result, you might say, okay, well, you know, you might test a cookie in this setting and you might test it against, I don't know, an avocado. And you might see that the temperature in that big box increases by as many degrees for both the cookie and the avocado. So you, you know, from a calorie perspective, you'd say these two foods contain the same number of calories. But that's a really reductive way of thinking about food. It's almost like thinking these two books are both 500 pages. Therefore, they're the same. You see how that's a problem? The number of pages in a book doesn't tell us anything about what the book is about, who wrote it, what are the words, what's the message, no clue. The calories in a food also gives us no information about what's actually in the food. How is that food going to impact how I feel, my physical health, my mental health, my glucose levels. So I want to teach people about the molecules in the food. So they actually start recognizing like, oh, that food is going to make a spike. That food is not. And teaching them hacks so they can, you know, improve their health. And so hack number three is called stop counting calories, because essentially what I found is that if people just focus on balancing their glucose levels and using the hacks to do that, and just completely stop counting calories, their health improves significantly. And it's a much nicer world to live in than a world of calorie counting, because something else you should know, two people can be eating the exact same number of calories, let's say, you know, 2000 calories a day. But if one person is eating in a way that causes all these spikes, and the other one isn't, the spiky 2000 calorie person is going to be full of cravings, exhausted, inflamed, aging faster, not sleeping as well, could have mental health issues, could have PCOS, yeah, could be gaining weight, like, it's not the same thing. The calories are not really what matters. We need to learn about how the food is actually affecting us. Interesting, I find that so interesting, because I was thinking, as you were speaking, you answered it there at the end, that a lot of the reason why people do count calories is for weight loss or weight, you know, gain reasons. But because of the glucose spikes in one set of 2000 calories, one meal that will give me 2000 calories, it'll have a significant impact on the insulin levels. And also on how you're feeling and how you're doing and how difficult, you know, that fat losses or not, how much of a good time you're having along the way.

That's the nuance that really, you know, people use calorie counting as a tool, I guess, but that's the nuance that's really missing if you really want to achieve any of those goals for whatever reason you have. Absolutely. And then, you know, restricting calories. Of course, like, if you go from 2000 calories to, I don't know, how many but fewer than that, you're essentially reducing how much you're eating, right? So yes, it's possible that'll lead to weight loss. But like, one, that's not really sustainable. Like, do you really want to count calories for the rest of your life? Like, that just, I don't know, that feels really difficult to me. And second, it doesn't tell you again, like, what you're eating. So you're reducing quantity, so yeah, that can lead to consequences, but it might not be improving your health at all. You might be losing weight on your body, but actually, you know, increasing the problems and the symptoms and the conditions. So I really hope people stop counting calories. And through this science, just kind of learn how to approach the food landscape and how to approach

food habits in a way that heals them from everything they want to heal from without the sort of

calorie thing. Breakfast. Yeah. Well, you have a breakfast, even today. Yeah. Nothing yet today. I was going, so I was actually, I ordered food, right? To this, this wonderful studio here in London at 10 30am. And it said it would take half an hour to get here. And it got here when you arrived. Now I looked at it and I thought, if I eat this, then I'm going to have some kind of like dump halfway through this conversation. So it's just sat. Can I ask, but you ordered? No.

Because some foods, some breakfast foods will have that impact and make you feel tired. So I ordered a breakfast wrap. So it's got like eggs, avocados, bacon in it, and it's like a gluten free wrap thing. And I was looking at it thinking because of this bread, I think the bread is probably going to make me have a dump. And I don't ever want to have like a energy dump halfway

through a conversation. I don't want to fall asleep. You know, that's rude. That would be, yeah. Midway through the conversation. So I've not eaten yet. Interesting. I had coffee. So actually, you know, your first is a pretty good one in terms of glucose. So the main thing we want to do to study our glucose levels is have a savory breakfast instead of a sweet one. So we want to have a breakfast that contains protein, you know, like eggs, fish, meat, protein powder, maybe some fat like the avocado, that's fantastic. And maybe some fiber if you want to add some veggies

in there. And then any sort of like bread or starches or potatoes should be there just for taste. It should not be the centerpiece of the breakfast. And then importantly, for a savory breakfast that keeps your glucose level steady, we shouldn't eat anything sweet at all for breakfast, except whole fruit if we want some. What's the difference between whole fruit and whatever isn't whole fruit? Well, you know, as I explained, like fruit has been bred by humans for a super long time to be extra sweet, extra juicy. So today, when you look at an apple, for example, it's really been pumped full of sweetness and sugar and made really easy to eat. I had this conversation this week with my partner. She was offering me some fruit. And because now I'm like a food, you know, arrogant little food guy because of all these conversations I've had, I was like, babe, it's got sugar in it and they've bred it. And then she was like, really? And we've had a conversation about it. And I googled it and I said, I googled like the historic banana and apple and the pear. And I showed her and she was like, what? Because they obviously, you know, the fruit we have today is so bright and big. Absolutely. And easy to eat. Yeah, exactly. And then I showed her some of these pictures of these old bananas and they're like tiny and they're like full of seeds and stuff. Full of seeds and tiny and actually guite tart. You wouldn't really eat that many of them. No, you wouldn't want to. Yeah.

And so even though fruit has been bred for a super long time to be extra sweet, if you want to eat something sweet, it's still the best thing to eat because of the fiber that fruit contains. And as I explained, you know, fiber is protective. In whole fruit.

In whole fruit. So now here's the thing. While a piece of whole fruit is the best thing to eat if you want to eat something sweet, the problem starts when we denature that piece of whole fruit, when we blend it, when we juice it, when we dry it, when we puree it, so many different things. So let's take, for example, when you juice a piece of fruit, juicing is essentially

taking away all the fiber and getting rid of all the fiber. The fiber is like the hard stuff, you know, the pulp and everything that's left over. So if you juice like an apple, you're just taking all the sugar from the apple, putting it in water, and getting rid of all the protective fiber. So all of that super concentrated sugar that's been bred into that piece of fruit, you're now giving to your body in a really, really fast way. And as I explained, the speed of delivery is really important. The faster all that sugar arrives, the more your mitochondria get hurts, the more the spikes are happening, inflammation, et cetera. And so when you drink apple juice, you're essentially drinking like the amount of sugar in two already pretty bred apples and drinking it in a few seconds. And so your body is experiencing a massive spike. And your body doesn't care whether the sugar came from a piece of fruit or if it came from like cane sugar and is in a can of Coca-Cola. The molecules in the apple juice and in the can of Coke are the same. Your body does not make a difference. Your body's not like, oh, this sugar came from fruit. Not going to cause any issues. Oh, this sugar is from Coca-Cola. Oh, it's going to cause problems. Your body does not care. And in a can of fruit juice, there's almost as much sugar as in a can of Coca-Cola. So when we eat fruit juice, we have to do it in a way that's like, okay, this is dessert, right? This is for my pleasure. This is not for my health. This is going to give me pleasure and make, maybe make me feel a bit happy, but it's not going to help my body. Which one of these bastards told me that fruit juice was good for me? I've been drinking this stuff like I was. Me too. You know, growing up, if I went and had fruit juice, I was like, well done, Steve. Yeah. You know, you've done yourself. You've done future, Steve, a massive service there. And then I got to fucking 30 years old and people start telling me that fruit juice is bad for me. I'm like, who lied to me? Do you want to know who lied? Who? The people who make fruit juice? Yeah, I thought it would be them. Yeah. And same for me. You know, I grew up eating, drinking orange juice and a Nutella crepe every morning. Well, come on, you knew the Nutella crepe wasn't good for you. I mean, yeah, but like, you know, I was like, I'm having orange juice, so it balances it out. You know, I had no idea that it was just eating starches and sugars, just eating a massive glucose spike for breakfast. And when you create a big glucose spike at breakfast, your entire day then becomes completely like a glucose roller coaster. The breakfast spike really dictates how you're going to be doing for the rest of the day. So what is a whole fruit? A whole fruit is like a piece of fruit that is just not processed. Yeah, like something you can hold in your hands. Then you buy the supermarket, like an untouched from the tree. Okay, I thought it's not a certain type of fruit. It's just you're talking about the state of the fruit. What would be a better word for whole? No, I guess that is the word. I'm just an idiot. Like a piece of, I don't know, whole is probably the right word. Okay, yeah. Okay, so I'm not going to have any, so granola, I used to think granola was, I was like, again, doing my health service by eating granola. So listen, if you're having a great time, no symptoms, feeling amazing, top energy, no cravings, no hormonal issues, no skin issues, whatever. I want to be Superman. Yeah, like if you're doing fine and you're eating things that are sweet, then you're having great time, I have nothing to teach you. But if you're suffering in one way or another, many of the symptoms we talked about earlier, look at your breakfast and avoid the sweet stuff. So avoid the granolas and the breakfast cereals and the oats with banana and honey in them, switch to something savory. And I have

lots of examples of what's a savory breakfast in my books, but that is really going to help set your day on a much better path and going to help your physical and mental health thrive. You have these 10 hacks in your book and there was one in particular that I, you know, there was nine of them that I thought, I can do this. And then there was this other one where I was like, let me guess. Which one do you think it is? I actually, I would say the vinegar one. Is that the one? You're such a weirdo. Why did you ask me to drink vinegar before I eat? Can you

imagine? Can you imagine me going to a restaurant and like, could I just get a glass of vinegar, please, before I? Well, actually, it's happening more and more, Stephen. Why are people doing this to themselves? Okay, because, okay. That's my line, by the way. I hear you. And by the way, the hacks are there for people to pick and choose from. You're supposed to like compose with them as you wish. It is not, you don't have to do everything all the time. You don't have to do any of them if you don't want to. It's like information from the science. And then you decide what you do with it. Hack seven, drink vinegar before you eat. Yeah. So the scientific studies show us that if we have one tablespoon of vinegar in a tall glass of water, so this is a pretty good size. One tablespoon of vinegar in a tall glass of water before a meal can reduce the glucose spike of the meal by up to 30%. And the insulin spike by up to 20%, which is important because, you know, insulin is also something we want to manage. And you might be wondering like, how the heck does that work? Well, vinegar contains another cool molecule called acetic acid. And acetic acid does two main things that help our glucose levels. Number one, you know how I explain that starches, they break down into glucose when you digest them? Well, acetic acid slows down that process. So it slows down how quickly, for example, a piece of bread is going to break down into individual molecules. So it slows down how guickly the molecules of glucose arrive in your bloodstream, which is, again, what we want. We want to slow down the velocity. And second, acetic acid goes to your muscles and it tells your muscles to soak up glucose as it arrives into your body. So glucose arrives more slowly in the bloodstream and muscles soak it up as it gets there. So those two actions reduce the spike of the meal without you needing to change any part of that meal. So if you wanted to have that cookie and you wanted to have the cookie without setting off a glucose roller coaster, without setting off that sugar addiction, having a vinegar drink before would be a really good idea.

I'll think about it. Moving on. Hack eight. After you eat, move. People say this, you know, they go for walks and stuff after like the Christmas meal or whatever. But why is that from a scientific perspective important? It's interesting because it's been around culturally for a very long time, right? Like the post meal walk, etc. Even the veggie starter. I mean, in France, we, you know, we have this thing called could you do, which is raw veggies at the beginning of a meal. We've had it for forever, you know, just culturally in Italy, anti-pasti veggies first, etc. So it's cool to see that a lot of these hacks have been around for a very long time. But now we understand how they work. And so we're able to be like, Oh, I want that back in my life. So moving after eating. So your muscles, when they contract, they need energy to do so. And the first place they look for this energy is in the glucose in your bloodstream. So we can use that to our advantage. The more muscle is contracting, the more glucose it needs. So if we use our muscles for 10 minutes after a meal, some of the glucose from that meal will make its way to your muscles instead of just standing there and creating a spike. And so you can use your muscles in lots of different

ways. You can go for a walk, you can clean your apartments, you can play with your dog, you can go to the gym, and you can do my new favorite thing, which is let's do it together, Steven. So put your feet on the ground and do some calf raises. Do you know what that is? You just like go into your tippy toes and back down calf raises and you feel your calf contracting. So this is actually a really effective way to get your muscles to soak up glucose because there's a muscle in your calf called the soles muscle, which is really extra good at soaking up glucose. So for example, after a meal, you're at work, you're at your desk, you want to reduce the spike, do some calf raises like this. Nobody will see and you'll be helping you because they'll think I'm so weird. They're going to see me have this shot of vinegar and then sit here like I'm something. They're going to be like, damn, Steven is doing so great. Look, he's 65 and still kayaking like then they might think they should have done the same. It's a good trade-off. I'm happy to take the weirdness. That's really interesting because when I think about glucose spikes and movement and stuff and what you've just said there, my mind went straight to being sat on a plane, which I do a lot of and they bring the food down. They bring the dessert trolley down or whatever. And then you eat the, not me of course, but someone else, a friend of mine.

he ate the cookie on the dessert trolley and then he sat there for 10 hours because he was on a plane.

That sounds like a fucking nightmare.

Well, for your glucose is not great, but there's lots of things you can do. So first, don't have the cookie on an empty stomach. Have it after some other food. For example, maybe you bought like some nuts at their airport. I have some of those nuts before the cookie. That's what I call putting clothing on your carbs. And then you can do some calf raises in a plane, right? Shot of vinegar. You can do the vinegar. Don't do it as a shot. Make sure you dilute it. It's better for your teeth. Okay. Okay. Generally, do you have a like a hypothesis or an idea or a system for when you travel and what you eat? Yes. If I'm traveling, I always make sure I have a really, really good savory breakfast, even if I'm not hungry before I leave for the plane. So I have like my favorite, like two egg omelettes with feta and tomatoes. It's my favorite thing to make. What is your general, what is your general walk me through your food? You know, I, I was watching your, some of your interviews and the most replayed part of one of your interviews was you describing what you ate. No way. Yes. It was, it was an hour and a half long interview. And at the very, very end of it, the interview asked you what you ate on a daily basis. And that was the highest spike in the, in the replay time. So I thought, you know, for clearly that's what people want to know at home right now. So in a, in a, in an idyllic, okay. Jesse day. Okay. So my favorite two egg omelettes for breakfast. Give me timings as well. Oh wow. Poof. I mean, that depends. I really, my days change so much. Um, I don't know, like on an idyllic day based on the science, if you were being super. Um, okay. I'm just going to take a shot in the dark here. Um, okay. I wake up at seven 45 have breakfast at eight 15, two egg omelettes with feta and tomatoes. And then that makes me feel pretty good and full until lunch at lunch. I usually will have like a big ass salad. So like maybe some spinach, quinoa, everything mixed together. I put some vinegar dressing in there to reduce the spike. Salmon, avocado, cheese, like a nice big, like yummy thing. Then inevitably, inevitably in

the afternoon, I want to eat something sweet because I, I love sugar. Like that's the thing you have to understand. Like I love sweet foods. And that's one of the reasons that I figured out all these hacks because I was like, I need to reduce my spikes because I want my mental health to improve, but I don't want to give up my chocolate cake. Like that's just not happening. So anyway, inevitably in the afternoon, I'm like, hmm, time for some sweet foods. So I'll do lots of hacks around that. I'll do the vinegar hack before the chocolate cake. I'll also do another hack we haven't spoken about yet called putting clothing on your carbs. And so that means when you're eating

starches and sugars, add some protein fat or fiber to them. So for example, I'll have the chocolate cake with some Greek yogurt, which is actually a freaking delicious combo as well. So I'll do that. And then I'll go for a walk or I'll go to the gym. I'll use my muscles. So I'm getting all the pleasure from the cake with less of an impact. And then in the evening is usually when I have more time to have like a more like longer meal. So I'll do veggie starter, some nice whatever proteins and pasta afterwards. And then usually I don't really want anything sweet after dinner because I've had the sweet thing in the afternoon. That would be my, you know, common

food habits. Then today, for example, I woke up at 545 because I had this shoot to go to in the morning before coming here. And so I just grabbed some ham from my fridge. And I have it in my bag

now. And I just started munching on some ham in the morning, because again, a protein centric breakfast is really key to making sure you have lots of energy all day. And I wanted to come here and have a lot of energy, you know, so I was like, I need to be really good about my savory breakfast today. So I just had that. So going back then to morning breakfast today, yeah, ahead of doing this podcast, you know, these podcasts sometimes last, you know, two hours, three hours, whatever it might

be. What should I be eating in your view to stay high energy, to stay focused, etc. etc. And what should I not be eating? So you should definitely avoid granola, anything sweets, right? You want to think about, okay, protein at breakfast. So actually, your breakfast wrap was pretty good, I would say, because it has eggs, it has avocado, it has, you know, some fats, some protein, that's pretty, pretty good. And as long as the wrap is not like a huge amount of bread, you're fine, because it's fine to have bread or starches in the morning for taste. So to me, that would feel like a really good, really good option. And if you do get tired after eating something like that, maybe you're having a bit too much food, that can also be a thing. So maybe you have half, and you should feel pretty good. Okay, that's good to know. I always wonder. And then, you know, a lot of people, they're sad to give up their sweet breakfast foods. And here's another hack you can use. It's, you can still have that sugar, but have it as dessert after lunch or after dinner, instead of like in the morning on an empty stomach. So it's not about cutting anything out, it's about learning to place the foods and organize them in a way that keeps your glucose levels steady so that you don't kick off the cravings roller coaster where you feel so controlled by all the sugar and the food around you. You're very, very good at simplifying things, but also making them like both accessible and not intimidating. And that word intimidating is one that I've come to learn is guite prevalent when people are listening to food conversations. They feel like, Oh my God, it's a lot in it. Because there's so much, they don't really take anything

simple and actionable into their lives. So if you were to try and summarize the message you're trying to spread into maybe like a sentence or two, that someone can embrace as a philosophy for their dietary choices and their eating habits, what exactly would that be? I think it would be learn the glucose hacks and then just eat everything you love. These hacks, I hope they become, and this is kind of my mission, I hope they become as well known as drink, water,

or brush your teeth. That's kind of the vibe I'm going for. These are fundamental scientific principles that can really help you break free and fast track you to feeling so, so much better. And they will help you cut through all the noise in the marketing, etc. Because it's really about how your body functions on like a biochemical level. So sorry, that was more than one sentence, but you get it. And how are you feeling now? You've obviously been on a health journey of your own, but where did you find yourself today? Man, I am so grateful today because for example, you know, I'm on this trip now and I'm staying in an Airbnb by myself for 10 days. Yeah, like I'm alone. And back in the day, you know, when I was 19, I broke my back, I couldn't spend 20 minutes alone. I would have a panic attack. I am so happy of that journey, but I really don't wish it on anyone like it was freaking horrible. But now I'm like, oh, like I did it. I healed. I went through this stuff. I understand my body. And now I just want to make sure that I share this information with as many people as I possibly can. And that's what really excites me. So I'm doing very well. Thank you for asking, Steven. Are there any sort of misconceptions about food or, you know, glucose or diet, dietary behaviors that we might have missed today? I want to make sure we've really covered it off, you know? Yeah. Is there anything that you think we might have missed? So we talked about calories, which is really important. We talked about fruit. Well, another thing we can talk about, which is a common myth is that sugar for breakfast gives you energy. We kind of covered it in many different ways, but I want people to understand sugar gives you pleasure. It does not give you energy. It is not good for your energy levels. Yeah, that's what's really, that's a paradigm shift for me, because I would have thought that having something sugary before doing like this podcast would make

me like... So that's not energy. That's dopamine. Okay. And even though it feels good for a little while, then you crash and then you want more. It's actually not unlocking like deep biological energy and stamina. It's just making you... And by the way, sometimes you want the... Like if you're writing something and you're just like, I need some... Just to eat that cooking, you know? Sometimes we need to use it to our advantage that dopamine hits. But long term, it's not what's going to be helpful for you. And if you did that thing, every time you recorded a podcast, after a few months, you'd feel really chronically tired and you'd be like, okay, this is not working anymore, because your mitochondria would have suffered so much on the inside. Interesting. I have this box in front of me. On the front of it, it says the Diary of a CEO conversation cards. I'm so excited. On the back, it says vulnerability is the door to connection. This is a new tradition. We've taken all of the questions that were ever written in the Diary of a CEO and we've turned them into these cards. And on the front of the card, you can see a question like this written by the person. And then it says the name of the person that wrote it. And on the back, you can see the person that answered it if you scan this QR code.

These are available at the diary.com. I need to get this. This is very cool. The reason why we've done this is because I've come to notice and learn that there's a certain type of question you can ask somebody. And if you have the patients to let them speak, that unlocks a level of vulnerability which is connective for humans. That's why it says vulnerability is the door to connection, because after I do these podcast conversations with people, especially when we're talking about real life story-centric stuff, I just feel so connected to them. We become best friends in two hours. And then we have an ongoing relationship. And I have that with nearly all of the guests that have been on this podcast that have really opened up with me. So we want people to be able to do that at home. I have four cards here that I've picked from the deck. I think there's about 60 or 70 cards in the full deck, which is available online. And I've picked four here. So I'm going to slide these over to you. I'm so excited. Why are you so excited? Well, my question's not exciting. No, but they were, but I love this kind of stuff. I love the vulnerable guestions. I love this. Okay. For that reason, I'm going to ask you to pick two. Okay. We'll see if you regret that decision. No, I won't. Okay. I'm going to slide them over. Okay. So I look at them all. No, no, no, no. Oh, okay. I don't choose. No, no. Okay. I'm going to pick the two middle ones. Okay. And I read them. Please read them and say who wrote the question as well. What is one thing you regret not saying to somebody and why didn't you say it? Who wrote that question? Nick Jones. He's the founder of Sarah House. Oh, this is an interesting one that's coming to me. And I still have time to say it. So that's good. I wish I had spent more time talking to the surgeon that operated on me. And I wish I had thanked him for, first of all, like how great of a job he did on me, but also just how much love and care he put into my scars. They're really thin and beautiful. And they were sewn like from the inside and in the side scar. That's gonna make me cry. It was really sweet because the side scar, he put it just in like the crease of my waist so that you can't even see it, you know? And it was just such a sweet touch that he did. And so I guess I could write him a letter. But um, and that's something that I have every day in my body, you know, and just, it was really cool that he did that. So I'm gonna write him a letter. This doesn't make me want to do it because he's still around and alive. So I love it. So yeah, not too late. Okay, second guestion.

Tell me something you have never told anyone before. Oh my God. I'm such an open book. It's tough. Something I've never told anyone before.

Interesting. Let me think of this one.

Gary Neville asked this question. Is that how you say his name?

Yeah.

Well, yesterday I spoke to my dad on the phone and he seemed sad.

And that made me sad.

And I just want him to be happy.

That's all I can think of.

He sounded sad. Yeah.

He doesn't talk a lot about his feelings and I could just tell that he was sad.

How could you tell?

I think just in the tone of the voice, you know, and he was in Paris and he thought I was there

too. And so he wanted to see me and I was like, Oh, I'm not in Paris right now. And I could just tell that he would have really liked to see me. And so that made me sad that I was, you know, not there.

You have a suspicion why he's sad, don't you? Like a deeper suspicion?

Yeah, I think life is a little bit rough on him right now. And

I think a combination of lots of stuff. I'm not sure. Like nothing acute,

more like a chronic, like kind of feeling. And I just wish I could like wave a magic wand and make sure everybody I love is happy all the time, but you can't.

A lot of people struggle with that, especially with their parents. You almost see like a decaying in their energy and joy for life. And it's slow. And it's like almost quite chronic, isn't it? Like a lot of the subject matter we've talked about today, like inflammation, it's almost like a psychological inflammation that when you, you know, they get to a certain stage, sometimes it happens earlier, but you almost see a, you know, people characterize it as being like grumpy old, you know, or like sad old or whatever. I wonder what that is. I wonder what's what the like psychological nutrient that's missing. Is it connection? Is it a sense of purpose? Is it, I mean, it has to be said, it's not everybody, but there is.

I'm not sure. I think it's also like the unexamined aspect of life. You know, I feel like if you've gone to therapy and you've done work, you kind of have tools to like, you know, change the things you want to change in your life and put boundaries and like do things.

And I think a lot of people don't have really those tools yet. And in the same way that they

don't have the tools around food and how to just make themselves feel better. I think it's, to me, it feels like a tool thing. I don't know. Maybe it's just because, you know,

that's my own experience of things. But I think those tools are most absent in men.

Yeah. Typically, you know, those tools about expression and opening up and vulnerability and it's much the reason why I love doing this so much.

Because we get to have these kinds of conversations and they are medicinal in many, many ways, you know. And these cars are really wonderful because I feel like even if you're somebody who doesn't tend to open up very much, like the fact that the card is asking the question makes it totally. It was random as well. You picked it. It wasn't me.

Yeah. But just generally, like, I think everybody should play this. It's so important because it's really hard to ask these questions and it's really hard for people to take them seriously and be like, I'm actually going to answer this. But the card medium and especially, it's so beautiful, the handwriting. I love it. It's a really lovely idea.

It's quite interesting. I was just thinking when you said that, the reason why it's different from me just asking you those questions versus you selecting one and it being on this sort of middle ground inanimate object is because it removes the agenda from the question. Exactly. You know what I mean? It doesn't come with an agenda. So it's almost like you asked yourself it, right? We do have another,

the old tradition, which was asking you the question in the book.

Do it. do it.

I'm ready. Okay.

Oh, this is a tough one. Oh, yeah.

Do it, Stephen. You have my permission. Okay.

The person you cherish most in life

dies tomorrow. You have a 60 second phone call with them.

What do you tell them?

Well, the good news is I communicate a lot. I would say my mom, to be honest, just, you know, I'm going to cry again.

I'm happy. I would say, listen, it was amazing. Thank you. I feel like I told you everything and you know how I feel about you. And it's really sad, but it would be sad if it weren't sad. That's what I would say.

Thank you, Jesse. Amazing conversation. You're an amazing person and the work you're doing is so incredibly necessary because it's turning the lights on to something that is driving us very much from the back room in terms of our health outcomes that most of us don't know anything about. I've been trying to be healthy. I've had, I've had the intention, but because of the lack of information, I've been failing without knowing it.

Yeah. And it's the motivation thing as well. It's like, how do you make it easy enough that you can actually start today? Amen. Thank you so much, Jesse. Everybody can go find your work. Everyone will be able to find you on the internet. They call you the glucose goddess. You very much are a goddess. And your book about the glucose revolution is a must, must read for anybody that's listening to this. So I hope everybody goes and gets that book because I'll be honest. I'm going to be completely honest with you here. It's important. I thought the subject matter of glucose was fucking boring until I read your book. Nice. And then I was like, oh my God. You know, and I think, I think a lot of people who are in the camp I was in will probably feel the same way. So take my word for it. It's an incredible book and it's a must read book. Thank you, Stephen. And I have a new book, the glucose goddess method that just came up. And where, what is the, I've not read that one. What's the distinction between the two? So glucose revolution is like the everything, all the science, the stories, the backstory, the glucose goddess method is a four week guide to actually get started.

Oh, like the actionable. Yeah. It's like, okay, week one breakfast. Here are all the recipes you can use week two vinegar. Here's what you do week three veggie starters. So it's an even it's yet another layer of help to actually help you start today.

Incredible. That's what I need to read next. That's what I'll do. Thank you so much. Jesse's Thank you, Stephen.

Over the last couple of maybe four months, I've been changing my diet, shall I say, many of you who've really been paying attention to this podcast will know why I've sat here with some incredible health experts. And one of the things that's really come through for me, which has caused a big change in my life, is the need for us to have these super foods, these green foods, these vegetables, and then a company I love so much and a company I'm an investor in, and then a company that sponsored this podcast and I'm on the board of recently announced a new product, which absolutely spoke to exactly where I was in my life. And that is Huell. And they announced daily greens. Daily greens is a product that contains 91 super foods, nutrients, and plant based ingredients, which helps me meet that dietary requirement with the convenience that Huell always offers. Unfortunately, it's only currently available in the US, but I hope I pray that it'll be with you guys in the UK too. So if you're in the US, check it out. It's an incredible product. I've been having it here in LA for the last couple of weeks,

[Transcript] The Diary Of A CEO with Steven Bartlett / E243: The Scary New Research On Sugar & How They Made You Addicted To It! Jessie Inchauspé
and it's a game changer.
Machine-generated and may