

A sunburst graphic with numerous thin, light gray lines radiating from a central point behind the text.

Healthy Moms Podcast

BY **Wellness Mama**[®]
simple answers for healthier families

Episode 10: Don't Count Calories & Why Diets Don't Work

Katie: Hi, I'm Katie from wellnessmama.com. Welcome to episode 10 of the "Wellness Mama Podcast," where I provide simple answers for healthier families. An interesting fact for your day, a 2010 study published in the "International Journal of Food Microbiology" found that 48% of fountain soda drinks contained fecal bacteria and 11% contained E. coli, just another on a long list of reasons to avoid drinking soda. On the opposite end of the health spectrum, 1 cup or approximately 33 calories of Swiss chard provides over 1,700% of a daily value of vitamin K1 and, when cooked in some grass-fed butter, is also a great source of vitamin K2. So skip the soda and load up on the green vegetables. Speaking of calories, today's guest is an expert in that arena. Jonathan Bailor is the author of the excellent book, "The Calorie Myth," which is also a "New York Times" bestseller. His research has led him to over 10 years of collaborating with top scientists. He's analyzed over 1,300 studies, write over 10,000 pages of research, and his work has been recognized by Harvard Medical School, Johns Hopkins, Yale, and UCLA. Jonathan is a top nutritionist and exercise expert, and his specialty is making very complex science simple and understandable. And I'm so excited to have him here today. Welcome, Jonathan. Thanks for joining us.

Jonathan: Thank you for having me, Katie. It's a pleasure.

Katie: Awesome. I know you've done countless hours of research when it comes to calories, and I would love to hear your take on the dichotomy with... We have this modern fascination with science, and I know when I write a blog post, everybody wants to know what are the studies, where is the science, but there seems to be a disconnect when it comes to what we actually eat. So in other words, with most things in life, we welcome the latest advances in science, from our smartphones to hospital technology and across the board, and we really value science and celebrate innovation and progress, but we're still following some nutrition advice from the '50s. So, can you explain that?

Jonathan: It's heartbreaking. It's very difficult to explain, because we will line up to get an iPhone that is six months newer than the last iPhone, yet when it comes to how we nourish our bodies and how we feed our children and how we move our bodies... At the end of the day 99% of the American population is still buying into the theories of 50 years ago, which is just eat less and exercise more, and it's just about consciously counting calories in and calories out, and that's just not accurate anymore. It was the best we could do in the 1950s and '60s, and you can see where it's led us. And there has just been radical innovation in the areas of neurobiology and gastroenterology and endocrinology, and really the study of human metabolism, and not again just theories around metabolic math, but really hardcore clinical science. Again, not observational studies, but clinical science that has helped us to get a much deeper understanding of the way our bodies and brains actually work. And at this point this whole, "It's just about consciously counting calories in and consciously burning more calories off," is a bit like the flat Earth theory in the sense that it's really intuitive and that's why it's stuck around for so long. It's intuitive that if you can just eat less and exercise more, you'll lose weight, but sadly it's wrong, much like it's intuitive that the Earth is flat.

If you look out of your window in most parts of the world, it looks like the Earth is pretty much flat but it's not once you understand science. But the reason that science hasn't made it to the surface, which is so heartbreaking, is because we've been led to believe that weight struggles, and specifically, body fats struggles are a moral issue. Specifically, that we are just either too lazy or too stupid to just eat less. And if people accept that this is a moral issue or a character flaw, then there really is no point in looking at the scientific

literature, right, because we already know the answer, people just need to try harder. That, of course, is ridiculous.

An analogy I like to use is, imagine that somebody was struggling psychologically, so not metabolic struggles but psychologic struggles. And imagine they walked into the doctor's office, in this case a psychiatrist, and the doctor said to them, "You know, your problem is you just need to frown less and smile more," right? We would know that that's ridiculous. It's not that someone who is suffering from depression isn't trying hard enough to be happy. It's usually that there's a much deeper issue going on. In fact, their brain chemistry is different than someone who isn't suffering from depression, and we look at your metabolism is very similar.

When you look at someone who is chronically struggling with their weight, not only is their brain chemistry different from someone who's not, but their gut bacteria is very different. Their hormone levels are very different. So if you tell someone who is characteristically and consistently different from somebody who's not struggling with their weight, "Hey, take your," for lack of better terms, "broken brain, hormones, and gut and just put less food in them," that will never, ever solve the problem, ever. It will simply make the person sicker and sadder, and eventually feel helpless because they'll believe they've tried everything because frankly they have, they've tried everything they've been told, but in reality, they haven't tried everything.

And I'm so excited, and I'm excited about your work too, because the alternative to this calorie mythology is to stop worrying about calories and to start just thinking about the quality of the food you're eating. Because when you increase the quality of the food you're eating, you start to actually heal the brain, hormone, and gut dysfunction that leads to chronic weight gain and chronic overeating. And when you do that healing first, then slim becomes simple at the end, and you never need to count calories to starve yourself again.

Katie: Yeah, definitely, I'm right there with you on the quality of food being the most important factor. But I feel like we're, in a sense, fighting an uphill battle because for decades, like you've said, we've been told this calories in and calories out mentality, and there are so many diet programs that are based on that. All of the really well known ones factor the calories into it. So can you, like, break that down a little bit more on what this "calorie myth" that you talk about so much in your book, what that is? And then if calories don't count, what do we do instead?

Jonathan: The calorie myth, to be very clear, isn't that calories don't count. They do count, but that doesn't mean we need to count them. Let me break that down for a second. Until the 1970s the mainstream really didn't talk about calories, in fact until the mid-1800s. The scientific community didn't even what a calorie was. And no animal on the planet other than people can understand what a calorie is. So the idea that for animals to not become obese, they have to consciously think about calories is obviously false. Because we had dramatically low rates of obesity before any human knew what a calorie was, and no other species on the planet struggles with obesity despite the fact that they can't even comprehend what a calorie is. So the calorie myth is not that calories don't exist, they do. And if you drink 10,000 calories of butter per day, every day for the rest of your life, you will gain fat, but nobody does that.

And the point is that, again, calories in minus calories out is valid. It's just the idea that you need to consciously monitor it is...that's what's ridiculous. So, you have a part of your brain called your hypothalamus which regulates all mission-critical bodily functions. So for example, you don't need to think about milligrams of vitamin C in and milligrams of vitamin C out. You also don't need to consciously think about ounces of water you take in and ounces of water you excrete out. You also don't need to think about breathes in and breathes

out. Like, why don't you have to think about any of these things?

Well, one, common sensically, if you had to think about them you couldn't do anything else because all you do all day is try to manually regulate the way your body functions. So your brain is supposed to do that for you. And energy balance, as it is a life-sustaining function, is no different. So that doesn't mean we can't break that system, it doesn't mean we can't break our brains. Think about blood sugar, for example. I'm sure your listeners are familiar with blood sugar and how you can manipulate your blood sugar. But the way the body generally works, if you don't have a disease, is if you eat something and it causes your blood sugar to go up, your body automatically takes steps to bring it back down, and if your blood sugar starts to fall, your body will take steps to bring it back up.

Energy balance works the same way. When you have a properly functioning metabolic system, when you're healthy, if you eat more you burn more, and if you eat less you burn less. And the body tries to balance itself out. So again it's not that calories don't exist or that they don't matter or that they don't count, it's just that, like everything else, we can't have to consciously count them. And in fact, when you think about consciously counting them, you go down all sorts of wrong paths. For example, you walk into McDonald's, and you see their "healthy options" are anything that has less than 400 calories. Well, that doesn't make any sense at all. Heroin doesn't have any calories in it but that doesn't mean it's good for you, neither do cigarettes.

So when we focus on calories, we miss the boat entirely, because what the matter in science has shown is calories, in and of themselves, are agnostic. Is a calorie good or bad? I don't know, it depends with where the calorie is coming from. And that's the key, it's where the calorie is coming from, it's what is everything else that's coming into your body. Take diet soda, for example, as you mentioned in the introduction. Diet soda has no calories in it. Does that mean if you drink an unlimited quantity of diet soda it will have no impact on your health? Of course not.

A Paxil or any other pharmaceutical drug, again, doesn't have calories in it, that doesn't it mean you can ingest it and expect nothing to happen into your body. So you can see that by focusing on calories, it's really we're just aiming at the wrong target and it's what has, in many ways, led to the big fat mass we've found ourselves in today.

Katie: Yeah, I agree. I have a post that addresses a lot of that about calories, and an objection I hear a lot is that the law of thermodynamics proves that eating less means that you'll burn more fat, and I definitely have my own objections to that, but I would like to hear your take on that. And does the law of thermodynamics prove that if you eat less, you'll burn more fat?

Jonathan: The law of thermodynamics argument is one of most common touted by folks who sadly don't actually understand science. There's four laws of thermodynamics, two of them have nothing to do with what we're talking about here, they have to do with defining absolute zero and other esoteric scientific topics like that. But there are two that apply, and they tell us, when you put in them together, that energy cannot be created nor destroyed. It can only change forms. So a lot of well-intended professionals in this arena take that and they say, "Well, since energy can't be created or destroyed, it can only change forms, if you just eat less, you're gonna create an energy deficit." Meaning that if you eat less, let's say hypothetically, if you need 2,000 calories to function and you eat 1,500, you've now created a 500-calorie energy deficit. And since energy cannot be created nor destroyed, it can only change forms, you're gonna make up for those 500 calories by burning 500 calories of body fat. And that is "proven" by the applicable laws of thermodynamics. Now that is

completely wrong. That is completely, completely wrong. There's a huge logical omission in that argument that's very easy to make.

So what the applicable laws of thermodynamics tell us, again, which is correct, is that energy cannot be created nor destroyed, it can only change forms. So what that means in terms of our bodies is two things. One, if we do create an energy deficit and eating less doesn't necessarily create an energy deficit, then our body has to do something. But there's two important caveats in what I just said. First is that eating less doesn't necessarily cause an energy deficit, because when you eat less your body slows down. This has been proven in every single clinical study that has ever tested it. If you take fewer calories in, you burn fewer calories off. Just like if you drink less water, you urinate less, because your body is trying to balance you out.

So first, eating 500 fewer calories does not mean your metabolism will stay at the same rate it did when you ate 2,000, and therefore you have a 500-calorie deficit, that is not at all true. In many ways, your metabolism will slow down to balance you out automatically. So that's the first problem.

The second problem is, even if you do create an energy deficit, the applicable laws of thermodynamics, all they tell us is that your body has to do something. They don't at all tell us that your body has to burn fat, and that's a biological question at that point. So the question we then have to ask is, in biological studies when organisms are in a negative energy balance, what do they do? And they don't burn fat, to begin with, the first thing they do is slow down. This is why when you go on a starvation diet, you feel tired, crabby, and cold because your body has literally slowed down.

And then if that doesn't balance you out, then your body will burn off muscle tissue which is, of course, terrible for long-term health and fitness. And if you're still in an energy deficit at that point you will burn body fat. But at what cost? You've actually set up yourself for long-term fat gain because your metabolism slowed down and you've burned off a bunch of muscle tissue.

So, when we combine these laws of thermodynamics that apply with proven biological laws, what the applicable laws of thermodynamics actually prove and ironically prove is that if you just eat less of the diet that made you overweight and diabetic, you will slow down your metabolism, burn off muscle tissue, maybe burn some fat, and set yourself up for a long-term fat gain, and that is not a good combination.

Katie: Yeah, and that's why we see people so often on diet, and they'll gain back that weight plus interest because they've created that feedback loop in their body. And you mentioned something about drinking, you know, 10,000 calories of butter a day, and I think that's an important point to touch on also is that the food source matter so much like you said. So can you give us a breakdown of the difference in food sources and how 100 calories of, for instance, coconut oil would be different than 100 calories of chicken, that would be different than 100 calories of sugar?

Jonathan: The most exciting thing about the past 10-plus years of my life in all this research that I did was re-defining healthy. So if you ask 10 people on the street what's healthy, you're gonna get 10 different answers, right? So what we wanted to do is look at the actual science, and we wanted to see what actually determines the quality of food, what makes something healthy or not. And if you look at the research, it's quite clear that you can break it down into four factors. We abbreviate these factors using the acronym SANE, which stands for the four factors to determine the quality of a calorie or of a food source. And that is satiety, that's the S, that's how quickly calories fill you up and how long they keep you full, the A is aggression or the hormonal

impact of that food, N is nutrition or how many essential things like vitamins, minerals, amino acids and fatty acids the food provides relative to non-essential things like MSG and sugar, which are non-essential, and then finally efficiency or how easily that source of calories can be stored as fat on your body.

So when you break foods down, you can literally just put them on what we call a sanity spectrum where you have SANE foods on one end of the spectrum, and these are the foods that will heal you. The more of them you eat, the healthier and slimmer you will be because they heal your brain, hormones, and gut. There are foods that are higher in water, fiber, and protein. There are food you find directly in nature, things like non-starchy vegetables, nutrient-dense sources of protein, whole food fats, and low sugar fruits. And then the other end of the spectrum, so low-quality foods, are objectively and demonstrably unhealthy foods are gonna be dry, low in fiber and low in protein. So think refined starches and sweets, things you don't find in nature, and things that the more of them you eat, the sicker you get.

Katie: Awesome. And I would love for you to also touch on a point that I really liked in your book, which was the relationship between food and hormones and how certain food choices can affect our hormones, and that makes a much bigger impact than just calories in and calories out.

Jonathan: Food is the primary way we can manipulate our hormones. So the best way to think about this is, hormones are the way your body communicates. So right now, Katie, you and I, we're speaking English to each other, that's why we can understand each other. But when your brain talks to your gut, talks to your muscles, talks to your reproductive system, it's talking in terms of hormones.

So at some point, you know, testosterone levels do certain things in males, which cause their body to do certain things, estrogen levels do certain things in females, causes their bodies to do things. The point is, is if you want your body to do anything, your brain has to tell your body to do it. And the way you get your brain to tell your body to do things is not by eating more or less calories. It's by eating foods that change the hormonal signals in your body. So if you want a simple example of how...forget about calorie quantity entirely and start thinking about hormone quality and how that impacts your body, think of anabolic steroids, right? Anabolic steroids are terrible for you, they're illegal, and no one should ever take them.

But it's been proven over and over and over again that if you take a person and you change nothing about what they're eating or how they're exercising, and you inject them with anabolic steroids, they will burn fat and build muscle. Why? Because the hormone testosterone tells your body, "Burn fat and build muscle." Similarly, if you take someone and you give them insulin, so this happens consistently for diabetic individuals. You put them on the hormone insulin and it does the exact opposite thing. It has your body store more fat.

In fact, studies have a shown that a lot of individuals who go on insulin therapy for diabetes gain an average of about 12 pounds in the first....12 pounds of fat, in the first year of insulin therapy. Again it's not because they're eating more, exercising less, it's simply because the hormonal makeup of their body has changed. That's again another reason food quality matters so much is because if you want to change the hormonal makeup in your body, the most cost-effective and healthy way you can do that is by increasing the quality of the foods you eat.

Katie: Awesome. And what about exercise? Because that's the other pieces of the puzzle that we're often told, "You just need to exercise more to burn more, and that that will fix...that will help you lose weight and fix your metabolism."

Jonathan: Think of exercise as really just the other side of the eating coin, right? So if we say that just eating less in an effort to eat fewer calories is bad for you, then for all the reasons that's bad for you, exercising more in an effort to starve yourself in a frankly just a more time-consuming way, right? If you have the choice between just eating 500 fewer calories and trying to jog off 500 calories, it just gonna take a lot more time to jog off 500 calories.

The goal is not to starve yourself. It's not to starve yourself by eating less, it's not to starve yourself by exercising more. Now let's be really clear, when it comes to exercise, things like activities, standing up rather than sitting, walking, playing with your kids, that's not even exercise, that's activity, and that's great for you and you should do it, but you're not doing it to burn calories. You're doing it because if you want the ability to walk when you're 95, you need to walk before you turn 95.

When it comes to exercise, when I say exercise I mean, something very unnatural that you do for a very short period of time. The concept of exercise really didn't come about until 1968 when there was a book called "Aerobics" published by a Dr. Kenneth Cooper. Prior to that, the term exercise really didn't exist in the mainstream. So, exercise, when done properly, when done very safely with high intensity and done very intentionally, for short periods of time, is great for you, but it's great for you not because it burns calories, but it's great for you because it changes your hormonal makeup. So the idea is not to jog more, to burn more calories. The idea is to find things like safe, heavy resistance training or low impact burst training so that you can exercise less but smarter and change the hormonal makeup of your body.

Katie: That's awesome. And I know you've written some excellent things on all those topics, so I'll make sure to link those in our show notes for the listeners. But lastly, I wanna respect your time, but what is one actionable step that you think someone can take right now if maybe they do need to lose weight or they're having metabolism troubles and they've been counting calories, what's one action step they can start with right now?

Jonathan: Instead of focusing on keeping your calorie count down, if all you're gonna do is one thing, swap all the effort you're spending on counting calories to eating more green vegetables, that's it. Literally, make your goal...if you enjoy counting things, and some people do, get a sticky note, get something that has like 10 boxes on it, and every day I want you to check off all 10 of those boxes for the 10 servings of non-starchy vegetables you eat. So think green leafy vegetables predominantly, but basically, any vegetable that can be eaten raw.

So things potatoes, and carrots, or excuse me, potatoes and corn are not vegetables, they can't be eaten raw, so non-starchy vegetables, especially green leafy ones, go for 10 of those per day. Count that, not calories.

Katie: Awesome, I love that advice. And can you tell listeners where they can find you and talk about your new project that is so exciting?

Jonathan: Thank you, yeah. Please hop over to bailorgroup.com, that's B-A-I-L-O-R-group.com, and you can sign up to stay up-to-date on all of the cool stuff we have going on. Also get our free program, a bunch of great stuff. And one of the coolest things we're offering right now is this brand new web series called "The Quest to end the Calorie Myth." And we're fortunate enough to partner with a wonderful company "Quest Nutrition, and put a web series that is just super high production value in an effort to combat the propaganda that big food is putting out there, right?

They're making these beautiful commercials and advertising campaigns, in many cases, target at our children, and it's heartbreaking, and we wanted to be able to essentially fight fire with fire. So come with something that is as high of a production in value that is 100% free, like no email sign-ups, no nothing, no cost at all. Just put it out there in the universe. Every episode dispels one key myth and gives you actionable steps. So, for example, one of my favorite episodes is that, "Health Eating is Expensive." So we bust that myth and we tell you exactly how you can eat healthily on a budget. There are six of them, and again, you can stay up-to-date on that and everything else at bailorgroup.com.

Katie: Awesome, and I will include a link to that. Thank you so much for your time and being here. I love your work, and I think your new project is gonna be incredible.

And thank you so much to all of you for listening. Please take a moment and go to wellnessmama.com/itunes to subscribe to this podcast and receive future episodes and also to leave a rating or review to help others find it. Until next time, have a healthy week.