

## Understanding Metabolic Engineering Transcript

Mary Perry

Hi, I'm Mary Perry and welcome to the Wellness Zone. Today I'm here with Dr. Barry Series. Dr. Series. Thanks for being with me.

Dr. Barry Sears

Always a pleasure, Mary.

Mary Perry

Dr. Sears, we're going to talk metabolism and metabolic engineering. So let's first start with an overview. When we say the word metabolism, a lot of people are thinking it's more about weight loss and, you know, your ability to burn fat faster. But what exactly is metabolism? Because it goes well beyond that.

Dr. Barry Sears

Well, metabolism can be summed up on one very easy phrase: It keeps us alive. So that's a good start. How can I support that statement? Metabolism does convert the food we eat into energy. It also controls our immune system. It controls turning on and turning off inflammation.

It controls the expression of our genes. It controls our rate of aging. That's a pretty impressive list from this metabolism. And yet people say, "I'm getting fat, my metabolism is slow." Well, they're right. They're getting fat because your metabolism is not slow. It's inefficient. It's no longer in the zone. And so this is why I started out many years ago looking at food as if it were a drug.

Finding the appropriate format for each individual that allows them to keep their metabolism in that zone. And what's the payoff? A longer and better life? Of course, yes, I will lose fat faster, too.

Mary Perry

A couple bonuses there. So so let's let's break this down a little bit further. So when you're talking about metabolic engineering, what does that mean?

Dr. Barry Sears

Well, let's say your car doesn't work very well. You're take it into an automotive engineer. He's also known as a mechanic. He does a little twist here, twist there, and all sudden the car is working fine. Likewise, if your metabolism is inefficient, you need to do some metabolic engineering. Does that mean taking a drug? No. It means adjusting your diet until basically that car, in this case, our metabolism is working like a Maserati at peak efficiency.

Mary Perry

And so when we say we have to work on the diet, what does that look like?

Dr. Barry Sears

Well, look at the things that basically make an establishment inefficient. Number one, eating too many calories. What happens when too many calories?

Mary Perry

You gain weight?

Dr. Barry Sears

No, you gain fat and it's the fat that basically becomes an inflammatory mediator that disrupts metabolism. So, again, eating too many calories can basically cause your metabolism to become less efficient. Likewise, you can have too many of the wrong things coming in there, like white carbohydrates, like white rice, white pasta, white bread, white potatoes. You can also have basically too many other things, such as too many omega six fatty acids or too many unsaturated fatty acids like palmitic acid.

All of these will cause your metabolism to become less efficient and basically slow down or increase the aging process, fat gain being usually the first stage. But as they say in infomercials, but there's more! Also, there are things that should be in your diet which are not in the typical American diet, in sufficient levels. These will include omega three fatty acids and polyphenols.

Polyphenols are the chemicals that give fruits and vegetables their color. And finally, the last thing, a wrong balance of protein to carbohydrate in the diet. So again, we're going back to use our car analogy. I need the right balance of gas and air to get the best mileage for my car. I also need the right balance of protein to carbohydrate, to get the best hormonal mileage for my car.

So in a nutshell, that's what basically metabolism is. What metabolic engineering does is it goes in and, using the blood, readjust those aspects for your biochemistry, for your genetics, so you can maintain peak metabolic efficiency at every stage of your life. And if you can do that, the end result is you will live longer and you will live better.

Mary Perry

Great. And who doesn't want that? So just to recap, Dr. Sears, we're talking about not having excess calories because you don't want to have excess body fat. We're talking about having enough protein and carbohydrate. So you need the right macronutrient balance and then the types of omega threes, obviously more omega threes compared to omega sixes. And then polyphenols. Did I get all the four things you just said?

Dr. Barry Sears

You did and some people are saying, God, my heart is exploding. So many things to do. I've got to watch CNN. I've got to basically go out and play pickleball. It's not that hard. But the fact is these are the rules. If you want to basically squeeze all you want out of life, the basic rules are actually quite simple, but you have to follow them. There is no basically get out of jail free card.

Now, if you don't, what are you going to look at? A lifetime of earlier development of chronic disease? I say I'm too busy. I'm sure they have a drug that'll make my life easier. Basically, fool's paradise. The reason you're taking the drug is because your metabolism has been disrupted by your diet and the drug is treating only the symptoms of the chronic disease. It's not treating the underlying cause, which is basically a disrupted metabolism.

Mary Perry

Okay, so could we do a day overview of what this would look like in terms of the right number of calories, kind of the macronutrient balance, the ideal amount of the omega threes in the polys? Can you walk people through a sample day of what this looks like because it's not as hard when you look at it. It seems like a lot when you're talking about it, but it's not that bad when you actually put it into motion.

Dr. Barry Sears

Let's break it down to one, two, three. Step one, get 30 grams of protein at every meal. Now, what's 30 grams of protein? The amount you can put on the palm of your hand? Yes. 4 to 5 ounces or so.

Not more, but not less. Now, why? Because protein is required to send signals from the gut to the brain to say stop eating. So if I don't eat enough protein at a meal, guess what the brain says? I'm still hungry and all of a sudden, a couple of hours later, I'm, you know, starting to eating again. Here's a good idea: I'll just eat lots of protein all day long.

Doesn't work that way. If you eat too much protein, you now are sending different signals to the brain to start eating again. So again, about 30 grams at every meal. Dinner? That's easy. Lunch will tougher. Breakfast? Impossible. But this is what your goal is. If I want to have freedom from hunger, the number one cause of an inefficient metabolism, then I have to basically have 30 grams of protein at every meal.

Okay. Step two I need some carbohydrates to balance it off. The fallacy is carbohydrates make me fat. Come on, give me a break. You know, you need carbohydrates and the brain needs it. Particularly, the brain is a glucose hog. It accounts for 2% of the weight of our body, yet eats up and basically consumes 20% of the energy. And all that has to come from glucose being burned for energy.

So you need to have enough carbohydrates in the diet to keep the brain happy. How much? Well, if you have 30 grams of protein, that's about 40 grams of carbohydrate now. But the type of carbohydrate matters and what are the best carbohydrates? Non-starchy vegetables, just like your grandmother told you, just like you've told all your clients and patients over the years, you've got to eat your non-starchy vegetables.

Why? One It's hard to overconsume them. Two, they contain fiber. Now what's fiber do? Well, it turns out fiber does a lot. It basically is metabolized by the microbes in our gut to make signaling agents that make the protein even more effective in shutting down hunger. Now last step, number three: you need some fat. People say, great, how much? The answer is a dash.

But I want to eat more fat. The answer is a dash. But not just any fat. The right type of fat. Monounsaturated fat. Things like extra virgin olive oil, things such as nuts, Things such as guacamole. Yeah. Okay. Well, how much extra virgin olive oil? Maybe a tablespoon. And you've done it. There's all the rules you need to follow for a lifetime to basically tune up your metabolism by metabolic engineering.

Mary Perry

And Dr. Sears, just to go over this again, because you touched on it, tell everybody again what the benefits are. It's not just about losing excess body fat. There's so many other benefits of following this for a lifetime.

Dr. Barry Sears

Well, number one is you slow down aging. Do I have to go any further?

Mary Perry

No,

Dr. Barry Sears

No. You know, you can talk about it and you say, yeah, I want to slow down aging. And that's something that happens at every age. But the primary cause of aging is a disrupted metabolism and you have the ability to turn around very quickly. And what does the clinical

data tell us? How long does it take following the simple one, two, three method I talked about to turn your metabolism around? Four days.

Mary Perry  
Four days.

Dr. Barry Sears  
Four days That's great news. Here's the bad news. How long does it take for the metabolism to become inefficient again?

Mary Perry  
Four days. So, not long.

Dr. Barry Sears  
I mean, I have to follow this for a lifetime, right? Right. Unless you want to be taking drugs for a lifetime to clean up, the damage, the symptoms caused by your inability to basically control your metabolism. And if you are taking drugs for chronic diseases, then the more you follow metabolic engineering, the less drugs you need to treat the symptoms.

Mary Perry  
And who wouldn't want that?

Dr. Barry Sears  
The drug companies don't want that. Everybody else wants it.

Mary Perry  
Yes. Well, this has been very enlightening. Dr. Sears, thanks for walking us through metabolism, how to actually follow the eating program and really what you can expect as the long term benefits of continuing to do this on a day in and day out basis. So we always appreciate your time as.

Dr. Barry Sears  
Thank you very much