

Measuring Insulin Resistance podcast transcript

Mary Perry

Hi, my name is Mary Perry and welcome to the Wellness Zone podcast. Today I'm here with Dr. Barry Sears. Dr. Sears, thanks for being with me.

Dr. Barry Sears

Thank you, Mary.

Mary Perry

So Dr. Sears, today we're going to talk about wellness and insulin resistance. But first, let's start with wellness. This is a term that's thrown out there a lot that people don't really have a good definition of. So how do you define wellness?

Dr. Barry Sears

Well, I define wellness as the absence of insulin resistance. Say what? It's the absence of insulin resistance. We have lots of definitions for disease. My blood pressure is too high. I've got cancer. I can't remember where I left my keys. But we don't have any good medical definitions for wellness.

People want to say, "I'm well because I'm not sick." See, that's not scientific. So we need a definition of wellness and understanding what basically caused us to become from going from well to basically having disease. And the answer is we need a definition of how efficient our metabolism is. It's our metabolism that keeps us well. It's our metabolism that basically allows us to live a longer and better life.

So how do we know, with a simple blood test, how efficient our metabolism is? There is one test actually developed in 1985. A standard test called HOMA-IR. That's called homeostatic assessment of insulin resistance. That one simple test will tell you how efficient your metabolism is. If it's below 1, basically you're well. That that's the definition of wellness.

It was above one. You're no longer well. You're not sick yet, but you're no longer well. When it gets above 2, basically you're getting sick because now you're developing was called insulin resistance. Insulin resistance is like a catch all term that describes an inefficient metabolism. So what happens when you say you have a car and it's still running but not running efficiently?

Say, well, I'll get around to it, but eventually something breaks down. Now you've got problems. So again, from a medical standpoint, we really want to be defining how do we maintain wellness. And the answer is eliminating insulin resistance. And what drug do we use? There is no drug, but there is the diet. If you're willing to treat the diet as if it were a drug.

Mary Perry

Okay. So wellness is the absence of insulin resistance, but really insulin resistance comes down to having an efficient metabolism. Is that a quick summary there?

Dr. Barry Sears

Well, what leads to insulin resistance is basically inflammation. Inflammation and really the first organ in your body that is most susceptible to any resistance is your fat cells. So what's the first sign your insulin resistant?

You're gaining weight. Your clothes don't fit. And that means you are gaining fat, abdominal fat. And so that's our first sign. Now, as you walk around the streets of America, are Americans less fat today than they were 20 years ago?

Mary Perry
Unfortunately, no.

Dr. Barry Sears
So that says one thing. We have a growing amount of insulin resistance. Now, 20 years ago, based on that HOMA-IR test I talked about maybe 5% of Americans were well. Today it's probably less than 1%.

Mary Perry
Crazy.

Dr. Barry Sears
And so the higher the level of insulin resistance, the more easy it is to accumulate excess body fat. And from that excess body fat in the organs, it now basically spreads throughout the body like a cancer that cause metabolic disturbances in every other organ in the body.

So eventually when it hits the pancreas, you get diabetes, the heart, you get heart disease, the kidney, kidney disease, liver disease, neurological disease. These are all basically manifestations of the same thing: increased levels of insulin resistance caused by a pro-inflammatory diet.

Mary Perry
So now when we say pro-inflammatory diet, what things in the diet are going to lead to inflammation?

Dr. Barry Sears
Well, several things. One group would be things we take too much of, like too many calories or eat too many white things like a white bread, white pasta, white rice, white potatoes, or of having things such as too many simple sugars like glucose or fructose in our diet or too many omega six fatty acids or too many saturated fatty acids like palmitic acid.

They say, my God, stop, stop, stop. I have to get along with my life saying, Well, these are things that make your life a lot more difficult. But there's more. There's other things we don't get enough of in our diet. Things such as omega three fatty acids. These are found in fish. Or polyphenols. These are found in fruits and vegetables.

And there's more. You need the right balance of protein to carbohydrate to maintain a hormonal balance. So if you can do all three of those things, you can basically tune up your metabolism. That's what we call metabolic engineering. And by doing so, you can basically turn back the hands of time. Now, it's not an idle statement. No. In terms of medicine today, it's, especially nutritional medicine, is driven primarily by bloggers and biohackers.

They say, "I have a secret" or there's some kind of cabal by the drug companies to basically prevent the knowledge of how to treat disease. No. It would be nice if it had a little science behind that support, but really, they're actually right. If we had an efficient metabolism, our levels of chronic disease would be dramatically lowered. Metabolism is very complex.

It's taken breakthroughs in molecular biology to crack the molecular code of how it works. And once you know how metabolism works, then you can develop a dietary program personalized to the individual that allows them to maximize their metabolism. And the success is the absence of insulin resistance.

Mary Perry

Breaking it down for everybody here. We're going to start with an anti-inflammatory diet, which will make your metabolism more efficient. And that way you keep insulin in a healthy range so you don't get insulin resistance and thus you have wellness.

Dr. Barry Sears

Exactly. Now, is the diet the only thing? No, there are other things that can also affect your metabolic efficiency. One is exercise and another is stress reduction. People say "Yes, I take my yoga class!" OK Great. Are they all equal?

No, I use the 80-15-5 rule. 80% of your ability to control your metabolism comes from your diet. 15% comes from exercise. And 5% coming from stress reduction. They're all good, but they're not equal. So you see the best exercise program, the best yoga classes will not overcome a bad diet.

Mary Perry

Right. And like you said, you can always look at your blood to see if you have your markers in the desirable range. For someone who isn't able to get their HOMA-IR tested, which is a calculation that looks at your insulin levels and your glucose, are there other blood parameters that you can use to gauge whether you're doing a good job with your diet?

Dr. Barry Sears

The answer is yes. They can look at the different aspects of the diet. One aspect is, am I getting enough omega three fatty acids? There's a simple finger stick blood test that can measure that. And you're trying to cut that in an appropriate zone, between about 1.5 and 3. The higher the number, the more inflamed you are.

The average American is about 20. Yikes! That's more than three, right? Yes. Another aspect is am I getting enough polyphenols, those chemicals found of fruits and vegetables? I can look at a blood marker called glycosylated hemoglobin. I like to keep that between 4.9 and 5.1%. Usually the doctors says if it was less than 5.6, you're okay. Well, 5.6 is more than 5.1.

You're not okay. You're not sick yet, but you're not well. So we're looking for basically definitions of wellness. And finally, am I basically getting the right balance of protein, to carbohydrate? I can look at now the ratio of triglycerides to HDL, that should be less than one. So that has now basically blood markers. Now it sounds like science.

Science will tell me how to stay well. I don't have to listen to a blogger or of, you know, basically a biohacker. No, show me the science. And one thing science has shown us in human beings, forget rats. In human beings. The only thing that increases the metabolism is calorie restriction. They say "Who wants to go through life being hungry all the time even if I'm living longer?"

Well, the secret of what we've been working on for at least many decades is understanding how can we control metabolism by restricting calories and yet, at the same time, have no hunger or fatigue? Sounds like the Holy Grail, right? It's really the holy grail of not only basically nutrition, but the holy grail of medicine. Refocusing medicine not to treat the symptoms of chronic disease, but to maintain wellness as long as possible.

Mary Perry

Well, like you said, Dr. Sears, the science is quite complex. Wellness is not just about how you feel in your own skin. But you walked us through really what the science is behind it, how to do

it, and then how to actually measure it. So I really appreciate you taking the time to to walk us through that today.

Dr. Barry Sears
Thank you very much.