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Mary Perry

Hello and welcome to the Wellness Zone podcast, where we discuss the science of wellness metabolism and the dietary pathways to maintain them. I'm Mary Perry, and today I'm here with Dr. Barry Sears. Dr. Sears, thanks for being here.

Dr. Barry Sears

Thank you, Mary. And today, I think we'll talk about something we all should understand is called truth in advertising, especially truth in drug advertising.

Mary Perry

All right. Well, there's definitely no shortage of that with Ozempic and Wegovy and all of these drugs. So let's dive into it. Let's first talk about advertising and what people should know when they see these.

Dr. Barry Sears

Well, first of all, what people should know is what they never see. And this is a concept of in statistics known as Number Needed to Treat. When you see a drug advertisement, say, I've got a chronic disease. But these people look so happy and I take the drug and I'll be happy too! Slow down, slow down, bro. It's not going to happen. So let's ask the questions when we begin to look at two drugs. Two considered wonder drugs. One being an aspirin and another being statins.

And let's see what the facts really tell us. Let's take aspirin as an example. Let's say you're taking aspirin to treat a bad headache. You take a big boy, aspirin about 325 milligrams. It's quite likely to treat that headache. In fact, the number needed to treat, that is what's the likelihood if I take aspirin in my head, it goes away, is probably 50%.

So the Need to Treat is two. Not a bad deal. And more importantly, there's a concept of Needed To Harm. If I take one aspirin, will it harm me. No. Okay, that's not a bad deal. So a definition of a good drug is a drug whose number of Need to Treat is about five.

So an aspirin for taking away a headache is a good drug. Now, what if we take an aspirin on the way to the hospital because we had a heart attack? And what's the likelihood of taking an aspirin preventing me from dying? Good question. No, it turns out it's 42. Which means 41 people who take the aspirin will die before they get to the hospital, one will survive.

So the number needed to treat is 41. Not bad. It's not not as good as the aspirin, but it's better than dying. Now, what if I want to take a baby aspirin to prevent a heart attack? Isn't that what they say? Everybody who has a likelihood of a heart attack, which is everybody in America, should take a baby aspirin.

So now what is the number needed to treat by taking a baby aspirin to prevent a heart attack? Remember, taking an aspirin to treat a headache was about two. Taking an aspirin to prevent dying on the way to the hospital in the ambulance was about 42. The number needed to treat the take a baby aspirin to prevent basically a heart attack is 330.

Bad deal because when I go to Las Vegas and I put my money on the table and I've put it on number. I've got a one in 36 chance of winning. You know, a number need to treat a 300 is not good. So all of a sudden you say, that's not a good drug. It's not a good drug for preventing a heart attack.

So now let's go to another drug. Statins, They say they're wonder drugs. The question, are they wonder drugs? Well, we go back to basically the concept of needed to treat. Let's say you

have known heart disease, not just you must take a statin or you will die. Okay. Let's ask the questions. What is the number need to treat if I have a high risk of heart disease?

I've already had a heart attack. They're taking A statin will prevent me from dying. Well, it turns out it's about one in 40. Let's say we means 39 people out of 40 who are taking a statin to prevent a fatal heart attack will have no benefits?. Right. All of a sudden you're saying that's not a very good drug.

What if you basically are taking a statin and you have no known heart disease. You haven't had a heart attack already. Now it goes up to 100, which means 99 out of 100 people who take a statin with no known risk factors for heart disease. Their likelihood of getting some benefits are pretty weak.

Now you have low risk. You don't have any heart disease. Well, what if my doctor says, you know, dying from a heart attack is bad. I think so, too. Yes. Yes, it's bad. So I want you to take a statin for the rest of your life. Now, was that needed the treat to basically reduce the likelihood of dying from a heart attack if you had already have a low risk?

It turns out it's about 200. It means 199 people who take a statin and don't have a relatively low risk for heart attack. Only one of those 200 will have a benefit. Is that a game changer? I think not. Now, why are aspirins and statins thought about as wonder drugs? They seem to have a lot of other benefits.

They seem to do other things. Well, because in the medical term, it's called pleiotropic. So we don't know. It's saying they we think they do one thing. They seem to do a lot more things. Well, the reason why they are wonder drugs is because they activate AMPK. Well, is that the definition of wonder drug?

I think that's that's a good definition for any wonder drug. What else might activate AMPK? I'll give you...

Mary Perry

I don't want to answer, but I could.

Dr. Barry Sears

You could. Well, and here would be the correct answer. Following Metabolic Engineering. it also activates AMPK. Now let's use our Needed to Treat. And why would the metabolic engineering work?

It lowers insulin resistance. Now, what's the number Needed to Treat? O ne. It means if you follow metabolic engineering, you will lower insulin resistance, but it also works through activating AMPK. So when you see drug advertising, you know, keep in mind basically that this is like playing three card monte in New York City. They're there to take your money.

Always ask what is the number need to treat. You know, in the right circumstances like a big boy aspirin for a headache. It's a good deal. But in terms of basically of long term activation of AMPK for both statins and aspirin, they're not such great wonder drugs. They're not game changers. But if you're looking to reduce insulin resistance and all the chronic diseases that are associated with it: diabetes, heart disease, liver disease, kidney disease, neurological disease, then that truly is a wonder drug.

Mary Perry

So Dr. Sears, a question for you here, just on number to treat. We do get, we have a lot of educated people that listen to this podcast, but some just don't know where to look for this

information. And some will reach out to us and say, Hey, my doctor's forcing me to go on this drug. And in that situation, what would your recommended be?

Dr. Barry Sears

There's a website that correlates all this. I think it's known TheNNT.com. So just go do a Google search for "number needed to treat and the website will come up. And the reason why you don't hear about these things, because drug companies have no reason to follow their patients for long periods of time.

So you only see the side effects and the benefits by following patients for long periods of times. And this site basically does the statistical analysis to say, wait a minute. It's not saying drugs are bad. But realize that drugs do have their limits. That's why they have side effects. That's why they call it a therapeutic index. Does a drug do what's supposed to do and also does a drug have side effects?

Drugs have side effects. So it's not saying that don't take the drugs. They're treating the symptoms. However, if you want basically to treat your conditions most effectively, be following metabolic engineering and then take the drug as a touch up. But if you're not following metabolic ensuring that drug is not going to basically cure your problem.

Mary Perry

Right. Well, the nice thing about this is no matter where you're at, you can start this right? So you can use metabolic engineering. If you're on the wellness path and you don't want to end up with a chronic condition. If you have a chronic condition, you can do it to, you know, help reverse some of your condition or if you're already on a drug, maybe take less of it. So no matter what point you are at in terms of your overall health, this can be applied.

Dr. Barry Sears

Or you can also ignore everything we're saying and basically eat whatever you want and and take the drugs and more of it. But that's your choice. But the fact is that we have to basically have a standard, a standard that says, does something actually work? And if it doesn't, then say, okay, we should be aware of the risk and the potentialities. And that's one of the things why drug advertising so pervasive. The drugs really aren't working that well, but the advertisements are great.

You always see happy people, you see bubbles, you see kids running around say, I want to be happy too!, If you do, first thing, start applying metabolic engineering to reprogram your metabolism to make the drugs work better, to increase their number needed to treat.

Mary Perry

And Doctor Sears, people want to learn more about metabolic engineering. Where should they go?

Dr. Barry Sears

Well, metabolic engineering is complex, but that's why we have our science site at Dr Sears.com. We talk about the science of metabolic engineering. It is complex, but basically there is a system, a system that if you follow, you see the results. And how do we know? That's why you do clinical research, That's why you get number needed to treat.