

Mary Perry

Hi. My name is Mary Perry, and welcome to the Wellness Zone podcast.

So, Dr. Sears, we're going to talk about zombie cells. People might think we're in Game of Thrones right now by talking about zombie cells, but let's talk a bit about what they are, what the implication is for our overall health and what the benefit is to trying to control what they are in the body. So first off, can you just walk us through what zombie cells are?

Dr. Barry Sears

Well, the initial name was called Senescent Cells. Senescent means aging cells, but the scientific term is zombie cells. You say what? I don't get that. Well, it turns out zombie cells are the reasons we age. And what happens as we age are cells get really distorted. They basically become transformed like cancer cells. And what the body has is a unique mechanism to stop cancer.

It turns cancer cells in the zombie cells, and hopefully the immune system will now attack the zombie cells and clear them out. And cancer is long gone. But as you age, your immune system becomes weaker and weaker, you become less active in terms of getting rid of the zombie cells, which is naturally a protective aspect. And what happens as zombie cells begin to increase and basically encourage other cells nearby or in other organs to also become zombie cells, the levels of inflammation start increasing in every organ in your body.

And now we know if the increasing levels of these zombie cells that drive the aging process. So if you're looking for the elixir of youth, kill the zombies.

Mary Perry

So. So essentially, Dr. Series, what you're saying is, as we age, we just lose our ability to clear these senescent cells from the body, and that's they accumulate. And with that accumulation comes additional inflammation in the body. Is that correct?

Dr. Barry Sears

That's correct. And it's that additional inflammation that accelerates the aging process.

Mary Perry

And how exactly do we make our bodies more efficient at clearing these senescent cells with age?

Dr. Barry Sears

Well, it turns out we come back to our old friend, Mr. AMPK, as the master regulator of metabolism and the master regulator of the immune response. If we have active levels of AMPK, it's doing its job, basically maintaining a strong immune system that's constantly surveilling throughout the body for zombie cells and then eliminating them, which is step one, and then two, replacing them.

Now it doesn't it doesn't do much good to eliminate the zombie cells unless you're replacing them with new healthy cells. A brick wall. I take the bricks, the damaged bricks out of the wall and don't replace them. Eventually, what's going to happen? The wall is going to fall down. So again, the the whole process of the aging process is one, surveillance, destruction and repair.

And the the one entity in each of our 30 trillion cells that does that is AMPK and AMPK is really the secret to aging better and aging longer.

Mary Perry

Okay. So now we know AMPK is a secret, but how do we actually activate it?

Dr. Barry Sears

Well, the old standby way always works and always will is called the diet. And not just diet, but a calorie restricted diet. It's a calorie restricted diet that basically activates AMPK. And then all of a sudden you're thinking, my God, is it worth being hungry and fatigued the rest of my life to live longer? Most people say no, but the answer is the secret of calorie restriction is never to be hungry and never be fatigued.

And that's the reason why I developed the Zone diet more than 30 years ago. To basically develop a dietary program that could restrict calories without hunger, without fatigue, to maximize activity of AMPK, which is a secret to living a longer and better life.

Mary Perry

Now, I know diet is is, you know, the huge piece here, but you've also talked about how certain exercise can also help to activate AMPK. You you talk about that a bit too.

Dr. Barry Sears

I'll also include stress reduction. These are called lifestyle interventions, but they're not all equal. I use the 80 15 5 rule. 80% of your ability to activate AMPK will come from the diet. 15% from exercise. 5% from stress reduction. So you can take all the yoga classes you want, but you're not going to overcome a bad diet.

So again, each of those is useful, but basically never let the tail wag the dog. It's the diet is the primary controller of the body's ability to remove the zombie cells and allow you to live longer and live better.

Mary Perry

So, going back to the to where we started here on senescence. So is the best way to measure whether you've done a good job with cellular senescence to look at these blood markers that keep you in the zone?

Dr. Barry Sears

Well, the trouble with senescence is basically you had to take out tissue to find out the senescent cells. It doesn't take very many senescent cells to make your life miserable. Maybe two or 3% of the cells in an organ is enough to basically start aging faster. So are we going to do a tissue biopsies in the brain, the heart?

No. Of course not. So is there any surrogate marker? Surrogate marker that indicates we're activating AMPK? There is one called HOMA-IR. This is a marker of insulin resistance. Insulin resistance indicates that your metabolism is not working very well. It means you're aging faster. So by looking at the simple marker, which is a simple blood marker, it's been around since 1985, we can tell our progress.

If insulin resistance is going down, you're aging slower. If insulin resistance is going up, you're aging faster. Now what people have high levels of insulin resistance? Those who have excess body fat and those who have diabetes, also those who have heart disease, liver disease, kidney disease. Should I go on? There's more because this is the marker through your every organ, your body is aging at a faster rate.

So you really want to put together a dietary program and monitored by saying, yes, I'm losing weight, but I'm not losing a muscle mass. But more importantly, is my levels of insulin resistance going down.

And so we usher in a whole new era of medicine, not finding drugs that treat the symptoms of chronic disease because chronic disease is caused by the aging process.

Our metabolism starts slowing down, and that gives the zombie cells a chance to keep on growing. So here we have, you know, do we have to basically buy drugs? No, but we have to eat. So you might as well eat smart. And if you want to eat smart, the bottom line is you'll live longer. You'll live better.

Mary Perry

And who doesn't want that? Well, thanks so much, Dr. Sears, for enlightening us on cellular senescence and anti-aging and all that. It's within the power of us to be able to do this with our diet. So thank you so much.

Dr. Barry Sears

Thank you.