

Depression and Inflammation Transcript March 2024

Dr. Barry Sears

Today, even though this is beginning of spring. I want to talk about a disease that affects many Americans, and that's called the Depression. Because about 8% of Americans have depression. And anybody who's had depression say it's a miserable disease, you know, your whole life is gray. And yet, how do we treat that?

Mary Perry

So what's really the underlying cause of depression in the treatment at this particular point in time?

Dr. Barry Sears

Well, the short answer is nobody really knows. The easy answer was say, ah, it's something that can be a druggable target. We say, Ah, we know that serotonin seems to be important and the levels of serotonin might be low. So if we basically just use drugs that prevent the uptake of serotonin by the nerves, we should get better treatment of depression.

A couple of problems with this. One, it takes a long time using drugs like Prozac to see any alleviation. If it was that simple, it should happen very quickly.

Two, about 40% of people basically are Prozac deficient. It simply doesn't work, which means something else is probably going on. So the most likely candidate would be our old friend, Mr. Inflammation.

Mary Perry

So what exactly is the role of inflammation in depression?

Dr. Barry Sears

The primary thing of inflammation, it basically disrupts neural transmission. So again, it's not a matter of not having enough serotonin, but it's basically saying, I have to make sure the neurotransmission is also working. So we do know a couple of things that drugs such as interferon when applied to people, about 40% of the people who get interferon treatments develop severe depression.

And what does interferon do? It increases the levels of cytokines. These are inflammatory mediators that basically will not be addressed by Prozac, but basically can be addressed by an anti-inflammatory diet. And that's what gave rise to the first aspect. Could a combination, a combination of drugs to increase serotonin and now dietary products, primarily fish oil and a lot of fish oil? Intriguing aspect.

Mary Perry

So using the combination of diet with these medications can kind of help to alleviate some of the side effects from these particular drugs.

Dr. Barry Sears

Well, exactly. And the first studies were done at Harvard Medical School back in 1999. And what they were doing with a very specialized group of a bipolar depression patients which are probably the most difficult to treat.

And they took this the bipolar depression patients and split them into two groups. One got a placebo and the other got ten grams of omega three fatty acids per day. And after about three months, they had to stop the study. The data was so strongly in favor of those who are taking their drugs and the fish oil that it became unethical to continue it.

The second reason they had to stop the study, they ran out of fish oil. The fish oil they were using was a specialized type being made by the National Laboratory in Bethesda, and they had used up all their samples, so they had to stop the study. But it was a first demonstration that high dose fish oil, not talking about one capsule a day or two.

This is probably close to about 15, 16 capsules per day could have a significant effect on depression. Okay. The field one kind of you know, so so for about 13 years until you and I published our data on basically a dose response curve with children with major childhood depression. And we had two groups, all had depression. They're taking their antidepressant drugs.

But one group, we gave two and a half grams of omega three fatty acids. The other group, we gave 15 grams about seven times more and say, okay, what happens? Well, what happened was the group that got the higher levels of the omega three fatty acids had a dramatic improvement in terms of their depression. Those who got the lower dose, they were getting a little better, but it was not statistically significant, which says there was a definite, you know, curve in terms of dose response going back to the data initially at Harvard, that the high levels, again, ten grams is a very high level, is basically probably a therapeutic dose.

And this was confirmed by new studies from Harvard published only last year showing again, a dose response effect in terms of the levels of the omega three fatty acids. But more importantly, it was basically they showed even a stronger effect on the resolve since these were the hormones that basically the omega three fatty acids generate. And they're the most powerful drugs known in the medical science are most powerful hormones that turn off inflammation.

So now we can look back and say, okay, what causes inflammation? We really don't know. But we do know that drugs such as Prozac that increase serotonin levels, they will help, but they can be made dramatically more effective with high dose fish oil. Well, let's be frank. Are most people going to take ten grams of fish oil a day?

No, no, I do, but nobody else will. But the fact is, this is the power of metabolic engineering. The more you combine the Zone diet with omega three fatty acids and the polyphenols, what you're doing is basically developing out a systems approach to reduce inflammation, including in the brain. So by using now the systems approach, you can basically use lower levels, lower levels of omega three fatty acids to make the existing drugs work better.

And that's the power of metabolic engineering. It's not a drug, but it's a very high defined dietary system that makes drugs work better at lower concentrations. Drugs don't solve the problem for disease. They don't treat the symptoms. Metabolic engineering makes those drugs work better. And if you don't have depression, probably your best way to make sure you don't get depression is to follow metabolic engineering in the first place.

And there's also two other benefits. One, you lose excess, body fat, and two, you slow down the aging process. Not a bad problem with being happy. So again, this is the aspect as we basically delve into chronic disease states, especially ones which really have no good markers other than how do you feel that basically metabolic engineering will have its play in terms of a powerful tool to basically restructure health care as we know it in the 21st century.

Mary Perry

And Dr. Sears, one thing I also want to point out from our studies is that the majority of the population is deficient in omega three. So it's likely that anyone that's listing right now, unless you're currently supplementing, is not getting enough omega threes in the diet. So that's also

another. Most of us are starting low to begin with. So if we have a propensity to, you know, have in our genetic line some of these conditions and stuff, it's really good to to be supplementing or ensuring that we're getting the right amount.

Dr. Barry Sears

And a good starting point saying what's the right amount if I don't have a chronic disease. Well, your grandmother knew when she gave your parents a tablespoon of cod liver oil before they could leave the house.

Now, that contains about 2 1/2 grams of omega three fatty acids. It's a good dose, but not enough to treat depression. But the average American takes in about 125 milligrams. A 95% reduction. And that, in my opinion, is reason why we have more and more neurological disorders arising, because basically our brains are starving for omega three fatty acids.

Mary Perry

Thanks, Dr. Sears for enlightening us. And, you know, I think it always shows the benefit of having the appropriate diet to begin with. But even if you are presented with one of these conditions, these can help your medications be more effective or how you can do things in combination with a healthy diet. So a lot of options for people.

Dr. Barry Sears

And don't forget that losing the excess body fat and basically slowing down aging.