

# Diet & Dementia

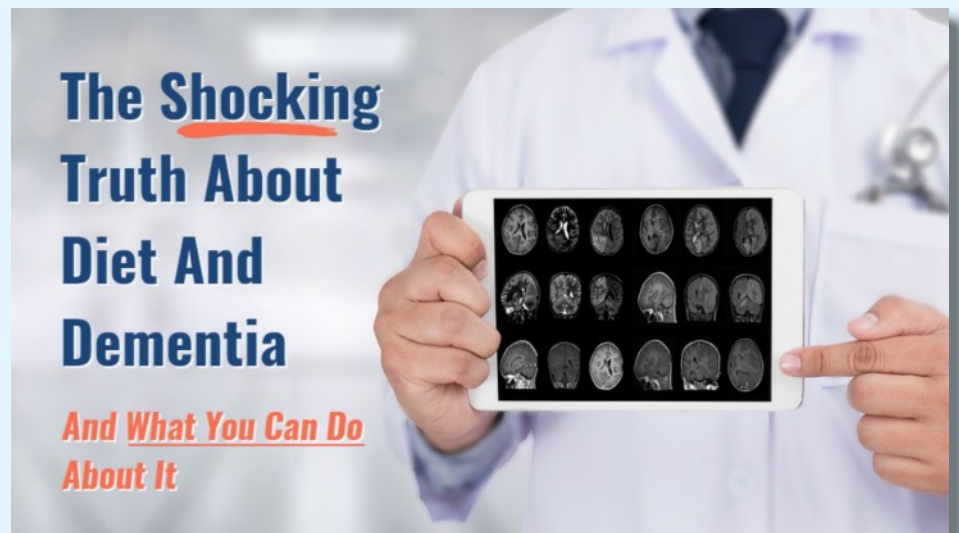
“Food plays a powerful role on our microbiome, and our microbiome can be a major source of systemic inflammation, which means brain inflammation.”

If a picture is worth a thousand words, a video could change someone's life, and the story told in this video strikes at the heart of every baby boomer. Let's watch it together.

Video:

<https://www.youtube.com/watch?v=NovazHXKfXw>

I know this video has been copied and reproduced. It's over 10 years old. Let's talk about the experiment for a moment. The water is cloudy so the rat can't see the platform under the surface. The rats need to use external cues in the environment to locate the hidden platform. This tests both navigation as well as learning and memory. Both rats were trained previously and were proficient in finding the platform. The first rat who ate standard rat chow beelined to that island because it remembered the way to the platform in 5.2 seconds. The second rat who consumed a diet equivalent to the standard American diet, acted like it was in the pool for the very first time, and it took 36.2 seconds, 7 times longer.



For years, researchers have been saying one of the components of Alzheimer's is insulin resistance. You may have even heard Alzheimer's nicknamed, type 3 diabetes. But why does the American diet have such a profound effect on how we think, how we feel and how we learn? One reason is that food plays a powerful role on our microbiome, and our microbiome can be a major source of systemic inflammation, which means brain inflammation.

My friend and colleague, Dr. Devaki Berskson shared something she just learned about biomes. “You have

multiple biomes, inside breast tissue, lungs, brain, vagina, prostate, and you even have biomes inside your eyes, but this is the least populated of all biomes. The Cleveland Clinic has found that women with breast cancer have different or unhealthy breast biomes compared to healthy controls who did not have breast cancer. But breast biome health, like all other biomes, is greatly influenced by the biome health inside your gut. Most tissues have biomes. These biomes get signals, “healthy” or “unhealthy,” from your gut biomes. Healthy gut biomes also make essential nutrients. These essential nutrients help keep

gut biomes, and the signals they send to diverse biomes, functioning as they should. Our gut and all the busy chatting signals it sends to biomes far and wide has evolved to depend on nutrients that healthy gut microbial life produces.

The typical American diet is loaded with processed foods which do NOT contain fiber-rich foods to feed your gut microbes. So, even though you “eat,” your gut microbes “starve.” Starving, unhealthy gut biomes, send-off unhealthy signals. That’s the part that caught my attention. Starving, unhealthy gut biomes send-off unhealthy signals to other parts of our body. Maybe it's these unhealthy signals are what contribute to excess inflammation in the brain. Regardless of the mechanism, highly processed foods devoid of fiber, phytonutrients, healthy fats and minerals affect the way we think and feel. And based on these and other experiments just like this one, food affects how we learn and remember.

You can see a link to the right when we discussed that parts of the brain can regenerate

though a process called neurogenesis. To stimulate and control neurogenesis, certain chemicals called neurotrophins are involved. One of the most exciting factors and one of the most active is a protein called BDNF, “Brain Derived Neurotrophic Factor,” and it turns out that calorie restriction and exercise are two ways to increase BDNF.

Another way to increase BDNF is with fish oil, specifically the DHA fraction. As a reminder, Biotics Research has the cleanest, freshest, most concentrated fish oil on the market. You can see a link to the right to understand why. There's also a link that discusses DHA: Anti-Aging For The Brain. Food is medicine, and no matter how we rationalize it, when we eat overprocessed fake food loaded with sugar, bad fats, and hidden chemicals, we poison enzymes and starve our microbiome. And I for one am always thankful for people or educational videos that remind me.

Thanks for watching today. I look forward to being with you again next Tuesday.