

## Cool Facts Friday #6

Dave Asprey:

Hey guys, I've got a new cool facts Friday for you. I love doing these things and it's really just about sharing cool stuff that I think is useful and it's certainly interesting, and I hope you enjoy it as much as I do.

Cool Fact 1:

This cool fact is about how lonely brains crave people and it's particularly relevant right now because, well, my new book *Fast This Way* just came out. And in it, I talk about how I sat in a cave for four days all by myself with no food. And I did that as part of a vision quest, but I did it because I wanted to face my fear of loneliness at the same time I faced my fear of hunger and I learned to overcome both of those. And I share that experience as part of understanding the psychology of fasting. But this new research is really interesting because we didn't know back when I did this, that there are parts of the brain that share hunger and connection.

You ever been in the situation when you're in a lunch meeting, you're starving. You can't hear a word your colleague is saying because you're distracted by food at the table next to you? And it happens because when you're hungry, different areas in your brain light up at the sign of food and it gets your attention. It's a primal survival response. Well, researchers found the exact same thing happens in your brain when you see groups of people socializing when you've been deprived of people. So apparently just like your brain says, "You need this food". It does the exact same thing in the exact same area for social interaction. That means when you're socially isolated, your brain is craving people. And what does it mean for you? We understand how important food is in our lives and without food, eventually you'd starve and you die, but it takes a very long time.

If that same center in your brain lights up for social interaction, this new research says that the impact of loneliness can have a much more significant role in your health than we previously understood. And I've interviewed a bunch of guests recently on *Bulletproof Radio* about human connection. Episode 755 is about friendships, 756 is loneliness and 757 is about social isolation. So if you're feeling a craving for social connection right now, for obvious reasons, at least make it a priority to connect with friends and family via a video chat and do what you can to get a hug. It's because it's part of being alive. So do your best to connect right now.

Source: <https://www.sciencenews.org/article/lonely-brains-social-isolation-people-mental-health>

Cool Fact 2:

Our next cool fact is one that I'm so excited about. It's about a new drug that reverses age related cognitive decline within days. If you've read my books, I tend to see the future and talk about it because I can see it happening because I get to talk to people. This is a new study on a drug that hasn't come out yet called ISRIB. And we previously knew that it helped to treat memory loss associated with brain injury and neurological disorders. But what they did here is they just said short-term as in a few doses of exposure to this drug reversed age-related memory decline and cognitive deficits, in mice. However, we've known about this drug for seven years, and it's very likely that it works in humans as well because the mechanism of action is because it's fixing mitochondrial function. They think it may be a cognitive enhancer in humans, as well as other healthy animals, can probably fight certain kinds of cancer and even reverse some of the down syndrome symptoms.

And what's interesting here is it's just resetting a physiological blockage in cells. In other words, these cells weren't able to make energy and do what they were supposed to do. This reboots the cell. A

few doses you take that makes your cells reboot and act like they're younger. You still think we're not going to 180? Don't bet on it.

#### Cool Fact 3:

Our next cool fact of the day is about repetitive behaviors and gut problems. You guys probably don't know this, but when I was young, I had OCD. I would do the facial scrunching. I had to tap my fingers a certain amount of the time. I had to bounce a ball a certain number of times before I could throw it. I was a total, total neurological normal person, not. I don't have any of that anymore. And maybe once every two years I might catch myself tapping my fingers, go, "Whoa, how broken is my brain right now? What did I do wrong?" And then it goes away when I just take care of myself. And it goes away usually within a half hour. Well, this new study came out December 3rd of 2020 and they're finding a connection between repetitive behaviors and gut problems. It seems like there's a connection between gut problems and almost everything.

We had a recent podcast where we figured out 60% of people can't process pomegranate to do good things for them. But 40% of people can. It's a compound called Urolithin A. But in this new research, which was what's going on in the gut, they said "The severity of autism symptoms is likely caused, or at least contributed to, by an increase in GI problems". And this also means that repetitive behaviors and those of us who just have ADD, or people have other behavioral things are also likely gastrointestinal. It means if you have constipation, stomach pain or any other gut difficulties, it's likely to show up in your brain, not just your gut.

So if things aren't okay in the bathroom and you're feeling like you're a little bit off today, they go together. And this isn't in the study here. But something that I know from bio hacking, that's useful for you. If that's happening, the quickest and easiest thing to do is activated charcoal. It'll make constipation worse, yes. But it'll absorb what is most likely a contributor, which is lipopolysaccharide in the gut. And this new study we just talked about is a part of deep coding this thing that's happening in our guts and our brains and the rest of our body. We're getting so much more new knowledge. This is just one more drop of it.

#### Cool Fact 4:

Our next cool fact is about the phases of degenerative diseases. And you might be saying, "Why do we care?" Here's why. If you can figure out what phases look like, you'll know if you're getting one and then you can reverse it before we get into the heavy duty ugly phases. Researchers have been looking at this with varying results for a long time. And they find, well, this therapy works for this person and they try it on the next person and it barely makes a difference. Well, biochemists at Rice University think they figured it out because of these two distinct phases. When degeneration starts, the activity of these key cell signaling proteins either goes up or goes down, which ultimately causes oxidative stress or inflammation. But it's the oxidative stress that then brings on the second phase of the condition, which is when you see the symptoms of degeneration. And that's really important because the signaling proteins in the first phase behave completely differently than they do during the second phase.

And that means that a treatment that would work really well when you have excessive inflammation, won't have much of an effect on the second thing, which is really a symptom of the first. And that means that for things like Alzheimer's, Parkinson's, muscle atrophy or just good old fashioned aging, you may have two very different populations of patients. And you want to catch anything that's going off in your biology early so you can correct where you're headed. If you catch gut problems early on and you say, stop eating gluten. Maybe you won't progress all the way to IBS or full on Crohn's disease because you're seeing an inflammatory response before you see the long-term damage. And this

goes throughout almost everything. It's one reason I like to monitor inflammation. It's another reason I like to monitor heart rate variability, because it's going to go down if your inflammation goes up. Catch it early. That's what this says.

Source: <https://www.sciencedaily.com/releases/2020/11/201123161031.htm>

#### Cool Fact 5:

Our next cool fact is about sleep and antioxidants, or more to the point, that sleep is an antioxidant. We've all heard chronic sleep loss it's rampant, and it's even worse during coronavirus because people now have Corona dreams. And it was pervasive beforehand, it's just getting worse. And we know that it isn't good for your health. So why is it not good for your health? We're figuring it out. Researchers at Columbia studied the impact of sleep deprivation in fruit flies and found that without enough sleep, sensitivity to oxidative stress increases intensely. Therefore, sleep supports antioxidant processes. And here's where things get really interesting, and understanding that sleep and oxidative stress are so correlated, researchers said, "Well, what happens if we turn on the antioxidant genes in their fruit flies brains to see if it changes their sleep?". The result was less oxidative stress leads to less sleep.

In other words, and this is really important for you, sleep and oxidative stress have a bi-directional relationship where sleep functions to defend your body against oxidative stress and oxidative stress also helps to induce sleep. What does that mean for you? Sleep disorders that are correlated with several diseases are related oxidative stress like Alzheimer's, Parkinson's and Huntington's. So sleep loss makes you more sensitive to those diseases because you need the antioxidants. And at the same time, disruptions in your antioxidants defense systems can cause sleep disorders and disease. It's a chicken and egg scenario but this could be the first step in understanding how sleep is impacting neurological disease. But more to the point, after 10 years of talking about the Bulletproof Diet, having had people lose more than a million pounds on the Bulletproof Diet. I can tell you straight up, it is really common for people to say, "Hey Dave, I need an hour less sleep than I did before I went Bulletproof. Is that normal?" And the answer is yes. And this study may be the key to understanding why.

You ate less stuff that caused inflammation, therefore you needed less sleep. In fact, maybe this even explains why that study of 1.2 million people that I've been talking about for 10 years that says the people live the longest sleep six and a half hours a night, not eight hours a night. Maybe they just have less oxidative stress because they're eating less crap. Maybe they're just healthier, which also means less oxidative stress. We're getting close to understanding it. Speaking of oxidative stress, there's a lot more research than this talking about free radicals and oxidative stress and how it happens in your cells and it causes aging along with all sorts of other bad things.

Source: <https://www.sciencedaily.com/releases/2018/07/180712141715.htm>

One of the things that I do use for my own oxidative stress is called the Eng3 NanoVi device. And it helps to repair oxidative damage and support natural repair mechanisms. It's a machine where you breathe a certain type of vapor that's shown in studies to reduce oxidative stress and increase muscle and mitochondrial function. You can learn more about this cool tech at [Eng3corp.com/dave](http://Eng3corp.com/dave). That's [eng3corp.com/dave](http://eng3corp.com/dave).

#### Cool Fact 6:

This cool fact is about farming on Mars. I've said for a long time, we're not going to do that. And I think I'm right. Here's why. In the movie, The Martian, Matt Damon makes it look really easy to feed himself. He just plants some stuff in marsh and dirt in his own poop, but researchers are figuring out it's not

really that easy because not only does Mars soil lack a lot of the nutrients that we have on earth that are a part of fertilization and growing processes. There's no soil bacteria, and there's no soil fungus that are a part of it. We also have this problem where Mars is ground up rocks with a very high pH. It's very alkaline and it's very high in salt. You ever hear of salting the earth. That's what the Romans would do when they really hated you. They would plow salt in your fields so nothing would grow there. Well, someone salted the earth on Mars. Oh, but they didn't use normal salt. They use perchlorate, which is a really, really toxic form of salt. That's bad for everyone. In fact, it's an environmental pollutant.

So I'm a huge fan of making humans, a multi galaxy species. We don't have to just keep it to our own solar system eventually. This is going to take a while and that means we've got to look at how do we harden humans to survive in space. We actually need to help evolve ourselves so that we can survive in environments instead of just changing environments so that they look just like ours today. Every step we make in becoming more resilient humans, every step we make in learning how to do things that weren't possible in hostile environments also helps us learn how to fix the planet that we live on. And it's about time we start doing all of the above. I want to be more resilient. You want to be more resilient and we want a planet that supports our resilience. We'll do it here and we'll do it everywhere we want to go. It's going to take some time and it's going to take real science.

If you like these cool facts, let me know. Just hit me up, dave.asprey on Instagram or on Facebook. And let me know this was worth your time. I go through the news, I go through interesting things and I'm tying it back to what we all want. We all want to be more resilient. We all want more energy than we know what to do with. Not ampy energy, but calm energy that lets us be more of who we want to be. Let's us act the way we want to act even if things are stressful. I've worked for a lot of years on making myself into who I want to be. Still working on it and sharing the stuff that works with you because I think you'd care.

Source: <https://www.sciencenews.org/article/mars-farming-harder-martian-regolith-soil>