

COOL FACTS FRIDAY #19

Dave Asprey:

These Cool Facts of the Day are recorded on the road in Austin, where I'm here at an anti-aging conference.

Cool Fact #1

This Cool Fact is about whether you're going to decide to learn something, maybe even this Cool Fact. It turns out there are three things that help you decide whether you're going to look for information, or you're going to unconsciously choose to remain ignorant. The research comes from The University College London, where researchers wanted to find out how people decide what they want to know.

In the research, people chose whether to seek or avoid information about their health, their finances, or their personal traits, based on these three things. And it turns out, you have an information-seeking type. You're one of these three types. You either choose to learn something based on how you think it's going to make you feel. And if you're one of those types, just understand that learning these Cool Facts of the day is going to make you feel like a great, golden god.

You might be the second type, which is, how useful is it? So you're going to learn useful information, at which point, Cool Facts of the Day are not just cool, they are incredibly useful, and you really need to know about them.

And the third type you may be, is that you learn things that relate to things you think about often. At which point, if you think about being cool, if you think about facts, or you think about biohacking, well most definitely, you want to continue listening to the rest of this episode.

And most people are one of those three types; and you may be more than one, but you're probably one of them as your top type. Take a second; are you worried about how it's going to make you feel, how useful it is, or whether it's related to stuff you care about? So think about that. What are you?

It turns out, that specific tendency remains stable across time. So if you're like that when you're young, you'll likely be like that when you're old; and it's like that across domains. So whether you're talking about health or finance or anything else, pretty much, this is how you learn stuff.

And why does this matter for you? Because if you learn what makes you want to learn something, you can probably play a little trick on yourself. And if you, for instance, are motivated by how things make you feel, tell yourself how a piece of information is going to make you feel, even if you don't really want to learn that info; and then maybe you'll unconsciously want to learn it more. It's kind of cool to just understand what kind of learner are you.

Source: <https://neurosciencenews.com/ignorance-information-factors-19749/>

Cool Fact #2

This Cool Fact is about anthrax. Turns out, it might be a new pain reliever. People have been searching for pain relievers, well, ever since there have been people; because pain oftentimes happens when the body is trying to tell the mind something. And sometimes yes, your leg is broken; but other times, you're just feeling pain that isn't serving you in a meaningful way. And as we all know, pain in the body is not a good thing, especially if it's really chronic. It increases stress, and well, that's not good.

We've been wanting to turn it off, and our options have been relatively limited. Why would you look at anthrax? It causes lung infections in people and skin lesions in livestock; and it's a biological weapon. But a new study found that a toxin made from the microbe that causes anthrax silences multiple types of pain, at least in mice. And the research comes out of Harvard; and that's kind of cool, because you can believe Harvard most of the time. And they worked with industry scientists and researchers, and this came out in Nature Neuroscience, which is also a trustworthy journal.

The toxin that they found works to alter signaling in pain-sensing neurons, and specifically, blocks pain. So they said, "All right. How do we deliver anthrax protein to turn off pain instead of as a bioweapon?" And they combined parts of the anthrax toxin with different types of molecular carriers, and were able to get it into pain-sensing neurons. And when they could get it right into the neurons in the central and peripheral nervous system, the toxin turned off pain.

Now, what does that matter? Well, there's a couple things going on here. One of them, is that we are discovering more and more about the nature of pain in humans. Everything from substance P, the primordial pain molecule that you learned about long ago, that's related to things like how your bite is. This is the same pain sensing that a snail or a slug, or even some types of bacteria can use, all the way up to these esoteric things that are specific only in certain types of nerves.

Well, we're developing the ability to understand the molecules themselves this well, so we can pull something out of anthrax without taking all the bad stuff. We're also, at the same time, developing our understanding of our own biology, so that we know where to put it. And our delivery systems are also getting good at enough to hit it there.

All three of these are happening at the same time. So it's a really exciting time for innovation, because we have a map of the human body that's better than ever before. We understand chemicals better than ever before. And we know how to get the chemicals right where we want them, instead of just kind of painting them everywhere. I'm pretty excited about this.

Source: <https://www.sciencedaily.com/releases/2021/12/211220120629.htm>

Cool Fact #3

This Cool Fact is about men who haven't learned how to do relationships right. It turns out, in this new research, that men who experience multiple breakups, and live by themselves have higher inflammation. So inflammation isn't just from physical conditions. This is a large population study from the Journal of Epidemiology and Community Health.

Now keep in mind, epidemiology is oftentimes really not good science; because they say there's a correlation, but they can't tell you the causation. So just because they happen together, it doesn't mean that the multiple breakups and solitary living caused the inflammation. It could have been that because they were inflamed, they couldn't be in good relationships, because their brain didn't work as well. Therefore, they broke up multiple times to live by themselves. You just don't know. So don't think that if you have just broken up with your partner, and you're living by yourself, that it means you will be inflamed. No, it just means they run in packs together.

In the research, living alone for several years, and/or experiencing serial relationship breakups was pretty strongly linked though, to those raised levels of inflammatory markers in the blood. Only in men; apparently, women are more resilient than men about this, even though I don't think anyone really likes serial breakups.

The study was looking at a couple of my favorite biohacking markers, ones that I have taught you about if you're a long time listener of the show. And the first one that's most important is C-reactive

protein, also known as CRP in blood samples. This is a marker of overall systemic inflammation. So when your doctor says, "Oh no, your butter in your coffee might be causing inflammation." Well, okay. It's not. Because if it was, you'd measure it in this marker.

The other marker is another one of my very favorite markers. It's an inflammatory cytokine called Interleukin 6, or IL-6, you might see it written as. I wrote a whole big detailed blog post on how IL-6 is the cytokine that goes up when you're most likely to be hospitalized for a very popular viral condition that shall not be named, unless you want to be banned. And I received a warning letter that I had to take that post down, from a government agency. So I did take that post down. But I will tell you that managing your IL-6 and your C-reactive protein are pretty darn important to you.

Many who had the most partnership breakups had the highest levels of CRP and IL-6; they were about 17% higher than men who did not have serial breakups, and did not go through periods of living by themselves for multiple years. It turns out though, that men who spent seven years or more living alone had about 12% more inflammation than the standard population. So it turns out that serial breakups are slightly more inflammatory than living alone for long periods of time, but only for men.

What does that matter, as a Cool Fact? Relationships, community, social connection do affect your inflammation. And if you find that you absolutely suck at relationships, it's okay. I did, too. There are skills that you can learn about this. There are all sorts of things, classes online, and very specifically, listen to the podcast that I've done with Neil Strauss, who went from pick-up artist to a book called *The Truth*. And he went from the very, "I suck at initiating relationships," to where he got very, very good at picking up people. And then realized he sucked at maintaining relationships, so he wrote a whole book about that, and evolved as a person. Very interesting stuff to listen to. So if this Cool Fact really stands out to you, check out those episodes of Neil Strauss. They're worth your time.

- [Neil Strauss – Situational & Behavioral Awareness: #282](#)
- [Relationship Hacks For Dealing With Conflicts, Monogamy, Sex & Communication With The Opposite Sex – Neil Strauss – #406](#)
- [Live and Die in L.A. with Neil Strauss – #570](#)

Source: <https://neurosciencenews.com/male-inflammation-loneliness-19892/>

Cool Fact #4

This Cool Fact today is actually not that cool. And I'll tell you why. It's because West Virginia University researchers say that insects might be the solution to providing protein for humans. And it's not cool for a variety of reasons; but first, let me tell you what they found, and then I'll tell you why it's actually not cool.

The researchers looked at cricket, locust, and silkworm pupae powders, and they found that insect protein isolates have high nutritional and functional quality, which is something you want in your protein; that you can get protein from insects with pH soluble precipitation, and that they have the right essential amino acids to keep humans alive. And they found muscle proteins called myosin and actin in locust powders, which are the same ones that you'll find in beef or pork.

From that perspective, you could say, "This is fantastic. Insects don't live very long. They reproduce quickly. They only need simple, minimal habitat nutrition. And if you turn them into powder, it's not going to be that gross, because it'll be like a flour." Well, okay. 80% of people already consume insects on the planet. Right now, in the West, we're about the 20% that don't do that. And it probably will change. I have had grasshopper tacos. I have eaten termites from the hive in Central and South America. I've eaten grubs. And all of them were edible and decent; but there's some problems with this.

The big food industry and the powers that be, I'll call them that, are actively saying, "Let's reduce the number of animals that are grazing on land." Animals make poop that makes healthy soil. Insect farms in factories do not make healthy soil. They are a form of industrial food, and the idea of your city ringed by a bunch of cockroach farms, making cockroach milk, which is also apparently really possible to eat, and a bunch of cricket smoothies, gives a science fiction nightmare. This is not the future that we are going to create.

Also, if you care, as a vegetarian or a vegan, about animal welfare, a life is a life. It takes about one-third of a life for you to eat pound of beef every single day for a year. If you're going to eat a bunch of crickets in the smoothie, you are killing 50, 60, 70, 100 living animals called bugs, in order for you to have your little cricket smoothie. So from an animal welfare perspective, giving bugs their right. From a soil welfare perspective, giving soil all the creatures that live in the soil. And an animal welfare perspective, given that we like to have animals alive on the planet, which means they have to have space to walk around, poop, and reproduce, and all of that.

I'm going to tell you, I'm not eating bugs as my major protein source. But I already eat shrimp and crab, which are essentially water bugs anyway. And I don't mind having some occasional bugs, but they'd better be raised with glyphosate free food. This is a terrible, terrible direction for humans to be going in, as a way to deal with the situation. We need to fix our environment, not make factories, enslaving kabillions of bugs. That's just gross. In fact, it's as gross as fake meat.

Source: <https://www.sciencedaily.com/releases/2022/01/220111193029.htm>

Cool Fact #5

Our next Cool Fact is about fertility and stress; and keep in mind, even if you're not looking for fertility, fertile animals are going to live longer. So if you are infertile, you can do things that make yourself live longer, which may turn your fertility back on. This new research shows that stress does contribute to infertility. Now, that's not exactly new information. I wrote about that in *The Better Baby Book*, my first big book, which was on fertility, published 10 years ago, and still having people get pregnant today.

The problem is, scientists didn't really know how stress did that. We have some theories, but now we know more. The brain cells responsible for fertility don't respond to cortisol, the stress hormone, directly. That would have made it really easy. But there are a group of nerve cells that sit at the base of your brain called the RFRP; and scientists at the Center of Neuroendocrinology at the University of Otago in New Zealand, discovered that RFRP suppresses reproductive hormones when it senses elevated levels of cortisol.

So, in other words, cortisol talks to RFRP, which talks to the fertility center. So we were missing that there was a middle man in there; a middle men's name or middle woman's name, as the case may be, is RFRP. They're the bridge between the stress response and fertility hormones.

Well, what does that matter? Well, now that we understand it, we may be able to make drugs that block the RFRP neurons, so that if you are dealing with anxiety or chronic stress or chronic illness, and you want to restore fertility, you may be able to do that. We also already knew that during the time, the three months before you conceive and the time that you are pregnant, you really, really want to reduce your stress as much as possible. And if you are around someone who is looking to have a baby, or is pregnant, for God's sake, be extra nice and kind; open doors, give them the parking spot, give them the seat in the subway, and all the other things that we have done throughout almost all of human history, just to support the next generation. Because when we have stressed women having stressed

babies, those babies grow up to be stressed, unless you do extra work in parenting. So the world is a better place when we're nice to our pregnant women. Let's keep doing that.

Source: <https://www.sciencedaily.com/releases/2020/12/201204110230.htm>

Cool Fact #6

Our next Cool Fact is kind of related to the last Cool Fact. And this is about research from UCLA, that says stress before and during pregnancy affects the child's longevity. You may have heard me talk about the number one anti-aging thing you could do is have a really healthy grandmother and mother. Well, they proved it at UCLA. Stress before and during pregnancy adversely affects the length of telomeres, which are the markers for longevity in babies.

As you may recall from my anti-aging book called Super Human, telomeres are one of many ways of looking at how long an organism is going to live. And every time a cell divides, you take a little bit off the telomeres. And when you run out of telomeres, the cells can't divide anymore, and the cells die. Telomeres are vulnerable to damage. Telomeres can be lengthened by things you do in your anti-aging practice; but stress does activate inflammation and metabolic activity, which can shorten those telomeres. And if you don't fix that damage before a cell divides, then the telomeres become shortened by the damage.

What the researchers found was that stress before and during pregnancy; keep in mind, this is before pregnancy, that three month precious window that I wrote about in The Better Baby Book; it really matters. Researchers saw rapid cell replication during in-utero development, and they suspected increased vulnerability to that damage I just described during that time. So they looked telomere length in infants all the way into early childhood; and they found that telomere link continues to be shorter into childhood.

Well, like I said, in the last Cool Fact, let's be nice to moms. It actually matters. Moms of young kids also can pass stress onto young kids, but it's that precious time, right before conception and during pregnancy, that we have the most leverage during a child's entire life, to increase the kid's likelihood of living a long time, having a better brain, a bigger brain, and being a kinder human being. It is the least amount of work to fix it there, than it is to wait until they're 20, and then fix it. And it's even more work to wait until they're 40 to fix it. So let's start early. If you see a woman who's pregnant, say thanks, and be nice.

Source: <https://www.sciencedaily.com/releases/2020/11/201130131427.htm>