

Genetic Lifehacks

Learn. Experiment. Optimize.

Hi there,

This past year has been a tough one, mentally, for many of us.

I love how genetics spurs new avenues of research on so many subjects, including mood disorders. While there are many valid ways of looking for a cause of a disorder or disease, genetic studies that look at the whole genome of people with a disorder often take research in new directions. This is definitely true for research into mood disorders, branching out from a narrow focus on pharmacologically altering neurotransmitters to the various ways our genes increase susceptibility to biological pathways that cause depression or anxiety.

My latest article focuses on one of the altered pathways that cause depression or anxiety: chronically elevated inflammatory cytokines. I would encourage you to pass this email along to anyone you know who is currently struggling with a mood disorder. While inflammation may not be the cause for everyone, I hope the article drives home the idea that mood disorders have a physiological cause and that targeting the root cause is a path forward.

I'm grateful to have you as a member,

Debbie



Is inflammation causing your

depression and anxiety?

Inflammation genes and mood

For many people, depression and anxiety impact their life on a daily basis. Pharmaceutical options often provide much-needed relief for some, but others struggle with what is often labeled 'treatment-resistant depression'. Finding your underlying physical cause of depression or anxiety may lead you to the solutions that are right for you.

Chronically elevated inflammation causes depression and anxiety, for some people, and genetic variants impact your risk of chronic inflammation.

This article explains why inflammation causes depression and how your genetic variants in inflammatory genes may play a role in depression or anxiety. We will end with possible solutions to target specific genetic pathways of inflammation.

[View your genes...](#)

Members' Privacy and Genetic Data:

Have you wondered why you periodically need to reconnect to your genetic data file to view your genotype in the articles? Yep, I know it is a bit irritating.

When you connect to your data, it is just creating a temporary connection -- keeping your data on your own computer and not transferring anything to the Genetic Lifehacks server.

While it may be annoying to periodically need to connect again to your data, I firmly believe this is the best way to protect your privacy.

Companies that are storing your data (and encouraging you to upload your health data and lab results) all say that they are concerned with privacy. But if you read the fine print in their privacy policy, your genetic data is likely going to be included as a business asset when that genetic report company gets bought out by a big tech company.

Data is a big business. And your genetic data (along with labs and health information) combines to be worth a lot as a business asset.

So while you may have to periodically click to reconnect to your data file, you can rest assured that Genetic Lifehacks doesn't have your data and can't be tempted to sell out.

What I've been reading:

1) [Cells Form Into 'Xenobots' on Their Own](#)

This article is an eye-opening glimpse into how far researchers have come in understanding how cells organize into life. The researchers first created a cluster of cells that could move in a non-random way using skin and muscle cells from frog embryos. They called them Xenobots. Next, the same research team investigated what would happen using the same type of cells which were allowed to assemble on their own. Interestingly, the cell groups respond to each other and seem to participate in collective activities.

2) [Root cause of cold-sensitive teeth](#)

Researchers have now discovered the root cause of tooth pain due to cold, an ion channel called TRPC5. This ion channel is located in the dentin and senses cold, and sends a signal (ouch!) to the brain when the exposed dentin feels something cold. This specific TRP ion channel can be blocked by eugenol, which is the main component of clove oil - explaining why clove oil blocks tooth pain.

Other genes in the TRP family encode ion channels that react to various substances. For example, you can [check your TRPV1 genes](#) for sensitivity to spicy foods.

3) [Comparing outcomes of COVID-19 vs. Influenza](#)

Researchers looked at the clinical features and mortality outcomes for people with the flu or COVID-19 between January 2019 and April 2020. Using medical records and comparing age, sex, comorbidities and outcomes, the researchers were able to compare flu mortality in 2019 to COVID mortality in 2020 in people who were hospitalized in the ICU for their illness. The results show that the need for ventilators was similar between groups. Mortality in the COVID ICU patients was 40%, which was twice the flu mortality from 2019 (19%) in ICU patients.

Why is this interesting? This is the first study that I've seen looking at flu data from a recent year compared to COVID data in the same hospital setting. It backs up the [statistical analysis from 50 countries](#) showing a worldwide average IFR for COVID of 0.15%, which is in line with being double the mortality rate of the flu (varies by geographic region).

A final bit of COVID news is a meta-analysis of 54 studies on household transmission of SARS-CoV-2 that was [published in JAMA](#). The combined data show the highest transmission rate is between spouses (~38%). The lowest rate is from asymptomatic people (0.7% transmission) in the same household.

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Bozeman, MT

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