## **Genetic Lifehacks** Learn. Experiment. Optimize.

Hi everyone,

I (re) learned a lesson this past week when writing the article on tendinitis. When starting the article, I read through a great review study from 2008. It started off by explaining how tendinitis had no inflammatory component to it....

Turns out that research article was way out of date! As you'll see with the tendinitis article (below), the more recent genetic and cell studies painted a totally different picture -- with possibilities for targeting inflammation to prevent tendon problems from happening.

I'm constantly amazed at the leaps and bounds health research has taken in the past decade. So this is my reminder to you: new discoveries happen every day and will likely alter our current view on health topics tomorrow. Keep current on research perspectives, while being open to future discoveries.

Wishing you well,

~ Debbie Moon

#### Member's Only Survey:

#### What would you like me to write about next?

My goal is to constantly keep improving Genetic Lifehacks to meet the needs of all members. <u>Tell me</u> what you want to learn about!



Member requested article!

# **Tendinitis Genes**

Do you have problems with your tennis elbow, rotator cuff, knees, or Achilles tendon? If so, you've probably followed the usual advice of rest, ice, and keeping it immobile. Then you wait and hope that it heals. One of the reasons there are very few, if any, effective treatments for tendinopathy is a lack of knowledge regarding its pathogenesis. In other words, we didn't know much about how tendinopathy works until recently.

This article digs into the mechanisms that cause tendonitis, explains what is going on in the tendon, and then shows you how your genes influence the risk of having tendon problems. I'll conclude with genetic-specific possible solutions.

Read the article, view your genes...

# **Recently Updated:**



### Prions: When proteins go awry...

What is non-living and doesn't have DNA -but yet can infect, replicate, and eventually kill you? The answer... a simple type of protein called a prion.

Prions are a difficult concept to grasp. They're misfolded protein molecules, but not in the same way that other proteins misfold. Prions are able to infect, causing the normal protein around them to also misfold and become infectious. The misfolded proteins clump together and induce neurodegenerative illness.

Prions, unlike bacteria, viruses, and other pathogens, do not contain DNA or RNA, but they can spread in an infectious manner. Instead of replicating, the misfolded proteins travel around the body, causing normal proteins to misfold.

In this article, I'm going to explain some of the background science on prions and look at how genetic mutations are involved. Finally, I'll examine some of the current theories linking Alzheimer's and Parkinson's as prion-related diseases.



## Nootropics and Genomic Interactions: Smart Drugs and Your Genes

Nootropics are supplements used to boost cognition and memory. In other words – smart drugs.

This article covers published research studies on several popular nootropics. I'll explain the research on how the substance works and the genes connected to the mechanism of action.

Let me be upfront, though...

Research that directly connects genetic variants to whether a smart drug will work for you is really slim. Instead, I'm connecting some dots and giving you the background information to start your own research and experimenting.

Please talk with your doctor or pharmacist if you have any questions on a supplement – especially if you are currently on prescription medication.

## What I've been reading (from the Daily Mail):

# Randy NEANDERTHAL may be to blame for passing on the gene that caused up to a million people to die from Covid, scientist claims

- A sexual encounter about 60,000 years ago passed on a gene that led to Covid
- Gene caused a common genetic quirk that makes lungs susceptible to infection
- · Sexual encounter led to Covid deaths 'in the hundreds of thousands to a million'

That headline is fabulous! (Ok - I admit that I had to read it twice because at first I thought it was talking about a Neanderthal named Randy ;-)

The scientific accuracy, though, of talking about "a gene that led to Covid".... That is not even close.

Just goes to show that reading the actual research study may give a different view than a Daily Mail headline :-)

*Quick overview*: The research <u>study</u> (first released 8 months ago) identified a genetic variant in the LZTFI gene, which encodes a protein that is involved in cilia function. LZTFI is a gene that we all have, whether you have Neanderthal DNA or not.

It is true that one of the LZTFI variants linked to Covid risk in the original Wuhan variant has been traced back to possibly coming from Neanderthals. But the research showed that it only minorly increased the absolute risk of death from Covid -- similar to the dozens of other genetic variants in other genes as well as other variants in the LZTFI gene. All of these genetic risk factors, though, pale in comparison to the increase in risk from age and comorbidities.

Nonetheless, the headline of "Randy Neanderthal" causing a million covid deaths is hard to pass by without giving it a click!

#### **Genetic Lifehacks**

Rivers are rising fast, MT

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