Genetic Lifehacks

Learn. Experiment. Optimize.

Member's Update

Hi everyone,

This month marks the 20 year anniversary of the first draft of the human genome being published by the Human Genome Project. As a society, we tend to expect scientific breakthroughs to happen rapidly, with instant knowledge of everything from the latest virus (a new bird flu) to videos from Mars. Take a moment the next time you see a science-y headline to reflect on both how quickly our science knowledge has changed - and on how much more we have to learn.

Personally, I learn a ton from listening to experts in their field explaining their research and hearing the backstory of how they got to their breakthroughs. I've put together a list of podcasts that I tune into fairly regularly, and I would love to add to that a list of podcasts that are Member favorites. So if you have a great suggestion, just reply to this newsletter or submit it on the podcast page.

~ Debbie Moon

Latest Articles:

Genetics, chronic fatigue syndrome, and long-haul viruses

We often think of viruses as a quick, couple-of-days being sick, type of deal. "*It's just a virus*". Perhaps the flu will get you down for a week or so, once in a blue moon. But sometimes a virus can linger, reactivate, or seemingly permanently alter your immune response…

This article digs into the science of the lingering effects that viruses can trigger. I'll touch on chronic fatigue syndrome (myalgic encephalomyelitis) as well as other persistent, viral-initiated illnesses. Genetic variants, of course, come into play here, and I'll cover which variants increase susceptibility. Finally, I'll wrap up with a few possible treatment pathways to investigate, based on genetic susceptibility.

View your genes

What I've been reading...

Absence of natural killer cell receptor associated with severe COVID-19

This article explains the latest research on a genetic variant that very likely plays a large role in who is more likely to have severe COVID-19. The researchers have found that a receptor for natural killer cells is important in the body's initial response to the virus. Natural killer (NK) cells, a type of innate immune cell, are a part of the initial response to pathogens. A genetic variant (not covered in 23andMe or AncestryDNA) affects the receptor for the natural killer cells. People with the variant (and thus decreased NK response) were about twice as likely to have severe COVID-19. About 4% of the population carries two copies of the NK receptor variant, while about 30% of the population have a partially available NK receptor.

Million-year-old mammoth genomes shatter record for oldest ancient DNA

Researchers have now sequenced ancient DNA from several different mammoth teeth. The genetic data gives the researchers more information on the mammoth lineages that predated the wooly mammoths.

Pfizer Vaccine Effectiveness

I've had several members email me about vaccine choices and safety, and I usually respond that I really don't know... A lame response, but I'm simply reading the same studies that everyone has access to.

I did want to share a new study in the Lancet about the Pfizer mRNA vaccine effectiveness. The study was conducted with 23,000 healthcare workers in the UK (mostly over age 35). The workers were tested fairly regularly with PCR testing, so this study was looking at both symptomatic and possible asymptomatic infections. The original studies on the mRNA vaccine only looked at symptomatic infections and didn't include PCR testing of asymptomatic participants. The results showed "vaccine effectiveness of 72% (95% CI 58-86) 21 days after first dose and 86% (95% CI 76-97) seven days after two doses..."