Genetic Lifehacks

Learn. Experiment. Optimize.

Hi there,

I get emails every week from members and readers excited about finding the genetic reasons - and solutions - for their health issues. These emails are a big reason why I keep digging into research studies and writing about new genetic topics.

When I talk with people about what I do, I'm often met with two opposite reactions:

- Some people react with "of course genes can tell you about your health". Often these people descrive their family history of diabetes and how "bad genes" explain why they are now diabetic.
- Others scoff and tell me how they don't have any of the things that run in their family. They explain that family members with XYZ disease are just eating junk and not exercising.

So who is right? Well, both... Genetics plays a big role in type 2 diabetes (printable risk factor report),but it may be prevented by diet, exercise, and a good gut microbiome.

Can you use "AI" and genetics to predict your health future? I don't think we are anywhere near that point. The AI predictions, which are really machine learning algorithms, are only as good as the data that they are fed. When dealing with group data, the predictions may be statistically pretty good. But for an individual person, the AI predictions often fall short due to all of the other variables affecting real people.

This is where common sense, plus knowing yourself and your family history, comes into play. When you read a Genetic Lifehacks article on a health issue, keep in mind that the genetic variants are just showing an increase in relative risk -- an increase in susceptibility. For example, your genetic data may show that you are at double the normal risk for an autoimmune disease. But without a specific triggering event at just the right time (e.g. viral infection, toxicant exposure), you'll never get that autoimmune disease.

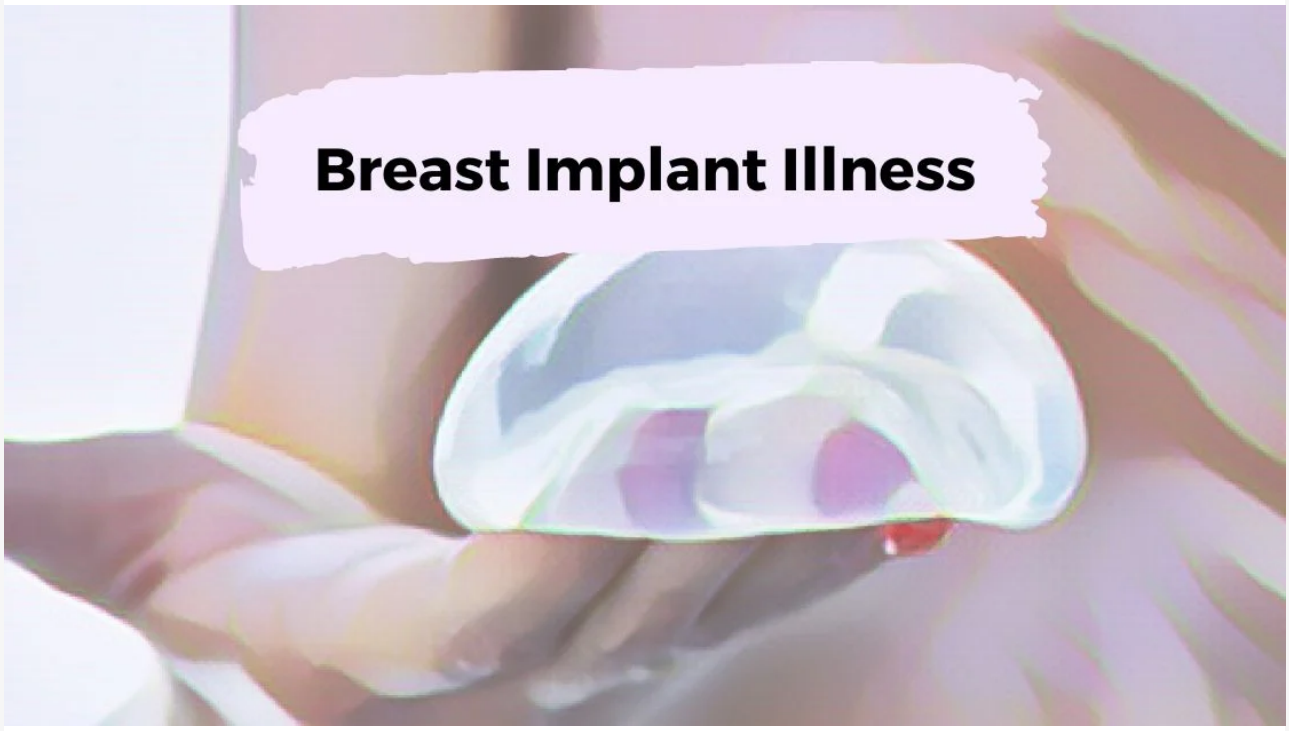
Genetics is more predictive at a cellular level. For example, if you have variants that impact the function of a key enzyme in a cellular process, such as MTHFR variants, then the variant is very predictive of what is going on in cells when your diet is low in a specific nutrient (folate for MTHFR).

While the predictive power of genetics is pretty cool, I don't want to oversell you on what you can learn from your genes. It really does take integrating your

knowledge about your lifestyle, your long-term diet, and your lifetime of exposures. Genes are just one (important) part of your health story.

Wishing you the all the best,

~ Debbie Moon



New! Member requested article

Breast Implant Illness: Genetics and Underlying Causes

Are you dealing with odd, seemingly disconnected symptoms that started after getting breast implants? It is estimated that 400,000 breast implants are performed in the United States every year, and some women report a constellation of different health issues after implants.[ref]

This article explores the research on breast implant illness — from whether or not it is real to research on underlying causes. Included is information on genetic variants that research links to increased susceptibility to BII and possible solutions.

Read the article, check your genes...

Just a fun article :-)

CYP1A2 Gene: Fast or Slow Caffeine Metabolizer?

CYP1A2 is a phase I detoxification enzyme that breaks down caffeine — as well as several other important toxins. If you've ever wondered why you can't drink coffee after 3pm and your friends can drink it at dinner, this gene likely holds the answer.

This article dives into the background science behind how CYP1A2 works, as well as how your genetic variants affect detoxification. This is part of a series of articles on detoxification genes.

Read the article, check your genes...

What I've been reading:

1) Gut microbiome disruptions by sugar in the diet may cause metabolic syndrome

This study in mice found that excess sugar caused changes to the gut microbiome, which then caused changes to the mouse immune response that resulted in metabolic syndrome. The researcher found: "We show that intestinal microbiota protects against development of obesity, metabolic syndrome, and pre-diabetic phenotypes by inducing commensal-specific Th17 cells. High-fat, high-sugar diet promoted metabolic disease by depleting Th17-

inducing microbes, and recovery of commensal Th17 cells restored protection. Microbiota-induced Th17 cells afforded protection by regulating lipid absorption across intestinal epithelium in an IL-17-dependent manner. Diet-induced loss of protective Th17 cells was mediated by the presence of sugar. "

2) Lipoprotein (a) during COVID-19 hospitalization: Thrombosis, inflammation, and mortality

New study on how thrombosis (clots) worsened outcomes in patients with the original COVID-19 variant (2020). The study found that higher D-dimer levels, which indicate clotting, were associated with higher lipoprotein (a) levels.

Lipoprotein (a) levels are highly genetic. You can check your Lp (a) variants here.

3) Reason for shingles after Covid vaccinations

This new study was really interesting to me. Shingles can be triggered by the Covid vaccines - as well as by other vaccines. I had assumed it was just an overall immune system change that allowed the varicella zoster virus to be activated. It turns out to be much more localized than that. The researchers biopsied skin lesions in people with shingles post vaccination. They found that the spike protein was still being produced in the skin cells! The researchers state that they don't know if shingles was caused by overall immune system perturbations or due to the spike protein in the skin cells. (I read quite a bit of research for the Long Spike article, but I hadn't come across studies before showing that the mRNA vaccines were producing the spike protein in skin cells.)