Genetic Lifehacks

Learn. Experiment. Optimize.

Hi everyone,

I mentioned a few months ago the Japanese business concept of Kaizen -- continual improvements to make something function better. In talking with a friend recently, she commented on how she has a hard time remembering her genetic variants along with what to implement after reading an article. To be honest, I can't always remember my own genetic variants either.

I'm hoping to solve this problem by adding an "Extras for Members" section to long articles. The section will include a visual recap of genetic variants along with additional information on supplements/diet/lifestyle. A section that can easily be highlighted and printed for people who like to print. I'm also going to include my thoughts on which variants are more important to address (for some topics) and opinions on supplements.

I would love to hear from you whenever you have ideas on improving Genetic Lifehacks. I've added a feedback and testimonials form to the member's dashboard where you can share ideas for improvement, pass along how you have applied Genetic Lifehacks, or give feedback on features you like or don't like.

Grateful for all of your support,

~ Debbie Moon

Recently published:

Key Genes to check for Alcoholism

Alcohol misuse is estimated to result in 3 million deaths worldwide each year (2016 numbers). Let that sink in...3 million people dying from overconsumption of alcohol. According to the World Health Organization: "Mortality resulting from alcohol consumption is higher than that caused by diseases such as tuberculosis, HIV/AIDS and diabetes."[ref]

This article explores the genetic connections to alcohol addiction and includes research-backed treatment options.

Read the full article....

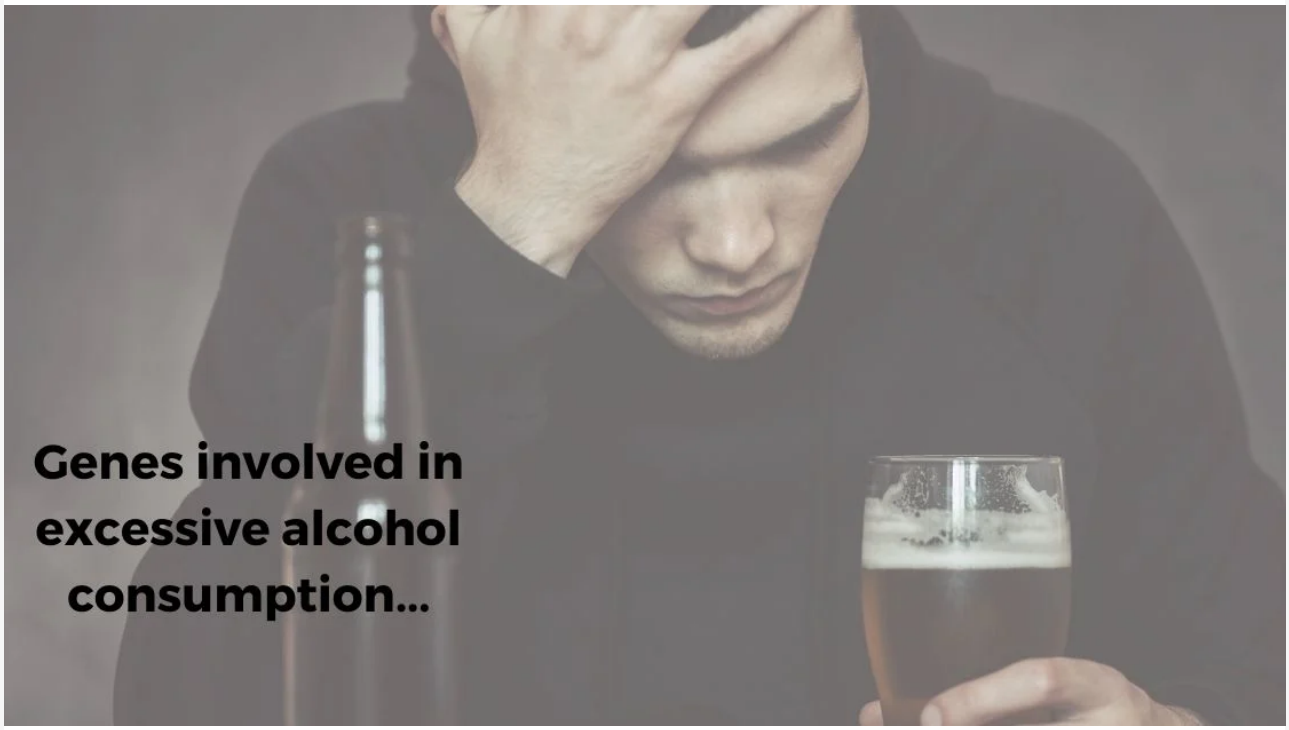
New! member's only section added

Alcohol Genes: Alcohol Metabolism Rate

Alcohol... People have been imbibing beer and wine for millennia, enjoying alcohol ever since someone discovered the altered sensations from fermented fruits and grains. In fact, archeologists recently announced the discovery of an Egyptian brewery from the time of the great pyramid.

This article examines how alcohol is metabolized and how your genes impact the rate at which it is broken down. I'll explain how to check your 23andMe or AncestryDNA data for genes related to slow or fast alcohol metabolism.

Read the article and check your genes...



Member's only article:

CYP2E1 Genetic Variants: Breaking down alcohol and more

The body has many interesting and wonderful ways of getting rid of the toxins that we take in every day. We detoxify substances in a two part system, breaking down the toxicants and then making them water soluble for excretion.

The CYP2E1 enzyme is part of the phase I detoxification system. Its responsibilities include getting rid of some cancer-causing substances and metabolizing alcohol at high levels of consumption. Genetic variants in this gene can increase the risk of certain cancers and of Tylenol poisoning.

Read the article and check your genes...

What I've Been Reading...

1) Plants Use RNA to Talk to Neighbors

Interesting article on how plants grown hydroponically can signal to each other with miRNA. From the article: "A study finds that plants sharing the same growth medium can exchange microRNAs that silence genes in the recipient, suggesting the nucleic acids may act as signaling molecules."

2) Cold exposure protects from neuroinflammation through immunologic reprogramming

This new study in *Cell Metabolism* explains why cold exposure can downregulate excessive inflammation and possibly ameliorate some autoimmune issues.

3) Most important risk factors for atherosclerotic cardiovascular events

The European Heart Journal has a new study out that evaluates the risk factors for cardiovascular disease. The full study is behind a paywall, but this table (below) sums up the research nicely. Most interesting to me: fibrinogen tops the list of risk factors. Check your fibrinogen genes.

Table 3 **Cox proportional hazards model for the prediction of atherosclerotic cardiovascular disease risk from individual atherothrombotic biomarkers in combination with traditional atherosclerotic cardiovascular disease risk factors**

Variable	Hazard ratio (95% CI)	*P*-value
Male sex	1.66 (1.42, 1.94)	<0.0001
Race		
White	1.00	
Chinese	0.72 (0.56, 0.91)	0.007
Black	0.74 (0.62, 0.89)	0.002
Hispanic	0.95 (0.80, 1.14)	0.57
Age, years	1.04 (1.04, 1.05)	<0.0001
Total cholesterol, mg/dL	1.002 (1.000, 1.004)	0.02
HDL, mg/dL	0.990 (0.984, 0.996)	0.0005
Systolic BP, mmHg	1.011 (1.007, 1.014)	<0.0001
Diabetes	1.72 (1.46, 2.04)	<0.0001
Smoking status		
Never	1.00	
Former	1.17 (1.01, 1.36)	0.03
Current	1.54 (1.24, 1.92)	<0.0001
Hypertension medications	1.34 (1.16, 1.55)	<0.0001
Plasminogen[a]	1.03 (0.86, 1.24)	0.76
OxPL-plasminogen[b]	0.78 (0.65, 0.92)	0.005
Fibrinogen[a]	2.24 (1.52, 3.30)	<0.0001
Plasmin–antiplasmin complex[b]	1.07 (0.83, 1.38)	0.62
D-dimer[c]	1.16 (0.91, 1.46)	0.23
Factor VIII[d]	1.24 (1.02, 1.50)	0.03
Lp(a)[a]	1.08 (1.01, 1.15)	0.03

The table presents individual associations following adjustment for all other variables included in the model. Prior to estimating model, each biomarker [plasminogen, OxPL-plasminogen, fibrinogen, plasmin–antiplasmin complex, D-dimer, factor VIII, and Lp(a)] was log-transformed.
CI, confidence interval; HDL, high-density lipoprotein; BP, blood pressure; Lp(a), lipoprotein(a); OxPL, oxidized phospholipids.
[a]Log(mg/dL).
[b]Log(nM).
[c]Log(μg/mL).
[d]Log(calibrated %).