

**EPIGENETICS:
THE MISSING PIECE OF
YOUR HEALTH PUZZLE**

Epigenetics: The Missing Piece of Your Health Puzzle



You consider yourself health conscious. You do the right things, such as drink enough water every day and exercise. You have developed good sleep habits and eat good clean food. Now you wonder what is next? How do you bridge the gap between where you are now and achieving peak health?

The answer is epigenetics.

Epigenetics is probably the most important biological discovery since DNA and it is turning the biological sciences upside down. ¹

Epigenetics is the study of changes in organisms caused by modification of gene *expression* rather than alteration of the genetic code itself.

I like the way Dr. Mercola explains it, "*At its most basic, epigenetics is the study of changes in gene activity that do not involve alterations to the genetic code but still get passed down to at least one successive generation.*" ²

These patterns of gene expression are governed by the cellular material — the epigenome — that sits on top of the genome, just outside it (hence the prefix *epi-*, which means above). It is these epigenetic "marks" that tell your genes to switch on or off, to speak loudly or whisper. It is through epigenetic marks that environmental factors like diet, stress and prenatal nutrition can make an imprint on genes that is passed from one generation to the next. ³

It is becoming more apparent that epigenetic effects occur not just in the womb, but over the full course of a human life span, and that epigenetic changes could be reversed. **There are numerous examples of epigenetics that show how different**

¹ Dr. Mercola:<https://articles.mercola.com/sites/articles/archive/2010/01/23/why-your-dna-isnt-your-destiny.aspx>

² Dr. Mercola:<https://articles.mercola.com/sites/articles/archive/2010/01/23/why-your-dna-isnt-your-destiny.aspx>

³ Dr. Mercola:<https://articles.mercola.com/sites/articles/archive/2010/01/23/why-your-dna-isnt-your-destiny.aspx>

lifestyle choices and environmental exposures can alter marks on top of DNA and play a role in determining health outcomes.⁴



Understanding Epigenetics

In order for us to be on the same page as we help you understand the importance of epigenetics and how testing and counseling can impact you, it's important that our definitions match up.

Genome: the complete set of genes or genetic material present in a cell or organism.

Cells: the smallest structural and functional unit of an organism, typically microscopic and consisting of cytoplasm and a nucleus enclosed in a membrane.

Proteins: complex molecules that trigger various biological actions to carry out life functions.

Nucleotide: one of the structural components, or building blocks, of DNA and RNA.

DNA Methylation: an epigenetic mechanism used by cells to control gene expression. A number of mechanisms exist to control gene expression in eukaryotes, but DNA methylation is a commonly used epigenetic signaling tool that can fix genes in the "off" position.⁵

Genetic variant: A single-nucleotide polymorphism (SNP), a common genetic variant.

Gene mutation: gene mutation is a permanent alteration in the DNA sequence that makes up a gene, such that the sequence differs from what is found in most people.

⁴ <https://www.whatisepigenetics.com/fundamentals/>

⁵ <https://www.news-medical.net/life-sciences/What-is-DNA-Methylation.aspx>

Why Should You Be Interested In Epigenetics?



Now that we share common biology definitions, here are some insights that will help you understand WHY epigenetics matter to YOU! A shout out to the publication, **What is Epigenetics**, and their article, *A Super Brief and Basic Explanation of Epigenetics for Total Beginners* for the following explanations.

- **Epigenetics Controls Genes.** Nature — epigenetics is what determines a cell's specialization (e.g., skin cells, blood cell, hair cell, liver cells, etc.) as a fetus develops into a baby through gene expression (active) or silencing (dormant). Nurture — additionally, environmental stimuli can cause genes to be turned off or turned on.
- **Epigenetics Is Everywhere.** What you eat, where you live, who you interact with, when you sleep, how you exercise, even aging – all of these can eventually cause chemical modifications around the genes that will turn those genes on or off over time. Additionally, in certain diseases such as cancer or Alzheimer's, various genes will be switched into the opposite state, away from the normal/healthy state.
- **Epigenetics Makes Us Unique.** Even though we are all human, why do some of us have blonde hair or darker skin? Why do some of us hate the taste of mushrooms or eggplants? Why are some of us more sociable than others? The different combinations of genes that are turned on or off is what makes each one of us unique. Furthermore, there have been indications that some epigenetic changes can be inherited.
- **Epigenetics Is Reversible.** With 20,000+ genes, what will be the result of the different combinations of genes being turned on or off? The possible arrangements are enormous! But if we could map every single cause and effect of the different combinations, and if we could reverse the gene's state to keep the good while eliminating the bad... then we could theoretically* cure cancer, slow aging, stop obesity, and so much more.
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The human genome probably consists of roughly 30,000 to 80,000 genes, but fewer than 8,000 have been found (though that number is growing monthly by several hundred!).⁶



Let's try to break it down in a way that will make it relatable. Let's say that your genetic makeup, your genome, is a book. There are 23 chapters called chromosomes, and each chapter contains several thousand stories called genes.⁷

Are you beginning to understand the importance of epigenetics and how it can impact your health?

Your epigenetics are like putty in your hands. When a gene is turned off epigenetically, the DNA has usually been "methylated." When methyl groups adhere to a segment of DNA, they inhibit the gene's response.

Methylation-gone-wrong is now suspected in autism, depression, bipolar disorder, and schizophrenia, among others.⁸

Try thinking of epigenetics as the missing puzzle piece or a Rubix Cube! Perhaps you've tried all the latest, greatest diets but you can't lose weight. Epigenetics probably has the answer!

You see, diets aren't a one size fits all kind of thing. There may be something going on in your genetics that affects the way you metabolize certain foods for instance. Did you know that there are people with certain genetic make ups that would suffer from a vegetarian diet as an example. Another example would be how some people's behavior has been found to be affected by diet. This is epigenetics.

Let's turn that Rubix Cube another way. What if dementia or Alzheimers runs in your family. What about cancer? Now, thanks to epigenetics, those conditions that you are predisposed to do not have to necessarily manifest in your life. Affordable testing is now available that will show genetic *propensities* to disease. If you know what your

⁶ Genome by Matt Ridley

⁷ Genome by Matt Ridley

⁸ Dr. Mercola:<https://articles.mercola.com/sites/articles/archive/2010/01/23/why-your-dna-isnt-your-destiny.aspx>

genetics *leans towards* you may have the ability to change the way those genes are expressed. That is what epigenetics does for you.

The practice of epigenetic counseling helps you to gain access to the missing piece of the puzzle. Most of our clients report that they have done all the right things, including changing their diet, getting plenty of exercise, etc. Doing all the things they understand to be the “right” things to do to be as healthy as they can, but they just can’t seem to feel their best, or break through a “glass ceiling”. Epigenetic testing and counseling has helped our clients reach another level in their health journey.

What Does Epigenetic Testing and Counseling Consist of?

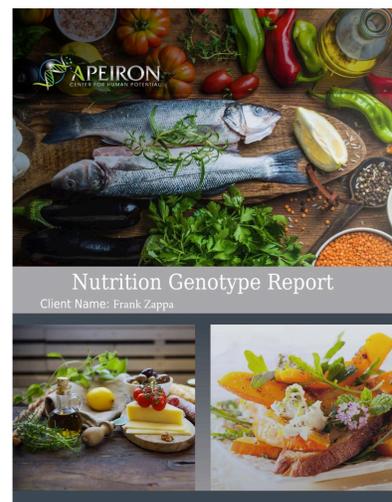
Epigenetic testing can be accomplished in a couple of ways.

1. You can go through 23andMe and order the hereditary report. (*Don't pay extra for the “health” report as it is nowhere near as informative and comprehensive as what we provide.*) Once you receive your hereditary report you have access to your genetic data. Email that data to us and we use it to create a comprehensive report that covers nutrition, supplementation, sleep and disease propensity (*at client request*).
2. We provide genetic testing which will allow us to report on more genes than we can access through 23andMe. We provide a testing array (swab) which you use to swab the inside of your cheek and is then sent to our lab. The lab will send the genetic data to you, and you email it to us. Super simple!

Our nutrition/epigenetic counselors will create your report and schedule the counseling session with you. You can expect this to take roughly 2 hours. *Both local and distance counseling is available.* We utilize apps like Zoom, Skype, or even Facebook.

Included in the epigenetic counseling is an additional 90 minutes of follow up consultation to check in and answer any questions that come up.

Here is a link to a [sample report](#) for your review.



Peak Wellness Group is committed to helping you optimize your health so you can live your best life.

Epigenetic counseling will help you discover the missing pieces so you can take the steps necessary to improve your health and break the cycle of dis-ease. If you have the desire to make this happen in your life then epigenetic counseling is for you.

Epigenetic Testing & Counseling	
Epigenetic Testing*	\$149.00
Epigenetic Counseling	\$650.00
<p>Counseling Includes:</p> <ul style="list-style-type: none"> • Nutrition Analysis Scoring Guide • Epigenetic Nutrition, Supplementation & Sleep Report** • Potential for Disease Risk (<i>if requested</i>) <p>You will receive one-on-one counseling with our certified nutrition and epigenetic counselors (usually a 2 hour consultation) to analyze the essential steps to optimize your health; and you will receive recommendations of proper foods, supplements and lifestyle based on your genetic make up.</p> <p>Up to 90 minutes of additional consultation is included which will consist of a follow up session to answer any questions and review your progress.</p>	

* not necessary if you have data from 23andMe

**See Addendum A

For more information, or to request a free consultation to discuss epigenetic testing and counseling visit www.peakwellnessgroup.com/contact.

Addendum A

Included in the reports you will receive:

- ✓ Risk Of Diabetes
- ✓ Triglyceride Status
- ✓ Cholesterol Status
- ✓ Saturated Fats
- ✓ Monounsaturated Fat
- ✓ Protein Status
- ✓ Lactose Tolerance
- ✓ Vita A Conversion Status
- ✓ Selenium
- ✓ Choline
- ✓ Vit D Status
- ✓ Vit K Status
- ✓ Iron
- ✓ Sodium
- ✓ Carbohydrates
- ✓ Gluten Sensitivity
- ✓ Grain Sensitivity
- ✓ Plant Sterols Risk
- ✓ B-12 Status
- ✓ B-6 Status
- ✓ B9 (Folate) Status
- ✓ Nitric Oxide Needs
- ✓ Copper Needs
- ✓ Zinc Needs

Genetic Reports

- ✓ Immune Response
- ✓ Depression Status
- ✓ Fatigue Status
- ✓ Response To Stress
- ✓ Weight Status
- ✓ Response To Exercise
- ✓ Response To Sleep Deprivation
- ✓ Response To Allergens
- ✓ Response To Toxins
- ✓ Methylation Status
- ✓ Eyesight Status

- ✓ Bone Density Status
- ✓ Lifespan
- ✓ Hearing Loss
- ✓ Cognitive Decline
- ✓ Risk Of Schizophrenia
- ✓ Risk Of Autoimmune Disease
- ✓ Risk ADHD
- ✓ Risk Of Lung Disease
- ✓ Risk Of Cancer
- ✓ Risk Of Autism
- ✓ Risk Of Parkinson's Disease
- ✓ Risk Of Liver Disease
- ✓ Risk Of Muscle Injury
- ✓ Obesity Status