



THE SCIENCE OF GENE EXPRESSION

Your Epigenetic Reset Guide

Take Control of Your Genes
Through Metabolic Nutrition

Dr. Steven Presciutti, MD

NIH Epigenomics Research Background |
Board-Certified Physician

A LETTER FROM THE DOCTOR

Dear Friend,

If you're reading this, you've probably been told that your health problems are "genetic." That your family history is your destiny. That you inherited your mother's thyroid issues, your father's diabetes, your grandmother's weight struggles... and there's nothing you can do about it.

I'm here to tell you that's not true.

**“Your genes are not
your destiny.”**

Your genetic makeup, your DNA, is a blueprint. But importantly, it's a dynamic blueprint. It can be turned on or off, amplified or silenced, by what you eat, how you move, how you sleep, and even how you think. This is the essence of epigenetics.

75% of your health destiny is in your hands.

This guide is designed to empower you with the knowledge and practical tools to harness the power of epigenetics. Let's begin.

Dr. Steven Presciutti, MD

WHAT'S INSIDE

Your Complete Guide

1	THE 25/75 TRUTH — YOUR GENES ARE NOT YOUR DESTINY	4	7	THE 7 EPI-NUTRIENTS YOUR GENES ARE STARVING FOR	28
2	THE TWIN STUDY THAT CHANGES EVERYTHING	7	8	YOUR BIOENERGETIC FOOD GUIDE	33
3	HOW YOUR METABOLISM CONTROLS YOUR GENES	12	9	YOUR 7-DAY EPIGENETIC RESET PROTOCOL	38
4	THE FOUR METABOLITES THAT CONTROL YOUR EPIGENOME	16	10	DAYS 1–3: FOUNDATION PHASE	41
5	YOUR METHYLATION SELF-ASSESSMENT	21	11	DAYS 4–7: INTEGRATION PHASE	44
6	UNDERSTANDING YOUR RESULTS	24	12	BREAKING GENERATIONAL PATTERNS	48
7	THE 7 EPI-NUTRIENTS YOUR GENES ARE STARVING FOR	28	13	FROM KNOWLEDGE TO TRANSFORMATION	52

THE SCIENCE

Your Genes Are Not Your Destiny

For decades, genetic determinism created a culture of helplessness. Landmark research has shattered this myth.

25%

Determined by
your genetic code

75%

Controlled by lifestyle,
environment &
metabolic function

The Old Belief

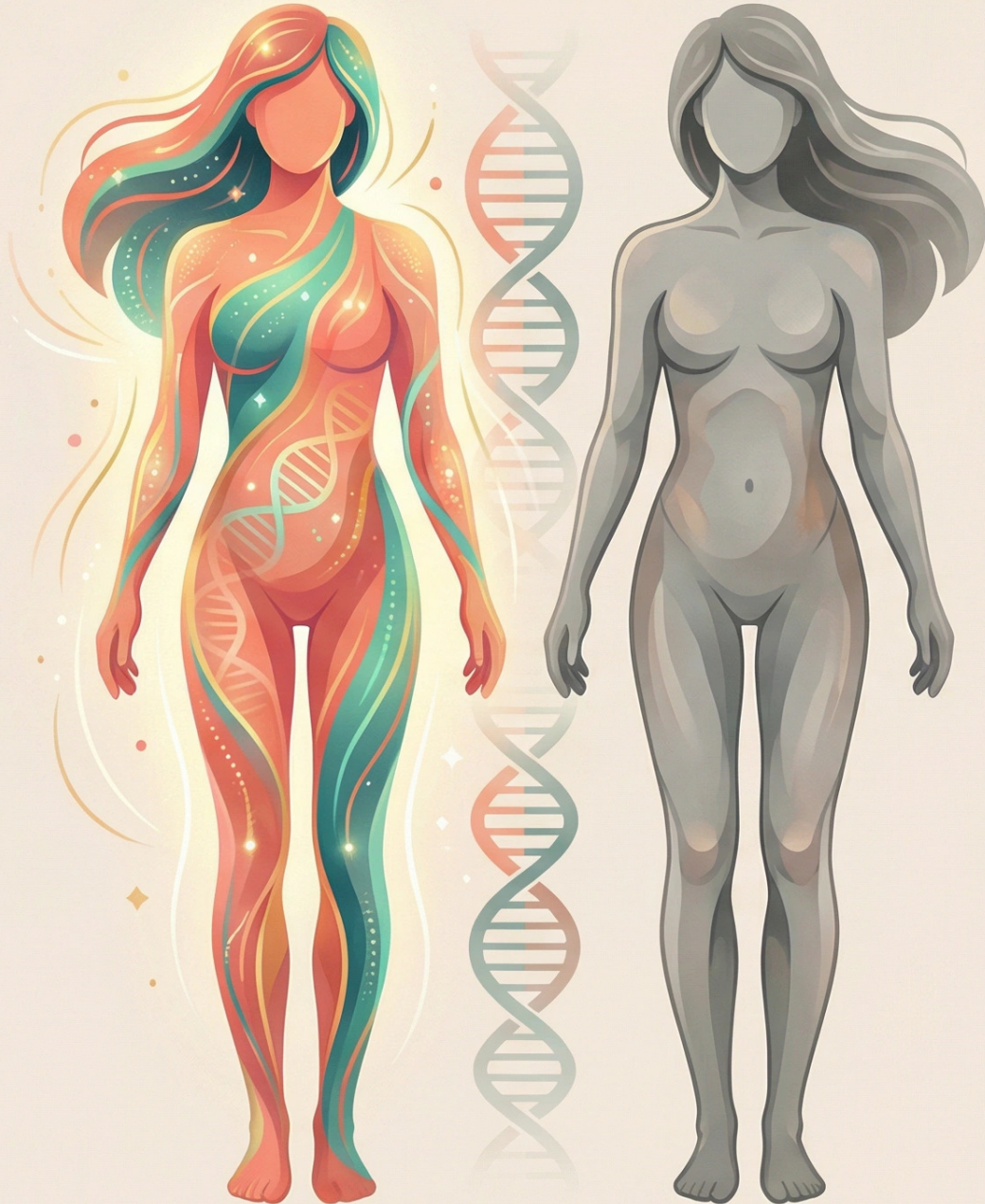
If your mother had diabetes, you're destined for it. If heart disease runs in your family, there's nothing you can do.

The New Science

Epigenetics reveals that your daily choices actively reprogram your gene expression. You are not a victim of your DNA.

Epigenetics Defined — The study of how your behaviors and environment cause changes that effect the way your genes work. Unlike genetic changes, epigenetic changes are reversible and do not change your DNA sequence, but they can change how your body reads it.

This is the science of epigenetics — and it changes everything.



BREAKING RESEARCH

The Twin Study That Changes Everything

Identical twins share 100% of their DNA. If genes were destiny, they'd have identical health outcomes. They don't.

One develops diabetes.
The other stays healthy.

One struggles with
weight. The other is lean.

One develops cancer.
The other lives to 90.

1

Washington State University researchers studied 70 sets of identical twins to examine the link between lifestyle and epigenetic health.

2

In every pair where one twin exercised regularly and the other was sedentary, the active twins had significantly healthier epigenetic profiles.

3


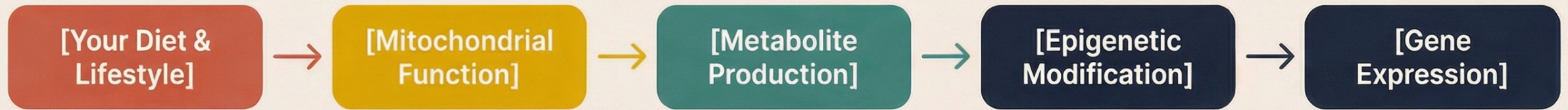
The conclusion: Your actions actively reprogram your body at a genetic level.

"It runs in my family" is no longer an acceptable excuse. Whether those genes express themselves is largely up to you.


THE MECHANISM

How Your Metabolism Controls Your Genes


Your mitochondria do more than generate energy. They are key players in regulating your epigenetics, the mechanisms that switch genes on or off.



Metabolic Rate & Gene Expression — The rate at which your mitochondria convert nutrients into ATP directly influences the epigenetic landscape. A higher metabolic rate drives increased availability of crucial substrates for epigenetic modifications.



Mitochondrial Metabolites — Specific metabolites like acetyl-CoA, alpha-ketoglutarate, and citrate act as substrates or inhibitors for enzymes that modify DNA and histone proteins.



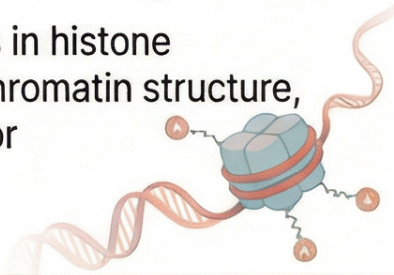
The Practical Implication — Your diet, exercise, and lifestyle choices, which influence your metabolism, are directly shaping the activity of your genes every single day.

YOUR EPIGENETIC CONTROL PANEL

The Four Metabolites That Control Your Epigenome

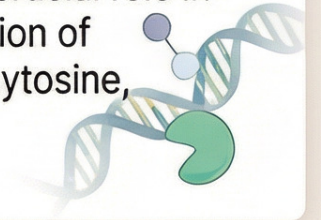
1 Acetyl-CoA — The Chromatin Opener

Acts as a donor for acetyl groups in histone acetylation. Promotes an open chromatin structure, making genes more accessible for transcription and expression.



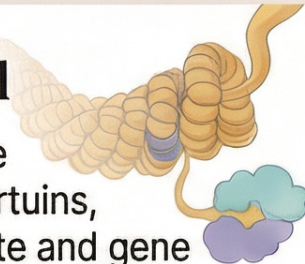
2 Alpha-Ketoglutarate — The Gene Activator

Key cofactor for TET enzymes, plays a crucial role in DNA demethylation. Facilitates conversion of methylated cytosine to hydroxymethylcytosine, contributing to gene activation.



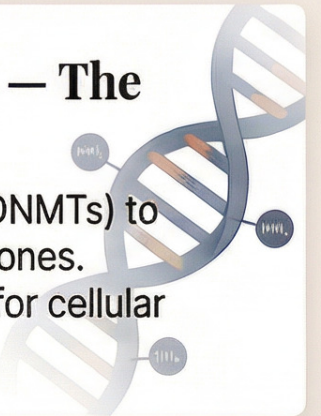
3 NAD+ — The Longevity Signal

Essential substrate for sirtuins (histone deacetylases). High NAD+ activates sirtuins, promoting a compacted chromatin state and gene silencing — linked to longevity and metabolic health.

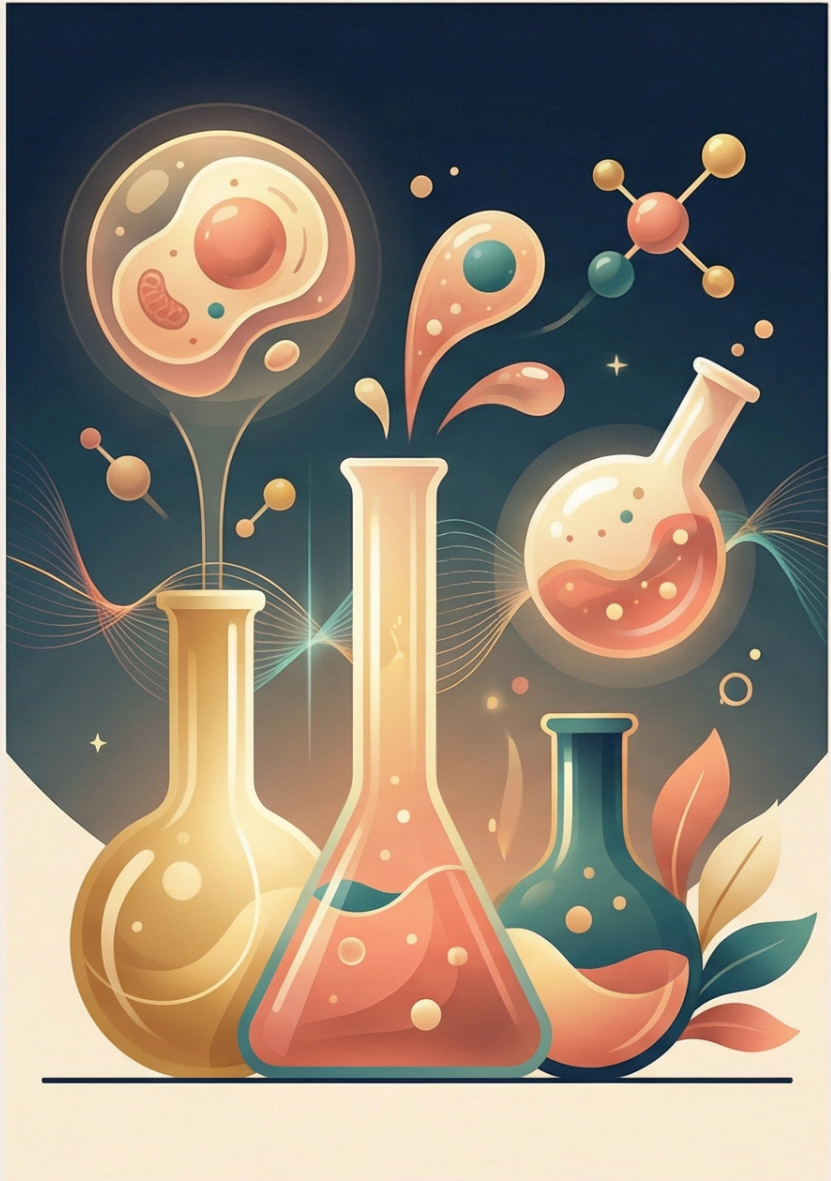


4 SAM (S-Adenosylmethionine) — The Universal Methyl Donor

Required by DNA methyltransferases (DNMTs) to transfer methyl groups to DNA and histones. Regulates gene expression and is vital for cellular identity and stability.



These four molecules are the bridge between what you eat and how your genes behave.



THE CLINICAL PERSPECTIVE

From the Research Lab to Your Kitchen

For over a decade, Dr. Presciutti led cutting-edge research at the National Institutes of Health (NIH), investigating the cellular mechanisms of metabolic diseases. This rigorous scientific background forms the foundation of the bioenergetic approach.

The focus shifted from merely treating symptoms to understanding how cellular energy production influences overall health and longevity.

By translating complex lab findings into actionable dietary strategies, Dr. Presciutti bridges the gap between scientific discovery and practical, everyday wellness.

The Bioenergetic Research Connection: This guide applies principles from bioenergetic research to your plate, focusing on foods and habits that optimize cellular energy (ATP) production, improving resilience and metabolic health.

SELF-ASSESSMENT

Your Methylation Self-Assessment

This brief questionnaire is designed to help you understand potential signs of methylation imbalances. Check all that apply to you.

Do you frequently experience low energy or fatigue, even after adequate sleep?

Do you have a history of mood swings, anxiety, or depression?

Are you often sensitive to strong odors or chemicals?

Do you struggle with persistent brain fog or difficulty concentrating?

Do you have a family history of cardiovascular issues or autoimmune conditions?

SCORING CARD: Count your checkmarks → **0-1**: Excellent methylation balance
→ **2-3**: Moderate imbalance, take action → **4-5**: Significant imbalance, prioritize support

INTERPRETING YOUR SCORE

Understanding Your Results

Your health assessment score provides a personalized snapshot of your current well-being, identifying areas of strength and opportunities for improvement.



Optimal

Your results indicate excellent health markers. You are effectively managing key health pillars.

Maintain your current healthy habits. Continue prioritizing nutrition, exercise, and stress management. Regular check-ups are still recommended.



Moderate

Your results suggest room for improvement in some areas. There are identifiable imbalances that could benefit from attention.

Review your personalized recommendations. Focus on specific lifestyle adjustments to move towards the optimal range. Consider consulting with a healthcare professional.



Needs Support

Your results indicate significant areas of concern that require immediate attention. There are critical imbalances that may impact your long-term health.

Prioritize your health now. Implement the recommended action plan and schedule a consultation with a healthcare provider for guided support.

The 7 Epi-Nutrients Your Genes Are Starving For

Folate (B9)

The Methylation Master

Crucial for DNA methylation.

Spinach Kale Legumes
Avocado

Vitamin B12

The Brain & Nerve Protector

Essential for neurological health.

Eggs Fish Poultry
Fortified Foods

Choline

The DNA Methylation Donor

Key for brain development.

Eggs Liver Soybeans
Broccoli

Betaine

The Homocysteine Regulator

Lowers homocysteine levels.

Spinach Beets Wheat Bran
Quinoa

Methionine

The Essential Amino Acid

Precursor for SAM-e.

Meat Fish Eggs Seeds

Vitamin B6

The Enzymatic Catalyst

Critical for enzyme reactions.

Poultry Fish Potatoes
Chickpeas Bananas

Vitamin B2 (Riboflavin)

The Energy Booster

Breaks down carbs/proteins/fats.

Dairy Eggs Lean Meats
Green Vegetables

Why Real Food Beats Supplements

Real food provides a synergistic matrix of nutrients, fiber, and phytochemicals that work together more effectively than isolated compounds. Your body absorbs nutrients from whole food sources more efficiently, offering superior bioavailability and balanced nourishment.

Your Bioenergetic Food Guide

Nutrient	Why It Matters	Best Food Sources	How Much & How Often
● Methyl Donors (B12, Folate, Choline)	Required for SAM production and DNA methylation	Beef liver, Egg yolks, Shellfish	Daily methyl donor intake essential
● Glycine	Supports methylation, collagen synthesis, detox	Bone broth, Gelatin, Collagen peptides	Daily for optimal methylation
● Glucose	Primary fuel for acetyl-CoA production	Ripe fruit, Raw honey, White rice	With each meal
● Vitamin C	Cofactor for TET enzymes (demethylation)	Fresh OJ, Ripe mango, Cooked potatoes	Multiple times daily
● Magnesium	Required for ATP production and enzyme function	Cooked spinach, Dark chocolate, Mineral water	Daily intake crucial
● Zinc	Supports enzyme function and gene expression	Oysters, Red meat, Pumpkin seeds	Daily zinc essential
● Copper	Balances zinc, supports energy production	Beef liver, Dark chocolate, Mushrooms	2–3x weekly minimum

Preparation Matters —

Cook vegetables to reduce anti-nutrients. Choose ripe, sweet fruits. Prioritize easily digestible forms. Quality matters more than quantity.



7 DAY EPIGENETIC RESET PROTOCOL

YOUR TRANSFORMATION BEGINS HERE

THE PROTOCOL

Your 7-Day Epigenetic Reset

This protocol is designed to kickstart your epigenetic health by focusing on daily practices that positively influence gene expression. By implementing targeted changes in your diet, sleep, stress management, and environmental exposure, you can begin to reprogram your cellular memory and unlock your body's full potential.

What to Expect





Over the next seven days, you will receive daily guidance, including specific dietary recommendations, lifestyle adjustments, and mindfulness exercises. This holistic approach aims to reduce inflammation, optimize metabolic function, and create a cellular environment that supports longevity and vitality.

DAYS 1-3

Foundation Phase





1

Reset & Hydrate

-  **Protocol:** Hydration focus. 3-4 liters filtered water. Gentle morning cleanse.
-  **Foods:** Bone broth, Steamed leafy greens, Wild-caught white fish, Pastured chicken. Avoid: processed foods, sugar, dairy, gluten.
-  **Timing:** Wake: Warm water + lemon | 8AM: Bone broth + greens | 1PM: Fish + asparagus | 7PM: Chicken soup | Evening: Chamomile tea.
-  **Temp Tracking:** Record basal body temp upon waking.





2

Nutrient Loading

-  **Protocol:** Continue high hydration. Introduce colorful vegetables and healthy fats.
-  **Foods:** Broccoli, Bell peppers, Carrots, Avocado, Olive oil, Lean proteins, Berries.
-  **Timing:** Wake: Warm water + lemon + sea salt | 8AM: Avocado + broccoli | 1PM: Chicken salad | 7PM: Baked salmon + carrots | Evening: Ginger turmeric tea.
-  **Temp Tracking:** Record upon waking. Track post-meal temps.

3

Stabilization & Fiber

-  **Protocol:** Solidify dietary patterns. Introduce complex carbs. Increase fiber.
-  **Foods:** Sweet potatoes, Squash, Legumes, Non-starchy vegetables, Fermented foods.
-  **Timing:** Wake: Warm water + ACV | 8AM: Veggie omelet | 1PM: Lentil soup + sweet potato | 7PM: Turkey burger + kale | Evening: Lemon balm tea.
-  **Temp Tracking:** Record basal temp + evening temp before sleep.

DAYS 4-7

Integration Phase

FRAMEWORK

- **Building Consistency** — Move from conscious effort to automated, sustainable practices. Solidify the habits and routines introduced in Days 1-3.
- **Observe Your Body** — Pay close attention to energy levels, digestive patterns, and sleep quality. These are your primary indicators for making adjustments.
- **Gentle Progression** — Avoid sudden, drastic changes. Continue to prioritize hydration, balanced nutrition, and mindful movement. Gradually increase intensity only if well-tolerated.

CUSTOMIZATION GUIDELINES

- **Energy Levels** — If energy is low, reduce physical activity intensity and ensure adequate rest. For high energy, consider slightly increasing exercise duration.
- **Digestive Sensitivity** — If experiencing discomfort, simplify meal compositions. Focus on easily digestible foods and cooked vegetables. Incorporate ginger or peppermint tea.
- **Lifestyle Integration** — Adapt the protocol to your daily schedule. Prepare meals the night before if mornings are rushed. Find pockets of time for mindfulness.
- **Listen to Your Intuition** — Your body's signals are the most valuable guide. Trust your instincts when deciding whether to push forward or dial back.

The goal is not perfection — it's consistent, intentional progress toward cellular renewal.



GENERATIONAL HEALING

Breaking Generational Patterns

Epigenetic inheritance is a powerful framework for understanding how trauma, lifestyle, and environmental factors from past generations can influence our health today. The experiences and choices of our ancestors — particularly our mothers and grandmothers — can leave chemical marks on our genome.

Healing family patterns requires a conscious effort to recognize these inherited influences and make proactive changes. By adopting healthier lifestyles, managing stress effectively, and addressing emotional wounds, we can actively modulate our own gene expression.

The connection to mother-daughter health is particularly profound. Research suggests that metabolic patterns and stress responses can be transmitted across generations through maternal influence. Women can empower themselves to rewrite their health stories — not just for themselves, but for their daughters and granddaughters.

“By understanding these connections, you have the power to break the chain of adverse inherited patterns and pave the way for healthier generations to come.”

YOUR NEXT STEPS

From Knowledge to Transformation

You now understand something most doctors don't: your genes are just the hardware. The software — your epigenetics — is what determines whether you turn on the programming for health or disease. Knowledge without application is wasted potential. You have the power to rewrite your health destiny.

This is where The Biospark Path comes in. Four distinct paths to help you implement this life-changing science.



Free

Free Resources

Access our library of articles, podcasts, and basic epigenetic guides. Get started with foundational knowledge.

→ [Explore Free Resources](#)



\$39

The Epigenetic Starter Kit

Our foundational digital guide including actionable protocols and meal plans to kickstart your transformation.

→ [Get the Starter Kit](#)



\$133/mo

The Biospark Membership

Ongoing support, monthly challenges, live Q&A with experts, and an exclusive community of like-minded individuals.

→ [Join the Membership](#)



Premium

The 1-on-1 Concierge Program

Personalized coaching, custom epigenetic protocols, and direct access to our leading experts for the ultimate health transformation.

→ [Apply for Concierge](#)

Not Sure Where to Start?

Our team can help you determine the best path for your unique health goals. Book a free 15-minute discovery call to discuss your options and find the right fit. Your transformation awaits.

Your Genes Are Listening

Every meal you eat today is sending signals to your DNA. These signals determine which of your genes are expressed and which are silenced.

This process is known as epigenetics, and it means that you are not a victim of your genetic code.

By making conscious choices about your nutrition, movement, and environment, you have the power to influence your gene expression and, ultimately, your health destiny.

Welcome to the epigenetic revolution.

Dr. Steven Presciutti, MD

biosparkhealth.com | info@biosparkhealth.com | [@biosparkhealth](https://twitter.com/biosparkhealth)

This guide is for educational purposes only. It is not intended to be a substitute for professional medical advice, diagnosis, or treatment. Always seek the advice of your physician or other qualified health provider with any questions you may have regarding a medical condition.