

Migraines

DNA Health Report

REPORT CATEGORY —



HEADACHES &
MIGRAINES

Sample Client

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DISCLAIMER

This report does not diagnose this or any other health conditions. Please talk to a healthcare professional if this condition runs in your family, you think you might have this condition, or you have any concerns about your results.

Personal information

NAME

Sample Client

SEX AT BIRTH

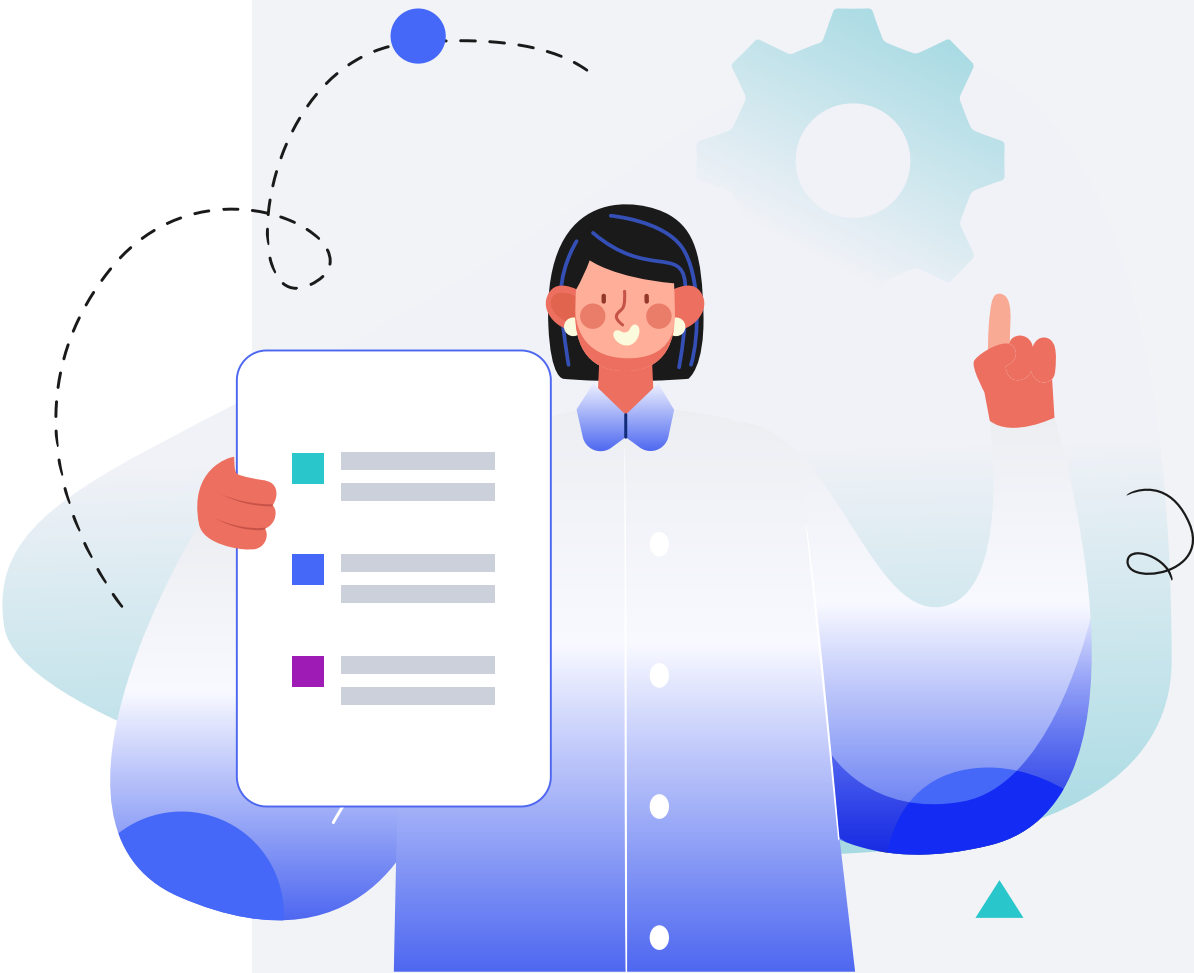
Male

HEIGHT

5ft 5" 165cm

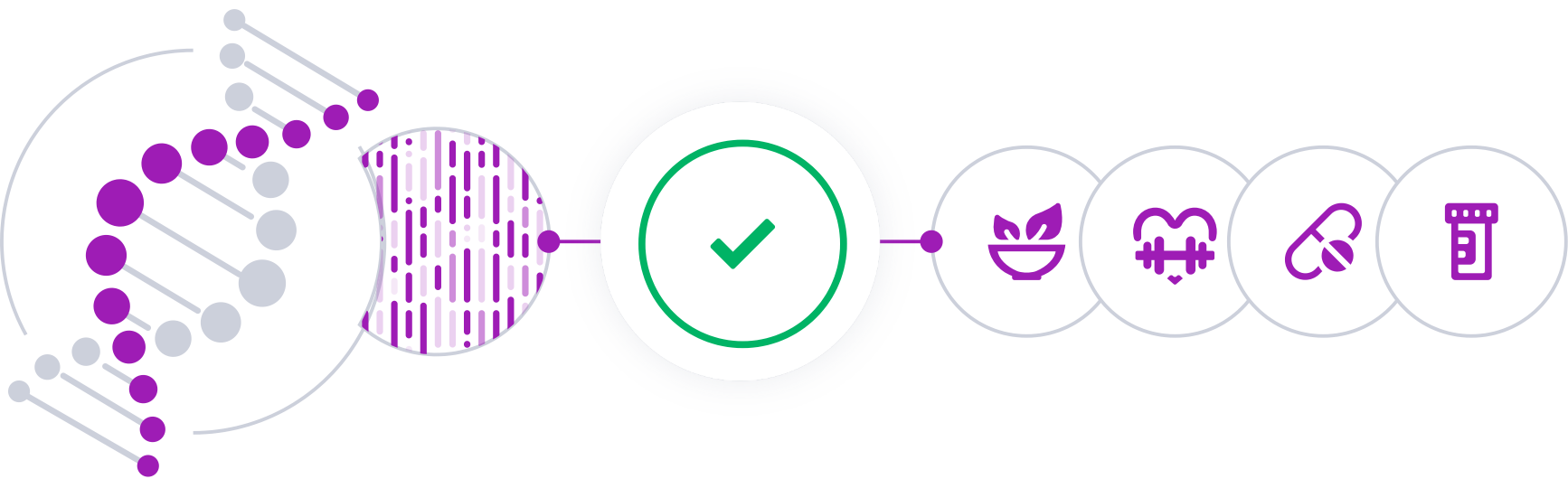
WEIGHT

137lb 62kg



How this works

Our Wellness Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.

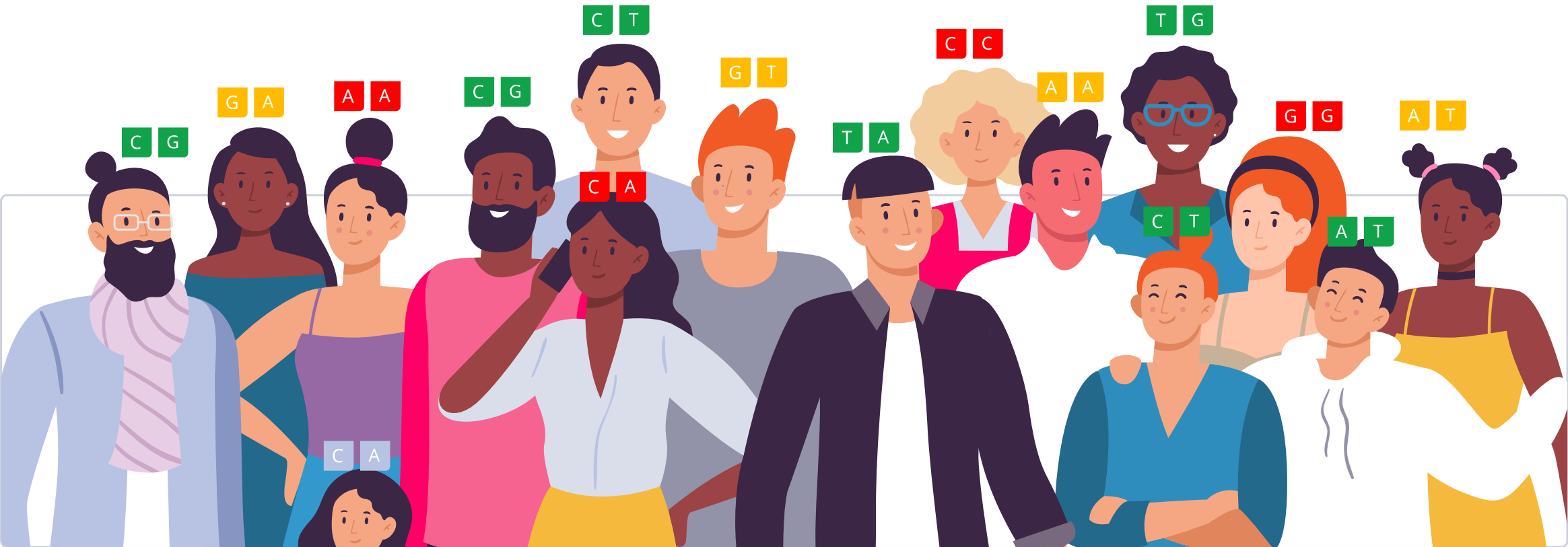


Similarly, our Trait Reports look at how your DNA influences your traits.



Your DNA is like an instruction manual — it contains a lot of information.
You can think of it as a blueprint for your body.

Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.



We use artificial intelligence and machine learning to analyze all this information.
We then summarize your results as a risk score or display it on a gauge.

In total, we analyze up to 83 million genetic variants.

When we give a risk score, the risk icon tells you if you are at a higher or lower risk compared to other people:



Genotype color info:

AA

You don't have any risk alleles

AA

You have 1 risk allele

AA

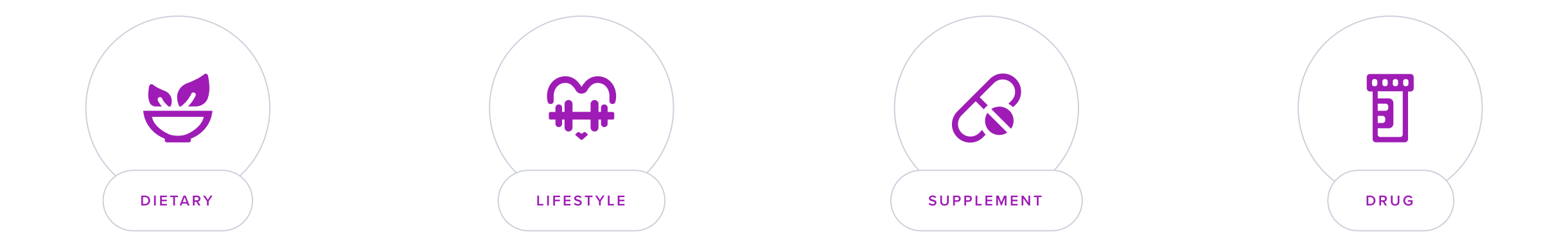
You have 2 risk alleles

Your risk is also displayed as a percentile. This will tell you how your risks compare to our sample population. The lower your percentile number, the lower your risk. The "50th percentile" would be an average risk.

Similarly, the gauge tells you your relative risk score compared to our sample population, or it indicates a specific trait or haplotype you are more likely to have based on your genetic variants.

When applicable, we also list top evidence-based recommendations that may help lower your risk. The focus is on recommendations that may be of benefit to you, based on your genetics.

Our recommendations come in four categories: lifestyle, diet, supplements and drugs.
The following icons tell you which category a recommendation falls into:



Our team of scientists also ranks each recommendation.
We rank based on impact and the strength of evidence in the medical literature.

Impact shows how strongly a recommendation will affect your health in a certain area.
Evidence is how much scientific support there is for the recommendation. Rankings are from 1 to 5 (low to high):



Impact

Impact scores range from 1-5. These scores reflect how much of an effect each recommendation can have. An impact score of 5 predicts the biggest effect.

When a recommendation affects something we can measure, we use those measurements to assign the impact score. For example, a recommendation that decreases cholesterol by 20% will have a higher impact score than one that decreases it by 5%.

Some recommendations affect things that we cannot directly measure, like stress or mood. For these, the impact score is based on how well they work relative to other recommendations and standard treatments. The best ones get the highest scores.

If there is a lot of research that shows a recommendation works especially well for your genotype, the impact score gets increased.

Recommendation Evidence

- 5 / 5
- Recommendations that are considered effective and generally recommended by experts and medical bodies.
-
- 4 / 5
- Recommendations that are considered likely effective and that have multiple independent meta-analyses and a great many studies supporting them.
-
- 3 / 5
- Recommendations that are considered possibly effective and have many studies supporting them
-
- 2 / 5
- Recommendations that have insufficient evidence, with two or several clinical trials supporting them, or many studies but with ambiguous results.
-
- 1 / 5
- Recommendations that have insufficient evidence, with a single clinical trial, or with many studies most of which didn't find support for the recommendation.
-
- 0 / 5
- No evidence in humans.

Genotype-specific Evidence

- High-quality
- Direct evidence that a recommendation helps more in people with your gene variant (many clinical trials, a few large clinical trials, or a meta-analysis).
- Medium-quality
- Direct evidence that a recommendation helps more in people with your gene variant (a few clinical trials or one large clinical trial).
- Low-quality
- Direct evidence that a recommendation helps more in people with your gene variant (a single clinical trial or more trials with inconsistent results).
- Indirect
- A recommendation may help more in people with your gene variant because it targets a specific gene or protein affected by your variant (e.g., MTHFR, dopamine).
- In theory
- A recommendation may help more in people with your gene variant because it targets a specific mechanism affected by your variant (e.g., inflammation, oxidative stress).

Some things to keep in mind:

- Genetics doesn’t play a considerable role in a condition or a trait.
- There is not enough research available to estimate a genetic predisposition.
- There are technical limitations to estimating or presenting a genetic predisposition.
- The topic is sensitive, and a genetic predisposition should only be estimated and presented by a healthcare professional.

Introduction

It’s just a headache. Painkillers will make it go away. Right?

It’s pretty common to pass off a migraine as a simple headache, but actually there are some key differences.

First and foremost, migraines are persistent and can last for days. Migraines also often come with a range of other symptoms, such as nausea and sensitivity to light [\[R\]](#).

Migraines are often brought on by triggers like stress. When stress increased dramatically during the COVID-19 shutdown, migraineurs like Serena Williams were debilitated [\[R\]](#), [\[R\]](#).

Despite the fact that migraine is one of the most prevalent conditions in the world, we still don’t fully understand what causes it. But one thing is for sure: **there is a genetic element to migraines**. You may even share the same migraine-related genes as Serena Williams [\[R\]](#), [\[R\]](#)!

Importantly, the differences between migraine and other types of headache mean there are different approaches to tackling them. **One thing that may benefit you when it comes to migraines is targeting your genes.**

Your genes may influence how susceptible you are to certain triggers. For example, a variant of the [MTHFR](#) gene may affect how likely stress is to trigger migraines. Your genes may also indicate the best potential pain-relieving strategies. Those with a certain [COMT](#) variant may find particular benefit from acupuncture [\[R\]](#), [\[R\]](#).

Read on to find out more about:

- **How your genetics play a role in migraine**
- **Your genetic risk score based on over 114,000 genetic variants**
- **Personalized recommendations based on your genetics**

About Migraines

Key Takeaways:

- Up to **64%** of differences in people's chances of developing migraine may be due to genetics.
- Risk factors include: obesity, depression, stress, being female, blood vessel issues, brain chemical imbalances.
- If you have a high genetic risk, take action on modifiable risk factors to help reduce overall risk.
- About **16%** of Americans regularly have migraines. So, even if your genetic risk is low, you don't want to ignore this condition.
- Click the **Recommendations** tab for potential dietary and lifestyle changes and **next steps** for relevant labs.

About **16% of Americans** regularly have migraines [R](#).

For a long time, researchers thought migraines were only caused by widening blood vessels in the brain. However, new research suggests that it's more complicated. Possible causes include [R](#), [R](#):

- Blood vessel problems
- Changes in nerve pathways linked to pain
- Imbalances in serotonin or other brain messengers

Risk factors for migraines include [R](#):

- Obesity
- Depression
- Stress
- Being female

Migraines aren't just headaches, and pain isn't the only symptom. People with migraines also commonly experience [R](#), [R](#):

- Nausea
- Sensitivity to bright light or loud sounds
- Fatigue
- Neck stiffness
- Dizziness
- Aura (flashing lights, moving lines, blind spots, etc.)

Migraine attacks can last from hours to days. They can even be bad enough to cause people to miss work. In fact,



MORE LIKELY

More likely to have migraines based on **109,603** genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
TRPM8	rs10166942	TT
TRIM32	rs6478241	AA
MTHFR	rs1801133	AA
AOC1	rs2052129	GG
IRAG1	rs4910165	GC
NOS3	rs1799983	TT
BDNF	rs6265	TC
NOS3	rs2070744	TC
IFT43	rs75002882	GG
DHX36	rs13078967	AA
CARF	rs138556413	CC
AOC1	rs1049793	GC
HPSE2	rs12260159	GG
LY6G5C	rs74434374	CC
SLC24A3	rs4814864	CC
NOC3L	rs2274224	GG
ITPK1	rs11624776	AA
TNFSF12	rs34914463	TT
PNPLA7	rs4278223	TT
UFL1	rs11153082	AG
C12ORF4	rs2160875	CT
MRPS6	rs28451064	AG
MLXIPL	rs13235543	CT
RABGAP1L	rs11487328	CG

migraine is one of the most common causes of disability in people under 50 years old [R](#), [R](#), [R](#).

People sometimes go through periods with several migraines and then stretches with none [R](#).

Unfortunately, there is no "cure" for chronic, severe migraines. Instead, people with migraines are often prescribed medications to [R](#):

- Relieve symptoms during an attack
- Prevent the next attack

Up to 64% of differences in people's chances of developing migraine may be attributed to genetics.

Genes involved in migraine may influence [R](#):

- Nerve cell activity ([COMT](#), [CACNA1A](#), [SCN1A](#))
- Sleep-wake cycles ([CLOCK](#), [CSNK1D](#))
- [DNA methylation](#) ([MTHFR](#))

GENE	SNP	GENOTYPE
PHACTR1	rs9349379	GG
STAT6	rs11172113	CC
NAXE	rs2274316	AA
PRDM16	rs2651899	TT
NOS2	rs2297518	GG
AOC1	rs10156191	CC
AOC1	rs1049742	CC
SERPINA1	rs28929474	CC
PRDM16	rs10218452	AA
TSPAN2	rs2078371	TT
HTR2C	rs3813929	C
SUGCT	rs10234636	CC
HOXD10	rs72923449	AA
NAXE	rs2274319	CC
GJA1	rs28455731	GG
MAU2	rs74182632	GG
TRIM32	rs3891689	TT
MTHFR	rs1801131	TT
ROBO1	rs950570	CC
KCNK5	rs10456100	CC
COL4A1	rs2000660	GG
TSPYL5	rs1835740	CC
PPIC	rs246326	CC
HMGXB3	rs4705403	GG
LIN7C	rs2049046	AA

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Your Recommendations

Your recommendations are prioritized according to the likelihood of it having an impact for you based on your genetics, along with the amount of scientific evidence supporting the recommendation.

You’ll likely find common healthy recommendations at the top of the list because they are often the most impactful and most researched.

		DOSAGE			DOSAGE
1	Relaxation Techniques	30 minutes	2	Avoid Sensory Triggers	
3	Avoid Food Triggers		4	Cognitive-Behavioral Therapy (CBT)	
5	Aerobic Exercise (Cardio)	1 hour	6	Sleep for 7+ Hours	
7	Magnesium	250 mg	8	Melatonin	500 mcg
9	Nerve Stimulation	30 minutes	10	Acupuncture	1 hour
11	Regular Sleep Schedule		12	Exercise At Least One Hour a Day	1 hour
13	Biofeedback		14	Coenzyme Q10 (CoQ10)	100 mg
15	Maintain a Regular Meal Schedule		16	Avoid Monosodium Glutamate (MSG)	
17	Butterbur	75 mg	18	Riboflavin (Vitamin B2)	25 mg
19	Meditation	30 minutes	20	Drink at Least 8 Glasses of Water a Day	
21	Ginger	500 mg	22	Dietary Omega-3 Fatty Acids	
23	Feverfew	50 mg	24	Transcutaneous Electrical Nerve Stimulation (TENS)	30 minutes
25	Alpha-Lipoic Acid	100 mg	26	Tryptophan	500 mg
27	Keto Diet		28	Dietary Tryptophan	
29	Hyperbaric Oxygen Therapy	90 minutes	30	Cold Applications	15 minutes

31	Zinc	10 mg	32	Omega-3 (Fish Oil)	500 mg
33	Omega-3 And Nano-Curcumin	250 mg	34	Magnesium Sulfate	200 mg
35	Yoga	30 minutes	36	Acupressure	1 minute
37	Soy Isoflavones	40 mg	38	Topical Anise	
39	Ginkgo	120 mg	40	Music Therapy	30 minutes
41	Autogenic Training	10 minutes	42	Low-Level Laser Therapy (LLLT)	30 seconds
43	Topical Basil		44	Progressive Muscle Relaxation	10 minutes
45	Vitamin E	200 iu	46	Mindfulness	30 minutes
47	L-Carnitine	500 mg	48	Lavender Essential Oil	2 drops
49	Neurofeedback	1 hour	50	Self-Hypnosis	20 minutes
51	Apigenin	50 mg	52	Cinnamon	500 mg
53	Topical Peppermint Oil		54	Topical Menthol	
55	Palmitoylethanolamide (PEA)		56	Cupping Therapy	15 minutes
57	Chasteberry	150 mg	58	5-HTP	100 mg
59	Maintain Optimal Vitamin D Levels	1000 iu	60	Avoid Calcium Supplements	
61	SAM-e	400 mg			

1

Relaxation Techniques

IMPACT

5 / 5

EVIDENCE

4 / 5

How to implement

Incorporate relaxation techniques such as deep breathing exercises, meditation, or yoga into your daily routine. Spend at least 15-30 minutes each day practicing one of these techniques, preferably in a quiet, comfortable space without interruptions.

TYPICAL STARTING DOSE

30 minutes

Description

Relaxation techniques encompass various methods like deep breathing, yoga, meditation, and progressive muscle relaxation, aimed at reducing stress and promoting mental and physical relaxation. Practicing these techniques regularly can help manage stress, improve mental clarity, and enhance overall emotional well-being.

We all get stressed from time to time.

[Stress](#) can help you deal with a challenge or avoid danger. However, **it’s not healthy to be stressed for a long time** [\[R, R\]](#).

Relaxation techniques such as [yoga](#) and [meditation](#) can relieve stress in different ways. Most of them focus on breathing and help you get rid of negative thoughts and emotions [\[R\]](#).

People use relaxation techniques to improve conditions like [\[R, R, R\]](#):

- Anxiety
- Depression
- Chronic pain

Progressive muscle relaxation is another relaxation technique. In this technique, you focus on tensing and relaxing different parts of your body. It is common to start with the toes and slowly work your way up to the neck and head [\[R, R\]](#).

Autogenic training is a relaxation technique that a person may carry out on their own. It uses exercises that take the mind’s attention to bodily sensations such as warmth and heaviness [\[R, R\]](#).

How it helps

Stress can trigger migraines [\[R, R, R, R, R, R, R, R\]](#).

Experts agree that relaxation techniques may help with migraines by reducing stress [\[R, R, R\]](#).

Examples include:

- Meditation [\[R, R, R, R, R, R, R, R\]](#)
- Progressive muscle relaxation [\[R, R\]](#)
- Biofeedback [\[R, R, R, R, R, R, R, R, R, R\]](#)

Yoga may also help with migraines. However, not all studies showed a benefit [\[R, R, R\]](#).

2



Avoid Sensory Triggers

IMPACT

5 / 5

EVIDENCE

4 / 5

How to implement

Identify and keep a record of situations, environments, or objects that trigger unwanted sensory responses, such as bright lights for migraines or loud noises for auditory sensitivities. Actively avoid these triggers whenever possible, such as wearing sunglasses in bright environments or using noise-cancelling headphones in loud places. Implement these strategies consistently to minimize exposure to the identified triggers.

Description

Recognizing and avoiding sensory triggers, such as bright lights or loud noises, can help individuals with sensory processing issues manage their environment and reduce sensory overload and potential symptoms.

A "trigger" is something that prompts or worsens the symptoms of a health condition.

A number of things that you see, hear or smell may be sensory triggers [\[R\]](#), [\[R\]](#).

For example, looking at a digital screen for too long may trigger symptoms in some people. These include [\[R\]](#), [\[R\]](#):

- Tired, itchy eyes
- Blurred vision
- Headache

How it helps

People who have migraines tend to process sensations differently. **Sensory triggers may cause or worsen migraines** [\[R\]](#), [\[R\]](#), [\[R\]](#).

Some people with migraines may be more sensitive to:

- Bright light [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)
- Loud noise [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)
- Strong smells [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)

Avoiding these triggers may help prevent migraines. For example, special eyeglasses with filters may help by blocking bright light [\[R\]](#).

 PERSONALIZED TO YOUR GENES

People with your [TRPM8](#) gene variant may be more sensitive to light and sound during a migraine [\[R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
TRPM8	rs6724624	CC	

3



Avoid Food Triggers

IMPACT

5 / 5

EVIDENCE

4 / 5

How to implement

Identify foods that trigger negative reactions in your body, such as digestive issues, allergies, or headaches, and eliminate them from your diet entirely. This may require keeping a food diary for a few weeks to observe patterns and might involve cutting out common triggers like dairy, gluten, soy, or certain additives. Continuously monitor and adjust your diet to avoid these triggers as long as the symptoms persist.

Description

Food triggers are specific substances or ingredients in one's diet that can exacerbate or induce adverse reactions, such as allergies, sensitivities, or digestive issues, often leading to symptoms like inflammation, bloating, or discomfort.

A "trigger" is something that prompts or worsens the symptoms of a health condition.

Food triggers can lead to a wide range of symptoms in people who are sensitive to them. These may include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Gut problems
- Skin problems
- Migraines

How it helps

Experts agree that certain foods may trigger migraines [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

In some people, migraines may be triggered by the following foods [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Alcohol
- Chocolate
- Cheese
- Coffee

Both caffeine intake and caffeine withdrawal may trigger migraines. Try to **limit caffeine to 200 mg per day** to avoid migraines [\[R\]](#).

Some foods may cause migraines by [\[R\]](#), [\[R\]](#):

- Increasing dehydration
- Stimulating pain signals
- Altering blood flow in the brain

 PERSONALIZED TO YOUR GENES

Alcohol is more likely to trigger migraines in people with your **ADH1B** gene variant [\[R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
ADH1B	rs1229984	TC	

4



Cognitive-Behavioral Therapy (CBT)

IMPACT

4 / 5

EVIDENCE

4 / 5

How to implement

Schedule weekly sessions with a certified cognitive-behavioral therapist for a period of 5 to 20 weeks. Engage actively in exercises assigned by your therapist both during sessions and as homework to apply CBT strategies to daily life.

Description

Cognitive-behavioral therapy (CBT) is a psychotherapeutic approach that has been effective in treating various mental health conditions by helping individuals identify and change negative thought patterns and behaviors. It is widely used for conditions like depression, anxiety, and phobias.

Psychotherapy (talk therapy) involves talking about your health with a licensed therapist. It may improve the way you react to certain experiences [\[R\]](#).

Talk therapy is a great way to improve many conditions, including [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Depression
- Anxiety disorders
- PTSD
- OCD
- Substance use disorder
- Bipolar disorder

Cognitive-behavioral therapy (CBT) is a type of talk therapy. CBT aims to change the way you think about your life and yourself. Through CBT, a therapist can help you develop healthy coping mechanisms [\[R\]](#).

How it helps

Experts agree that **cognitive-behavioral therapy (CBT)** may help prevent migraines [\[R\]](#), [\[R\]](#), [\[R\]](#).

Talk therapy may also make migraines shorter and less intense [\[R\]](#), [\[R\]](#), [\[R\]](#).

Talk therapy may help by [\[R\]](#), [\[R\]](#):

- Changing thoughts and behaviors related to pain
- Providing people with coping strategies
- Training the brain to send fewer pain signals

5



Aerobic Exercise (Cardio)

IMPACT

4 / 5

EVIDENCE

4 / 5

How to implement

Engage in at least 150 minutes of moderate-intensity aerobic exercise or 75 minutes of vigorous-intensity activity each week. Distribute this time over at least 3 days per week, avoiding consecutive days of vigorous exercise to allow for recovery.

TYPICAL STARTING DOSE

1 hour

Description

Engaging in regular aerobic exercise, such as running, swimming, or cycling, offers numerous health benefits, including improved cardiovascular fitness, weight management, and mood enhancement. It supports overall physical and mental well-being while reducing the risk of chronic diseases.

Cardio, short for cardiovascular exercise, is any type of physical activity that temporarily increases your heart rate. Examples include **running, cycling, swimming, and brisk walking**.

Regular cardio exercise has many benefits for your overall health. It can help lower your risk of heart disease and diabetes, support weight loss, and improve your mood and energy levels. To get the most out of cardio, try to do it for at **least 30 minutes, 3-5 times a week**.

Interval training is a type of cardio that combines periods of high-intensity training with brief rest periods.

How it helps

Aerobic exercises, like brisk walking or cycling, can help reduce the frequency and severity of migraines by boosting your body's production of natural painkillers called endorphins. Furthermore, it helps to reduce stress and improves sleep, factors which can trigger migraines.

Four meta-analyses (the largest one with 21 trials and 1195 patients) found **low- to moderate-quality evidence** that aerobic exercise, **especially at high intensity, decreases the number of migraine days/month (by 0.6 days), attack duration (by 20-27%), pain intensity (by 20-54%), and medication use while increasing quality of life**. However, one of them found **strength training more effective** [\[R, R, R, R\]](#).

6



Sleep for 7+ Hours

IMPACT

4 / 5

EVIDENCE

4 / 5

How to implement

Ensure you allocate enough time in your schedule to achieve a minimum of 7 hours of sleep each night. This might involve going to bed earlier or adjusting your evening routine to promote relaxation and make it easier to fall asleep.

Description

Optimizing sleep involves adopting healthy sleep habits and creating a sleep-conducive environment to ensure restorative and sufficient sleep duration. It supports cognitive function, mood stability, and overall physical health. Most experts recommend getting **at least 7 hours of good-quality sleep each night**.

[Sleep](#) supports your body and mind [\[R, R\]](#). More precisely, sleep helps:

- Support brain health [\[R, R\]](#)
- Maintain a healthy weight and appetite [\[R, R, R\]](#)
- Regulate blood pressure [\[R, R\]](#)
- Balance blood sugar [\[R, R\]](#)

Ways to sleep better include [\[R\]](#):

- Reducing your bright light exposure (screen time) in the evenings
- Sticking to a regular sleep schedule
- Avoiding hunger or large meals before bed
- Avoiding nicotine, caffeine, and alcohol before bed
- Maintaining a sleep area that’s cool, dark, and quiet

How it helps

Getting too much or too little sleep may trigger migraines [\[R, R, R, R, R\]](#).

Sleep disturbances can affect parts of the brain involved in migraine [\[R, R, R\]](#).

In line with this, **experts recommend getting 7-8 hours of sleep per night to help prevent migraines. They also recommend keeping a consistent sleep schedule** [\[R, R\]](#).

7



Magnesium

IMPACT

4 / 5

EVIDENCE

3 / 5

How to implement

Take up to 350 mg of magnesium daily as a supplement, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

250 mg

Description

Magnesium is an essential mineral involved in various bodily functions, including muscle contractions, nerve signaling, and bone health. Maintaining adequate magnesium levels through diet or supplements can support overall well-being and reduce the risk of magnesium deficiency-related health issues.

[Magnesium](#) is an essential mineral. Your body needs it for [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Muscle, nerve, and bone function
- Blood sugar and blood pressure control
- DNA and protein production
- Strong immunity

Women need **310-320 mg** of magnesium per day, while men need **400-420 mg** [\[R\]](#).

Foods rich in magnesium include **nuts, seeds, and leafy greens**. Magnesium is also available as a supplement [\[R\]](#).

How it helps

People who get migraines may have low magnesium levels [\[R\]](#), [\[R\]](#).

Magnesium supplements (up to 350 mg/day for 8-12 weeks) may make migraines less frequent and intense. However, some studies found no benefits [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Magnesium may help by reducing [\[R\]](#):

- Inflammation
- The response to pain



PERSONALIZED TO YOUR GENES

The [NOS3](#) gene encodes *nitric oxide synthase 3*, which increases blood flow by widening the blood vessels (*vasodilation*). People with migraines may have excessive vasodilation in the brain [\[R, R\]](#).

Your genotype for [rs2070744](#) has been associated with higher expression of *NOS3*, increased vasodilation, and increased incidence of migraines [\[R\]](#).

[Magnesium](#) is essential for the removal of nitric oxide from cells [\[R\]](#).

To learn more about this gene and how you may be able to counteract its effects, check out the SelfDecode blog post on this gene [here](#).

People with your [KRTCAP2](#) gene variant may have lower magnesium levels [\[R\]](#). Consider supplementing with magnesium to help with migraines.

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
NOS3	rs2070744	TC	
GENE	SNP	GENOTYPE	EVIDENCE
ADAM15	rs4460629	CT	



Melatonin



How to implement

Take 500 mcg of melatonin orally, about 30 minutes before bedtime, to help with sleep. It can be taken daily as needed.

TYPICAL STARTING DOSE

500 mcg

Description

Melatonin is a natural hormone produced by the pineal gland in the brain that helps regulate the sleep-wake cycle. It plays a crucial role in promoting sleep onset and maintaining a consistent sleep pattern, making it a commonly used supplement for managing sleep disorders and jet lag.

[Melatonin](#) is an important sleep hormone. Bright light at night may prevent your body from making enough melatonin [\[R, R, R\]](#).

Your body makes melatonin on its own. However, some people take melatonin supplements to help them sleep. It may help with jet lag in particular [\[R, R, R\]](#).

How it helps

Melatonin (3-4 mg/day at bedtime for at least 3 months) may reduce the number of migraine attacks [\[R, R, R, R\]](#).

Melatonin may help with migraines by reducing [\[R\]](#):

- Oxidative stress
- Inflammation
- The response to pain

Please note: Melatonin may interact with medications. Consult your doctor before taking melatonin [\[R\]](#).

9

Nerve Stimulation

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

Nerve stimulation can be implemented by daily sessions of 15-30 minutes using a device specifically designed for this purpose. These devices often use electrical currents to stimulate nerves through the skin, which can be adjusted in intensity according to comfort. It's important to consult a healthcare provider for guidance on the specific type of nerve stimulation that may be most beneficial for your condition.

TYPICAL STARTING DOSE

30 minutes

Description

Nerve stimulation techniques involve the use of electrical impulses, like transcutaneous electrical nerve stimulation (TENS) or other methods to activate nerves, potentially providing relief from chronic pain, improving muscle function, and aiding in physical therapy.

Health professionals can stimulate your nerves using different strategies [\[R\]](#).

Many strategies use magnetic fields or electric currents. Examples include [\[R\]](#), [\[R\]](#), [\[R\]](#):

- [Transcutaneous electrical nerve stimulation](#) (TENS)
- Transcranial direct current stimulation (tDCS)
- Transcranial magnetic stimulation (TMS)
- Transcutaneous auricular vagus nerve stimulation (taVNS)

Nerve stimulation may improve [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Cognition
- Mood
- Pain
- Seizures
- Tinnitus

How it helps

Nerve stimulation may help with migraines, but the evidence is mixed and of low quality [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

It may stimulate parts of the brain involved in pain relief [\[R\]](#).

Please note: *Nerve stimulation may not be safe for everyone. Consult your doctor before using nerve stimulation devices of any kind* [\[R\]](#), [\[R\]](#).

10



Acupuncture

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Visit a licensed acupuncturist for a session, typically lasting between 30 to 60 minutes, once or twice a week. Depending on your specific condition, a course of treatment might range from a few weeks to several months.

TYPICAL STARTING DOSE

1 hour

Description

Acupuncture is a part of traditional Chinese medicine. It involves inserting thin needles at specific points on the body. People use it to relieve pain and allergies, as well as reduce nausea and improve sleep.

[Acupuncture](#) is a part of traditional Chinese medicine. It involves **inserting thin needles at specific points on the body**. People use it to [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Relieve pain
- Improve sleep quality
- Relieve allergies
- Reduce nausea

How it helps

Experts note that acupuncture may help reduce migraine pain and frequency [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

It may help by releasing natural pain-relieving compounds [\[R\]](#).

Please note: *Acupuncture is safe for most people. However, it may come with extra risks for pregnant women, people with pacemakers, and people with bleeding disorders. Consult your doctor or a licensed acupuncturist for more information* [\[R\]](#).

 PERSONALIZED TO YOUR GENES

The [HTR2A](#) gene encodes a type of [serotonin receptor](#) (5-HT2A). When activated, this receptor may cause sudden changes in [brain blood flow](#) and trigger headaches [\[R\]](#), [\[R\]](#).

Your genotype for [rs6313](#) has been associated with increased 5-HT2A receptor activity and higher incidence of headaches [\[R\]](#), [\[R\]](#), [\[R\]](#).

[Acupuncture](#) has shown promising results for headaches — especially migraines. It may relieve pain by acting on the 5-HT2A receptors [\[R\]](#), [\[R\]](#), [\[R\]](#).

To learn more about this gene and how you may be able to counteract its effects, check out the [HTR2A SelfDecode blog post](#) [here](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
HTR2A	rs6313	GA	

11



Regular Sleep Schedule

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Go to bed and wake up at the same time every day, even on weekends and holidays. This helps regulate your body's internal clock, leading to better sleep quality. Aim for 7-9 hours of sleep per night.

Description

Maintaining a regular sleep schedule involves going to bed and waking up at consistent times each day. This practice helps regulate the body's internal clock and promotes better sleep quality, mood, and cognitive function.

How it helps

Experts recommend maintaining regular sleep schedules to help prevent migraine attacks [\[R\]](#), [\[R\]](#).

In line with this, 2 studies of 2973 university students identified irregular sleep patterns as the second most common migraine trigger (after stress) [\[R\]](#), [\[R\]](#).

A systematic review of 7 studies found that night shifts and irregular sleep patterns are more common migraine triggers in women [\[R\]](#).

12



Exercise At Least One Hour a Day

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Dedicate a minimum of 60 minutes to moderate-intensity activities such as brisk walking, swimming, or cycling. Do this most days of the week, aiming for at least 5 days to optimize benefits.

TYPICAL STARTING DOSE
1 hour

Description

[Exercise](#) can do wonders for your health. It can help you lose weight, improve your heart health, boost your mood, and more [\[R\]](#).

There are many ways you can be active. You can walk, run, swim, dance, or play team sports. **Everything counts, and it's never too late to start!**

Try to get at least **60 minutes of moderate physical activity on most days**, including walking. **Getting a mix of cardio (min 150 min/day) and strength training (min 2 times a week) may be optimal.**

How it helps

Physical inactivity is linked to migraines [\[R, R, R\]](#).

In line with this, **experts recommend getting regular, moderate exercise (3-4 times a week) to help prevent migraines** [\[R, R, R, R, R\]](#).

Exercise may also help reduce migraine pain and duration. However, not all studies found this benefit [\[R, R, R, R\]](#).

Exercise may help with migraines by [\[R, R, R, R\]](#):

- Reducing inflammation
- Relaxing blood vessels
- Boosting the body's natural pain-relieving compounds (opioids)

Please note: *Intense exercise might trigger migraines. Work with your doctor to find the right exercise type and intensity* [\[R, R, R\]](#).

 PERSONALIZED TO YOUR GENES

People with your [OPRM1](#) gene variant may be more sensitive to pain. This variant likely alters the activity of the opioids made by your body. Exercise may help by boosting your opioids [\[R, R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
OPRM1	rs1799971	GA	

13



Biofeedback

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Attend biofeedback sessions once or twice a week for about 8 to 10 weeks. During these sessions, a therapist will guide you through exercises to control different body functions, such as heart rate or muscle tension, using monitors that provide feedback on your physiological state. Practice the techniques learned during sessions at home daily to improve symptoms and manage your condition.

Description

Biofeedback is a type of therapy that teaches people how to control certain body functions, such as heart rate, blood pressure, and muscle tension. It can be used to treat a variety of conditions, including stress, anxiety, and chronic pain.

Biofeedback is a kind of “**brain training**” in which sensors are attached to your body. They detect information like your heart rate, temperature, and breathing rate. By seeing this information, you may be better able to control these functions [\[R\]](#), [\[R\]](#).

Biofeedback is used to help with [\[R\]](#), [\[R\]](#):

- Gut problems
- Chronic pain
- Migraines
- Insomnia
- Attention

[Neurofeedback](#) is a form of biofeedback that measures brain activity in real time [\[R\]](#).

How it helps

A meta-analysis of 55 studies found medium-sized, durable effects of biofeedback on migraines, especially on frequency of attacks and perceived self-efficacy. Blood-volume-pulse feedback yielded higher effect sizes than peripheral skin temperature feedback and electromyography feedback. Another meta-analysis (5 studies and 137 participants) found that biofeedback reduces migraine frequency, attack duration, and headache intensity in children and adolescents [\[R\]](#), [\[R\]](#).

Biofeedback training helps control bodily functions, like heart rate or muscle tension, which can directly impact migraines.

14



Coenzyme Q10 (CoQ10)

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

Take a 100 mg Coenzyme Q10 (CoQ10) supplement once daily with a meal that contains fat for better absorption.

TYPICAL STARTING DOSE

100 mg

Description

Coenzyme Q10 (CoQ10) is a naturally occurring antioxidant that plays a crucial role in cellular energy production. It is often taken as a supplement to support heart health, improve energy levels, and provide antioxidant protection, especially for individuals with certain medical conditions or as they age.

[Coenzyme Q10](#) (CoQ10) is a compound that helps enzymes work better. By doing so, CoQ10 helps improve [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Energy levels
- Antioxidant protection
- Heart health
- Muscle strength
- Blood sugar control

The amount of CoQ10 made by your body decreases as you get older. Luckily, you can also get it from food or supplements. Good sources of CoQ10 include [\[R\]](#), [\[R\]](#):

- Organ meats
- Fatty fish
- Whole grains

How it helps

Coenzyme Q10 (CoQ10) levels are often lower in people who have migraines [\[R\]](#).

CoQ10 supplements (300-800 mg/day for at least 6 weeks) may help make migraines less frequent. They may also reduce migraine duration and severity. However, some studies with doses at or below 300 mg/day did not find a beneficial effect [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

CoQ10 may help by reducing oxidative stress and inflammation [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Note that CoQ10 is fat-soluble. This means that **taking it with a fatty meal should help you absorb it better** [\[R\]](#).

Please note: *CoQ10 may reduce the effectiveness of blood thinners such as warfarin. Talk to your doctor before taking CoQ10* [\[R\]](#).

15



Maintain a Regular Meal Schedule

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Eat your meals at the same times each day, for instance, breakfast at 7 AM, lunch at 12 PM, and dinner at 6 PM. Stick to this schedule every day, including weekends, to help regulate your body's internal clock and improve digestion.

Description

Maintaining a regular meal schedule helps regulate blood sugar levels, supports digestion, and promotes a healthy metabolism. Consistency in meal timing can contribute to overall energy balance and long-term weight management.

Blood sugar ([glucose](#)) is the body’s main source of energy. It increases after a meal. Skipping meals may reduce this energy supply and lead to [R](#), [R](#):

- Poor cognitive performance
- Headaches

A regular meal schedule means eating the same number of meals at about the same times every day. Doing so may help [R](#), [R](#):

- Balance the internal clock
- Maintain a healthy body weight
- Support healthy cholesterol levels
- Prevent migraines

How it helps

Missing a meal may trigger migraines in some people. This may be more common in women [R](#), [R](#), [R](#), [R](#), [R](#), [R](#).

In line with this, **experts agree that maintaining a regular meal schedule may help with migraines** [R](#), [R](#), [R](#).

16



Avoid Monosodium Glutamate (MSG)

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Carefully check food labels and ingredient lists of packaged foods to avoid products containing monosodium glutamate (MSG). When dining out, request meals without added MSG. This practice should be consistent for all meals and snacks.

Description

Avoiding excessive consumption of MSG, a common food additive, can help prevent potential side effects like headaches and allergic reactions in some individuals. Moderation in MSG intake promotes better tolerance and overall food enjoyment.

How it helps

A review concluded that 12-60% of migraine patients report specifically food items as migraine triggers. Foods identified as migraine triggers include cheese, chocolate, citrus fruits, hot dogs, monosodium glutamate, aspartame, fatty foods, ice cream, caffeine withdrawal, and alcoholic drinks, especially red wine and beer. Tyramine, phenylethylamine, histamine, nitrites, and sulfites are involved in the mechanism of food intolerance headache [\[R\]](#), [\[R\]](#).

A study of 684 patients with migraines and tension headaches found that 44.2% of those with migraines had dietary triggers. The most common ones were coffee (19%), chocolate (7.5%), and the additive monosodium glutamate (5.6%). Both coffee and chocolate were approximately 2x times more commonly associated with migraines than with tension headaches [\[R\]](#).

17



Butterbur

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

Take a 75 mg butterbur supplement twice daily with meals to help manage your condition. Continue this regimen as advised by your healthcare provider.

TYPICAL STARTING DOSE

75 mg

Description

Butterbur is an herbal remedy commonly used for its potential to alleviate migraines and allergy symptoms. It contains compounds that may have anti-inflammatory and antispasmodic properties, providing natural relief for these conditions.

[Butterbur](#) is a shrub that has been used in traditional medicine for thousands of years. People even used it to treat plague during the Middle Ages [\[R\]](#).

Today, people mainly use a species of butterbur called *Petasites hybridus*. It may help relieve migraines and allergies [\[R\]](#), [\[R\]](#).

How it helps

In a placebo-controlled trial of 60 migraine patients, supplementation with butterbur extract (50 mg, 2x/day) for 12 weeks reduced the frequency of attacks by 60% (from 3.4 to 1.8 per month). The response rate was 45% [\[R\]](#), [\[R\]](#).

In a 4-month placebo-controlled trial of 245 adults, there was a 48% decrease in migraine frequency in the group given butterbur extract (50-75 mg, 2x/day), compared to 26% for the placebo group. In total, 68% of patients who received 75 mg butterbur reported improvement [\[R\]](#).

In a survey of 108 children and adolescents, the rate of reported migraine attacks decreased by at least 50% in 77% of participants. After 4 months of treatment with butterbur (50-150 mg/day), 91% of patients felt “substantially” or “at least slightly improved” [\[R\]](#).

In a small placebo-controlled trial of 58 primary school children with migraine, butterbur root extract failed to prevent migraines during the 12-week treatment but was effective during an 8-week follow-up period. However, music therapy was more effective in both periods [\[R\]](#).

Butterbur root extract is currently recommended by both the Canadian Headache Society and the American Headache Society for short-term prevention and treatment of migraines [\[R\]](#), [\[R\]](#).

Butterbur’s active compounds petasines limit the production of multiple inflammatory molecules [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Please note: Raw, unprocessed butterbur contains harmful substances called pyrrolizidine alkaloids (PA), which cause liver damage and may even cause cancer. For this reason, it is important to choose butterbur supplements that have been produced by a reputable manufacturer. The products are typically labeled “PA-free” [\[R\]](#), [\[R\]](#).

18



Riboflavin (Vitamin B2)

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Take a riboflavin (vitamin B2) supplement daily, with a dose ranging from 5mg to 400mg, depending on the specific health concern or advice from a healthcare provider. Swallow the supplement with water, preferably with a meal to enhance absorption. This regimen can be continued long-term or as directed by a healthcare professional.

TYPICAL STARTING DOSE

25 mg

Description

Riboflavin is a water-soluble B vitamin found in various foods like dairy products, leafy greens, and lean meats. It plays a crucial role in energy production, metabolism, building red blood cells, and maintaining healthy skin and eyes.

[Vitamin B2](#) helps our cells create energy. It’s also known as riboflavin [\[R\]](#), [\[R\]](#).

This vitamin is important for [\[R\]](#), [\[R\]](#):

- Brain, liver, and gut health
- Building red blood cells

Riboflavin deficiency is rare in the US. People with gut, eating, or hormonal disorders may be at a higher risk. Alcohol abuse and certain medications can also deplete this vitamin [\[R\]](#), [\[R\]](#).

Good sources of riboflavin include [\[R\]](#), [\[R\]](#):

- Eggs
- Dairy
- Lean and organ meats
- Green vegetables
- Fortified cereals

How it helps

According to some experts, supplementing with riboflavin (400 mg/day) may help make migraines less frequent and painful [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Riboflavin may help make the brain less sensitive to migraine triggers [\[R\]](#).

 PERSONALIZED TO YOUR GENES

People with migraines may be more prone to high blood pressure. Riboflavin supplementation may reduce blood pressure more in people with your [MTHFR](#) gene variant [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
MTHFR	rs1801133	AA	

19



Meditation

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Set aside 10-20 minutes each day in a quiet space without distractions to practice meditation. Focus on your breath or perform guided meditation using an app or audio track.

TYPICAL STARTING DOSE

30 minutes

Description

Meditation is a mindfulness practice that can reduce stress, improve mental clarity, and promote relaxation. Regular meditation is associated with numerous mental and emotional health benefits, including reduced anxiety and enhanced emotional well-being.

Meditation is a relaxation technique that trains your mind to focus and redirect your thoughts. Some of the main types of meditation are [\[R\]](#):

- Mindfulness
- Focused
- Transcendental
- Mantra
- Moving

People use meditation to improve [\[R\]](#), [\[R\]](#):

- Stress and anxiety
- Mood
- Sleep disturbances
- Pain

How it helps

A non-placebo-controlled trial of 80 migraine patients found that practicing different meditation modalities (20 minutes/day for 30 days) reduced anger and pain more effectively than distraction techniques [\[R\]](#).

Another non-placebo-controlled trial of 131 children with migraine headaches found both transcendental meditation and progressive muscle relaxation equally effective at reducing primary headaches [\[R\]](#).

In a non-placebo-controlled trial of 92 migraine sufferers, spiritual meditation (20 minutes/day for 30 days) reduced migraine frequency and medication use [\[R\]](#).

Mindfulness meditation is the modality that has been most widely investigated in people with migraines. A meta-analysis of 10 trials and 315 patients found significant improvements in pain intensity and headache frequency. Mindfulness-based stress reduction and interventions lasting 8 weeks were especially effective [\[R\]](#).

In 3 non-placebo-controlled trials of 251 migraine patients, mindfulness-based stress reduction increased coping strategies while reducing headache days, headache-related disability, and psychological impairment. In one of them, it was as effective as headache education at improving migraine frequency but more effective at improving disability, quality of life, self-efficacy, pain catastrophizing, and depression [\[R\]](#), [\[R\]](#), [\[R\]](#).

Mindfulness-based cognitive training, which combines mindfulness meditation and cognitive-behavioral skills, reduced disability caused by headaches and migraine attacks in a non-placebo-controlled trial of 60 migraine patients [\[R\]](#).

Mindfulness meditation facilitated heart rate regulation, and thus recovery from a stressful event, in a non-placebo-controlled trial of 75 students suffering from headaches [\[R\]](#).

Meditation helps to manage stress and promotes deep relaxation, which can reduce the frequency and intensity of migraines.

20



Drink at Least 8 Glasses of Water a Day

IMPACT

3 / 5

EVIDENCE

2 / 5

How to implement

Consume a total of at least 64 ounces (or approximately 1.9 liters) of water over the course of the day. This can be divided into 8 glasses, each containing 8 ounces of water. Aim to drink evenly throughout the day to avoid dehydration.

Description

Water is an essential nutrient for nearly every process in your body, helping to mainting brain and gut function, maintain a health weight, as well as energy and performance levels, among others.

Water is essential for life. It supports nearly every process in your body [\[R\]](#).

Water helps maintain [\[R\]](#):

- Energy and performance levels
- Brain function
- Gut function
- Healthy weight

Most experts recommend drinking **around 8 glasses (64 oz. or 2 L) of water daily**. You might need more or less than this, depending on how active you are, where you live, or what your overall health is like [\[R\]](#).

How it helps

Not drinking enough water may lead to changes in fluid and pressure in the brain. This may trigger migraines [\[R, R\]](#).

Staying hydrated may help [\[R, R, R, R\]](#):

- Prevent migraines
- Reduce migraine severity
- Improve the quality of life

It’s best to **drink room-temperature water**, because ice-cold water may trigger a migraine [\[R\]](#).

21



Ginger

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Take a 500 mg ginger supplement daily, preferably with a meal to enhance absorption and minimize potential stomach discomfort.

TYPICAL STARTING DOSE

500 mg

Description

Ginger is a versatile spice known for its potential anti-inflammatory and digestive benefits. It may help alleviate nausea, reduce muscle soreness, and support gastrointestinal comfort when consumed as part of a balanced diet.

[Ginger root](#) is a cooking spice and a traditional remedy. People mostly use it to relieve [\[R\]](#):

- Nausea
- Menstrual cramps
- Joint pain

How it helps

In a placebo-controlled trial of 60 migraine patients, supplementation with ginger (400 mg) improved clinical response 1-2 hours after the onset of a migraine attack. However, ginger extract (200 mg, 3x/day for 3 months) wasn't more effective than the placebo in another placebo-controlled trial of 107 patients [\[R\]](#), [\[R\]](#).

In a non-placebo-controlled trial of 100 migraine patients, ginger powder was as effective as sumatriptan at treating migraine attacks and caused fewer adverse effects [\[R\]](#).

The combination of ginger and feverfew was an effective abortive treatment when initiated early during the mild headache phase in 2 trials (one of them placebo-controlled) of 90 people with a history of migraines [\[R\]](#), [\[R\]](#).

A meta-analysis of 3 of these trials concluded that ginger supplementation substantially improves pain-free and pain scores at 2 hours, but not treatment responses or total adverse effects [\[R\]](#).

Ginseng may help by reducing inflammation, nausea, and vomiting [\[R\]](#), [\[R\]](#), [\[R\]](#).

22



Dietary Omega-3 Fatty Acids

IMPACT2 / 5

EVIDENCE3 / 5

How to implement

Incorporate foods high in omega-3 fatty acids into your diet daily. This includes eating fish such as salmon, mackerel, and sardines at least twice a week. Alternatively, include a tablespoon of flaxseed oil or chia seeds in your daily diet.

Description

[Omega-3 fatty acids](#) are some of the healthiest fats we can eat. They help lower inflammation and protect the heart, brain, and eyes. Our bodies produce less omega-3s than we need for optimal health, so it's important to get enough through food or supplements [\[R\]](#), [\[R\]](#), [\[R\]](#).

There are three major types of omega-3s: ALA, EPA, and DHA. **EPA and DHA are vital for mental and heart health** [\[R\]](#), [\[R\]](#), [\[R\]](#).

Fatty fish are rich in EPA and DHA. They include [\[R\]](#):

- Salmon
- Tuna
- Herring
- Sardines

For optimal health, try to get at least **two servings of fatty fish per week**. Fish oil supplements are available for those who don't eat fish regularly [\[R\]](#).

How it helps

A meta-analysis of 11 trials found that the intake of dietary omega-3 fatty acids reduces migraine duration by 3.44 hours but has no effect on the frequency and severity of migraine attacks [\[R\]](#).

A 12-week dietary intervention increasing omega-3s and decreasing omega-6s reduced headache impact score (by 5.4 points), the number of headache days per month (by 4.8 days), and headache hours per day (by 3.4 hours), while increasing the antinociceptive lipid mediators 18-hydroxy-eicosapentaenoic acid and 17-hydroxy-docosahexaenoic acid, in a non-placebo-controlled trial of 56 people [\[R\]](#).

Fatty fish is rich in omega-3 fatty acids, which lower the levels of multiple inflammatory markers [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

23



Feverfew

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Take a feverfew supplement containing 50-150 mg daily, ideally choosing a product standardized to contain at least 0.2% parthenolide. This regimen should be continued daily for the prevention of migraines. Consult with a healthcare provider for personalized advice, especially if currently taking blood-thinning medications.

TYPICAL STARTING DOSE
50 mg

Description

Feverfew is an herbal remedy traditionally used to alleviate headaches and migraines. Some studies suggest that its compounds may have anti-inflammatory and pain-relieving effects, which can contribute to headache relief.

[Feverfew](#) (*Tanacetum parthenium*) is a member of the daisy family. People have used it for centuries to treat pain, such as [\[R\]](#):

- Headaches
- Joint pain
- Toothaches

How it helps

Feverfew extract may reduce the number and severity of migraines. However, not all studies found a clear benefit, which is why some experts recommend against it [\[R, R, R, R, R, R\]](#).

It may also help when combined with one or more of the following [\[R, R\]](#):

- Coenzyme Q10 (CoQ10)
- Magnesium
- Riboflavin

Feverfew may help with migraines by [\[R, R, R, R, R, R\]](#):

- Balancing serotonin
- Reducing inflammation

 PERSONALIZED TO YOUR GENES

The [HTR2A](#) gene encodes a type of [serotonin receptor](#) (5-HT2A). When activated, this receptor may cause sudden changes in [brain blood flow](#) and trigger headaches [[R](#), [R](#)].

Your genotype for [rs6313](#) has been associated with increased 5-HT2A receptor activity and higher incidence of headaches [[R](#), [R](#), [R](#)].

Supplements and extracts from the [feverfew](#) plant may suppress chronic headaches and migraines by blocking the 5-HT2A receptor [[R](#), [R](#), [R](#), [R](#), [R](#)].

To learn more about this gene and how you may be able to counteract its effects, check out the HTR2A SelfDecode blog post [here](#).

The [NOS3](#) gene encodes *nitric oxide synthase 3*, which increases blood flow by widening the blood vessels (*vasodilation*). People with migraines may have excessive vasodilation in the brain [[R](#), [R](#)].

Your genotype for [rs2070744](#) has been associated with higher expression of *NOS3*, increased vasodilation, and increased incidence of migraines [[R](#)].

Extracts from the [feverfew](#) plant block nitric oxide production in cells [[R](#), [R](#)].

To learn more about this gene and how you may be able to counteract its effects, check out the SelfDecode blog post on this gene [here](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
HTR2A	rs6313	GA	
NOS3	rs2070744	TC	

24



Transcutaneous Electrical Nerve Stimulation (TENS)

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Apply TENS unit electrode pads around the area in pain; begin with the device set to a low setting and gradually increase intensity to a comfortable level. Use the device for 15-30 minutes per session for pain relief, and it can be used multiple times a day as needed.

TYPICAL STARTING DOSE

30 minutes

Description

TENS is a therapy that uses low-level electrical currents to relieve pain by stimulating the nerves. It's commonly used as a non-invasive method to manage various types of pain, such as musculoskeletal pain or chronic pain conditions.

How it helps

TENS may reduce monthly headaches and painkiller use without causing adverse effects in people with migraines. However, the evidence of its effectiveness is mixed [[R](#), [R](#)].

25



Alpha-Lipoic Acid

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 600-1800 mg of alpha-lipoic acid daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

100 mg

Description

[Alpha-lipoic acid](#) is a natural antioxidant found in almost every cell in your body. People use alpha-lipoic acid to help with issues like skin aging, weight loss, and high blood sugar [\[R, R, R\]](#).

People use alpha-lipoic acid to help with [\[R, R, R, R\]](#):

- Complications of high blood sugar
- Skin aging
- Weight loss
- Carpal tunnel syndrome

How it helps

In 3 placebo-controlled trials of 178 migraine sufferers, supplementation with alpha-lipoic acid (600-800 mg/day) for 3-6 months reduced the number of migraine attacks (by half), the number of days of treatment in the previous month (by 3.4 days), and the severity of migraine attacks, antioxidant status (by 0.51 nmol/mL MDA), inflammatory status (by 0.15 mmol/L CRP), anxiety, stress, and depression [\[R, R, R\]](#).

Alpha-lipoic acid may also help in combination with flunarizine, as seen in a non-placebo-controlled trial of 60 adolescent migraine sufferers [\[R\]](#).

Alpha-lipoic acid may help by reducing inflammation and preventing sudden sugar spikes.

26



Tryptophan

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 500 mg of tryptophan supplement daily. This dosage can be taken all at once, preferably before bedtime to support sleep, or as directed by a healthcare professional.

TYPICAL STARTING DOSE

500 mg

Description

Tryptophan is an essential amino acid found in various protein-rich foods. It serves as a precursor for serotonin, a neurotransmitter that plays a role in mood regulation. Tryptophan is used in dietary supplements to potentially support mood and sleep disorders, although its effectiveness can vary among individuals.

[Tryptophan](#) is an amino acid. Your body uses it to make proteins and some hormones. **Humans can’t make tryptophan, so we need to get it from protein-rich foods** [\[R, R\]](#).

Your body uses tryptophan to make [serotonin](#) and [melatonin](#). **These brain chemicals are important for mood and sleep** [\[R, R\]](#).

An average adult needs at least **250-425 mg** of tryptophan per day, which is the amount you can get from [\[R\]](#):

- A pound of turkey or chicken
- Two cups of milk
- An ounce of canned tuna
- Two cups of oatmeal

Other foods high in tryptophan include **cheddar cheese, peanuts, pumpkin seeds, and seafood**. Most people get enough tryptophan from their diets, but supplements are also available [\[R, R\]](#).

How it helps

A study of 1,096 participants found that subjects who had a median intake of 0.84-1.06 g/day tryptophan had 2 to 2.5 times reduced odds of developing migraines when compared to those who consumed less than 0.56 g/day [\[R\]](#).

Tryptophan depletion (by consuming a drink without this amino acid) in healthy controls boosted dizziness, nausea, and the illusion of movement similar to those caused by migraines in a non-placebo-controlled trial of 76 people. Tryptophan depletion augmented headache in migraine sufferers and aggravated nausea in both migraine sufferers and controls in another non-placebo-controlled trial of 41 people [\[R, R\]](#).

People with migraines have chronically low serotonin levels. Tryptophan may help with migraines by serving as a building block for this neurotransmitter [\[R, R, R\]](#).

27



Keto Diet

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Adopt a diet that consists of about 70-80% fat, 10-20% protein, and 5-10% carbohydrates. Eliminate or significantly reduce the intake of sugar and starches like bread, pasta, rice, and potatoes, focusing instead on high-fat foods like meats, fatty fish, eggs, butter, and healthy oils, as well as low-carb vegetables like leafy greens. This dietary pattern should be maintained consistently for a period of at least 3-4 weeks to achieve ketosis, after which it can be adjusted based on individual goals and responses.

Description

The keto diet is a high-fat, low-carbohydrate eating plan designed to induce a state of ketosis in the body, where it primarily burns fat for energy. It is often used for weight loss and managing certain medical conditions.

The ketogenic diet, or the ‘keto’ diet, is rich in fat and restricts carb intake [\[R, R\]](#).

On the ketogenic diet, 50 g of carbs or less are consumed per day. Around 55-80% of the calories come from fat [\[R\]](#).

The ketogenic diet depletes the body of sugars like glucose. When people fast or eat very little carbs, the body makes less insulin. In response, the body starts using fat for energy.

When the body only uses fat for energy, molecules called ketones are formed. This state is called *ketosis*.

The ketogenic diet may help with:

- Seizures [\[R\]](#)
- Excess weight [\[R\]](#)
- Diabetes [\[R, R\]](#)

How it helps

In a non-placebo-controlled trial of 96 women with migraines, adopting a ketogenic diet improved attack frequency, number of days without headaches, and tablet intake during the first month, slightly worsened them during the second one, and continuously improved them over the following 4 months [\[R\]](#).

Similarly, a very-low-calorie ketogenic diet reduced migraine days (by 3.73), migraine attacks (by 3.02), and migraine severity by at least 50% in 74.28% of participants in a non-placebo-controlled trial of 35 overweight and obese migraine sufferers [\[R\]](#).

The ketogenic diet may help with migraines by:

- Promoting weight loss [\[R\]](#)
- Reducing insulin levels [\[R\]](#)
- Reducing brain inflammation [\[R\]](#)
- Reducing oxidative stress in the brain [\[R\]](#)
- Improving brain energy metabolism [\[R\]](#)

28



Dietary Tryptophan

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Increase your intake of tryptophan-rich foods in your daily diet. Examples include turkey, chicken, milk, cheese, yogurt, eggs, bananas, tofu, salmon, and nuts such as almonds and peanuts. Aim to incorporate these foods into at least one meal per day to meet the dietary recommendation for tryptophan.

Description

Tryptophan is an essential amino acid that plays a crucial role in serotonin production, contributing to mood regulation and sleep quality. Adequate tryptophan intake through diet supports emotional well-being and overall mental health.

[Tryptophan](#) is an amino acid, or a protein building block. **Humans can’t make tryptophan, so we need to get it from protein-rich foods** [\[R, R\]](#).

Your body uses tryptophan to make [serotonin](#) and [melatonin](#). **These brain chemicals are important for mood and sleep** [\[R, R\]](#).

An average adult needs at least **250-425 mg** of tryptophan per day, which is the amount you can get from [\[R\]](#):

- A pound of turkey or chicken
- Two cups of milk
- An ounce of canned tuna
- Two cups of oatmeal

Other foods high in tryptophan include **cheddar cheese, peanuts, pumpkin seeds, and seafood**. Most people get enough tryptophan from their diets, but supplements are also available [\[R\]](#).

How it helps

A study of 1,096 participants found that subjects who had a median intake of 0.84-1.06 g/day tryptophan had 2 to 2.5 times reduced odds of developing migraines when compared to those who consumed less than 0.56 g/day [\[R\]](#).

Tryptophan depletion (by consuming a drink without this amino acid) in healthy controls boosted dizziness, nausea, and the illusion of movement similar to those caused by migraines in a non-placebo-controlled trial of 76 people. Tryptophan depletion augmented headache in migraine sufferers and aggravated nausea in both migraine sufferers and controls in another non-placebo-controlled trial of 41 people [\[R, R\]](#).

People with migraines have chronically low serotonin levels. Tryptophan may help with migraines by serving as a building block for this neurotransmitter [\[R, R, R\]](#).

29



Hyperbaric Oxygen Therapy

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Schedule and attend sessions in a hyperbaric oxygen therapy chamber as your doctor prescribes, typically for about 60 to 90 minutes per session. The exact number of sessions required can vary based on the condition being treated, but it often ranges from 20 to 40 sessions, which may be conducted daily or a few times a week.

TYPICAL STARTING DOSE

90 minutes

Description

Hyperbaric oxygen therapy increases the amount of oxygen in the blood and tissues, which can help to improve circulation, reduce inflammation, and promote healing.

How it helps

A Cochrane review of 11 trials with 209 participants suggests that hyperbaric oxygen therapy may be beneficial for terminating acute migraine, while normobaric oxygen therapy could help with cluster headaches [\[R, R\]](#).

Hyperbaric oxygen therapy increases the amount of oxygen that reaches the brain, which can help decrease inflammation and alleviate migraine pain. It aids in vascular constriction, potentially reducing the frequency and severity of migraine attacks.

Please note: Hyperbaric oxygen therapy is a potentially dangerous procedure that should only be performed under medical supervision. People with pneumothorax or congestive heart failure are at especially high risk of adverse effects. Because highly concentrated oxygen can easily catch on fire, avoid potential fire sources around hyperbaric oxygen chambers, oxygen gas cylinders, tanks, and concentrators [\[R, R\]](#).

30



Cold Applications

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Apply a cold pack or a bag of frozen peas wrapped in a towel to the affected area for 15-20 minutes, every 2-3 hours during the first 48 hours of experiencing pain or swelling.

TYPICAL STARTING DOSE
15 minutes

Description

Cold applications, such as ice packs, can help reduce inflammation, alleviate pain, and promote muscle recovery after injuries or intense physical activity. Applying cold can provide temporary relief from discomfort and support the body's natural healing processes.

People use cold applications to relieve pain, reduce inflammation, and more [\[R, R\]](#).

Types of cold applications include [\[R, R\]](#):

- Ice packs
- Ice baths
- Cryotherapy

How it helps

A study proposed a mechanism for cold therapy in migraine treatment by cooling blood in intracranial vessels. A randomized trial confirmed reduced pain with a frozen neck wrap targeting carotid arteries, suggesting its efficacy [\[R\]](#).

An uncontrolled study investigated cold therapy for migraine. Twenty-six patients showed reduced headache severity after cold gel cap application, supporting its efficacy [\[R\]](#).

 PERSONALIZED TO YOUR GENES

The [DBH gene](#) codes for *dopamine beta-hydroxylase* (DBH), an enzyme that converts [dopamine](#) to [norepinephrine](#). Norepinephrine constricts blood vessels in the brain, which may prevent migraine [\[R, R\]](#).

Your genotype for [rs1611115](#) is associated with increased risk of migraines. The ‘C’ allele may produce lower levels of DBH, leading to decreased amounts of norepinephrine [\[R, R, R, R\]](#).

Applying a cold compress to the back of the neck may reduce the severity and duration of headaches, in part by increasing norepinephrine levels [\[R, R\]](#).

To learn more about this gene and how you may be able to counteract its effects, check out the SelfDecode blog post on this gene [here](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
DBH	rs1611115	CC	

31

Zinc

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Take a 15 mg zinc supplement daily, ideally with a meal to enhance absorption.

TYPICAL STARTING DOSE

10 mg

Description

Zinc is an essential mineral found in various foods, including meat, dairy, and nuts. It is crucial for immune function, wound healing, DNA synthesis, and maintaining healthy skin and nails. Zinc supplements are sometimes used to support immune health and manage zinc deficiencies.

[Zinc](#) is an essential mineral. Your body needs it to [\[R\]](#), [\[R\]](#):

- Defend against disease
- Protect DNA from damage
- Heal wounds
- Control blood sugar

Some of the best sources of zinc include **shellfish, pork, beef, and beans**. It is also available as a supplement [\[R\]](#).

Adults should get **8-11 mg of zinc** per day [\[R\]](#).

How it helps

In an 8-week placebo-controlled trial of 80 migraine sufferers, supplementation with zinc sulfate (220 mg/day) reduced the frequency of migraine attacks [\[R\]](#).

Similarly, supplementation with zinc gluconate (50 mg/day) for 12 weeks reduced the severity and frequency of migraine attacks in a placebo-controlled trial of 60 women with migraine [\[R\]](#).

Zinc may help by regulating neurotransmitter release and facilitating nerve signaling, thereby reducing headache frequency and severity.

32



Omega-3 (Fish Oil)

IMPACT1 / 5

EVIDENCE2 / 5

How to implement

Take 1-2 g of omega-3 (fish oil) supplement daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

500 mg

Description

Omega-3 fatty acids are essential fats found in fatty fish like salmon, flaxseeds, and walnuts. They are known for their potential cardiovascular and brain health benefits, including reducing the risk of heart disease and supporting cognitive function.

[Omega-3 fatty acids](#) are some of the healthiest fats we can eat. They help lower inflammation and protect the heart, brain, and eyes. Our bodies produce less omega-3s than we need for optimal health, so it's important to get enough through food or supplements [\[R\]](#), [\[R\]](#), [\[R\]](#).

There are three major types of omega-3s: ALA, EPA, and DHA [\[R\]](#), [\[R\]](#).

Fatty fish are rich in EPA and DHA. They include [\[R\]](#):

- Salmon
- Tuna
- Herring
- Sardines

For optimal protection, try to get at least **two servings of fatty fish per week**. Fish oil supplements are available for those who don't eat fish regularly [\[R\]](#).

How it helps

A meta-analysis of 11 trials found that the intake of dietary omega-3 fatty acids reduces migraine duration by 3.44 hours but has no effect on the frequency and severity of migraine attacks [\[R\]](#).

In 2 placebo-controlled trials of 219 migraine patients, supplementation with omega-3 fatty acids (1.254-6 g/day) for 8-16 weeks wasn't more effective than the placebo at reducing the frequency, duration, and severity of headaches [\[R\]](#), [\[R\]](#).

Conversely, omega-3 fatty acids used as an add-on to amitriptyline reduced the number of headache days per month by over 80% in 66.7% of the patients who took them (versus 33.3% in those taking placebo) in a placebo-controlled trial of 51 patients [\[R\]](#).

In a large non-placebo-controlled trial of 25,871 participants, both omega-3 fatty acids (1 g/day) and vitamin D (2,000 IU/day) failed to reduce migraine frequency or severity [\[R\]](#).

The combination of omega-3 fatty acids (2,500 mg) and nanocurcumin (80 mg) reduced the frequency, severity, and duration of migraine attacks, as well as the levels of TNF-alpha, IL-6, hs-CRP, ICAM-1, COX2, iNOS, and VCAM, in 5 placebo-controlled trials of 380 migraine patients [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Omega-3 fish oil supplements can help to reduce inflammation in the body, which may lessen the severity of migraine attacks.



PERSONALIZED TO YOUR GENES

The [ASTN2-AS1gene](#) is believed to be involved in the development of a region of the brain called the choroid plexus [\[R, R\]](#).

Your genotype for [rs6478241](#) is associated with migraines. The ‘A’ allele may increase levels of sVCAM1, a compound also associated with migraines [\[R\]](#).

Supplementing with [fish oil](#) (*omega-3*) may help with migraines by decreasing sVCAM1 levels in the brain [\[R, R, R\]](#).

To learn more about this gene and how you may be able to counteract its effects, check out the SelfDecode blog post on this gene [here](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
TRIM32	rs6478241	AA	

33



Omega-3 And Nano-Curcumin

IMPACT

1 / 5

EVIDENCE

2 / 5

How to implement

Take an omega-3 supplement of about 250-500 mg daily, combined with nano-curcumin in doses of 400-600 mg per day. These supplements should be consumed with meals to enhance absorption, and it is recommended to continue this regimen for at least 3 months to observe beneficial effects.

TYPICAL STARTING DOSE

250 mg

Description

Omega-3 fatty acids are essential fats found in fatty fish like salmon, flaxseeds, and walnuts. They are known for their potential cardiovascular and brain health benefits, including reducing the risk of heart disease and supporting cognitive function. Nano-curcumin is a highly bioavailable form of the spice turmeric, containing curcuminoids known for their anti-inflammatory and antioxidant properties.

How it helps

Omega-3 fatty acids can help reduce the frequency and severity of migraines by lowering inflammation and improving brain health. Nano-curcumin enhances this effect because of its potent anti-inflammatory properties and higher bioavailability, which means it's able to reach brain tissue more effectively.

A meta-analysis of 11 trials found that the intake of dietary omega-3 fatty acids reduces migraine duration by 3.44 hours but has no effect on the frequency and severity of migraine attacks [\[R\]](#).

In 2 placebo-controlled trials of 219 migraine patients, supplementation with omega-3 fatty acids (1.254-6 g/day) for 8-16 weeks wasn't more effective than the placebo at reducing the frequency, duration, and severity of headaches [\[R\]](#), [\[R\]](#).

Conversely, omega-3 fatty acids used as an add-on to amitriptyline reduced the number of headache days per month by over 80% in 66.7% of the patients who took them (versus 33.3% in those taking placebo) in a placebo-controlled trial of 51 patients [\[R\]](#).

In a large non-placebo-controlled trial of 25,871 participants, both omega-3 fatty acids (1 g/day) and vitamin D (2,000 IU/day) failed to reduce migraine frequency or severity [\[R\]](#).

The combination of omega-3 fatty acids (2,500 mg) and nanocurcumin (80 mg) reduced the frequency, severity, and duration of migraine attacks, as well as the levels of TNF-alpha, IL-6, hs-CRP, ICAM-1, COX2, iNOS, and VCAM, in 5 placebo-controlled trials of 380 migraine patients [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Please note: curcumin may interfere with iron absorption due to its iron-chelating properties, potentially exacerbating anemia or making it harder to manage. If you have anemia, consult your healthcare provider before using curcumin or turmeric supplements [\[R\]](#), [\[R\]](#), [\[R\]](#).

How to implement

TYPICAL STARTING DOSE

200 mg

Description

Magnesium sulfate, also known as Epsom salt, is used in baths and topical applications to soothe sore muscles, alleviate stress, and promote relaxation. It is believed to be absorbed through the skin, providing a calming effect on muscles and the nervous system.

How it helps

Magnesium Sulfate helps in the treatment of migraines by stabilizing the nerves in your brain, which prevents them from becoming overstimulated and leading to a migraine. It also relaxes blood vessels, potentially enhancing blood flow to the brain, which can help alleviate migraine symptoms.

In a trial with 30 migraine patients, intravenous magnesium sulfate reduced pain by 86.6%, lowered it by 13.4%, and stopped accompanying symptoms in 100% of patients compared to a placebo group. Subsequent administration confirmed magnesium sulfate's superiority in both response rate and pain-free rate [R].

In another study of 70 acute migraine patients, magnesium sulfate significantly decreased pain severity at various time intervals, showing faster and more effective relief than a dexamethasone/metoclopramide combination [R].

However, in a trial with 44 adults, combining intravenous metoclopramide and magnesium sulfate for migraine relief led to a smaller pain reduction compared to metoclopramide alone. This suggests a possible counterproductive effect of magnesium sulfate on metoclopramide's effectiveness, potentially related to cerebral vasodilatation. Note that the results may not be applicable to men due to the study's predominantly female population [R].

35



Yoga

IMPACT

1 / 5

EVIDENCE

2 / 5

How to implement

Practice yoga for at least 20 to 30 minutes a day, most days of the week. Choose a style that matches your fitness level and goals, and consider attending a class or using online resources to guide your practice.

TYPICAL STARTING DOSE

30 minutes

Description

Yoga is a mind-body practice that combines physical postures, breathing exercises, and meditation. It enhances flexibility, strength, and mental well-being and is used for stress reduction, relaxation, and overall health improvement.

[Yoga](#) combines breathing, stretching, and relaxation techniques. Practicing yoga may help [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Reduce [stress](#)
- Improve fitness
- Lower blood pressure and heart rate
- Manage pain

How it helps

In a non-placebo-controlled trial of 72 people suffering from migraines with aura, practicing yoga for 3 months reduced headache intensity, frequency, anxiety, depression, and painkiller use [\[R\]](#).

Similarly, yoga used as an add-on to conventional therapy reduced headache frequency, headache intensity, and painkiller use in a non-placebo-controlled trial of 114 migraine patients [\[R\]](#).

However, a meta-analysis of 5 trials found significant overall effects of yoga on headache frequency, headache duration, and pain intensity in people with tension headache but not migraines [\[R\]](#).

36

Acupressure

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Apply firm pressure on specific acupoints related to your condition using your fingers or a blunt object for 1-3 minutes. Repeat this process 2-3 times a day for several weeks to potentially observe improvements.

TYPICAL STARTING DOSE

1 minute

Description

Acupressure is a traditional Chinese healing technique that involves applying pressure to specific points on the body to promote relaxation, alleviate pain, and improve overall well-being.

How it helps

In a non-placebo-controlled trial of 98 patients suffering from chronic migraine with aura, the use of acupressure as an add-on to sodium valproate for 8 weeks reduced nausea but had no effects on pain or quality of life [R].

Acupressure may help by promoting relaxation and pain relief.

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Soy Isoflavones

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a soy isoflavone supplement containing 40 to 80 milligrams daily, ideally with food to improve absorption. This dosage can be continued on a daily basis for several months, but it's recommended to reevaluate its effectiveness and any potential side effects with a healthcare provider periodically.

TYPICAL STARTING DOSE

40 mg

Description

Soy isoflavones are natural compounds found in soybeans and soy products. They are phytoestrogens, which means they can mimic the effects of estrogen in the body and are associated with potential health benefits like menopausal symptom relief and improved heart health.

Soy is a common food in many cuisines around the world, especially Asian cuisines [\[R\]](#).

It's a great source of [\[R\]](#), [\[R\]](#):

- Plant-based protein
- Fiber
- Omega-3 fats
- Antioxidants (isoflavones)

Soy-based foods include [\[R\]](#):

- Tofu
- Tempeh
- Edamame
- Miso
- Natto

Soy protein and soy isoflavones are also available as supplements.

How it helps

In an 8-week randomized double-blind trial with 83 participants, daily 50 mg soy isoflavones significantly reduced migraine attack frequency, duration, CGRP levels, and improved quality of life compared to a placebo. Migraine severity and mental status did not show statistically significant changes [\[R\]](#).

38



Topical Anise

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Apply anise oil diluted with a carrier oil directly to the affected area of the skin, gently massaging in a circular motion. Use this mixture 1-2 times daily until symptoms improve. Avoid using pure anise oil undiluted to prevent irritation.

Description

Anise, an aromatic spice derived from the seeds of the Pimpinella anisum plant, is sometimes used topically for its potential to alleviate skin conditions such as itching and fungal infections. It may also have antimicrobial properties.

How it helps

In a placebo-controlled trial of 50 migraine patients, applying 2 cc of a cream with anise essential oil at the onset of migraine attacks reduced the frequency and duration of migraine attacks, as well as painkiller use [\[R\]](#).

Topical anise may help by reducing inflammation and relaxing the muscles.

39



Ginkgo

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 120 mg of Ginkgo supplement daily, preferably with meals to aid absorption. This dosage is typically split into two 60 mg doses taken in the morning and evening for best results.

TYPICAL STARTING DOSE

120 mg

Description

[Ginkgo](#) (*Ginkgo biloba*) is an ancient tree used in traditional Chinese medicine [\[R\]](#), [\[R\]](#).

According to limited evidence, ginkgo leaf extract may help with [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Anxiety
- Dementia
- Eye problems
- Blood vessel problems
- Vitiligo

How it helps

In 3 non-placebo-controlled trials of 105 patients with migraines, supplementation with ginkgolide B reduced the frequency and duration of migraine attacks [\[R\]](#), [\[R\]](#), [\[R\]](#).

Ginkgo may help by increasing blood flow to the brain and decreasing inflammation.

40



Music Therapy

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Engage in music therapy sessions for at least 30 minutes a day, three times a week. These sessions can involve listening to music, playing an instrument, singing, or writing songs, facilitated by a certified music therapist if possible.

TYPICAL STARTING DOSE
30 minutes

Description

Music therapy is a therapeutic approach that uses music to address physical, emotional, cognitive, and social needs. It can improve mental health, enhance emotional expression, and support overall well-being.

[Music](#) therapy is a form of therapy that involves making, reflecting on, and/or listening to music. It can be applied individually or in groups and may not require the presence of a therapist [\[R\]](#).

Music therapy provides tools for body relaxation and positive imagery. It aims to improve communication, quality of life, and well-being [\[R\]](#), [\[R\]](#).

How it helps

In a placebo-controlled trial of 58 primary school children with migraines, receiving music therapy for 12 weeks reduced headache frequency [\[R\]](#).

Music therapy may help by reducing stress levels, a common trigger for migraine attacks.

41



Autogenic Training

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Practice autogenic training for 10-15 minutes daily, ideally in a quiet, comfortable space where you won't be disturbed. Sit or lie down in a comfortable position, close your eyes, and focus on calming your mind and body through self-suggested affirmations. Repeat this routine daily for at least 2-3 months to observe beneficial effects on stress reduction and relaxation.

TYPICAL STARTING DOSE

10 minutes

Description

Autogenic training is a relaxation technique that involves self-suggestion and progressive muscle relaxation to promote relaxation, reduce stress, and alleviate symptoms of anxiety and tension.

Autogenic training is a relaxation technique that a person may carry out on their own [\[R, R\]](#).

Autogenic training uses 6 exercises that take the mind’s attention to bodily sensations such as warmth and heaviness. The exercises involve guided imagery and verbal cues (e.g. "My arm is very heavy") to [\[R, R\]](#):

- Relax the body
- Quiet and calm the mind
- Increase energy

How it helps

Autogenic training, a mind-body technique, helps manage migraines by reducing your body's response to stress, as higher stress can trigger migraines. This technique may help decrease the frequency and intensity of your migraines by promoting relaxation and easing tension.

In a non-placebo-controlled trial of 32 patients with migraines and 21 healthy controls, biofeedback-assisted autogenic training improved the symptoms and decreased anxiety and depression scores. In a non-placebo-controlled trial of 30 children with migraines, 50% of those receiving autogenic training were symptom-free after 6 months [\[R, R\]](#).

42



Low-Level Laser Therapy (LLLT)

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Use a low-level laser therapy device, as directed by its manual or a healthcare professional, on the affected area. Generally, treatment involves applying the laser for a specified duration, often between 30 seconds to several minutes, per treatment area. Sessions can be conducted 2-3 times per week for a period of 4-12 weeks, depending on the condition being treated and the device used.

TYPICAL STARTING DOSE

30 seconds

Description

Low-level laser therapy (LLLT), also known as photobiomodulation, is a type of light therapy that uses low-intensity lasers to promote healing. It has been shown to be effective in treating a variety of conditions, including pain, inflammation, and wound healing.

How it helps

Low-Level Laser Therapy (LLLT) helps to reduce migraines by lowering the inflammation and promoting nerve cell function. When applied to the head, it can reduce migraine intensity and frequency.

A clinical trial with 36 chronic migraine patients showed that botulinum toxin A (BT-A) and low-level laser therapy (LLLT) reduced headache days, pain intensity, and acute medication usage. BT-A reduced anxiety, while LLLT improved sleep. Both treatments are effective for chronic migraine with no significant differences [\[R\]](#).

43



Topical Basil

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Apply a thin layer of basil essential oil diluted in a carrier oil, such as coconut or olive oil, to the affected area of the skin. Use a ratio of 1 drop of basil oil to 3 drops of carrier oil. Apply twice daily until symptoms improve.

Description

Basil oil, extracted from the basil plant, is occasionally used topically for its potential antibacterial and anti-inflammatory properties. It may help soothe skin irritation and support overall skin health.

How it helps

In a placebo-controlled trial of 144 migraine patients, applying topical basil essential oil (2-6%) every 8 hours for 3 months reduced the severity and frequency of migraine attacks in a dose-dependent manner [\[R\]](#).

Topical basil releases compounds that relax the muscles and blood vessels. This reduces their constriction, which may cause help prevent migraines.

44



Progressive Muscle Relaxation

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Set aside at least 10-15 minutes daily in a quiet, comfortable spot where you won't be disturbed. Start by tensing the muscles in your feet for 5 seconds, then relax for 30 seconds, and progressively work your way up through the major muscle groups of your body, tensing then relaxing each for 5 and 30 seconds respectively.

TYPICAL STARTING DOSE

10 minutes

Description

Progressive Muscle Relaxation is a relaxation technique involving the systematic tensing and releasing of muscle groups to reduce muscle tension, stress, and anxiety. Regular practice can lead to improved physical and mental relaxation.

Progressive muscle relaxation is a relaxation technique focused on releasing muscle tension. In this technique, you focus on tensing and relaxing different parts of your body, one after the other, to relieve stress [R](#), [R](#)].

It is common to start with the toes and slowly work your way up to the neck and head. Try to focus on a single muscle group at a time (for example, the calf muscles). Tense these muscles for 5-10 seconds, then relax for 20-30 seconds before moving on to the next muscle group [R](#), [R](#)].

How it helps

Progressive muscle relaxation helps reduce migraines by reducing tension in the muscles and promoting relaxation. This practice can lessen the physical stress that often triggers migraine attacks.

In a non-placebo-controlled trial of 35 migraine patients and 46 healthy controls, participating in a 6-week progressive muscle relaxation training reduced migraine frequency and altered cortical information processing. A smartphone-delivered progressive muscle relaxation intervention had small-to-moderate beneficial effects on the Migraine Disability Assessment Scale score in a non-placebo-controlled trial of 139 patients with migraines [R](#), [R](#)].

45



Vitamin E

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 200 IU of Vitamin E daily as a supplement, preferably with a meal that contains fat to enhance absorption.

TYPICAL STARTING DOSE

200 iu

Description

Vitamin E is a fat-soluble antioxidant found in various foods, such as nuts and seeds. It is known for its ability to protect cells from oxidative damage, support immune function, and may play a role in skin health. Vitamin E supplements are used to bolster antioxidant defenses and may be beneficial for conditions related to oxidative stress.

[Vitamin E](#) is an antioxidant important for the immune system and for heart health [\[R\]](#).

Plant-based foods have the most vitamin E. These include [\[R\]](#):

- Wheat germ
- Sunflower seeds
- Almonds
- Plant oils

Adults need about **15 mg** of vitamin E per day [\[R\]](#).

How it helps

Vitamin E can aid in treating migraines by reducing inflammation and promoting blood flow, which relieves headache pain. Additionally, Vitamin E helps stabilize your body's hormonal balance, which is particularly useful if hormonal imbalances are triggering your migraines.

In a study, 72 women with menstrual migraine received placebo or vitamin E (400 IU) daily for five days during their periods. There were statistically significant differences in the pain severity and functional disability scales between the placebo and the vitamin E treatments. Vitamin E effect was also superior to placebo regarding photophobia, phonophobia, and nausea [\[R\]](#).

Please note: *While dietary vitamin E is generally considered safe, vitamin E supplements have been linked to prostate cancer. They may also not be the best option for pregnant people. Those who have heart disease, bleeding disorders, or other conditions may also need to avoid them. Consult your doctor before taking vitamin E supplements [\[R\]](#).*



PERSONALIZED TO YOUR GENES

The [ASTN2-AS1](#) gene is believed to be involved in the development of a region of the brain called the choroid plexus [\[R, R\]](#).

Your genotype for [rs6478241](#) is associated with migraines. The ‘A’ allele may increase levels of sVCAM1, a compound also associated with migraines [\[R\]](#).

Increasing your dietary intake of [vitamin E](#) may help reduce sVCAM1 levels [\[R, R, R\]](#).

To learn more about this gene and how you may be able to counteract its effects, check out the SelfDecode blog post on this gene [here](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
TRIM32	rs6478241	AA	

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Mindfulness

IMPACT



EVIDENCE



How to implement

Set aside 5-10 minutes each day to practice mindfulness meditation. Find a quiet place, assume a comfortable seated position, close your eyes, focus on your breathing, and observe your thoughts and sensations without judgment.

TYPICAL STARTING DOSE
30 minutes

Description

Mindfulness involves paying focused and non-judgmental attention to the present moment. It can reduce stress, improve emotional regulation, and enhance overall mental clarity and well-being.

Mindfulness is the practice of being aware of the present moment. When practicing mindfulness, a person acknowledges their thoughts, feelings, and sensations without any judgment [\[R\]](#).

Mindfulness and other types of [meditation](#) may improve [\[R\]](#):

- Weight and anxiety
- Low mood
- Sleep disturbances
- Pain
- High blood pressure

How it helps

Practicing mindfulness can help manage migraines by reducing stress, a common migraine trigger, and by teaching the body to respond differently to pain. By focusing on the present and controlling stress and emotions, it can minimize the severity and frequency of migraines.

In a study comparing chronic migraine patients, 15 received pharmacological prophylaxis and 14 had mindfulness-based treatment. At 12 months, both groups showed significant improvements in headache frequency, medication intake, and catecholamine levels. No changes in elusive amines were noted. This supports mindfulness-based treatment's efficacy in migraine care, indicating a potential link between tyrosine metabolism and migraine progression and remission [\[R\]](#).

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L-Carnitine

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 500 mg of L-carnitine supplement daily with a glass of water, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

500 mg

Description

L-carnitine is an amino acid-like compound that plays a role in energy metabolism and helps prevent toxic substances from building up in cells. It is often used in dietary supplements for its potential to support muscle recovery, reduce fatigue, and enhance athletic performance.

[L-carnitine](#) is a compound that helps you burn fat. It also prevents toxic substances from building up in cells [\[R\]](#).

Your body can usually make enough carnitine to meet its needs. You can also get it from **meat and dairy products** [\[R\]](#).

People use L-carnitine for [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Heart problems
- Overactive thyroid
- Fertility problems
- Blood sugar control
- Weight control

How it helps

In a non-placebo-controlled trial of 133 migrainous patients, supplementation with L-carnitine (500 mg/day) prevented migraine attacks. L-carnitine worked better in combination with magnesium oxide [\[R\]](#).

L-carnitine may help by enhancing brain energy metabolism and reducing inflammation.

48



Lavender Essential Oil

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Add 2-3 drops of lavender essential oil to a diffuser filled with water and use it for aromatherapy. Alternatively, you can mix a few drops with a carrier oil like coconut oil and apply it topically to your temples or wrists before bedtime. Use daily for best results.

TYPICAL STARTING DOSE

2 drops

Description

Lavender essential oil is known for its calming and soothing properties. It is often used in aromatherapy to reduce stress and anxiety, promote relaxation, and improve sleep quality.

[Lavender](#) is a decorative flower and a calming herb [\[R\]](#). People use it to:

- Reduce anxiety [\[R\]](#)
- Improve sleep quality [\[R, R\]](#)
- Relieve pain [\[R, R\]](#)

Lavender is available as an **oral supplement** or as an **essential oil for aromatherapy** [\[R\]](#).

How it helps

In a placebo-controlled trial of 47 patients with migraines, inhaling lavender essential oil for 15 minutes reduced headache severity [\[R\]](#).

Lavender essential oil may help by reducing anxiety and promoting relaxation.

49

Neurofeedback

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Attend neurofeedback sessions with a trained therapist, usually once or twice a week, for a minimum of 20 sessions. Each session typically lasts 30 to 60 minutes where sensors are placed on your scalp to monitor brainwave activity, and feedback is given in real-time to help you learn to control or alter your brain functions.

TYPICAL STARTING DOSE

1 hour

Description

Neurofeedback is a therapeutic technique that helps individuals regulate brain activity, potentially improving focus, reducing anxiety, and enhancing cognitive function by providing real-time feedback on brainwave patterns.

How it helps

Out of 71 migraine patients, 46 opted for neurofeedback training, resulting in 54% experiencing complete migraine cessation, and 39% seeing a more than 50% reduction in frequency. In contrast, the 25 patients who continued drug therapy had no change (68%), less than 50% reduction (20%), or more than 50% reduction (8%) in migraine frequency [\[R\]](#).

Neurofeedback uses real-time displays of brain activity to teach self-regulation of brain function, potentially adjusting the imbalances that cause migraines. By training your brain to change these specific patterns, it may reduce the frequency and severity of your migraines.

50

Self-Hypnosis

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Practice self-hypnosis for 20-30 minutes daily. Find a quiet, comfortable place where you won't be disturbed. Close your eyes, take deep breaths, and focus on positive affirmations or imagery that addresses your specific needs, such as reducing stress or pain management.

TYPICAL STARTING DOSE

20 minutes

Description

Self-hypnosis involves using relaxation techniques and focused attention to enter a state of heightened suggestibility, often for the purpose of self-improvement or managing certain conditions like stress or pain.

How it helps

In a placebo-controlled trial of 28 children with migraines, learning self-hypnosis for 3 months decreased headache frequency but not headache severity [\[R\]](#).

Self-hypnosis may help by promoting relaxation and stress reduction, which are known to be triggers. Moreover, it may stimulate the body's pain control mechanism, thereby reducing discomfort during a migraine attack.

51



Apigenin

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 50-100 mg of apigenin supplement daily, preferably with a meal to enhance absorption. This dosage is suggested based on studies for general health benefits and should be continued as long as it contributes positively to your well-being, or as directed by a healthcare professional.

TYPICAL STARTING DOSE

50 mg

Description

Apigenin is a flavonoid compound found in various plants, including parsley, chamomile, and celery. Its potential health benefits include anti-inflammatory and antioxidant properties.

How it helps

In a placebo-controlled trial of 72 patients with migraines without aura, applying a chamomile cream with 0.233 mg/g apigenin reduced pain, nausea, vomiting, photophobia, and phonophobia after 30 minutes [R].

Apigenin may help through its anti-inflammatory properties.

52



Cinnamon

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a 1 g cinnamon supplement once daily, ideally with a meal to aid absorption. This can be in the form of a capsule or tablet. Continue this regimen as long as it aligns with your health goals and under the guidance of a healthcare provider.

TYPICAL STARTING DOSE

500 mg

Description

Cinnamon is a popular spice that may have various health benefits, including improving blood sugar control, reducing inflammation, and providing antioxidants. It's commonly used in both culinary and herbal applications.

[Cinnamon](#) is a spice made from the bark of *Cinnamomum* trees. Cinnamon can [\[R\]](#):

- Decrease inflammation
- Fight [oxidative stress](#)
- Kill microbes

Cinnamon is mainly used in cooking and fragrances. **As a natural remedy, people use cinnamon to reduce blood sugar** [\[R\]](#).

There are two main types of cinnamon [\[R\]](#):

- Ceylon or ‘true’ cinnamon (*Cinnamomum verum*)
- Chinese or Cassia cinnamon (*Cinnamomum cassia*)

How it helps

In a placebo-controlled trial of 50 migraine patients, receiving oral cinnamon powder (600 mg, 3x/day) for 2 months significantly decreased the frequency, severity, and duration of migraine attacks, as well as the blood levels of IL-6 and NO [\[R\]](#).

Cinnamon may help by improving blood circulation to the brain and reducing inflammation.

53

Topical Peppermint Oil

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Apply 2-3 drops of peppermint oil diluted in a carrier oil (such as coconut or jojoba oil) directly to the area of concern. Do this no more than 2-3 times daily. Always perform a patch test on a small area of your skin first to check for any adverse reactions.

Description

Peppermint oil, extracted from the peppermint plant, is used topically for its cooling and soothing properties. It can provide relief from headaches, muscle aches, and skin irritations when applied to affected areas.

How it helps

In a placebo-controlled trial of 120 migraine sufferers, intranasal peppermint essential oil drops (1.5%) reduced pain intensity in 42% of the patients. Its effectiveness was comparable to that of lidocaine [\[R\]](#).

A topical solution with peppermint oil (10% menthol) reduced pain, nausea, vomiting, phonophobia, and photophobia in another placebo-controlled trial of 35 migraine patients [\[R\]](#).

Topical peppermint oil may help by blocking pain signals.

54



Topical Menthol

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

To use topical menthol, apply a small amount of the medication to the affected area and rub it in gently. You can repeat this application as needed, but do not use more than the recommended amount. Topical menthol can cause side effects, such as skin irritation, redness, and itching.

Description

Topical menthol is a type of over-the-counter medication that can be used to relieve pain and inflammation. It is available in a variety of forms, including creams, ointments, and patches. Topical menthol works by cooling the skin, which can help to reduce pain and inflammation.

How it helps

A study investigated 10% menthol solution's efficacy in migraine treatment. Menthol showed superiority over placebo in pain relief, sustained relief, and symptom alleviation, suggesting it as a safe and effective option [R].

 PERSONALIZED TO YOUR GENES

The [TRPM8](#) gene codes for the major cold-sensing receptor in our bodies. It responds to both cold temperatures and to *menthol*, a compound found in mint [R].

Your genotype has been associated with increased incidence of migraines [R, R].

Applying [menthol](#) patches to the skin around the forehead may disrupt a migraine in progress through their effect on *TRPM8* [R].

To learn more about this gene and how you may be able to counteract its effects, check out the SelfDecode blog post on this gene [here](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
TRPM8	rs10166942	TT	

55



Palmitoylethanolamide (PEA)

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

For managing pain and inflammation, take 300mg to 1,200mg of palmitoylethanolamide (PEA) in divided doses throughout the day, preferably with meals to enhance absorption. This regimen should be followed for at least 6 weeks to evaluate its effectiveness.

Description

Palmitoylethanolamide (PEA) is a naturally occurring fatty acid amide. It is a compound found in various tissues of animals, including humans. PEA has been a supplement for the past couple of decades, and is utilized for its potential anti-inflammatory and pain-relieving properties.

[Palmitoylethanolamide](#) (PEA) is a compound naturally made by the body to help combat inflammation [\[R\]](#).

It’s also made by plants and other animals. Good sources of PEA include [\[R\]](#):

- Soy lecithin
- Soybeans
- Egg yolk
- Peanuts

How it helps

In an uncontrolled trial of 61 children with migraines, supplementation with PEA (600 mg/day) for 3 months reduced headache frequency by >50% per month in 63.9% of the patients, the number of monthly attacks (by 7.4), attack intensity, and the percentage of patients with severe attacks (from 8.2% to 1.6%) [\[R\]](#).

PEA reduces inflammation and pain signaling in the body, which are key contributors to migraines.

56



Cupping Therapy

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

To practice cupping therapy as part of your lifestyle, schedule sessions with a qualified therapist once or twice a month to address specific concerns or for general wellness. Each session usually lasts between 5 to 15 minutes. Consistent treatment over several months may yield the best results.

TYPICAL STARTING DOSE

15 minutes

Description

Cupping therapy is an alternative therapy that involves placing cups on the skin to create suction. Some believe it may help with pain relief and muscle tension.

How it helps

Cupping therapy can help relieve migraines by improving blood flow and releasing toxins in the areas where the cups are applied, which can potentially reduce the severity and frequency of migraines. But please be aware--this is a complementary therapy--it should never replace traditional medical treatments.

In a non-placebo-controlled trial of 109 patients with migraines, wet cupping therapy reduced pain and disability. Continuous therapy for 12 months was more effective than receiving 3 single sessions [\[R\]](#).

57



Chasteberry

IMPACT

0 / 5

EVIDENCE

1 / 5

How to implement

Take 150-500 mg of chasteberry extract daily, ideally in the morning to align with the body's natural hormonal rhythms. This dose is typically recommended for a duration of at least three months to evaluate its effectiveness on symptoms.

TYPICAL STARTING DOSE

150 mg

Description

Chasteberry, also known as chaste tree or Vitex, is an herb commonly used to support women's health, particularly in addressing symptoms of premenstrual syndrome (PMS) and hormonal imbalances. It may help regulate the menstrual cycle and alleviate some PMS symptoms.

Chasteberry is the fruit of the chaste tree (*Vitex agnus-castus*), a plant native to Europe and Asia [\[R\]](#), [\[R\]](#).

Early studies note that chasteberry may help with menstrual problems [\[R\]](#).

How it helps

In an uncontrolled trial of 100 women with migraines, supplementation with chasteberry (40 mg/day) for 3 months reduced the frequency of monthly attacks by at least 50% in 42% of the patients and the number of monthly days with headaches by at least 50% in 57% of the patients [\[R\]](#).

Chasteberry regulates hormones that might help reduce the frequency and severity of hormonally-triggered migraines.

58



5-HTP

IMPACT

0 / 5

EVIDENCE

1 / 5

How to implement

Take 100 mg of 5-HTP as a supplement daily, ideally with a glass of water. It can be taken at any time of the day but taking it at the same time each day may help establish a routine.

TYPICAL STARTING DOSE
100 mg

Description

5-HTP is a building block for serotonin. 5-HTP and serotonin help make melatonin, a hormone that promotes sleep. People mainly use 5-HTP as a mood-boosting supplement. It may also help reduce appetite, help with chronic pain and fatigue, and improve sleep quality.

5-HTP is a building block for the “happiness hormone” [serotonin](#). 5-HTP and serotonin help make [melatonin](#), a hormone that promotes sleep [\[R\]](#).

People mainly use 5-HTP as a mood-boosting supplement [\[R, R\]](#). According to early research, it may also:

- Reduce appetite [\[R, R, R\]](#)
- Help with chronic pain and fatigue [\[R, R, R\]](#)
- Improve sleep quality [\[R, R\]](#)

Please note: 5-HTP can interact with SAM-e, St. John’s wort, and different medications. Combining it with antidepressants can be dangerous and even life-threatening. Never take 5-HTP without consulting your doctor [\[R, R, R\]](#).

How it helps

In a non-placebo-controlled trial of 24 migraineurs, 5-HTP was almost as effective as methysergide at reducing the intensity and duration of migraine attacks and caused fewer adverse effects [\[R\]](#).

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Maintain Optimal Vitamin D Levels

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Check your vitamin D levels, they should ideally be in the 30-66 ng/mL range. If your levels are lower than that, take a vitamin D supplement, 1000-4000 IU daily, to reach an optimal range.

TYPICAL STARTING DOSE
1000 iu

Description

Vitamin D, often referred to as the "sunshine vitamin," can be synthesized by the skin when exposed to sunlight, as well as being found in fish, eggs, and fortified milk. It helps regulate calcium absorption, promoting strong bones and a healthy immune system. Vitamin D deficiency can lead to conditions like rickets in children and osteoporosis in adults.

Your body needs [vitamin D](#) for strong bones. Vitamin D also plays a role in [\[R\]](#):

- Mood
- Immunity
- Heart health
- Blood sugar control

[Sunlight](#) is our main source of vitamin D. Experts recommend getting at least **5-15 minutes of midday sun, 2-3 times per week**. People with darker skin and those living at high latitudes may need longer periods of sun exposure [\[R\]](#), [\[R\]](#).

Foods like fish, eggs, and fortified milk provide small amounts of vitamin D. **People lacking vitamin D should consider taking a supplement** [\[R\]](#).

How it helps

Genetically predicted higher vitamin D levels may be associated with a lower risk of migraines [\[R\]](#).

Vitamin D may help by regulating various bodily functions including inflammation and nerve functioning.

Please note: *There is no evidence from controlled clinical trials to support this recommendation. It is included based on uncontrolled clinical trials, animal or cell studies, or non-scientific criteria. Please take this recommendation with a grain of salt until more research is available.*

60



Avoid Calcium Supplements

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Do not purchase or consume any calcium supplements. If you're currently using them, discontinue use immediately and do not replace them with another form of calcium supplement. Ensure that your calcium needs are met through dietary sources such as dairy products, leafy green vegetables, or fortified foods instead.

Description

Calcium supplements are pills people take to increase their calcium levels. But sometimes, instead of helping, they can lead to kidney stones and heart issues. Therefore, it's generally healthier to get your calcium from food like milk, cheese, and leafy green vegetables.

How it helps

Genetically elevated serum calcium over a lifetime appears to increase the risk for migraines [\[R\]](#).

Please note: calcium competes with iron for absorption in the intestines, potentially exacerbating anemia or making it harder to manage. If you have anemia, consult your healthcare provider before using calcium supplements.

61



SAM-e

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take 400-1600 mg of SAM-e as a supplement daily, preferably on an empty stomach to enhance absorption. It is often recommended to start with low dosage and observe how your body responds over a few weeks, adjusting as necessary under the guidance of a healthcare provider.

TYPICAL STARTING DOSE

400 mg

Description

SAM-e is a chemical that helps maintain liver and brain health. Your body makes SAM-e from the amino acid *methionine*, but it’s also available as a supplement [\[R\]](#).

SAM-e supplementation may help with:

- Joint pain [\[R\]](#)
- Liver disease [\[R\]](#)
- Depression [\[R\]](#)

Please note: SAM-e may not be safe for people with a bipolar disorder. It may also interact with 5-HTP, St. John’s wort, and different medications. Combining it with antidepressants can be dangerous and even life-threatening. Never take SAM-e supplements without consulting your doctor [\[R\]](#), [\[R\]](#), [\[R\]](#).

How it helps

SAM-e, also known as S-adenosylmethionine, is a compound that helps regulate many bodily functions and is believed to assist in managing migraines. It may work by reducing inflammation and pain perception, thereby potentially reducing the severity and frequency of migraines.

The long-term administration of a methyl donor (S-adenosylmethionine, SAM) relieves pain in migraine sufferers. The benefit arises gradually and long-term treatment is required for therapeutic effectiveness. Since SAM is an almost ubiquitous methyl donor in many biological systems, an explanation of this peculiar therapeutic effect is only speculative. The activity of SAM on 5-hydroxytryptamine turnover is the most reasonable interpretation of the results [\[R\]](#).

Next Steps

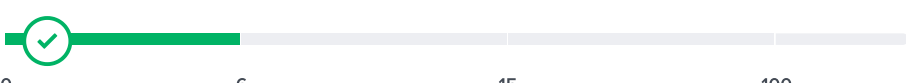
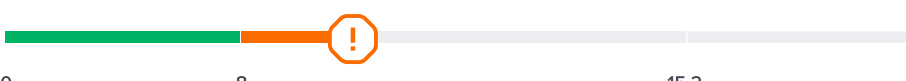
Remember, your genes only tell one important part of your health story!

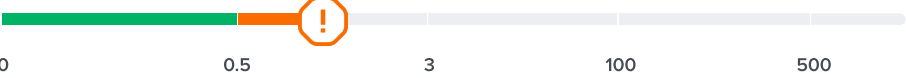
Now that you've seen your DNA-based results for this health topic, let's take a look at other contributing factors.

Your lab results

Your lab results are impacted by the combined effect of your genes, environment and lifestyle.

Lab tests will give you the best picture of your current health status, while your genes provide insight into your health predispositions and which recommendations are best for you.

	T4 Free (FT4)	1.26 ng/dL		9 Nov 2025
	TSH	2.76 mIU/mL		9 Nov 2025
	ESR	1 mm/hr		9 Nov 2025
	Zinc	17.12 umol/L		9 Nov 2025
	Ferritin	102.2 ng/mL		9 Nov 2025
	T4 (Thyroxine), Total	7.27 mcg/dL		9 Nov 2025
	Vitamin B12	687 pg/mL		9 Nov 2025
	Prolactin	9.83 ng/mL		9 Nov 2025
	Sodium	137 mmol/L		9 Nov 2025

	Magnesium	2.17 mg/dL		9 Nov 2025
	Vitamin D, 25-Hydroxy, Total	58.59 ng/mL		9 Nov 2025
	T3, Free (FT3)	3.34 pg/mL		9 Nov 2025
	Hemoglobin	17.1 g/dL		9 Nov 2025
	Homocysteine	12.84 umol/L		9 Nov 2025
	hs-CRP	1.6 mg/L		9 Nov 2025
	T3 Total	0.95 ng/mL		9 Nov 2025
	Calcium	9.2 mg/dL		9 Nov 2025
	Iron	228 mcg/dL		9 Nov 2025

Your Lifestyle Assessments

Ever heard of the term Nature vs. Nurture?

The thing is, both DNA and environment play a role in determining your health risks. The following assessments shows how much of an impact your lifestyle, environment and medical history are having on your health risks.

✓

LIFESTYLE

You have a **reduced risk** of migraines based on the answers you provided.

Your Lifestyle Risk

Low

Decreased

Average

Increased

High

Factors impacting your risk:

In a typical week, how many times do you participate in any physical activities or exercise for 30 minutes at a time? (such as walking, running, bike riding, weight training, yoga, etc.)	Decreasing Risk ✓
*Note: longer exercise equals more sessions (e.g., 1 hour = 2 sessions) 8 or more	
Do you often experience periods of low mood?	Decreasing Risk ✓
No	
On a scale of 1 to 5, how would you rate the amount of stress in your life in the past month (at home and at work)?	Decreasing Risk ✓
2	
Your BMI:	Decreasing Risk ✓
22.77	
What is your current employment status?	Decreasing Risk ✓
Self-employed	
What is your sex?	Decreasing Risk ✓
Male	
What is your height?	No impact −
165 cm	
What is your current weight?	No impact −
62.0 kg	