SelfDecode™

Psychedelics Genetic Report

Summary Report

REPORT CATEGORIES

MENTAL HEALTH

DETOX

Sample Client

Report date: 01 August 2025

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Personal information

NAME

Sample Client

SEX AT BIRTH

Male

HEIGHT

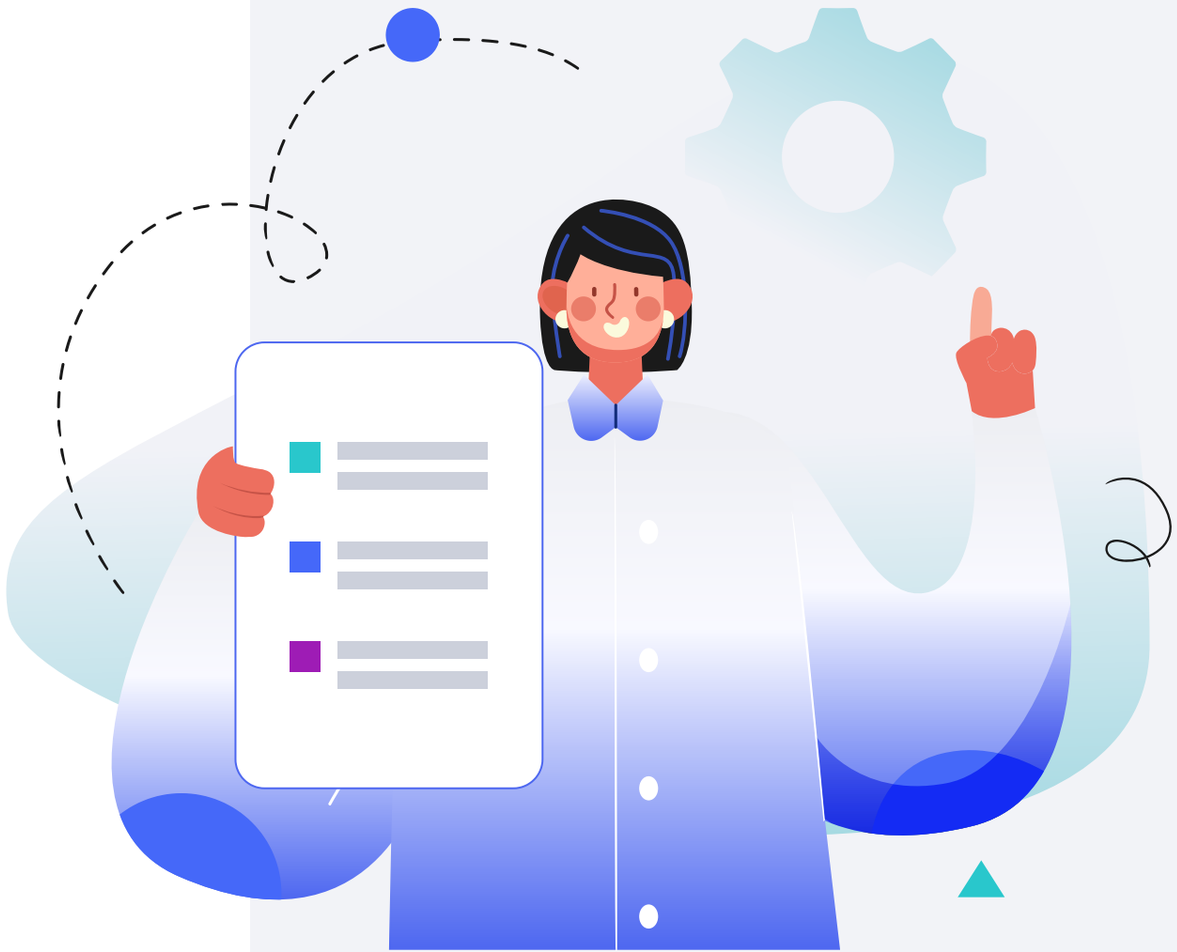
5ft 9" 175.0cm

WEIGHT

165lb 75.0kg

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.



Summary

Psychedelic experiences and their impact on the brain are influenced by a complex interplay of genetics, environment, and lifestyle. Understanding your unique genetic profile can help you navigate these experiences more safely and effectively.

This comprehensive report explores the genes that affect how your body metabolizes psychedelics, your sensitivity and response to these compounds, and your genetic predisposition to mental health risks from their misuse. By uncovering how your genes influence these critical areas, you gain valuable insights to make informed, personalized decisions about psychedelic use and mental wellness.

In this report, you'll learn about your genetics in areas such as:

- Response to psychedelics such as ketamine and cannabis
- Metabolism of psychedelic substances
- Genetic risks related to mental health, especially schizophrenia

Armed with this knowledge, you can approach psychedelic experiences with greater awareness and take proactive steps to support your mental and emotional well-being.

This summary report contains:

22 Genetic Results

50 Recommendations

Overview of Your Results

Psychedelics Response

SLIGHTLY LOWER LEVELS
BDNF
Relatively lower BDNF levels

INCREASED
Psychedelic Effects of THC (Functional)
Predisposed to increased psychedelic effects of THC

TYPICAL ACTIVITY
HTR2A (Serotonin)
Likely typical HTR2A activity

TYPICAL ACTIVITY
CNR1 (Cannabinoids)
Likely typical CNR1 activity

TYPICAL
Response to Ketamine
Predisposed to a typical response to ketamine

Psychedelics Metabolism

LOWER ACTIVITY
CYP2D6 (Mental Health, Detox)
Predisposed to a lower CYP2D6 activity

TYPICAL ACTIVITY
CYP2B6 (Drug Metabolism)
Predisposed to a typical CYP2B6 activity

TYPICAL METABOLIZER
CYP2C9 (Detox)
Likely a typical metabolizer

EXTENSIVE METABOLIZER
CYP2C19 (Detox)
Likely an extensive metabolizer

TYPICAL ACTIVITY
CYP3A4 (Detox)
Likely typical CYP3A4 activity

LOWER ACTIVITY
FAAH (Cannabinoids)
Likely lower FAAH activity

Mental Health Risk

MORE LIKELY

Bipolar Disorder

More likely to get bipolar disorder

MORE LIKELY

THC and Psychosis

More likely to experience psychotic symptoms from cannabis use

MORE LIKELY

Borderline Personality

More likely to have BPD

MORE LIKELY

Psychological Trauma

More likely to have PTSD

MORE LIKELY

Non-Epileptic Seizures

More likely to have non-epileptic seizures

TYPICAL LIKELIHOOD

Schizophrenia

Typical likelihood of schizophrenia

TYPICAL LIKELIHOOD

Anxiety

Typical likelihood of anxiety

TYPICAL LIKELIHOOD

Panic Attacks

Typical likelihood of having panic attacks

TYPICAL LIKELIHOOD

Seizures

Typical likelihood of having seizures

Mental Health Genes

LOWER ACTIVITY

DISC1 (Mental Health)

Predisposed to a lower DISC1 activity

TYPICAL ACTIVITY

NRG1 (Mental Health)

Predisposed to a typical NRG1 activity

Recommendations Overview

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
1	Omega-3 (Fish Oil)	500 mg
2	Cognitive-Behavioral Therapy (CBT)	
3	Yoga	30 minutes
4	Mindfulness	30 minutes
5	Art Therapy	1 hour
6	Meditation	30 minutes
7	Acceptance and Commitment Therapy (ACT)	
8	Psychotherapy	1 hour
9	Dance	30 minutes
10	Dietary Omega-3 Fatty Acids	
11	Sunlight Exposure	20 minutes
12	Vitamin C	500 mg
13	Mindfulness-Based Stress Reduction (MBSR)	2 hours
14	Dark Chocolate	
15	Tryptophan	500 mg
16	Lithium Orotate	5 mg
17	Nuts	3 oz
18	Whole Grains	
19	Mindfulness Meditation	30 minutes
20	Ginkgo	120 mg
21	Curcumin	500 mg
22	D-Mannose	2 g
23	Attention Bias Modification	10 minutes
24	Mindfulness-Based Cognitive Therapy (MBCT)	2 hours
25	Bacopa	300 mg
26	Cocoa	
27	Green Tea	400 mg
28	Spend Time in Nature	2 hours
29	Music Therapy	30 minutes
30	Biofeedback	

31	Pet Therapy	30 minutes	32	EFT Tapping	20 minutes
33	Transcendental Meditation	20 minutes	34	Applied Relaxation	30 minutes
35	Resistant Starch	40 g Hi-Maize	36	Lavender Essential Oil	2 drops
37	Strength Training	1 hour	38	DHA (Omega-3)	200 mg
39	Diaphragmatic Breathing	10 minutes	40	Kundalini Yoga	1 hour
41	Morning Bright Light Therapy	20 minutes	42	N-Back Training	20 minutes
43	Progressive Muscle Relaxation	10 minutes	44	Dietary Zinc	
45	Galphimia	350 mg	46	Climbing	1 hour
47	Yoga Nidra	30 minutes	48	CBD	10 mg
49	Laughter Therapy	30 minutes	50	Massage	30 minutes

Your Results in Details

Psychedelics Response

Psychedelic substances can profoundly influence perception, mood, and cognition by interacting with specific brain receptors and signaling pathways. Your genetic makeup plays a key role in determining how you respond to these compounds, affecting both their intensity and therapeutic potential.

Genes like HTR2A are central to the effects of classic psychedelics, influencing serotonin receptor activity and modulating mood and perception. BDNF supports neural plasticity, which may impact how the brain adapts during experiences with psychedelic drugs such as ketamine. The cannabinoid receptor encoded by CNR1 is involved in the response to THC, the active compound in cannabis, which also has psychedelic-like effects. Understanding your genetic predisposition to these substances can help guide safe and personalized approaches to their use.

SLIGHTLY LOWER LEVELS

BDNF

Relatively lower BDNF levels

INCREASED

Psychedelic Effects of THC (Functional)

Predisposed to increased psychedelic effects of THC

TYPICAL ACTIVITY

HTR2A (Serotonin)

Likely typical HTR2A activity

TYPICAL ACTIVITY

CNR1 (Cannabinoids)

Likely typical CNR1 activity

TYPICAL

Response to Ketamine

Predisposed to a typical response to ketamine

BDNF

The *BDNF* gene helps produce BDNF and strongly impacts its levels and activity [R].

A crucial *BDNF* gene variant is **rs6265**, also known as "**Val66Met**". It may affect BDNF production, storage, and release in brain cells [R, R, R, R].

As a result, the **"T" ("Met") allele is linked to reduced cognitive function**, including [R, R, R, R]:

- Learning difficulties
- Poor memory
- Dementia

Besides cognitive effects, this variant may also play a role in [R, R, R, R, R, R, R]:

- Stress and anxiety
- PTSD and OCD
- Weight control
- Migraines
- Fatigue

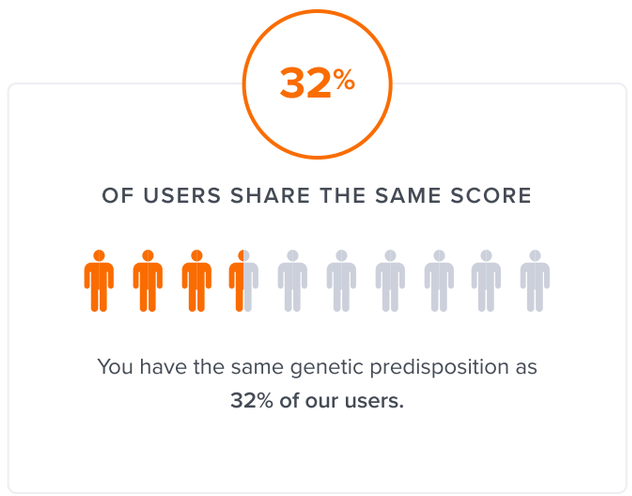
Moreover, the "T" variant may impair response to the antidepressant effects of low-dose ketamine. Nevertheless, this variant may not affect the effectiveness of ketamine for treatment-resistant depression [R, R, R, R, R].

However, you should keep in mind some **important limitations** [R, R, R, R, R, R]:

- The effects of this variant on some traits are conflicting.
- Many studies looking into the cognitive effects of this variant are limited to people with mental health problems.
- The link between this variant and some conditions, such as OCD and dementia, may be significant only in women.
- **Your other genetic variants, lifestyle, and environment may also influence your BDNF levels and activity.**

SLIGHTLY LOWER LEVELS

Relatively lower BDNF levels based on the genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
BDNF	rs6265	TC

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

Psychedelic Effects Of THC (Functional)

The genetic predisposition to THC's psychedelic effects is shaped by variations in specific genes involved in the endocannabinoid system and neurotransmitter regulation.

Among these, the ***CNR1*** gene (**rs1049353, rs12720071**) plays a critical role. This gene encodes cannabinoid receptor CB1. Variants in this gene influence receptor functionality and density, which modulate how THC interacts with the endocannabinoid system to produce psychedelic effects [R, R].

Additionally, the ***AKT1*** gene (particularly the SNP **rs2494732**) is linked to an increased risk of experiencing psychosis-like effects from THC. AKT1 is involved in dopamine signaling pathways, which THC impacts, potentially enhancing susceptibility to altered perceptions [R].

Another key gene is ***DRD2***, associated with the dopamine D2 receptor. The SNP **rs1076560** is linked to altered dopamine receptor activity, potentially influencing THC-induced euphoria and cognitive effects. Variants in this gene may also affect the likelihood of experiencing addiction or dependency on cannabis [R].

The ***FAAH*** gene, represented by SNP **rs324420**, is responsible for the breakdown of anandamide, a natural cannabinoid. Reduced FAAH activity leads to increased levels of anandamide, which may enhance THC's effects [R, R].

Finally, ***COMT*** is responsible for the breakdown of neurotransmitters such as dopamine, epinephrine, and norepinephrine in the brain. Its **rs4680** SNP may increase the risk of psychosis in cannabis users [R, R, R, R, R, R, R].

Understanding these genetic markers can provide valuable insights into personalized cannabis use, highlighting who might benefit from THC's therapeutic potential and who might be at risk for adverse effects.

INCREASED

Predisposed to increased psychedelic effects of THC based on 7 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
CNR1	rs1049353	TT
FAAH	rs2295633	AA
COMT	rs4680	AG
TTC12	rs1076560	CA
CNR1	rs12720071	TT
FAAH	rs324420	CA
AKT1	rs2494732	TT

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

HTR2A (Serotonin)

The most widely investigated variant is rs6313. Its minor 'A' allele increases the number of active receptors. This variant has been associated with an increased risk of [R, R]:

- Chronic pain, including hip and low back pain [R, R]
- Panic disorder [R]

Carriers may also require higher doses of anesthetic drugs (propofol) and longer times to induce sedation [R].

However, it may be protective against:

- Fatigue disorders such as chronic fatigue syndrome and fibromyalgia [R]
- Headaches [R]
- IBS [R]
- Temporomandibular joint disorders [R]
- Suicide attempts [R]

Another well-researched variant is rs6311. Its minor 'T' variant is usually inherited together with the 'A' variant at rs6313 and also increases the number of active 5HT2A receptors. This variant has been associated with [R, R]:

- Increased odds of chronic pain, including hip and low back pain [R, R]
- Greater depressive symptoms [R]
- Increased risk of IBS [R]

However, this variant may be protective against:

- Headaches [R]
- Rheumatoid arthritis [R]

Interestingly, this variant has been associated with decreased aggressiveness and social dominance. This was linked to being a worse speed dater in men but better in women [R].

Finally, two variants believed to impair serotonin signaling ('A' at rs7322347 and 'C' at rs7984966) have been associated with an increased risk of ADHD [R, R].

TYPICAL ACTIVITY

Likely typical HTR2A activity based on the genetic variants we looked at

47%

OF USERS SHARE THE SAME SCORE

You have the same genetic predisposition as **47% of our users.**

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
HTR2A	rs6313	GA
HTR2A	rs6311	CT

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

CNR1 (Cannabinoids)

The most studied SNP in this gene is rs1049353 or 1359G/A. Its minor 'T' allele doesn't change the CB1 receptor structure, but is believed to impair gene expression and receptor activity [R, R]. This variant has been associated with:

- Lower BMI, belly fat, and weight gain [R, R, R, R]
- Increased risk of major depression and PTSD but better response to antidepressants [R, R, R, R, R]
- Increased risk of brain fog
- Reduced risk of risky gambling, cannabis use, and heroin addiction [R, R, R, R]
- Increased risk of lectin sensitivity
- Reduced risk of ulcerative colitis and young-onset Crohn's disease but worse gut inflammation in people with IBD [R, R, R]
- Reduced risk of heart disease in people with type 2 diabetes [R, R]

Another polymorphism, 'G' at rs6454674, seems to lower blood CB1 levels. This variant has been linked to [R]:

- Increased odds of childhood obesity [R]
- Increased susceptibility to anxiety disorders and, possibly, depression [R]
- Increased dependence to alcohol, cannabis, and cocaine [R, R, R, R]

The minor 'C' allele of rs2023239 seems to increase CB1 levels, especially in people using marijuana. This variant has been associated with [R, R, R]:

- Decreased odds of childhood obesity [R]
- Increased impulsivity, cigarette smoking, and cannabis rewarding, craving, and withdrawal [R, R, R, R]
- Decreased odds of major depression in opiate-dependent outpatients on methadone therapy [R]
- Increased risk of metabolic syndrome [R]

The minor 'T' variant of rs806378 is believed to increase CNR1 activity. This allele has been associated with [R, R]:

- Faster colonic transit and gassiness in people with diarrhea-predominant IBS [R, R]
- Weight gain in people treated with antipsychotics [R]

TYPICAL ACTIVITY

Likely typical CNR1 activity based on 7 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
CNR1	rs1049353	TT
CNR1	rs806378	CC
CNR1	rs2180619	GG
CNR1	rs806380	AA
CNR1	rs806374	TT
CNR1	rs6454674	TT
CNR1	rs2023239	CC

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

Another minor variant believed to decrease CB1 levels is ‘G’ at rs806380. This variant has been associated with:

- Decreased risk of unsafe sex behavior, alcohol use, and cannabis dependence [R, R]
- Repeated episodes of severe nausea and vomiting [R]

The minor ‘C’ variant of rs806374, which seems to reduce CB1 levels in the gut and fatty tissues, has been linked to frequent marijuana use around the age of 18 [R, R].

Finally, a variant that seems to decrease CB1 levels in the brain, ‘G’ at rs2180619, has been linked to substance abuse in European Americans but not in African Americans [R, R].

Response To Ketamine

Despite its effectiveness, the response to ketamine can vary significantly among individuals. Factors affecting influencing individual response to this drug include:

- **Dosage and administration:** The dose and route of administration (intravenous, intramuscular, oral, or nasal) significantly impact the efficacy and side effects of ketamine. Higher doses may be more effective for some but can increase the risk of adverse effects.
- **Medical history:** The nature and severity of the condition being treated (such as the type of depression or pain) influence how individuals respond to ketamine. Patients with a history of substance abuse or chronic pain may experience different effects compared to those with acute pain or episodic depression.
- **Concurrent medications:** Other medications that the patient is taking can interact with ketamine, altering its effectiveness and safety. For example, CNS depressants can enhance sedative effects, while certain antidepressants may either potentiate or inhibit the therapeutic effects of ketamine.
- **Genetics:** Individual genetic differences can affect how ketamine is metabolized and its efficacy. Variations in the liver enzymes that process ketamine can lead to differences in how long the drug stays active in the body, impacting both effectiveness and side effect profiles [R, R].

TYPICAL

Predisposed to a typical response to ketamine based on 13 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
IRAK3	rs11465988	CC
TGFA	rs115141868	AA
CXXC4	rs151184257	AA
TMBIM4	rs17767394	CC
FAM83B	rs112647602	GG
/	rs1846786	GT
CRIM1	rs1524145	GT
GGH	rs4739050	AA
SLC22A15	rs79749176	TT
SLC22A15	rs6689906	CC
SEC11A	rs55945116	GG
ZBTB14	rs75908125	GG
DUSP18	rs5997786	CC

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

Psychedelics Metabolism

How your body processes psychedelic substances greatly influences their effects and duration. The metabolism of these compounds is primarily governed by enzymes encoded by genes in the cytochrome P450 family, which break down psychedelics into active or inactive forms.

Genes like CYP2D6, CYP2C19, and CYP3A4 play major roles in metabolizing a wide range of psychedelic drugs, affecting how quickly these substances are cleared from your system. Additionally, FAAH regulates the breakdown of endocannabinoids, which can modulate the effects of cannabis-derived psychedelics. Genetic variations in these enzymes can alter your metabolism rate, impacting both efficacy and potential side effects.

LOWER ACTIVITY

CYP2D6 (Mental Health, Detox)

Predisposed to a lower CYP2D6 activity

TYPICAL ACTIVITY

CYP2B6 (Drug Metabolism)

Predisposed to a typical CYP2B6 activity

TYPICAL METABOLIZER

CYP2C9 (Detox)

Likely a typical metabolizer

EXTENSIVE METABOLIZER

CYP2C19 (Detox)

Likely an extensive metabolizer

TYPICAL ACTIVITY

CYP3A4 (Detox)

Likely typical CYP3A4 activity

LOWER ACTIVITY

FAAH (Cannabinoids)

Likely lower FAAH activity

CYP2D6 (Mental Health, Detox)

The *CYP2D6* gene has more than 100 known variants. These include [R, R]:

- Normal enzyme function variants (e.g., *1 and *2) [R, R]
- Reduced function variants (e.g., *9, *10, *17, and *41) [R, R]
- Non-functional variants (e.g., ∆3, ∆4, ∆5, ∆6, and *7) [R, R]

It gets more complicated, however, because this gene can also be missing or duplicated. This means that you can have 0, 1, 2, or more than 2 copies of the gene. Therefore, most clinical laboratories also report the copy number [R].

*CYP2D6*1* is the wild-type variant. The change from an 'A' to a 'G' at **rs16947** encodes *CYP2D6*2*. Although its activity is indistinguishable from that of CYP2D6*1, having several copies of this variant can result in an ultrafast phenotype. This variant has been associated with tyramine intolerance, suggesting a slightly lower metabolic efficiency for this substrate [R, R].

The 'T' allele of **rs3892097** corresponds to *CYP2D6*4*. This is the most frequent non-functional variant in Europeans and North Americans (18.0%), accounting for 70-90% of cases [R].

Another non-functional variant is *CYP2D6*6*, consisting of the deletion of an 'A' at **rs5030655**. This variant is generally rare, but may be slightly more common in Europeans (around 1%) [R, R, R].

Finally, the 'G' allele of **rs5030867** encodes the non-functional *CYP2D6*7* variant. This allele is very rare but may be slightly more common in South East Asians (around 1%) [R].

The 'A' allele of **rs1065852** encodes the intermediate-activity *CYP2D6*10* variant. This variant is especially common in Thai (50%) and East Asians (42%) [R, R].

Another intermediate-activity variant is *CYP2D6*17*, encoded by the 'A' allele of **rs28371706**. This variant is most common in Africans (20%-35%) [R, R].

Studies suggest that people with low CYP2D6 enzyme activity may be more prone to anxiety and less successful at socializing

LOWER ACTIVITY

Predisposed to a lower CYP2D6 activity based on 5 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
CYP2D6	rs5030867	TT
CYP2D6	rs5030655	CC
CYP2D6	rs3892097	CC
CYP2D6	rs28371706	GG
CYP2D6	rs1065852	GG
CYP2D6	rs16947	GA

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

than extensive metabolizers. Reduced activity has also been associated with impulsivity or novelty seeking [R, R, R].

Alternatively, poor metabolizers may perform better in cognitive tasks that demand sustained attention or vigilance and spatial working memory. They may also have higher conscientiousness, responsibility, orderliness, and perseverance [R, R, R].

Low-activity variants have been associated with an increased risk of developing the following conditions:

- Alzheimer's disease [R]
- Parkinson's disease [R]
- Systemic sclerosis [R, R]
- Lupus [R]
- Ankylosing spondylitis [R]
- Pesticide toxicity [R]
- Adverse effects from antidepressants [R]

In contrast, they have been linked to a reduced risk of:

- Schizophrenia [R]
- Bulimia [R]
- Heavy smoking [R]
- Adverse effects from codeine and tramadol [R]

CYP2B6 (Drug Metabolism)

There are over 100 known *CYP2B6* polymorphisms, with numerous complex haplotypes and distinct ethnic frequencies, making *CYP2B6* one of the most polymorphic cytochrome p450 genes in humans [R].

The change from a ‘G’ to a ‘T’ at **rs3745274** encodes the *CYP2B6*6* variant, which has **markedly reduced enzyme activity**. This variant is very common (especially in Africans, Asians, and Hispanics), and has been associated with slower metabolism of multiple drugs such as methadone, efavirenz, bupropion, cyclophosphamide, sertraline, ketamine, and nicotine [R, R, R, R, R, R, R].

Another low-function variant is the rare ‘C’ allele of **rs28399499**, which encodes the *CYP2B6*18* variant. This variant has been associated with slower efavirenz and nevirapine metabolism, resulting in higher blood levels of these drugs [R, R].

*CYP2B6*1* is the wild-type variant. The change from a ‘C’ to a ‘T’ at **rs8192709** encodes the *CYP2B6*2* variant. Although considered a normal-function variant, carriers may have slightly slower efavirenz and prasugrel metabolism [R, R, R].

Another polymorphism considered a normal-function variant is the ‘T’ allele of **rs3211371** (*CYP2B6*5*). Research on its effects on methadone metabolism has produced mixed results. Moreover, this variant has been associated with an increased risk of gastrointestinal cancer and relapse after autologous hematopoietic cell transplantation for lymphoma [R, R, R, R, R].

Finally, the ‘G’ allele of **rs2279343** encodes the *CYP2B6*4* variant. This polymorphism has been associated with slower metabolism of efavirenz. However, it has also been linked to faster metabolism of bupropion (and thus lower success rate of smoking cessation therapy with bupropion) and methadone [R, R, R, R].

The CYP2B6 gene affects how you metabolize ketamine via the liver. Between 10 and 20% of people have a variant that causes them to clear the drug from their system half as fast as others.

These "slow metabolizers" should be extra cautious about taking

TYPICAL ACTIVITY

Predisposed to a typical CYP2B6 activity based on 4 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
CYP2B6	rs3745274	TG
/	rs2279343	GA
CYP2B6	rs28399499	TT
CYP2B6	rs8192709	CC
CYP2B6	rs3211371	CC

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

ketamine, since they're more likely to have a long or intense trip, according to some resources. They also have a higher risk for adverse reactions to the drug — such as drowsiness, unpleasant hallucinations, and confusion — especially if they inject it rather than taking it orally or nasally.

CYP2C9 (Detox)

The CYP2C9 gene is highly polymorphic, with more than 50 known alleles affecting its metabolic activity compared to the wild-type CYP2C9*1 allele [R].

The two most common CYP2C9 gene polymorphisms decreasing enzyme activity are known as CYP2C9*2 and CYP2C9*3. Individuals with one copy of any of these alleles or two copies of the CYP2C9*2 allele are considered intermediate metabolizers, while those with one copy of each one or two copies of the CYP2C9*3 allele are considered poor metabolizers.

CYP2C9*2 (‘T’ at rs1799853) consists of the change of the amino acid arginine with the amino acid cysteine at position 144 while CYP2C9*3 (‘C’ at rs1057910) consists of the change of the amino acid isoleucine with the amino acid leucine at position 359. **THC metabolism is especially impaired in people with two copies of the CYP2C9*3 variant** [R, R].

The CYP2C9*5 allele (‘G’ at rs28371686) consists of the change of the amino acid aspartic acid with the amino acid glutamic acid at position 360 and is believed to decrease enzyme activity [R, R].

The CYP2C9*8 allele (‘A’ at rs7900194) consists of the change from an arginine to a histidine at position 150 and also encodes an enzyme with decreased activity. This variant is especially common in African Americans [R, R, R].

Finally, the CYP2C9*11 allele (‘T’ at rs28371685) consists of the change from an arginine to a tryptophan at position 335 and also encodes a protein with decreased enzyme activity [R, R].

TYPICAL METABOLIZER

Likely a typical metabolizer based on 5 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
CYP2C9	rs1057910	AA
CYP2C9	rs7900194	GG
CYP2C9	rs28371686	CC
CYP2C9	rs28371685	CC
CYP2C9	rs1799853	CC

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

CYP2C19 (Detox)

There are more than 30 known *CYP2C19* variants. Based on the variants they carry, individuals can be categorized as [R, R]:

- Ultrarapid metabolizers (*1 /*17 or *17 /*17)
- Extensive metabolizers (*1/*1)
- Intermediate metabolizers (*1 /*2, *1 /*3, or *2 /*17)
- Poor metabolizers (*2 /*2 or *2 /*3)

The normal version of the gene is called CYP2C19*1.

The two most common polymorphisms associated with reduced CYP2C19 activity and clopidogrel resistance are CYP2C19*2 (**rs4244285**) and CYP2C19*3 (**rs4986893**). Carriers of one copy of the minor 'A' alleles have a reduced ability to break down drugs, including CBD. Those with two copies can metabolize very little or none of the drug and are classified as poor metabolizers [R, R, R].

The **rs12248560** polymorphism, also known as CYP2C19*17, is located in the region that controls gene expression (the *promoter*). Its minor allele 'T' is associated with increased gene expression and protein activity. People with this variant are classified as ultrarapid metabolizers [R, R].

The following supplements and chemicals may decrease CYP2C19 activity [R, R, R, R, R, R, R, R, R, R, R]:

- Propolis
- Caffeic acid
- Quercetin
- Ginger
- Kale
- African lettuce
- Saint John's wort
- Astaxanthin
- Canthaxanthin
- Hops
- Licorice
- Berberine
- Capsaicin
- Bulbocapnine, canadine, and protopine
- Fluconazole

EXTENSIVE METABOLIZER

Likely an extensive metabolizer based on the genetic variants we looked at

62%

OF USERS SHARE THE SAME SCORE

You have the same genetic predisposition as **62% of our users.**

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
NOC3L	rs12248560	CC
CYP2C19	rs4986893	GG
CYP2C19	rs4244285	GG

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

CYP3A4 (Detox)

The ‘A’’ allele of **rs35599367**, also known as CYP3A4*22, reduces CYP3A4 levels and activity by approximately half, resulting in slower drug metabolism [R, R, R, R].

Similarly, the minor alleles ‘C’ of **rs12721627** (CYP3A4□16) and ‘G’ of **rs55785340** (CYP3A4*2) have been associated with lower enzyme activity [R, R].

Two other variants with decreased enzyme activity are ‘C’ at **rs2740574** (CYP3A4*1B) and ‘T’ at **rs2242480** (CYP3A4*1G) [R, R].

The minor ‘G’ allele of **rs680055** (CYP3A4*3) encodes a protein with an amino acid change believed to reduce enzyme activity [R].

In carriers of these variants, the breakdown of cannabinoids such as THC and CBD may be slower. Moreover, people with these variants shouldn’t use cannabis if they are being treated with ketoconazole, fluconazole, or diltiazem, which are CYP3A inhibitors [R, R].

In contrast, the ‘G’ allele of **rs28371759** (CYP3A4*18) increases enzyme activity [R, R].

TYPICAL ACTIVITY

Likely typical CYP3A4 activity based on 7 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
CYP3A4	rs28371759	AA
CYP3A43	rs680055	CC
CYP3A4	rs55785340	AA
TRIM4	rs35599367	GG
TRIM4	rs2740574	TT
CYP3A5	rs2242480	CC
/	rs12721627	GG

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

FAAH (Cannabinoids)

One common variant of the *FAAH* gene, rs324420, is associated with reduced FAAH levels and activity. As a result, carriers of the minor 'A' allele have higher levels of endocannabinoids such as anandamide [R].

Carriers of this variant may have:

- Lower anxiety in response to stressful situations [R]
- Lower odds of PTSD [R]
- Decreased pain sensitivity [R]
- Better athletic performance [R, R]

However, this variant is also linked to an increased risk of:

- ARDS [R]
- Obesity (especially early-onset) [R, R]
- Antipsychotic-induced weight gain [R]
- Problematic drug and alcohol use [R, R, R, R]
- Generalized epilepsy [R]
- Heart attack [R]

LOWER ACTIVITY

Likely lower FAAH activity based on the genetic variants we looked at

44%

OF USERS SHARE THE SAME SCORE

You have the same genetic predisposition as **44% of our users.**

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
FAAH	rs324420	CA

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

Mental Health Risk

Studies have shown that misuse of psychedelics combined with genetic risk factors can increase the risk of negative mental health effects, such as the development of schizophrenia. Understanding your genetic predisposition can provide valuable insights into your risk and guide early interventions or lifestyle choices to support mental well-being.

Misuse of psychedelics is linked to an increased risk of the following psychiatric and neurological conditions:

- **Bipolar Disorder**
  - Risk: Can trigger manic or depressive episodes.
  - Even a single psychedelic experience may destabilize mood.
- **Schizophrenia or Schizophreniform Traits**
  - Risk: High risk of psychotic breaks or prolonged psychosis.
  - Family history alone can be a contraindication.
- **Borderline Personality Disorder (BPD)**
  - Risk: May worsen emotional dysregulation and impulsivity.
- **Severe Anxiety Disorders**
  - Risk: Potential for panic attacks, overwhelming fear, or derealization.
- **PTSD (Post-Traumatic Stress Disorder)**
  - Risk: Flashbacks or re-traumatization, especially with poor set & setting.
  - Note: Some clinical trials use psychedelics for PTSD under strict controls.
- **Depersonalization/Derealization Disorder**
  - Risk: Psychedelics can worsen feelings of disconnection from reality or self.
- **Epilepsy or Seizure Disorders**
  - Risk: Some psychedelics, particularly MDMA or high doses of psilocybin, may lower the seizure threshold, potentially triggering seizures in individuals with epilepsy.

MORE LIKELY

Bipolar Disorder

More likely to get bipolar disorder

MORE LIKELY

THC and Psychosis

More likely to experience psychotic symptoms from cannabis use

MORE LIKELY

Borderline Personality

More likely to have BPD

MORE LIKELY

Psychological Trauma

More likely to have PTSD

MORE LIKELY

Non-Epileptic Seizures

More likely to have non-epileptic seizures

TYPICAL LIKELIHOOD

Schizophrenia

Typical likelihood of schizophrenia

TYPICAL LIKELIHOOD

Anxiety

Typical likelihood of anxiety

TYPICAL LIKELIHOOD

Panic Attacks

Typical likelihood of having panic attacks

TYPICAL LIKELIHOOD

Seizures

Typical likelihood of having seizures

Bipolar Disorder

Key Takeaways:

- Up to **80%** of differences in people's chances of developing bipolar disorder may be due to genetics.
- Risk factors: being female, childhood bullying, excessive social media use, stressful events, and alcohol/drug abuse.
- If you have high genetic risk or symptoms, you may want to take action on modifiable risk factors to reduce your overall risk.
- Click the **Recommendations** tab for potential dietary and lifestyle changes and **next steps** for relevant labs.

Anger, sadness, and joy are everyday human experiences. It's normal to feel a wide range of emotions. **However, some people experience extreme changes in emotions that interfere with their lives.** These are called **mood swings**, and they can be a symptom of a deeper problem.

One cause of mood swings is bipolar disorder. This condition causes mood changes that are severe enough to affect daily life. It can also cause shifts in energy, focus, and ability to perform basic tasks [R, R, R].

People with bipolar disorder have periods of high energy and good mood followed by periods of low energy and poor mood. **These 'up' periods are called *manic* episodes, and the 'down' periods are called *depressive* episodes. Some people experience less extreme highs called *hypomanic* episodes** [R, R].

Other conditions that can cause mood swings include [R, R, R]:

- Personality disorders (e.g., borderline personality disorder)
- Premenstrual syndrome (PMS)

About **2-3%** of people may develop some form of bipolar disorder during their lifetime. Most people develop it as teens or young adults [R].

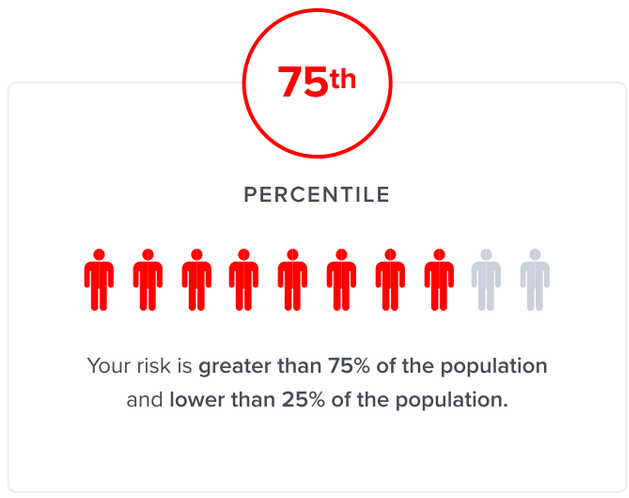
Women are more likely to develop bipolar disorder than men.

Other risk factors include [R, R]:

- Childhood bullying
- Excessive social media use
- Stressful or traumatic events
- Alcohol or drug abuse
- **Genetics**

MORE LIKELY

More likely to get bipolar disorder based on 1,044,121 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
NRN1	rs4960155	CT
DUSP28	rs2953145	CC
DCTN5	rs420259	AA
PSAPL1	rs7683874	AG
THRA	rs2314339	CC
HES6	rs2304672	GG
ARVCF	rs165599	AG
BCR	rs131690	GG
CMTM8	rs4276227	CC
BCR	rs131702	GG
TDRD9	rs11622475	CC
WHRN	rs10982256	TT
SH2B3	rs3847953	CC
MAPK1	rs8136867	AA
TPH2	rs17110747	GG
THRA	rs2071427	CC
CDC25B	rs3761218	TT
POU3F3	rs7570682	AG
HES6	rs2304669	TT
THRA	rs939348	CC

Bipolar disorder can have negative effects on a person's life. It can increase the risk of [R, R]:

- Alcohol or drug abuse
- Other health conditions (e.g., obesity, heart disease, or diabetes)
- Self-harm
- Relationship problems
- Financial issues
- Poor performance at work or school

It is important to work with your doctor and find appropriate ways to manage bipolar disorder. Management options include [R]:

- Medication
- Talk therapy
- Lifestyle changes, such as regular exercise
- Brain stimulation therapies

People with untreated mood disorders are considerably more likely to harm themselves and even die by suicide. If you are diagnosed with a mood disorder, it is essential to follow your doctor's treatment plan [R].
About 80% of differences in people's chances of developing bipolar disorder may be attributed to genetics. Genes involved in bipolar disorder may influence [R, R, R]:

- Brain activity (*DAOA*, *BDNF*, *CACNA1C*, *SCN2A*)
- Nerve inflammation (*CD47*)
- Serotonin levels (*SLC6A4*)

Genetically high levels of omega-3s may be causally associated with a lower risk of mood swings [R].

GENE	SNP	GENOTYPE
DPP10	rs1375144	GA
TPH2	rs1843809	TT
THRA	rs2269457	TT
PPARGC1B	rs7732671	GC
CHD9	rs1344484	CT
TRIB2	rs4027132	GA
SDCCAG8	rs6703335	GA
CHRNA7	rs6494223	CT
BICRAL	rs6458307	TC
NT5C2	rs11191580	TC
NFIA	rs7556462	TC
CCDC198	rs10134944	TC
CLOCK	rs3805148	CA
CLOCK	rs4864542	GC
NFKB1	rs230529	CT
NPAS2	rs1562313	TC
MANBA	rs230535	CA
ZNF804A	rs1344706	AC
/	rs145410455	GG
SPPL3	rs58235352	GG
SORCS3	rs61867293	CC
MYH15	rs1531188	CC
PLXNB2	rs113872034	GG
EIF3M	rs143864773	TT
OLFM4	rs12552	AA
SOX6	rs977509	CC
RARRES1	rs7430565	GG
EFNA5	rs55993664	CC
SOX5	rs4074723	CC
ENOX1	rs4143229	CA

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

THC And Psychosis

Certain genetic variants may affect the risk and severity of THC-related psychosis. Carriers of several risk variants may want to consider avoiding cannabis use.

The *CNR1* gene encodes the type-1 cannabinoid receptor (CB1), whose activation improves mood and anxiety. The most studied SNP in this gene is rs1049353 or 1359G/A. Its minor 'T' allele doesn't change the CB1 receptor structure but is believed to impair gene expression and receptor activity. This variant has been linked to worse psychotic symptoms in cannabis smokers and greater size reduction in a region of the brain (the caudate nucleus) after the first episode [R, R].

Another *CNR1* variant, 'T' at rs12720071, has been associated with psychotic symptoms in cannabis users. However, the 'C' variant has been linked to greater white matter reduction in the brain from marijuana misuse [R, R].

The *FAAH* gene helps create an enzyme that breaks down certain compounds in the body, including endocannabinoids. The 'G' allele of rs2295633, associated with increased FAAH activity, has been linked to reduced odds of requiring treatment with antipsychotics in cannabis users [R, R].

The *COMT* gene encodes an enzyme that helps break down neurotransmitters such as dopamine, norepinephrine, and epinephrine. The major 'G' variant of its main polymorphism rs4680 has been associated with increased risk, earlier onset, and worse symptoms of psychosis and schizophrenia from cannabis use [R, R, R, R, R, R, R].

The *DRD2* gene helps make dopamine D2 receptors. Those are proteins on the surface of brain cells that bind dopamine. The minor 'A' allele of rs1076560 has been associated with increased DRD2 signaling and a 3- to 5-fold higher risk of psychosis in cannabis users [R, R].

Finally, the *AKT1* gene encodes an enzyme involved in many cellular processes, whose dysregulation may promote schizophrenia. The 'C' allele of rs2494732 has been associated with a 7-fold higher risk of psychosis in daily cannabis smokers [R, R].

MORE LIKELY

More likely to experience psychotic symptoms from cannabis use based on 6 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
CNR1	rs1049353	TT
FAAH	rs2295633	AA
CNR1	rs12720071	TT
COMT	rs4680	AG
TTC12	rs1076560	CA
AKT1	rs2494732	TT

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

Borderline Personality

Factors that might increase the risk of developing BPD include:

- Childhood abandonment, neglect, or abuse
- A family history of BPD or other mental health disorders
- Brain abnormalities, particularly in regions related to emotion regulation, impulsivity, and aggression
- Neurochemical imbalances in the brain
- Genetics

There is evidence suggesting that genetics plays a role in BPD development. Having a close family member, such as a parent or sibling, with the disorder can increase the risk of developing BPD. Research has indicated that certain genetic variants might be linked to BPD, affecting how the brain regulates emotions and impulsivity.

MORE LIKELY

More likely to have BPD based on 17,840 genetic variants we looked at

93rd

PERCENTILE

Your risk is **greater than 93% of the population** and **lower than 7% of the population.**

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
/	rs150592717	TT
DPYD	rs187785463	GG
MYCN	rs57726666	AA
SKP2	rs34416917	GG
SYT1	rs11110253	AA
FAM155A	rs9520569	TT
TRDN	rs2145737	TT
SNX9	rs6922614	TC
GAP43	rs283386	GA
MAML3	rs13136239	GA
GAS1	rs7859734	TC
DPRX	rs8104156	TG
METTL21C	rs675828	GA
TWIST1	rs114497090	GG
/	rs115689122	TT
/	rs62127626	CC
GDF6	rs11784341	CC
CLEC4C	rs113507694	AA
/	rs187058036	TT
FOXK1	rs6975373	CC

GENE	SNP	GENOTYPE
EME1	rs1985762	CC
TSPAN14	rs7074356	GG
/	rs76695126	CC

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

Psychological Trauma

Key Takeaways:

- Up to **40%** of differences in people's chances of developing PTSD may be due to genetics.
- Risk factors include being female, events that cause fear and/or helplessness, lack of support after trauma, additional stressful events, history of mental health conditions or substance abuse, genetics.
- If you have high genetic risk or symptoms, you may want to take action on your modifiable factors to reduce your overall risk.
- Click the **next steps** tab for relevant labs and lifestyle factors.

Post-traumatic stress disorder (PTSD) is a mental health condition that commonly affects war veterans. **However, anyone who has experienced trauma can develop PTSD** [R, R].

About 1 in 12 people develop PTSD in their lifetime. Women are more prone to PTSD than men [R].

Risk factors for PTSD include [R]:

- Experiencing events that cause extreme fear or helplessness
- Lack of support after traumatic events
- Experiencing additional stressful events after the initial trauma
- A history of mental health conditions or substance abuse

Flashbacks are the classic symptom of PTSD. They cause a person to relive previous trauma. A common trigger is the sound of fireworks, which can remind war veterans of gunfire. Flashbacks can include **physical symptoms, such as sweating and fast heart rate** [R, R].

Other symptoms of PTSD include [R, R]:

- Nightmares or frightening thoughts
- Avoiding places, situations, objects, or thoughts that remind you of the traumatic event
- Being easily startled
- Tension

MORE LIKELY

More likely to have PTSD based on 443,168 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
CRHR2	rs2267715	AA
UST	rs10457838	TC
RORA	rs8041061	TG
MAPT	rs12938031	GA
/	rs58649573	CT
RGS2	rs4606	CC
ANKK1	rs1800497	GA
/	rs61793204	GA
TBC1D2	rs7866350	GC
CSMD1	rs2616978	CT
FBLL1	rs10038727	GA
SH2D1B	rs386231	TC
NOS1AP	rs10918936	AA
TNF	rs1800629	GG
C1ORF226	rs12027674	GA
ARHGAP27	rs4792887	CC
BDNF	rs6265	TC
FAAH	rs324420	CA
NOS1	rs10744891	TG
ESR1	rs9340799	GA

- Poor or disrupted sleep
- Negative feelings about oneself or the world
- Feelings of guilt

It's normal to experience some of the above symptoms after a traumatic event. **However, it's important to seek professional help if the symptoms last for longer than one month and affect daily activities** [R].

People with PTSD may be at a higher risk of [R]:

- Panic disorder
- Depression
- Substance abuse
- Suicide

Treatment for PTSD usually includes talk therapy and medication [R, R, R].

Up to 40% of differences in people's chances of developing PTSD may be attributed to genetics. Genes involved in PTSD may influence [R, R, R]:

- Dopamine activity (*DRD2*, *PARK2*)
- Serotonin activity (*SLC6A4*)
- Brain cell communication (*PODXL*)
- Adrenaline (epinephrine) activity (*ZDHHC14*)

GENE	SNP	GENOTYPE
KIAA1109	rs45510091	AA
IL1B	rs16944	AG
TERT	rs2736100	AC
TCF4	rs599550	AA
MLKL	rs62056018	GA
SOX6	rs931774	CT
SERPING1	rs2509805	CT
FAM120AOS	rs10992729	TC
/	rs11933210	CT
ZNF804A	rs62176173	GT
ACE	rs4311	CC
IL6	rs1800795	GG
FAAH	rs2295633	AA
TULP1	rs3800373	AA
DUSP23	rs1130864	GG
PTPN7	rs3100127	CC
PTPN7	rs4511180	GG
POGK	rs2312236	CC
ATP10B	rs17504106	GG
ADRB2	rs2400707	AG
SRR	rs4523957	GG
OXTR	rs53576	GG
UNC13C	rs73419609	AA
TTC12	rs2075652	GG
LRRC4C	rs10768747	GG
PRTFDC1	rs1033962	TT
DUSP23	rs3091244	GG
TRIM27	rs145108206	GG
/	rs1246683	GG
MAPT	rs62056789	AA

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

Non-Epileptic Seizures

The exact causes of non-epileptic seizures are not fully understood, but they are generally thought to be a physical manifestation of psychological stress. Some common triggers and risk factors include:

- Psychological stress: Significant stress or traumatic events can trigger these seizures.
- Mental health disorders: Conditions such as depression, anxiety, post-traumatic stress disorder (PTSD), and others are commonly associated with NES.
- History of abuse: Physical or sexual abuse during childhood or adulthood can increase the risk.
- Neurological disorders: While they are not caused by neurological disorders, individuals with neurological conditions like epilepsy may also experience non-epileptic seizures.

Treatment for non-epileptic seizures focuses on addressing the underlying psychological causes:

- Psychotherapy: Cognitive-behavioral therapy (CBT) and other forms of psychotherapy are effective in treating the psychological triggers of NES.
- Medication: While medication specifically for NES is not typically used, associated conditions like anxiety or depression may be treated pharmacologically.
- Education: Educating the patient and family about the condition can help manage the psychological aspects and reduce the frequency of seizures.
- Stress management techniques: Techniques such as mindfulness, relaxation exercises, and biofeedback can help manage stress and reduce the occurrence of seizures.

MORE LIKELY

More likely to have non-epileptic seizures based on 752,593 genetic variants we looked at

80th

PERCENTILE

Your risk is **greater than 80% of the population** and **lower than 20% of the population.**

Schizophrenia

About **70-80%** of differences in people's schizophrenia rates may be due to **genetics**! Individuals with a close family member, like a parent or sibling with the disorder, are more likely to develop schizophrenia than those without a family history.

Genetically high fasting insulin and alpha-linolenic acid levels may be causally associated with schizophrenia. In contrast, genetically high levels of omega-3s may be causally associated with a lower risk [R, R, R, R].

Several genes are associated with an increased risk of schizophrenia, but no single gene causes the disorder by itself. It's believed that a complex interplay of genetics and one's environment contributes to the development of the disorder.

Factors that might increase the risk of developing schizophrenia include:

- Increased immune system activation, such as from inflammation or infections.
- Complications during birth.
- Psychosocial stresses during early adulthood.
- Psychoactive drug use during adolescence.
- Some pregnancy and birth complications, like malnutrition or exposure to viruses.

Please note: This report accounts for only a fraction of schizophrenia's genetic component. Even if your risk is higher, it doesn't mean you are likely to have or develop the condition.

TYPICAL LIKELIHOOD

Typical likelihood of schizophrenia based on 1,033,405 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
NRN1	rs4960155	CT
COMT	rs737865	AA
DPYD	rs1702294	CC
PILRB	rs41295924	CC
H4C13	rs140365013	GG
CBLN3	rs146732081	CC
EFCAB6	rs76365544	GG
EDEM3	rs78444298	GG
ELAPOR2	rs137881681	GG
OR4C12	rs139161789	GG
DLC1	rs143092720	GG
RD3	rs117251211	GG
ARSA	rs113706174	CC
SIX3	rs79028395	GG
ZFP69	rs150863806	GG
CCDC85A	rs74759822	TT
STAT6	rs61937595	CC
/	rs9456970	AA
TEF	rs143426938	GG
RBFOX1	rs79478621	TT

GENE	SNP	GENOTYPE
CCDC68	rs34751112	AA
LRRC46	rs11652374	TT
SFXN2	rs12571643	GG
SH3YL1	rs6548238	TC
CCDC68	rs12966547	GA
NAT16	rs1006507	CT
SP3	rs117073909	GG
SPATS2L	rs140001745	TT
RELN	rs62480723	CC
STAT6	rs34073963	GG
REX1BD	rs72999390	GG
ZNF365	rs11596514	TT
ARL5B	rs7893279	TT
TCF4	rs72934602	GG
FTCDNL1	rs76432012	TT
GRM3	rs35274762	TT
ATP5MC3	rs62184532	GG
ACVR2A	rs114664644	GG
FUT9	rs117178087	CC
THAP8	rs3810450	TT
RELN	rs7341475	GA
TDRD3	rs139971826	GC
EPHX2	rs73229090	AC
ANKRD36	rs7575796	GA
COMT	rs4680	AG
NRN1	rs9379002	TT
NRN1	rs3763180	GG
NRN1	rs1475157	AA
GRIN3A	rs149729514	GG
KLF9	rs11142387	CC

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

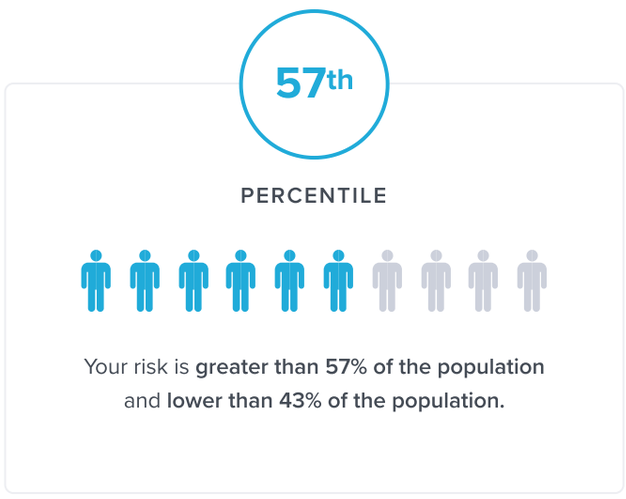
Anxiety

Key Takeaways:

- Up to **65%** of the differences in people's risk of getting anxiety may be due to genetics.
- Other risk factors include traumatic and stressful events, thyroid problems, heart problems, and substance use problems.
- If your genetic risk is high, managing stress and substance use may help reduce overall risk.
- Anxiety can cause issues with sleep, fatigue, the gut, stress, focus, and mood.
- Click the **Recommendations** tab for potential dietary and lifestyle changes and **next steps** for relevant labs.

TYPICAL LIKELIHOOD

Typical likelihood of anxiety based on 807,582 genetic variants we looked at



It's completely normal to feel anxious about things from time to time. Occasional anxiety can help us solve problems and make better life decisions. However, people with *anxiety disorders* often worry about normal activities, which impacts their daily life [R, R].

Two parts of your brain process threats [R, R, R]:

- The *amygdala* helps activate the "fight or flight" response
- Frontal areas of your brain override the amygdala and help you respond logically

People experience anxiety when they have too much activity in their amygdala or too little in frontal brain areas [R, R].

If you're anxious, you may experience [R]:

- Restlessness
- Fatigue
- Problems concentrating
- Short temper
- Muscle tension
- Heavy sweating
- Trembling
- Gut problems
- Heart rate changes

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
ATP8B4	rs2413998	AA
/	rs16838980	GG
DNAH8	rs4714177	AA
NUP107	rs11177321	GG
FKBP4	rs2302729	CC
PREPL	rs1067327	CC
RNF180	rs6295	GG
IL20RB	rs17374749	GG
PID1	rs10498237	GG
/	rs10092548	AA
C6ORF118	rs9295300	AA
NOX4	rs17221829	CC
NOX4	rs10830352	GG
GABRG2	rs211037	TT
MARCHF4	rs955816	GG
IRX6	rs2397376	TT
HTR2A	rs12584920	GG
COMT	rs4680	AG
ERCC6L2	rs7867155	CC
COMT	rs4633	TC

- Sleep problems

People are more likely to have these symptoms if they experience [R]:

- Traumatic or stressful events
- Thyroid problems
- Heart problems
- Substance use problems

Another important risk factor for anxiety is genetics. About 30-65% of the differences in people's chances of getting anxiety can be attributed to genetics. Genes linked to anxiety may influence the levels and activity of different brain chemicals, such as [R, R, R, R, R, R, R]:

- Serotonin and dopamine, which make you feel happy (*SLC6A4*, *HTR1A*, *TPH2*, *MAOA*)
- GABA, which calms the mind (*GABRG2*)
- Stress hormones such as cortisol (*MC4R*, *MAOA*)
- Substances that promote new brain cell growth (*BDNF*, *NGF*)

GENE	SNP	GENOTYPE
SLC6A2	rs3785151	CG
CES1	rs1566652	GT
GAD1	rs3828275	TC
GAD1	rs701492	CT
GAD1	rs769407	GC
GAD1	rs3791878	GT
IL18R1	rs2058622	AG
GAD1	rs3791851	TC
ZPLD1	rs1709393	TC
DMD	rs921896	C
CAMTA1	rs11120917	CT
OR5P3	rs7112002	AC
SRBD1	rs2344662	AC
ADRB1	rs1034258	GA
SSH2	rs6354	TT
ESR1	rs9340799	GA
ESR1	rs2234693	CT
AKAP6	rs17406568	GG
OSCP1	rs906228	AC
AGPAT4	rs3798943	CC
CCNY	rs2086153	CT
COX7B2	rs6447514	TT
DDT	rs755622	GG
TULP1	rs3800373	AA
RGS2	rs10801153	GG
RNF220	rs12138940	AG
MC4R	rs10871777	AA
TBL1X	rs5934574	T
TACR1	rs3771841	AG
DSCAM	rs1040315	AG

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

Panic Attacks

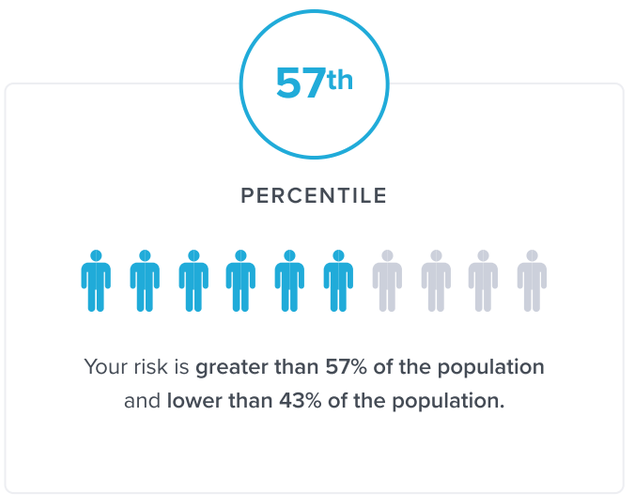
Factors that might increase the risk of developing panic attacks include:

- Family history of panic attacks or panic disorder
- Major life stressors, such as the death of a loved one or a traumatic event
- History of physical or sexual abuse
- Experiencing a traumatic event, such as an accident or a natural disaster
- History of other mental health disorders, such as depression or anxiety
- Smoking or excessive caffeine consumption
- Certain medical conditions, including thyroid problems or heart issues
- Genetics

There is evidence to suggest a genetic predisposition to panic attacks and panic disorder. Individuals with a family history of these conditions are more likely to experience them. Genetic factors can influence the brain's response to stress and anxiety, making certain individuals more prone to experiencing panic attacks when faced with triggers.

TYPICAL LIKELIHOOD

Typical likelihood of having panic attacks based on 1,664 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
TMEM132D	rs11060369	AA
LGSN	rs6914428	GG
SNURF	rs2554444	TA
BLMH	rs140701	TT
BLMH	rs4583306	GG
SSH2	rs6354	TT
TPH1	rs1800532	GT
COMT	rs4680	AG
/	rs25531	TT
HTR2A	rs6313	GA
TFAP2C	rs79919349	GG
SMAD1	rs144783209	GG
SUSD1	rs41280169	CC
CCK	rs1799923	GG
CERS5	rs685012	TT

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

Seizures

Factors that might increase the risk of developing epilepsy include:

- A family history of epilepsy.
- Head injuries.
- Stroke or transient ischemic attack (TIA).
- Infectious diseases like meningitis, AIDS, and viral encephalitis.
- Prenatal injury or brain damage.
- Developmental disorders, such as autism or neurofibromatosis.
- Brain conditions that cause damage to the brain, such as brain tumors or cysts.
- Genetics

There is a strong genetic component to some forms of epilepsy, with multiple genes potentially playing a role in susceptibility. For example, genetically high prolactin levels may be associated with a higher risk of epilepsy [R].

While many people with epilepsy have no family history of the disorder, there are several epilepsy syndromes that are inherited. Some people may have a genetic predisposition that makes them more susceptible to the environmental triggers of epilepsy.

TYPICAL LIKELIHOOD

Typical likelihood of having seizures based on 1,672 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
ATXN1	rs68082256	GG
CDK5RAP3	rs4794333	TT
KRTAP8-1	rs2833098	AA
PCDH7	rs1044352	GT
TRIM36	rs4596374	TC
GABRA2	rs11943905	TC
ZEB2	rs10496964	CC
COPZ2	rs72823592	GG
CSMD2	rs771390	CC
FMN2	rs12059546	GA
TTC21B	rs11890028	TT
GOLIM4	rs111577701	CC
TTC21B	rs6732655	TT
VRK2	rs13026414	TC
PTGS2	rs12720541	GT
MMP8	rs1939012	CT
SCN1A	rs12987787	TC
PCDH7	rs28498976	GA
GABRA2	rs535066	GT
VRK2	rs1402398	AA
THEMIS	rs13200150	GG
NEMP2	rs887696	TT
UBXN2A	rs4665630	TT
IQCM	rs10030601	TT
VRK2	rs2717068	CC
MAST4	rs39861	GA
VRK2	rs2947349	AA

GENE	SNP	GENOTYPE
TRIM36	rs55670112	AA

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

Mental Health Genes

Studies have shown that misuse of psychedelics combined with genetic risk factors can increase the risk of negative mental health effects, such as the development of schizophrenia. Understanding your genetic predisposition can provide valuable insights into your risk and guide early interventions or lifestyle choices to support mental well-being.

Genes like NRG1 and DISC1 have been strongly associated with schizophrenia and other psychiatric disorders, affecting brain development and neural connectivity. This section explores key genetic variants to help you understand your mental health risks and empower you with knowledge for proactive care.

LOWER ACTIVITY

DISC1 (Mental Health)

Predisposed to a lower DISC1 activity

TYPICAL ACTIVITY

NRG1 (Mental Health)

Predisposed to a typical NRG1 activity

DISC1 (Mental Health)

The ***DISC1*** **gene** makes a protein called "disrupted in schizophrenia 1" - a name that hints at its discovery through schizophrenia research. This protein acts like a cellular manager, overseeing many critical functions in brain cells [R].

DISC1 protein is remarkably versatile, managing several key cellular processes:

- **Cell growth and division** - controlling when and how brain cells multiply
- **Cell specialization** - helping cells develop into specific types (like different kinds of neurons)
- **Cell movement** - guiding cells to their proper locations during brain development
- **Cell connections** - helping neurons grow the branches (dendrites and axons) they need to communicate
- **Cellular powerhouses** - managing mitochondria, the cell's energy factories
- **Cell adhesion** - ensuring cells stick together properly to form brain structures

Think of DISC1 as a construction foreman coordinating multiple aspects of building and maintaining the brain's cellular infrastructure.

When DISC1 doesn't work properly due to genetic variants, it can contribute to several psychiatric conditions [R, R]:

- **Schizophrenia** - the condition that led to its discovery
- **Depression** - affecting mood regulation
- **Bipolar disorder** - influencing mood stability

Because DISC1 manages so many fundamental cellular processes, problems with this gene can have wide-ranging effects on brain development and function. Understanding DISC1 helps researchers better comprehend how cellular dysfunction can lead to mental health conditions and may point toward new treatment approaches.

Multiple *DISC1* variants have been associated with an increased risk of schizophrenia. These include:

- ‘T’ of **rs821616** [R, R]
- ‘A’ of **rs821617** [R]
- ‘T’ of **rs821633** [R]

LOWER ACTIVITY

Predisposed to a lower DISC1 activity based on 9 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
DISC1	rs821597	AA
DISC1	rs821616	AT
DISC1	rs821617	AG
DISC1	rs821633	TC
DISC1	rs1538979	CT
DISC1	rs2255340	CT
DISC1	rs2738864	CT
/	rs2509382	CG
DISC1	rs3737597	AG
DISC1	rs6675281	CC

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

- ‘T’ of **rs1538979** [R]
- ‘A’ of **rs821597** [R]
- ‘T’ of **rs6675281** [R]
- ‘T’ of **rs2255340** [R]
- ‘T’ of **rs2738864** [R]
- ‘C’ of **rs2509382** [R]
- ‘A’ of **rs3737597** [R]

Some of these variants have been shown to increase the production of alternative, truncated versions of the DISC1 protein. This results in an alteration in the structure and function of brain structures such as the hippocampus and the gyrus [R, R, R, R].

NRG1 (Mental Health)

The **NRG1 gene** provides instructions for making a protein called **neuregulin 1**, which plays a crucial role in brain development and function.

During brain development, billions of nerve cells need to connect properly. Neuregulin 1 specializes in building **inhibitory connections** - think of these as the brain's "brake system" that helps control and balance brain activity.
This process is part of **neuroplasticity** - your brain's ability to strengthen, weaken, and reorganize connections throughout life. This allows you to learn new skills, form memories, and adapt to changes [R, R, R].

The NRG1 gene produces six different versions (called isoforms) of the neuregulin 1 protein, like having different tools for different jobs. Each version works in specific tissues and cell types [R]:

- **Brain and nerve cells** - guiding proper development and connections
- **Support cells** - helping maintain brain health
- **Other body tissues** - assisting with cell growth and function

This gene is essential for proper brain development, maintaining healthy brain function, and supporting the brain's ability to learn and adapt throughout life. Understanding neuregulin 1 helps scientists better comprehend how the brain builds its complex communication networks.

Several *NRG1* variants have been associated with an increased risk of schizophrenia. These include:

- 'G' of **rs62510682** [R, R]
- 'T' of **rs10503929** [R, R]
- 'T' of **rs2954041** [R]
- 'C' of **rs35753505** [R]
- 'A' of **rs17603876** [R]
- 'T' of **rs6994992** [R]
- 'G' of **rs3924999** [R]

These variants may reduce NRG1 levels or activity, since defects in NRG1 signaling have been associated with schizophrenia [R, R].

TYPICAL ACTIVITY

Predisposed to a typical NRG1 activity based on 7 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
NRG1	rs10503929	TT
NRG1	rs3924999	GG
NRG1	rs62510682	TG
NRG1	rs17603876	GA
NRG1	rs6994992	CC
NRG1	rs35753505	TT
NRG1	rs2954041	GG

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

Recommendations Details

1 Omega-3 (Fish Oil)

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

TYPICAL STARTING DOSE

500 mg

Helps with these Symptoms & Conditions:

Artery Hardening | Cognitive Decline

Helps with these Goals:

Focus | Longevity | Memory | Mood | Strength

Helps with these DNA Risks:

Bipolar Disorder | BDNF | Borderline Personality | Psychological Trauma

How it helps

Bipolar Disorder

IMPACT 2 / 5

EVIDENCE 3 / 5

People with bipolar disorder tend to have lower levels of the omega-3 DHA [R].

Omega-3s (1-2 g/day for 4-12 weeks) may improve depressive symptoms in people with bipolar disorder. However, the evidence is mixed. Also, they may not improve manic symptoms [R, R, R, R, R, R].

Omega-3s may help with mood swings by [R, R]:

- Reducing inflammation
- Supporting brain health

Please note: *Omega-3s can interact with blood thinners (like aspirin, Plavix, Coumadin). Consult your doctor before taking omega-3s* [R].

BDNF

IMPACT 2 / 5

EVIDENCE 2 / 5

Two meta-analyses (the largest one with 12 studies and 587 participants) concluded that supplementation with fish oil increases BDNF levels by 0.72 pg/mL or 1.01 µmol/L. Fish oil may be most effective in interventions lasting longer than 10 weeks, at doses below 1500 mg/day, and in individuals older than 50 years old [R, R].

Borderline Personality

IMPACT 2 / 5 EVIDENCE 2 / 5

According to a meta-analysis of 4 trials, marine omega-3 fatty acid supplements may help improve the symptoms of borderline personality disorder, such as [R]:

- Impulsive behavior
- Affective dysregulation

Psychological Trauma

IMPACT 2 / 5 EVIDENCE 2 / 5

Low blood levels of DHA may be linked to PTSD [R].

In people who experienced a traumatic physical injury, supplementing with **omega-3s** may help make PTSD symptoms less severe [R].

Omega-3s may help with PTSD by supporting brain health and reducing stress [R, R, R, R].

Please note: *Omega-3s from fish oil can interact with blood thinners (like aspirin, Plavix, Coumadin). Consult your doctor before taking omega-3s* [R].

2 Cognitive-Behavioral Therapy (CBT)

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.

Helps with these Goals:

Energy | Fat Loss | Focus | Libido | Memory | Mood

Helps with these DNA Risks:

Bipolar Disorder | Borderline Personality | Psychological Trauma

How it helps

Bipolar Disorder

IMPACT 3 / 5 EVIDENCE 3 / 5

CBT is one type of psychotherapy that may be useful for bipolar disorder, according to experts [R, R].
CBT for bipolar disorder has shown consistent efficacy in improving the quality of life for patients, reducing the frequency and duration of mood episodes, enhancing compliance with treatment, and decreasing the number of hospitalizations [R].

A study demonstrated that cognitive behavioral group therapy, when combined with pharmacotherapy, improved symptoms of mania, depression, and anxiety in bipolar people, contributing to fewer and shorter mood episodes [R].

CBT has a small but significant effect on depressive symptoms in persons with bipolar disorder. It shows that while CBT is beneficial, the magnitude of its effect varies, indicating the need for individualized treatment plans [R].

Borderline Personality

IMPACT 0 / 5 | EVIDENCE 0 / 5

CBT can assist in changing negative thought patterns and behaviors associated with borderline personality disorder, and teaches coping strategies for dealing with challenging situations.

Psychological Trauma

IMPACT 5 / 5 | EVIDENCE 5 / 5

Cognitive-behavioral therapy (CBT) is approved for different anxiety disorders, including PTSD. CBT is especially effective if combined with medication. Multiple meta-analyses (the largest one with 70 studies and 4761 participants) concluded that this therapy can produce large improvements and its effects are long-lasting [R, R, R, R, R, R, R, R].

3 Yoga

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

Helps with these Symptoms & Conditions:

Artery Hardening | Cognitive Decline

Helps with these Goals:

Cognitive Function | Creativity | Energy | Fat Loss | Focus | Libido | Longevity | Memory | Mood | Short Term Memory

Helps with these DNA Risks:

Bipolar Disorder | BDNF | Borderline Personality | Psychological Trauma

How it helps

Bipolar Disorder

IMPACT 1 / 5 | EVIDENCE 1 / 5

Yoga may reduce depression and anxiety in people with bipolar disorder. However, more studies are needed to confirm these benefits [R].

In a self-reported survey, people with bipolar disorder who practiced yoga also noted emotional benefits, including reduced anxiety and improvements in mood. Some participants considered yoga to be life-changing [R].

BDNF

IMPACT 2 / 5

EVIDENCE 2 / 5

Different yoga programs increased BDNF in several trials of middle-aged volunteers, older adults, and patients with major depressive disorder [R, R, R, R].

Borderline Personality

IMPACT 0 / 5

EVIDENCE 0 / 5

Yoga combines physical postures, breathing exercises, and meditation, which can help individuals with borderline personality disorder by reducing stress, improving mood, and enhancing emotional regulation.

Psychological Trauma

IMPACT 3 / 5

EVIDENCE 3 / 5

Different yoga interventions improved PTSD and depressive symptoms, substance abuse, sleep quality, and social relations in 9 non-placebo-controlled trials of 184 women with a history of traumatic experiences, 72 war veterans, 88 survivors of natural catastrophes, and 76 children living in orphanages [R, R, R, R, R, R, R, R, R].

Similarly, engaging in a yoga program called *trauma-sensitive yoga* for 8-20 weeks was found to reduce symptoms of PTSD, depression, and anxiety in 4 non-placebo controlled trials of 141 people with PTSD [R, R, R, R].

Three meta-analyses (the largest one being a meta-review of 13 reviews) concluded that the evidence to support yoga for PTSD is encouraging but preliminary due to the low quality of most studies and pointed out the need for more high-quality research [R, R, R].

Yoga and other forms of meditation have a natural stress-relieving effect, which could help mitigate the hyperarousal symptoms of PTSD [R, R, R].

4 Mindfulness

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

Helps with these Symptoms & Conditions:

Cognitive Decline

Helps with these Goals:

Cognitive Function | Creativity | Energy | Fat Loss | Focus | Libido | Longevity | Memory | Mood

Short Term Memory

Helps with these DNA Risks:

Borderline Personality | Non-Epileptic Seizures | Psychological Trauma

How it helps

Borderline Personality

IMPACT 0 / 5 | EVIDENCE 0 / 5

Practicing mindfulness can help people with borderline personality disorder by improving emotional regulation and reducing impulsive behaviors. It focuses on being present in the moment, which can decrease anxiety and stress.

Non-Epileptic Seizures

IMPACT 1 / 5 | EVIDENCE 1 / 5

A study assessed mindfulness-based therapy on 49 patients with psychogenic nonepileptic seizures. Of the participants, 26 completed the 12-session program, showing significant reductions in seizure frequency and intensity, and improved quality of life. However, changes in event duration and psychiatric symptoms were not significant. The study suggests the potential of this therapy for PNES, despite a notable dropout rate, and underscores the need for more comprehensive research [R].

Psychological Trauma

IMPACT 3 / 5 | EVIDENCE 3 / 5

Three meta-analyses (the largest one with 20 studies and 898 participants) concluded that mindfulness-based interventions can improve PTSD psychological symptoms such as intrusive memories, avoidance, and increased emotional arousal, with the duration increasing their effectiveness [R, R, R].

An 8-week mindfulness-based cognitive intervention used as an add-on to conventional therapy with citalopram further reduced PTSD, anxiety, depression, and stress symptoms in a non-placebo-controlled trial of 48 male veterans with PTSD [R].

In a non-placebo-controlled trial of 80 discharged ICU patients with PTSD, a 3-month mindfulness program self-directed by a mobile app was as effective as a therapist-led program [R].

5 Art Therapy

Participate in art therapy sessions, which can include activities such as painting, sculpting, or drawing, for 1-2 hours per week. These sessions can be done either in group settings guided by a trained art therapist or individually, depending on your comfort level and goals. It is beneficial to engage in this practice consistently for several months to observe the therapeutic benefits.

TYPICAL STARTING DOSE
1 hour

Helps with these Symptoms & Conditions:

Cognitive Decline

Helps with these Goals:

Creativity | Mood

Helps with these DNA Risks:

Bipolar Disorder | Borderline Personality | Psychological Trauma

How it helps

Bipolar Disorder

IMPACT 1 / 5 | EVIDENCE 1 / 5

Art therapy, especially for pediatric patients with bipolar and comorbid disorders, has been shown to offer a method for implementing interventions effectively, addressing clinical challenges presented by early onset bipolar disorder through psychodynamic and object relations approaches to art therapy [R].

Psychological treatments for bipolar disorders, including psychotherapies adjunct to standard medications, may significantly enhance social adjustment, reduce symptoms, and decrease relapses and hospitalizations [R].

Creative art therapy for severe mental illness, covering various creative mediums like visual art and music, is suggested as a potentially low-risk, high-benefit intervention for individuals with SMI, including bipolar disorder [R].

Borderline Personality

IMPACT 1 / 5 | EVIDENCE 1 / 5

A randomized controlled trial of 57 patients with personality disorders (including borderline personality disorder) found that an art therapy intervention (1.5 hours/week for 10 weeks) was an effective treatment because it not only reduces personality disorder pathology and maladaptive modes, but also helps patients to develop adaptive, positive modes that indicate better mental health and self-regulation [R].

Psychological Trauma

IMPACT 2 / 5 | EVIDENCE 1 / 5

In 2 non-placebo-controlled trials of 330 adults and 470 children with PTSD, different modalities of art therapy (audio-visual, music, drama, and poetry) improved the symptoms, In one of them, drama therapy was most effective [R, R, R].

Art therapy can facilitate the expression and processing of emotions, offering a non-verbal form of communication.

6 Meditation

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

Helps with these Symptoms & Conditions:

- Artery Hardening

Helps with these Goals:

- Cognitive Function
- Creativity
- Energy
- Focus
- Longevity
- Memory
- Mood
- Short Term Memory

Helps with these DNA Risks:

- Bipolar Disorder
- Borderline Personality
- Psychological Trauma

How it helps

Bipolar Disorder

IMPACT 1 / 5

EVIDENCE 1 / 5

Meditation practices can foster an improved sense of emotional balance and stress reduction, which can be beneficial in managing mood swings.

Several studies highlight the efficacy of mindfulness-based interventions in managing bipolar disorder II. Meditation serves as a mood stabilizer, notably reducing depressive symptoms, especially among consistent practitioners. Combining cognitive-behavioral therapy with mindfulness shows high acceptance and restores self-image. Mindfulness-based cognitive therapy, when practiced consistently, correlates with long-term improvements in depression scores. Additionally, an 8-week mindfulness-based class demonstrates feasibility and benefits, suggesting potential as an adjunctive treatment [R, R, R, R, R].

Borderline Personality

IMPACT 0 / 5

EVIDENCE 0 / 5

Meditation helps in managing symptoms of borderline personality disorder by promoting relaxation, reducing stress, and enhancing emotional regulation. It encourages a calm state of mind and better focus.

Psychological Trauma

IMPACT 3 / 5

EVIDENCE 3 / 5

Two meta-analyses found meditation effective at improving PTSD symptoms and depression in people with PTSD. In military veterans, meditation programs may be more effective than treatment as usual [R, R, R].

Meditation may help reduce stress levels and promote feelings of calm and well-being.

7 Acceptance and Commitment Therapy (ACT)

Participate in Acceptance and Commitment Therapy (ACT) sessions with a licensed therapist weekly for a minimum of 8 to 12 weeks. During this period, engage in daily ACT exercises at home as recommended by your therapist, such as mindfulness practices and writing exercises that help you connect with your values and accept your thoughts without judgment.

Helps with these Goals:

Mood

Helps with these DNA Risks:

Bipolar Disorder | Borderline Personality | Psychological Trauma

How it helps

Bipolar Disorder

IMPACT 1 / 5

EVIDENCE 1 / 5

ACT taught patients to accept unavoidable private events, focus on actions directed toward valued goals, and defuse odd cognition. This approach may benefit patients with positive psychotic symptoms, which can include mood disturbances [R].

A four-session ACT-based group intervention developed for perinatal women focused on acceptance, cognitive defusion, present-moment awareness, value identification, and goal setting, showing promise in addressing the significant psychiatric and behavioral health condition comorbidity, somatic symptoms, and stigma associated with perinatal mood and anxiety disorders [R].

A systematic review of group-based ACT for anxiety and depression concluded that it is useful in the psychological treatment of emotional disorders [R].

Borderline Personality

IMPACT 0 / 5

EVIDENCE 0 / 5

ACT is a form of psychotherapy that helps patients accept what is out of their personal control, and commit to action that enriches their life. It can enhance psychological flexibility and may be beneficial in managing symptoms.

Psychological Trauma

IMPACT 1 / 5

EVIDENCE 1 / 5

In a non-placebo-controlled trial of 31 war veterans with PTSD, an ACT workshop improved psychiatric symptoms, functioning, and reintegration. However, ACT only showed modest effects on distress in a non-placebo-controlled trial of 160 veterans [R, R].

A mobile application-delivered ACT program helped in a trial of 221 participants with PTSD due to the COVID-19 pandemic [R].

ACT may help by teaching techniques to deal with distressing thoughts and feelings effectively so they have less impact and influence over a person's actions.

8 Psychotherapy

Schedule and attend regular sessions with a licensed psychotherapist, typically once a week for 50-60 minutes, over a period of several months to years depending on your individual needs and progress. Consistency is key, and the duration can vary widely based on personal goals and the type of psychotherapy being practiced.

TYPICAL STARTING DOSE

1 hour

Helps with these Goals:

Energy | Fat Loss | Focus | Libido | Mood

Helps with these DNA Risks:

Bipolar Disorder | Psychological Trauma

How it helps

Bipolar Disorder

IMPACT 5 / 5

EVIDENCE 5 / 5

Experts recommend talk therapy for mental conditions that cause mood swings. It may work best as part of a broader treatment plan [R, R, R, R, R, R, R, R, R, R, R, R].

Talk therapy may help improve the symptoms of bipolar disorder. It may also help people with their daily activities. Forms of talk therapy that may help include:

- **Family-focused therapy** [R, R]
- **Cognitive-behavioral therapy (CBT)** [R, R, R, R, R]
- **Mindfulness-based therapy** [R]
- **Psychoeducation** [R, R]

PERSONALIZED TO YOUR GENES

Mindfulness-based talk therapy may significantly improve mood in people with your *OPRM1* gene variant [R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
OPRM1	**rs609148**	GA	

Psychological Trauma

IMPACT 5 / 5

EVIDENCE 5 / 5

Experts agree that talk therapy is the most effective way to manage PTSD. Exposure therapy and cognitive-behavioral therapy (CBT) are often part of a treatment plan for PTSD [R, R, R, R].

In **exposure therapy**, patients face their fears in a safe environment. It may be helpful for flashbacks and nightmares in people with PTSD [R, R, R, R, R, R, R].

CBT is sometimes used in combination with exposure therapy for PTSD. Through CBT, a therapist can help you develop healthy coping mechanisms [R, R, R, R, R, R].

Eye movement desensitization and reprocessing (EMDR) is another option. It combines exposure therapy with therapist-guided eye movements. This may help with PTSD by making memories less stressful [R, R, R, R, R].

Other techniques may help with PTSD but have less evidence supporting them. These include:

- Mindfulness-based interventions [R, R, R, R, R]
- Attention bias modification [R, R, R, R]
- Animal-assisted therapy [R, R, R, R, R, R]

PERSONALIZED TO YOUR GENES

Your *ADCYAP1R1* gene variant is linked to higher odds of PTSD. Talk therapy may cancel out the effects of this variant [R, R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
ADCYAP1R1	**rs2267735**	GG	

9

Dance

Engage in dance activities for at least 30 minutes, three times per week. You can choose any form of dance you enjoy, such as ballroom, hip hop, or salsa, and you can dance at home, in a studio, or in a group class setting.

TYPICAL STARTING DOSE

30 minutes

Helps with these Symptoms & Conditions:

Cognitive Decline

Helps with these Goals:

Creativity Fat Loss Mood Strength

Helps with these DNA Risks:

Borderline Personality Psychological Trauma

How it helps

Borderline Personality

IMPACT 2 / 5

EVIDENCE 2 / 5

Participants in the DMT group showed significant symptom reduction in various areas, including overall symptoms, psychological discomfort, negative symptoms, and positive symptoms compared to the TAU group. Qualitative findings supported these results, but there were differing opinions on resistance [R].

Psychological Trauma

IMPACT 3 / 5

EVIDENCE 3 / 5

A systematic review of 15 studies concluded that dance interventions improve pathognomonic symptoms of trauma, bodily sensations and perceptions, psychological processes, and interpersonal skills [R].

10

Dietary Omega-3 Fatty Acids

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.

Helps with these Symptoms & Conditions:

Artery Hardening | Cognitive Decline | Food Allergies | Hair Loss

Helps with these Goals:

Cognitive Function | Mood

Helps with these DNA Risks:

Bipolar Disorder | Borderline Personality

How it helps

Bipolar Disorder

IMPACT 1 / 5

EVIDENCE 1 / 5

Omega-3 fatty acids may be beneficial as an adjunctive treatment for depressive symptoms in bipolar disorder. A systematic review found positive effects of omega-3 for depressive, but not manic symptoms, based on limited data [R].

Inflammation plays a significant role in bipolar disorder, and both omega-3 (n-3) and omega-6 (n-6) polyunsaturated fatty acids (PUFAs) are involved in inflammatory processes linked to the disorder. Several studies suggest that low levels of n-3 PUFAs are associated with bipolar disorder symptoms and that n-3 PUFA supplementation may show efficacy in treating both mania and depression in bipolar disorder [R].

A systematic review focusing on the efficacy of omega-3 fatty acid supplementation in improving bipolar symptoms concluded that combinations of eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) might improve bipolar symptoms, while single-constituent supplements did not [R].

Borderline Personality

IMPACT 0 / 5

EVIDENCE 0 / 5

Omega-3 fatty acids may improve emotional regulation and reduce impulsivity, symptoms often associated with borderline personality disorder.

11 Sunlight Exposure

Expose your skin to direct sunlight for about 10-30 minutes several times per week, preferably during midday when the sun is strongest. Adjust duration based on your skin sensitivity and local climate to avoid sunburn.

TYPICAL STARTING DOSE

20 minutes

Helps with these Symptoms & Conditions:

- Food Allergies

Helps with these Goals:

- Energy
- Longevity
- Mood

Helps with these DNA Risks:

- Bipolar Disorder

How it helps

Bipolar Disorder

IMPACT 4 / 5

EVIDENCE 3 / 5

Exposure to more light during the day is associated with reduced depressive symptoms in people with bipolar disorder [R, R].

Light therapy alone or with medication may also help. However, it may not be the best option for people with bipolar disorder [R, R, R, R, R, R, R].

Light exposure may help with mood swings by regulating the body's internal clock. It may also increase serotonin activity in the brain [R, R].

Please note: *Excessive sun exposure may lead to sunburn, skin aging, and skin cancer. Make sure to find the right balance. Before trying light therapy, talk to your doctor. Some people may experience symptoms of mania from light therapy* [R, R, R].

PERSONALIZED TO YOUR GENES

In people with your *DGKB* gene variant, the lack of light exposure may increase the risk of seasonal depression. Light therapy may help with seasonal depression in people with mood swings [R, R, R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
DGKB	**rs190675597**	GA	●●●○○

12

Vitamin C

Take 500-2000 mg of vitamin C supplement daily. It can be taken at any time of the day, with or without food, according to personal preference or tolerance.

TYPICAL STARTING DOSE

500 mg

Helps with these Symptoms & Conditions:

- Artery Hardening
- Food Allergies

Helps with these Goals:

- Fat Loss

Helps with these DNA Risks:

- ⚠ Bipolar Disorder

How it helps

⚠ Bipolar Disorder

IMPACT ●●●○○ 3 / 5

EVIDENCE ●●●○○ 3 / 5

Low vitamin C levels may be associated with adverse mood effects [R].

Mood swings are a typical symptom of vitamin C deficiency (scurvy), possibly because it increases oxidative damage while decreasing dopamine and serotonin in the brain [R].

Vitamin C may reduce oxidative stress and support the normal production and function of brain messengers [R, R].

13 Mindfulness-Based Stress Reduction (MBSR)

Enroll in an 8-week MBSR course, which includes a weekly 2.5-hour class, one all-day class after the sixth week, and 45 minutes of daily home practice guided by assignments and instructional recordings.

TYPICAL STARTING DOSE

2 hours

Helps with these Symptoms & Conditions:

- Cognitive Decline

Helps with these Goals:

- Focus
- Mood

Helps with these DNA Risks:

- Borderline Personality
- Psychological Trauma

How it helps

Borderline Personality

IMPACT 0 / 5

EVIDENCE 0 / 5

MBSR is a structured program that teaches mindfulness meditation to reduce stress. It can help people with borderline personality disorder to become more aware of their thoughts and feelings and manage them more effectively.

Psychological Trauma

IMPACT 3 / 5

EVIDENCE 3 / 5

Three meta-analyses (the largest one with 20 studies and 898 participants) concluded that mindfulness-based interventions (including mindfulness-based stress reduction) can improve PTSD psychological symptoms such as intrusive memories, avoidance, and increased emotional arousal, with the duration increasing their effectiveness [R, R, R].

14 Dark Chocolate

Eat dark chocolate with a cocoa content of at least 70-85%, limiting intake to about 1-2 ounces (28-56 grams) a day to gain cardiovascular and mood-related benefits without excessive calorie intake.

Helps with these Symptoms & Conditions:

Artery Hardening

Cognitive Decline

Helps with these Goals:

Cognitive Function

Energy

Fat Loss

Longevity

Memory

Mood

Short Term Memory

Helps with these DNA Risks:

Bipolar Disorder

BDNF

How it helps

Bipolar Disorder

IMPACT 1 / 5

EVIDENCE 1 / 5

Dark chocolate contains flavonoids, caffeine, and theobromine, which may improve mood and brain function.

A study found that consumption of 85% cocoa dark chocolate improved mood in association with gut microbial changes in healthy adults. This trial demonstrated that daily consumption of dark chocolate significantly reduced negative effects [R].

BDNF

IMPACT 0 / 5

EVIDENCE 0 / 5

Dark chocolate contains flavonoids that might stimulate the brain to produce more BDNF.

15

Tryptophan

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

Helps with these Symptoms & Conditions:

Food Allergies

Helps with these Goals:

Mood

Helps with these DNA Risks:

Bipolar Disorder

How it helps

Bipolar Disorder

IMPACT 2 / 5

EVIDENCE 1 / 5

People with bipolar disorder may have higher brain levels of the tryptophan byproducts kynurenic acid and picolinic acid [R, R].

However, in a study of 24 people with bipolar disorder in a manic phase, supplementation with L-tryptophan (12 g/day for 2 weeks) reduced manic symptoms. The combination of L-tryptophan (up to 9 g/day for 6 days) with lithium carbonate may offer greater benefits than lithium alone [R, R].

Tryptophan may help with mood by serving as a building block to serotonin [R].

Please note: *Supplements with L-tryptophan may be associated with eosinophilia-myalgia syndrome* [R].

16

Lithium Orotate

Take 5 mg of lithium orotate supplement daily, preferably with a meal to enhance absorption. It is recommended to consult with a healthcare provider prior to starting the supplement, particularly for long-term use.

TYPICAL STARTING DOSE

5 mg

Helps with these DNA Risks:

Bipolar Disorder

How it helps

Bipolar Disorder

IMPACT 1 / 5

EVIDENCE 1 / 5

Lithium, in the form of lithium *carbonate* or lithium *citrate*, is an approved drug for the treatment of bipolar disorder [R, R, R, R, R].

Animal studies show that a non-approved lithium form, **lithium *orotate*,** may deliver more lithium to the brain than lithium carbonate. It may also stay in the blood and brain longer [R, R, R, R].

In theory, the orotate form may be able to help stabilize mood in smaller doses than lithium carbonate. However, the only relevant research is a single small study from the ‘70s. This study suggests it may help with depressive symptoms [R, R].

Please note: *There are no studies looking into the efficacy, tolerability and safety of lithium orotate for mood swings in humans. Discuss lithium supplements with your doctor* [R].

17

Nuts

Incorporate a variety of nuts such as almonds, walnuts, and cashews into your daily diet, aiming for a serving size of about 1 ounce (28 grams), which is roughly a handful, every day.

TYPICAL STARTING DOSE

3 oz

Helps with these Symptoms & Conditions:

Artery Hardening

Cognitive Decline

Helps with these Goals:

Cognitive Function

Fat Loss

Longevity

Memory

Mood

Strength

Helps with these DNA Risks:

Bipolar Disorder

How it helps

Bipolar Disorder

IMPACT 1 / 5

EVIDENCE 1 / 5

A systematic review highlighted the role of nutraceuticals, including nuts, in bipolar disorder. While the evidence is not conclusive and is somewhat inconsistent, some nut components like fatty acids and certain amino acids have shown promise in improving symptoms related to both depressive and manic phases of bipolar disorder. This suggests that while not a standalone treatment, nuts could be beneficial as part of a broader dietary strategy [R].

18

Whole Grains

Incorporate at least three servings of whole grains into your daily diet. This can include consuming foods such as whole grain bread, brown rice, whole grain pasta, and oats. Aim to replace refined grains with whole grains at each meal for optimal benefits.

Helps with these Symptoms & Conditions:

Artery Hardening

Helps with these Goals:

Memory | Short Term Memory

Helps with these DNA Risks:

⚠ Bipolar Disorder

How it helps

⚠ Bipolar Disorder

IMPACT 1 / 5 | EVIDENCE 1 / 5

A study found that dietary patterns, including higher consumption of whole grains, may be associated with fewer symptoms of depression in patients with bipolar disorder [R].

Whole grains are known to influence systemic inflammation, a factor that has been linked with various mental health conditions including mood disorders. However, the direct impact on bipolar disorder isn't well-documented [R].

19 Mindfulness Meditation

Practice mindfulness meditation for 10-20 minutes daily. Find a quiet, comfortable place to sit or lie down, then focus on your breath, observing thoughts and sensations without judgment. Consistency is key, so try to incorporate it into your daily routine, perhaps in the morning or before bed.

TYPICAL STARTING DOSE
30 minutes

Helps with these Goals:

Creativity | Fat Loss | Focus | Libido | Memory | Mood | Short Term Memory

Helps with these DNA Risks:

BDNF

How it helps

BDNF

IMPACT 0 / 5 | EVIDENCE 0 / 5

Practicing mindfulness meditation can increase BDNF production, potentially supporting cognitive functions and mental wellbeing.

20 Ginkgo

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

Helps with these Symptoms & Conditions:

- Cognitive Decline

Helps with these Goals:

- Cognitive Function
- Focus
- Libido
- Memory

Helps with these DNA Risks:

- BDNF

How it helps

BDNF

IMPACT 0 / 5

EVIDENCE 0 / 5

Ginkgo biloba is known for its potential cognitive benefits. It may aid by improving circulation and acting as an antioxidant.

21 Curcumin

Take a 500 mg curcumin supplement daily with food. To enhance absorption, take it with a meal that contains fats or oils since curcumin is fat-soluble.

TYPICAL STARTING DOSE

500 mg

Helps with these Symptoms & Conditions:

- Artery Hardening
- Cognitive Decline
- Food Allergies

Helps with these Goals:

- Cognitive Function
- Energy
- Fat Loss
- Focus
- Memory
- Mood
- Strength

Helps with these DNA Risks:

BDNF

How it helps

BDNF

IMPACT 0 / 5

EVIDENCE 0 / 5

Curcumin, a compound found in turmeric, is believed to increase levels of a protein called Brain Derived Neurotrophic Factor (BDNF). Higher BDNF levels can enhance brain health and may help prevent brain conditions.

22 D-Mannose

Take 2 grams of D-mannose powder dissolved in water, once daily for recurrent urinary tract infections. For active infections, take 1.5 grams twice daily for 3 days, then once daily for the next 10 days.

TYPICAL STARTING DOSE

2 g

Helps with these DNA Risks:

Bipolar Disorder

How it helps

Bipolar Disorder

IMPACT 0 / 5

EVIDENCE 0 / 5

Genetically lower mannose levels have been causally associated with bipolar disorder. The authors of the study suggested supplementation may provide therapeutic benefits [R].

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.*

23 Attention Bias Modification

Engage in daily sessions of attention bias modification training for 10-15 minutes. Use computerized programs or mobile apps specifically designed for this purpose, focusing on redirecting your attention away from negative

TYPICAL STARTING DOSE

stimuli towards neutral or positive stimuli. Continue this practice for a minimum of 4 weeks to observe potential changes in anxiety or stress levels.

10 minutes

Helps with these DNA Risks:

Psychological Trauma

How it helps

Psychological Trauma

IMPACT 4 / 5

EVIDENCE 3 / 5

People with PTSD and other anxiety issues tend to preferentially pay attention to threatening information (this is called *attention bias*) [R, R, R].

Attention bias modification is the practice of "re-training" this type of bias. Attention bias modification programs lasting for 3-4 weeks improved PTSD and depressive symptoms in 5 non-placebo-controlled trials of 421 people [R, R, R, R, R].

These programs also helped prevent the development of PTSD in 2 non-placebo-controlled trials of 818 soldiers [R, R].

A meta-analysis of 85 trials of over 5k people with anxiety (including PTSD) and mood disorders concluded that attention bias modification has consistent but small benefits and warned about the high heterogeneity and risk of bias of the studies [R].

24 Mindfulness-Based Cognitive Therapy (MBCT)

Participate in an 8-week course of Mindfulness-Based Cognitive Therapy (MBCT), which typically includes weekly group sessions (each lasting about 2 hours), daily homework practices (about 1 hour per day), and one all-day session after the fifth week. Sessions are led by trained instructors and focus on mindfulness meditation practices and cognitive behavioral exercises.

TYPICAL STARTING DOSE

2 hours

Helps with these Goals:

Focus Mood

Helps with these DNA Risks:

Psychological Trauma

How it helps

Psychological Trauma

IMPACT 4 / 5

EVIDENCE 3 / 5

Three meta-analyses (the largest one with 20 studies and 898 participants) concluded that mindfulness-based interventions can improve PTSD psychological symptoms such as intrusive memories, avoidance, and increased emotional arousal, with the duration increasing their effectiveness [R, R, R].

An 8-week mindfulness-based cognitive intervention used as an add-on to conventional therapy with citalopram further reduced PTSD, anxiety, depression, and stress symptoms in a non-placebo-controlled trial of 48 male veterans with PTSD [R].

In a non-placebo-controlled trial of 80 discharged ICU patients with PTSD, a 3-month mindfulness program self-directed by a mobile app was as effective as a therapist-led program [R].

25 Bacopa

Take bacopa as a supplement in a dose of 300-450 mg per day, ideally with food to enhance absorption. It should be taken daily for at least 4-6 weeks to begin noticing benefits in cognitive function and stress reduction.

TYPICAL STARTING DOSE

300 mg

Helps with these Symptoms & Conditions:

Cognitive Decline

Helps with these Goals:

Cognitive Function | Focus | Memory | Short Term Memory

Helps with these DNA Risks:

BDNF

How it helps

BDNF

IMPACT 0 / 5

EVIDENCE 0 / 5

Bacopa monnieri has been traditionally used to support cognitive functions. It may support memory formation and neural health.

26 Cocoa

Incorporate 30-60 grams of high-quality dark chocolate (with at least 70% cocoa content) into your daily diet. Enjoy it as a snack or dessert to reap the potential heart health benefits.

Helps with these Symptoms & Conditions:

Artery Hardening
Cognitive Decline

Helps with these Goals:

Cognitive Function
Energy
Focus
Memory
Mood
Short Term Memory

Helps with these DNA Risks:

BDNF

How it helps

BDNF

IMPACT 0 / 5
EVIDENCE 0 / 5

Cocoa is rich in flavonoids, compounds that stimulate the production of Brain-Derived Neurotrophic Factor (BDNF), a protein essential for brain health. Higher levels of BDNF can help prevent neurodegenerative diseases by promoting brain cell growth and survival.

27

Green Tea

Consume 400 mg of green tea extract daily. This can be taken in the form of capsules or tablets available that specify the amount of green tea extract. Ensure the supplement is taken according to the product's specific instructions, usually once a day with water.

TYPICAL STARTING DOSE
400 mg

Helps with these Symptoms & Conditions:

Artery Hardening
Cognitive Decline

Helps with these Goals:

Cognitive Function
Energy
Fat Loss
Focus
Longevity
Memory
Mood

Helps with these DNA Risks:

BDNF

How it helps

BDNF

IMPACT 0 / 5

EVIDENCE 0 / 5

Green tea boosts brain-derived neurotrophic factor (BDNF), a protein that supports brain health by facilitating brain cell survival and growth. Through its antioxidants, it also helps prevent any damage to your brain cells, effectively reducing the chances of low BDNF levels.

28 Spend Time in Nature

Aim to spend at least 120 minutes per week in natural environments, such as parks, forests, or beaches. This can be divided into short durations throughout the week, for example, 17 minutes per day or longer sessions on weekends.

TYPICAL STARTING DOSE

2 hours

Helps with these Goals:

Creativity | Energy | Longevity | Mood

Helps with these DNA Risks:

BDNF

How it helps

BDNF

IMPACT 0 / 5

EVIDENCE 0 / 5

Being in nature can reduce stress and increase BDNF levels, aiding in brain cell growth and resilience.

29 Music Therapy

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

Helps with these Symptoms & Conditions:

Cognitive Decline

Helps with these Goals:

Creativity | Focus | Mood

Helps with these DNA Risks:

Psychological Trauma

How it helps

Psychological Trauma

IMPACT 1 / 5

EVIDENCE 1 / 5

In a non-placebo-controlled trial of 74 subjects with PTSD, trauma-focused music and imagery was as effective as treatment as usual [R].

Music therapy may hep by promoting relaxation.

30 Biofeedback

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.

Helps with these Goals:

Creativity | Focus | Libido | Memory

Helps with these DNA Risks:

Psychological Trauma

How it helps

Psychological Trauma

IMPACT 3 / 5

EVIDENCE 3 / 5

A lower heart rate variability from a normal “baseline” heart rate indicates a dominance of the “fight-or-flight” (*sympathetic*) nervous system, which is associated with increased stress and many forms of anxiety, as seen in a meta-analysis of 36 trials and 2,086 patients. In the case of PTSD it predicts poorer response to cognitive-behavioral therapy, as seen in a study of 37 patients [R, R].

Heart rate variability biofeedback training consists of learning to modify heart rate variability to adjust it to the breathing pattern. This therapy improved PTSD symptoms in 3 non-placebo-controlled trials of 400 soldiers. Those in their late 30s benefited more from this technique than younger soldiers [R, R, R, R].

31 Pet Therapy

Engage with a pet, such as a dog or cat, for at least 15-30 minutes a day. This can include activities like playing, petting, or simply sitting together. It's beneficial to do this regularly, aiming for daily interactions, to maximize the emotional and physical health benefits.

TYPICAL STARTING DOSE

30 minutes

Helps with these Symptoms & Conditions:

- Cognitive Decline

Helps with these Goals:

- Focus
- Mood

Helps with these DNA Risks:

- Psychological Trauma

How it helps

Psychological Trauma

IMPACT 3 / 5

EVIDENCE 2 / 5

Three non-placebo-controlled trials and 2 case series of 106 war veterans with PTSD showed that attending weekly horse-assisted therapy sessions for 6 weeks can improve PTSD and anxiety symptoms. In a non-placebo-controlled trial of 66 war veterans, the use of service dogs as an add-on to conventional care further improved the symptoms [R, R, R, R, R, R].

Similarly, dog-assisted therapy improved PTSD, anxiety, depression, anger, dissociation, and sexual concerns in a non-placebo-controlled trial of 153 children with PTSD [R].

32 EFT Tapping

Perform EFT (Emotional Freedom Technique) tapping daily for about 15 to 20 minutes. Focus on a specific issue while tapping with your fingertips on 9 specific meridian points on the body in a sequence: karate chop (side of the hand), top of the head, eyebrow, side of the eye, under the eye, under the nose, chin, beginning of the collarbone, and under the arm. Repeat the process 3 to 5 times or until you feel relief.

TYPICAL STARTING DOSE

20 minutes

Helps with these Goals:

Mood

Helps with these DNA Risks:

Psychological Trauma

How it helps

Psychological Trauma

IMPACT 3 / 5

EVIDENCE 2 / 5

A meta-analysis of 32 trials and 2,260 participants showed significant positive effects of EFT tapping in children and young people with PTSD. Additionally, EFT tapping effectively reduced anxiety and improved various mental health parameters in 2 trials on women who experienced prenatal loss and chemically pulmonary injured veterans [R, R, R].

EFT tapping may help by stimulating the body's stress relief systems by tapping on specific points. This process can reduce stress and negative emotions associated with traumatic events.

33

Transcendental Meditation

Practice transcendental meditation for 20 minutes twice a day, once in the morning before breakfast and once in the afternoon or early evening. Sit comfortably in a quiet place, close your eyes, and silently repeat a mantra given to you by a certified transcendental meditation teacher.

TYPICAL STARTING DOSE

20 minutes

Helps with these Symptoms & Conditions:

Artery Hardening

Helps with these Goals:

Cognitive Function

Longevity

Mood

Helps with these DNA Risks:

Psychological Trauma

How it helps

Psychological Trauma

IMPACT 3 / 5

EVIDENCE 2 / 5

Transcendental meditation has shown promise in reducing symptoms associated with PTSD in various non-placebo-controlled trials. Veterans, refugees, and prison inmates who practiced transcendental meditation experienced improvements in PTSD symptoms, depression, anxiety, sleep difficulties, and trauma-related symptoms [R, R, R, R, R].

34 Applied Relaxation

Practice applied relaxation by dedicating 15-30 minutes each day to learning and practicing relaxation techniques, such as deep breathing, progressive muscle relaxation, or guided imagery. Consistency is key, so aim to incorporate these practices into your daily routine for an ongoing period to effectively manage stress and anxiety.

TYPICAL STARTING DOSE

30 minutes

Helps with these DNA Risks:

Psychological Trauma

How it helps

Psychological Trauma

IMPACT 2 / 5

EVIDENCE 2 / 5

Three non-placebo-controlled trials of 102 people with PTSD showed that applied relaxation can reduce feelings of anger and guilt. However, cognitive behavioral therapy is generally more effective at managing this condition [R, R, R].

Applied relaxation techniques can reduce general anxiety, excessive worry, and tension. The improvements may be maintained for up to one year after initial treatment [R, R, R].

35 Resistant Starch

Incorporate 40g of Jo's resistant starch into your daily diet. This can be done by adding it to smoothies, yogurt, or baked goods. Ensure to spread the intake throughout the day for better tolerance.

TYPICAL STARTING DOSE

40 g Hi-Maize

Helps with these Symptoms & Conditions:

Food Allergies

Helps with these Goals:

Fat Loss Mood

Helps with these DNA Risks:

BDNF

How it helps

BDNF

IMPACT 0 / 5

EVIDENCE 0 / 5

Resistant starches act as food for gut bacteria, which then produce short-chain fatty acids that can increase the brain-derived neurotrophic factor (BDNF). Increased BDNF levels can aid in brain health and decrease the risk of neurological conditions.

36 Lavender Essential Oil

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

Helps with these Goals:

Mood

Helps with these DNA Risks:

Psychological Trauma

How it helps

Psychological Trauma

IMPACT 1 / 5

EVIDENCE 1 / 5

Taking an oral product with lavender oil (Silexan 80 mg/day) for 6 weeks improved psychological symptoms, mental health score, and sleep quality in an uncontrolled trial of 47 people with PTSD and other mood and anxiety disorders [R].

37 Strength Training

Engage in strength training exercises, such as weight lifting or bodyweight exercises, for 60 minutes per session, 2 to 3 times per week. Ensure you work all major muscle groups and rest each muscle group for at least 48 hours before exercising it again.

TYPICAL STARTING DOSE

1 hour

Helps with these Symptoms & Conditions:

Artery Hardening | Cognitive Decline | Underactive Thyroid

Helps with these Goals:

Cognitive Function | Fat Loss | Focus | Longevity | Memory | Mood | Short Term Memory | Strength

Helps with these DNA Risks:

Psychological Trauma

Recommendation Note:

These are my personal recommendations to you

How it helps

Psychological Trauma

IMPACT 3 / 5

EVIDENCE 3 / 5

Exercise interventions based on aerobic exercise, resistance training, or both and lasting 2-12 weeks improved PTSD in 8 non-placebo-controlled trials of almost 300 people. While aerobic exercise was more effective at improving anxiety and overall psychological distress, resistance training also helped with specific PTSD symptoms, distress tolerance, and sleep quality [R, R, R, R, R, R, R, R].

Exercise may help by [R, R]:

- Reducing anxiety and depression
- Protecting the brain

38

DHA (Omega-3)

Take an omega-3 supplement containing DHA at a dosage of 200-500 mg daily, preferable with a meal to improve absorption. It's recommended to continue this supplementation as part of your daily regimen to support heart, brain, and joint health.

TYPICAL STARTING DOSE

200 mg

Helps with these Goals:

Memory

Helps with these DNA Risks:

BDNF

Psychological Trauma

How it helps

BDNF

IMPACT 2 / 5

EVIDENCE 2 / 5

Two meta-analyses (the largest one with 12 studies and 587 participants) concluded that supplementation with fish oil, including DHA, increases BDNF levels by 0.72 pg/mL or 1.01 µmol/L. Fish oil may be most effective in interventions lasting longer than 10 weeks, at doses below 1500 mg/day, and in individuals older than 50 years old [R, R].

Psychological Trauma

IMPACT 2 / 5

EVIDENCE 2 / 5

A study of 95 people associated PTSD with low blood levels of the omega-3 fatty acid docosahexaenoic acid (DHA) [R].

In line with this, taking omega-3 supplements containing 1,470 mg DHA and 147 mg eicosapentaenoic acid (EPA) for 12 weeks increased blood EPA levels and reduced PTSD severity after a traumatic physical injury in a placebo-controlled trial of 110 people [R].

The same dose of omega-3 fatty acids prevented the development of PTSD and secondary symptoms such as accelerated heart rate after traumatic injuries and accidents in 2 placebo-controlled trials of 193 people [R, R].

Omega-3 fatty acids, particularly DHA, may support brain health by maintaining the structural integrity of neuron membranes. They are involved in neuronal signaling and neuroplasticity.

39 Diaphragmatic Breathing

Practice diaphragmatic breathing for 10-15 minutes per day. Sit or lie down in a comfortable position, place one hand on your chest and the other on your belly. Breathe in slowly through your nose, ensuring your belly moves out more than your chest. Exhale slowly through your mouth or nose, consciously relaxing the belly. Repeat this process, focusing on the movement of your belly rather than your chest.

TYPICAL STARTING DOSE

10 minutes

Helps with these Goals:

Fat Loss

Helps with these DNA Risks:

Psychological Trauma

How it helps

Psychological Trauma

IMPACT 1 / 5

EVIDENCE 1 / 5

In a non-placebo-controlled trial of 30 veterans with PTSD, a 4-week mobile technology-supported diaphragmatic breathing intervention improved stress, PTSD, anxiety, depression, and psychological well-being [R].

Diaphragmatic breathing may help by activating your body's relaxation response, thus reducing feelings of stress, fear, and anxiety.

40

Kundalini Yoga

Participate in a Kundalini yoga class or follow an online session for 60 to 90 minutes, at least three times per week. Ensure the practice includes a combination of dynamic movements, specific postures, breathing techniques, meditation, and the chanting of mantras.

TYPICAL STARTING DOSE

1 hour

Helps with these Symptoms & Conditions:

Cognitive Decline

Helps with these Goals:

Mood

Helps with these DNA Risks:

Psychological Trauma

How it helps

Psychological Trauma

IMPACT 1 / 5

EVIDENCE 1 / 5

In a non-placebo-controlled trial of 40 patients with PTSD, participating in an 8-week Kundalini yoga program improved health and well-being, lifestyle, psychosocial integration, and perceptions of self [R].

41 Morning Bright Light Therapy

Expose yourself to a light therapy box, which mimics natural sunlight, for about 20-30 minutes each morning within the first hour of waking up. It's important to do this daily, especially during months with less natural sunlight, to help manage symptoms of Seasonal Affective Disorder (SAD) or other conditions influenced by light exposure.

TYPICAL STARTING DOSE

20 minutes

Helps with these Goals:

Cognitive Function | Energy | Mood

Helps with these DNA Risks:

Psychological Trauma

How it helps

Psychological Trauma

IMPACT 1 / 5

EVIDENCE 1 / 5

In a non-placebo-controlled trial of 15 PTSD patients, a wearable light device reduced the symptoms and was well tolerated. In 2 non-placebo-controlled trials of 59 war veterans, morning bright light treatment reduced PTSD symptoms, pain, and sleep disturbances [R, R, R].

42 N-Back Training

To implement n-back training, practice this cognitive exercise for 20 minutes daily over a period of at least 4 weeks. Use a computer program or mobile app designed specifically for n-back tasks, choosing a difficulty level that challenges you without causing frustration.

TYPICAL STARTING DOSE

20 minutes

Helps with these Goals:

Cognitive Function | Focus | Memory | Short Term Memory

Helps with these DNA Risks:

Psychological Trauma

How it helps

Psychological Trauma

IMPACT 1 / 5

EVIDENCE 1 / 5

In a non-placebo-controlled trial of 21 veterans with PTSD, N-back training improved re-experiencing symptoms better than 1-back training [R].

N-back training may help by strengthening the brain's ability to process and cope with traumatic memories. Improved cognitive function can lessen the intensity of traumatic flashbacks and intrusive thoughts.

43 Progressive Muscle Relaxation

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

Helps with these Goals:

Energy | Fat Loss | Focus | Mood

44 Dietary Zinc

Incorporate foods high in zinc, such as beef, poultry, seafood (especially oysters), beans, nuts, and whole grains, into your daily diet. Aim for the recommended dietary allowance of zinc, which is 11 mg per day for adult men and 8 mg per day for adult women.

Helps with these Goals:

Longevity

45 Galphimia

Take a galphimia glauca extract supplement, commonly in capsule or tablet form, at a dosage of 350 mg daily. This should be consumed with water, ideally in the morning for a period of up to 12 weeks to help alleviate symptoms of anxiety.

TYPICAL STARTING DOSE

350 mg

46

Climbing

Engage in climbing activities, such as rock climbing, bouldering, or indoor wall climbing, two to three times per week, each session lasting for about an hour. Begin with easier routes and gradually progress to more challenging ones as your strength and skill improve.

TYPICAL STARTING DOSE

1 hour

Helps with these Goals:

Fat Loss

Strength

Helps with these DNA Risks:

Psychological Trauma

How it helps

Psychological Trauma

IMPACT 1 / 5

EVIDENCE 2 / 5

In a pilot trial with severe anxiety and PTSD patients, climbing as an add-on treatment for 4 weeks improved psychological parameters and health-related characteristics similarly to Nordic walking and social contact. Climbing did not show additional clinically relevant benefits compared to the other two options [R].

In a pilot study with 21 inpatients having mental health disorders, climbing therapy outperformed Nordic walking and a sedentary control condition. Climbing improved positive affect, affective valence, activation, and perceived self-efficacy more significantly, while reducing anxiety to a greater extent than Nordic walking [R].

Please note: Climbing injuries are common and can be challenging to diagnose. Climbers typically get injured on their fingers, and if they have been injured before, they are more likely to get hurt again. Seek medical attention if you experience pain after practicing [R].

47

Yoga Nidra

Practice Yoga Nidra for 30-45 minutes per session. Choose a quiet, comfortable place where you won't be disturbed. Aim to do this 3-5 times a week, preferably in the evening before bed to help improve sleep quality and reduce stress.

TYPICAL STARTING DOSE

30 minutes

Helps with these Goals:

Mood

Helps with these DNA Risks:

Psychological Trauma

How it helps

Psychological Trauma

IMPACT 0 / 5

EVIDENCE 0 / 5

In an uncontrolled trial of 16 male combat veterans with PTSD, practicing yoga nidra reduced rage, anxiety, and emotional reactivity, and increased feelings of relaxation, peace, self-awareness, and self-efficacy, despite challenges with mental focus, intrusive memories, and other concerns [R].

48 CBD

Take a CBD supplement in a dosage ranging from 10 to 40 milligrams per day. Start with the lowest dose and gradually increase it based on your body's response. This can be taken orally in the form of capsules, edibles, or oil drops under the tongue. For ongoing issues, such as anxiety or chronic pain, it may be used daily, while for acute issues, it might be used as needed.

TYPICAL STARTING DOSE

10 mg

Helps with these Symptoms & Conditions:

Artery Hardening | Food Allergies

Helps with these Goals:

Memory

49 Laughter Therapy

Dedicate at least 15-30 minutes a day to watch, listen to, or participate in activities that make you laugh, such as watching a comedy show, attending a stand-up comedy event, or engaging in laughter yoga sessions. Consistently incorporate these laughter-inducing activities into your daily routine for an ongoing period to harness the health benefits of laughter.

TYPICAL STARTING DOSE

30 minutes

Helps with these Goals:

Longevity | Mood | Short Term Memory

50

Massage

Schedule a massage session, ideally with a licensed therapist, for 30-60 minutes, once a week. Choose a type of massage that suits your specific needs, such as Swedish for relaxation or deep tissue for muscle tension.

TYPICAL STARTING DOSE

30 minutes

Helps with these Goals:

Energy

Focus

Mood