

Brain Health

Summary Report

REPORT CATEGORY —



BRAIN

Report date: 10 January 2024

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REPORT PROVIDED BY

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for Dummy Persson

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DISCLAIMER

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

How this works

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



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



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

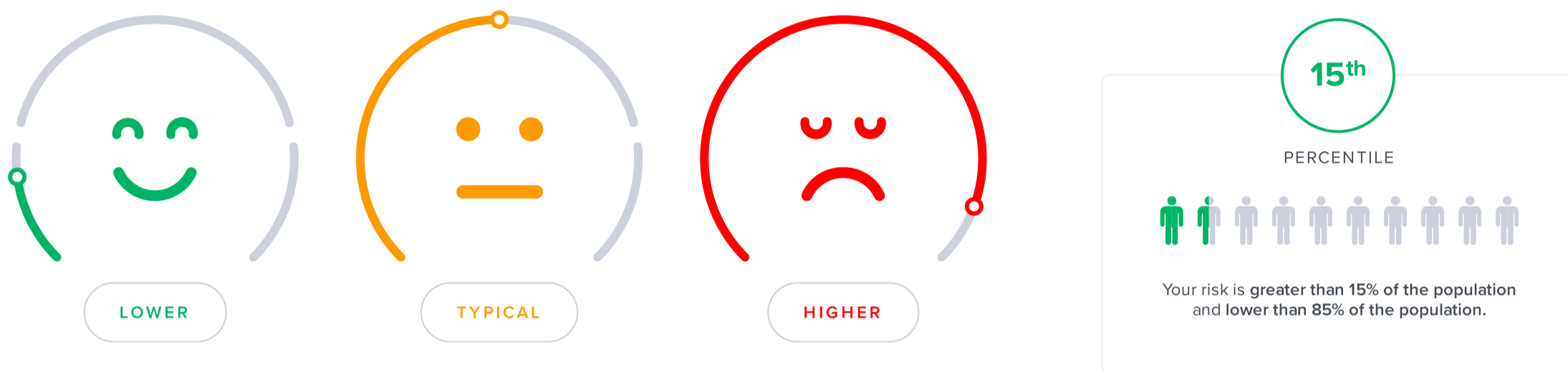
Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.

Our Summary Reports combine different Wellness and Trait Reports related to a certain health topic. They give you a more complete picture about different aspects of your health and wellness.



We use artificial intelligence and machine learning to analyze all this information. We then summarize your results as a risk score or display it on a gauge. When we give a risk score, the risk icon tells you if you are at a higher or lower risk compared to other people:

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



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

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

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

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



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

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



In Summary Reports, we combine top evidence-based recommendations for different conditions.

We focus on recommendations that help with more conditions included in a Summary Report.

For each recommendation, we list all conditions it may help with. We also include impact, evidence, regimen, personalized parts, and other details specific to each condition.

1



Recommendation

Helps with the following



Condition

IMPACT
●●●●● 4 / 5

EVIDENCE
●●●●● 4 / 5



Condition

IMPACT
●●●●● 4 / 5

EVIDENCE
●●●●● 4 / 5



Condition

IMPACT
●●●●● 4 / 5

EVIDENCE
●●●●● 4 / 5



Condition

IMPACT
●●●●● 4 / 5

EVIDENCE
●●●●● 4 / 5

Impact

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

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

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

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

Recommendation Evidence

●●●●● 5 / 5

Recommendations that are considered effective and generally recommended by experts and medical bodies.

●●●●● 4 / 5

Recommendations that are considered likely effective and that have multiple independent meta-analyses and a great many studies supporting them.

●●●●● 3 / 5

Recommendations that are considered possibly effective and have many studies supporting them.

●●●●● 2 / 5

Recommendations that have insufficient evidence, with two or several clinical trials supporting them, or many studies but with ambiguous results.

●●●●● 1 / 5

Recommendations that have insufficient evidence, with a single clinical trial, or with many studies most of which didn't find support for the recommendation.

●●●●● 0 / 5

No evidence in humans.

Genotype-specific evidence

●●●●● High-quality

Direct evidence that a recommendation helps more in people with your gene variant (many clinical trials, a few large clinical trials, or a meta-analysis).

●●●●● Medium-quality

Direct evidence that a recommendation helps more in people with your gene variant (a few clinical trials or one large clinical trial).

●●●●● Low-quality

Direct evidence that a recommendation helps more in people with your gene variant (a single clinical trial or more trials with inconsistent results).

●●●●● Indirect

A recommendation may help more in people with your gene variant because it targets a specific gene or protein affected by your variant (e.g., MTHFR, dopamine).

●●●●● In theory

A recommendation may help more in people with your gene variant because it targets a specific mechanism affected by your variant (e.g., inflammation, oxidative stress).

Some things to keep in mind:

- The scores/gauges use the latest scientific studies. But they are not perfect and will change as the models improve.
- Not everyone with risk variants will develop a health condition.
- Genetics is not the whole story. Your health is most often a combination of genetics, lifestyle, and environmental factors. Great news, as this means that you can often change your lifestyle to lower your risk.
- Results might be more accurate for some ethnic groups than others. This depends on the studies used in each report.
- People without risk variants can also develop health conditions.
- It's important to work with your doctor to better understand your risks. Our reports do not diagnose or treat any health condition. They are not a substitute for medical advice. If you're diagnosed with a certain health condition, follow your doctor's advice.

Summary

Some of us get stressed out by every single detail, while others go through life with a smile on their face. Going out for a drink after work, one has a single glass, while another downs an entire bottle. In a college class, one student pours through a text, while another googles up possible places to eat after class.

How our brains handle the daily environment is as unique as the individual. Past experiences, one's current environment, diet, lifestyle, and of course, your DNA all affect how the brain functions and responds.

Putting together all of these factors to get a better picture of your brain's health can be difficult, but it's crucial. **Knowing your genetics is a great starting point!** This Comprehensive Brain Report covers key aspects of brain health, such as:

- Mental health
- Substance use and eating disorders
- Cognitive problems
- Cognitive traits










This summary report contains:

23 Genetic Results






50 Recommendations

Overview of Your Results

Mental Health

 MORE LIKELY Seasonal Low Mood	 TYPICAL LIKELIHOOD Teeth Grinding	 MORE LIKELY Stress
More likely to have seasonal affective disorder	Typical likelihood of bruxism	More likely to feel stressed
 TYPICAL LIKELIHOOD Anxiety	 LESS LIKELY Caffeine-Related Anxiety	 TYPICAL LIKELIHOOD Low Mood
Typical likelihood of anxiety	Less likely to experience caffeine-related anxiety	Typical likelihood of chronically low mood
 TYPICAL LIKELIHOOD Mood Swings	 LESS LIKELY Obsessive-Compulsive Tendencies	 MORE LIKELY Psychological Trauma
Typical likelihood of mood swings	Less likely to have OCD	More likely to have PTSD

Addictions And Eating Disorders

 LESS LIKELY Cannabis Addiction	 LESS LIKELY Addictions	 LESS LIKELY Alcohol Addiction
Less likely to be addicted to cannabis	Less likely to have addictions	Less likely to be addicted to alcohol
 TYPICAL LIKELIHOOD Tobacco Addiction	 TYPICAL LIKELIHOOD Eating Disorders	
Typical likelihood of tobacco addiction	Typical likelihood of eating disorders	

Cognitive Problems



TYPICAL LIKELIHOOD

Cognitive Decline

Typical likelihood of cognitive decline



LOWER RISK

Attention

Less likely to have ADHD



TYPICAL LIKELIHOOD

Dyslexia

Typical likelihood of having dyslexia



TYPICAL LIKELIHOOD

Brain Fog

Typical likelihood of brain fog

Cognitive Traits



TYPICAL

Memory Performance

Likely typical memory performance



TYPICAL

Creativity

Likely typical creativity



TYPICAL

Short-Term Memory

Likely typical short term memory



TYPICAL

Processing Speed

Likely typical processing speed



TYPICAL

Executive Function

Likely typical executive function

Your Results in Details



Mental Health

Why does one person have a low mood without an apparent reason, while another keeps smiling despite all the hardships? When is stress just stress and not ongoing anxiety? The lines can get blurry when it comes to mental health issues.

One thing is clear: DNA plays a key role in mental health. This section looks at your predisposition to things like stress, anxiety, mood problems, and obsessive-compulsive tendencies.



MORE LIKELY

Seasonal Low Mood

More likely to have seasonal affective disorder



TYPICAL LIKELIHOOD

Teeth Grinding

Typical likelihood of bruxism



MORE LIKELY

Stress

More likely to feel stressed



TYPICAL LIKELIHOOD

Anxiety

Typical likelihood of anxiety



LESS LIKELY

Caffeine-Related Anxiety

Less likely to experience caffeine-related anxiety



TYPICAL LIKELIHOOD

Low Mood

Typical likelihood of chronically low mood



TYPICAL LIKELIHOOD

Mood Swings

Typical likelihood of mood swings



LESS LIKELY

Obsessive-Compulsive Tendencies

Less likely to have OCD



MORE LIKELY

Psychological Trauma

More likely to have PTSD

Seasonal Low Mood

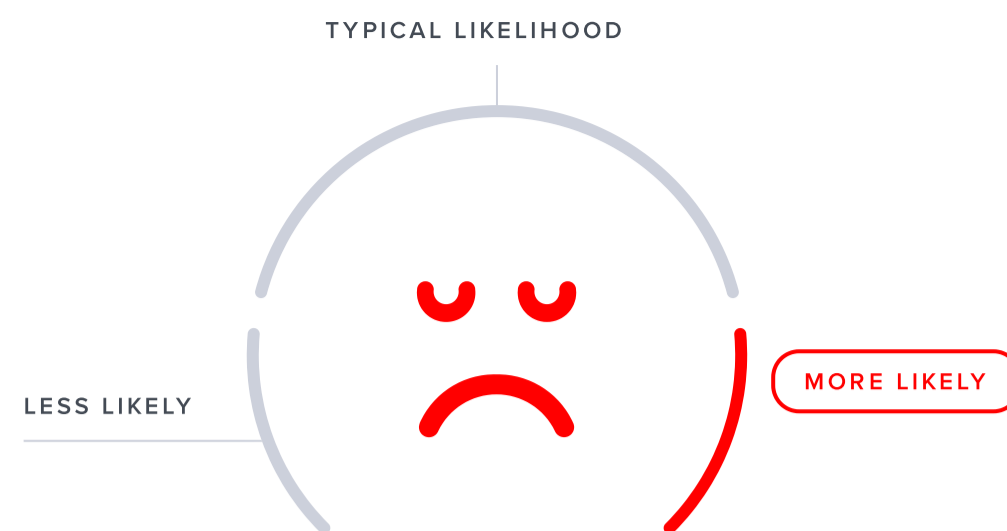
Seasonal affective disorder (SAD) is a type of depression that occurs seasonally, usually during the fall and winter months when there is less sunlight.

Genetics may account for about **30%** of the differences in people's seasonality, including mood changes. Genes involved in SAD may influence the body's internal clock and serotonin levels [R, R].

Other risk factors include [R]:

- Family history
- Living at higher latitudes
- Low vitamin D levels

In some people with **depression and bipolar disorder**, symptoms tend to worsen seasonally [R].



More likely to have seasonal affective disorder based on 90 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
PTGER3	rs113067418	CC
PSAP	rs61852182	CC
CAMKMT	rs17498753	AA
MPHOSPH6	rs7190761	GG
HLCS	rs2835475	TT
HLCS	rs2835490	TT
/	rs9364726	AG
TARS1	rs55685444	CC
HLCS	rs12151959	AA
NRDE2	rs2183189	AA
PSMC1	rs9743577	TT
DNAJB4	rs1323097	TC
DNAJB4	rs2181453	TC
DNAJB4	rs2351912	TA
FGGY	rs835365	CT
GSTM3	rs11101980	TG
GSTM3	rs3754450	TC
FOXQ1	rs77826363	GG
DGKB	rs190675597	GG

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

Teeth Grinding

Key Takeaways:

- Genes involved in teeth grinding may influence dopamine and serotonin activity.
- Other risk factors include certain personality types, stress, cigarette/alcohol/caffeine use, and certain medications.
- Teeth grinding is not uncommon, affecting children and young adults more, with about 3 times the rate occurring while sleeping.
- If your genetic risk is high, you may lower your overall risk by taking action on factors that you can change. If you have symptoms, talk to a dentist about appropriate actions to take.

Bruxism is a condition involving excessive teeth grinding. It can happen when people are awake, but more commonly occurs during sleep [\[R, R\]](#).

Many people that have sleep bruxism don't know that they have it! Often, a bed partner may notice that the other person grinds their teeth at night. Alternatively, a dentist may bring it to their attention [\[R\]](#).

Your jaws and teeth are strong—they can exert around 250 lbs (greater than 110 kg) of force! That is why teeth grinding can damage [\[R\]](#):

- Teeth
- Joints that open and close the mouth
- Jaw muscles

If left untreated, teeth grinding can lead to [\[R\]](#):

- Damaged, fractured, or loose teeth
- Headaches or earaches
- Tense or painful face muscles
- Pain or clicking in the jaw

Bruxism is usually diagnosed by a dentist. Grinding your teeth leaves wear marks that a dentist can easily identify [\[R\]](#).

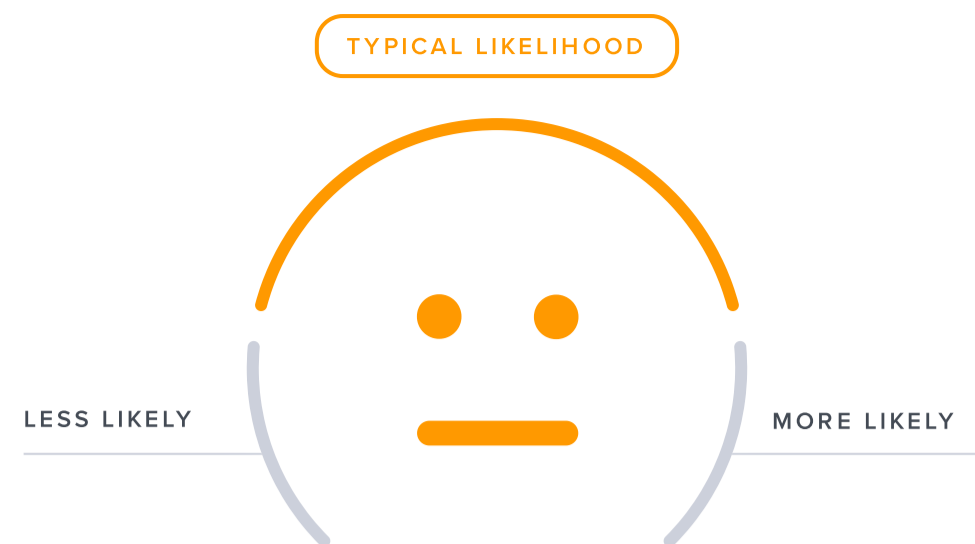
If you have bruxism, a dental device like a splint or a mouthguard can help prevent damage to your teeth. Talk to your doctor or dentist about treatment options for bruxism [\[R, R\]](#).

Doctors don't know the exact cause of bruxism. It can happen in any age group and is fairly common in children. Risk factors for teeth grinding include [\[R, R, R\]](#):

- Certain personality types, such as being very driven or competitive
- Stress
- Cigarette, alcohol, and caffeine use
- Some medications

The risk of bruxism depends partly on genetics. Many people with bruxism have a first-degree relative with the condition. Genes involved in teeth grinding may influence [\[R, R, R, R, R, R\]](#):

- Dopamine activity
- Serotonin activity



Typical likelihood of bruxism based on 3 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
HTR2A	rs2770304	TC
DRD3	rs6280	CT
DRD5	rs6283	TC
DRD1	rs686	AG
HTR2A	rs6313	AG
ANKK1	rs1800497	GG

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

Stress

Key Takeaways:

- Up to **45%** of differences in people's stress levels may be due to genetics. It is a common issue that we all need to cope with at every age.
- Stress is highly modifiable by lifestyle and environment. So, a high genetic risk may be offset by effective stress reduction techniques and optimizing your health.
- Long-term or excessive stress may affect mental health, memory, heart, and gut health.
- Even with low genetic risk, you may want to take action now if you feel stressed out!
- Click the **next steps** tab for relevant labs.

Some people might tell you that stress is all in your head, but that's not true. **Stress is a whole-body reaction** [R, R].

Stress is managed by a network of brain regions, glands, and hormones. This network is called the *HPA axis* [R, R, R].

The HPA axis makes your body release [epinephrine](#) (adrenaline), [norepinephrine](#) (noradrenaline), and [cortisol](#). These are the three major stress hormones [R].

The stress response is supposed to get your body ready for danger. It slows down immunity, digestion, and healing, so more energy is available for "fight or flight." Once the danger has passed, the body returns to normal [R].

In other words, **it's natural to get stressed out sometimes.** Stress only becomes a problem when it starts interfering with your daily life [R].

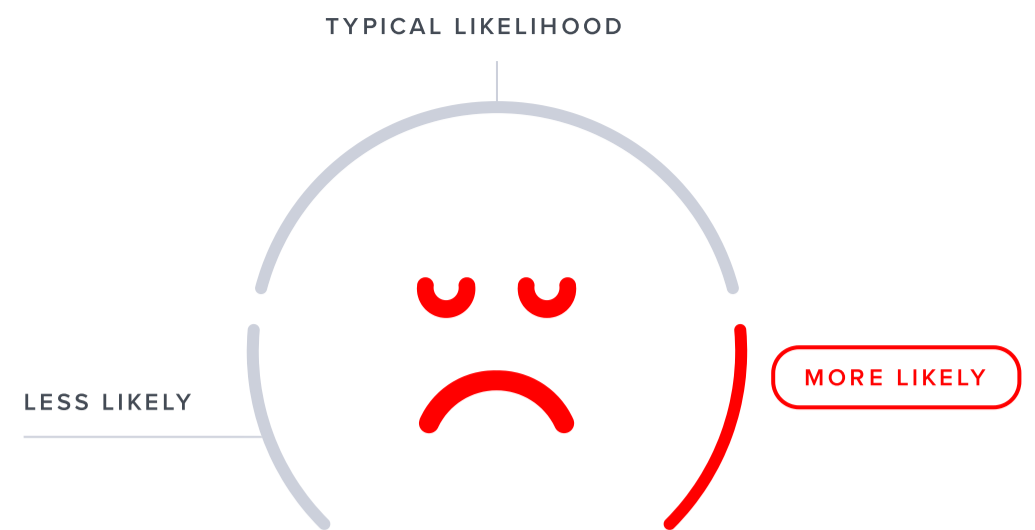
This is because long-term or intense stress may contribute to [R, R]:

- Depression
- Anxiety
- Memory problems
- Infections
- Heart problems
- Gut problems

However, not everybody responds to stress in the same way. Some people seem to thrive under pressure. Others need a much calmer environment to be at their best [R].

Up to 45% of differences in the way we perceive stress may be attributed to genetics. Genes involved influence [R, R, R]:

- Stress hormones like cortisol (NR3C1, ACE, ZNF366)
- Calming brain chemicals (GABRA6, OPRM1)
- Brain function (BDNF)



More likely to feel stressed based on 383,309 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
SPG7	rs2292954	GA
MROH2A	rs7606893	CA
LMCD1	rs114122346	CC
STAC	rs112766131	GG
CHRM3	rs10925907	GA
DPYSL5	rs12474330	GA
OXTR	rs2254298	GG
MPPED1	rs9614176	GG
SMARCA2	rs10965522	TC
HLA-DPB1	rs2064479	CC
PDCD6IP	rs2053425	CC
/	rs2650673	CC
RASGEF1B	rs10033652	TC
/	rs137970858	TT
/	rs150429966	AA
/	rs76192797	AA
CDH12	rs1545967	TT
RBM17	rs1073646	AA
KCTD12	rs674041	TT

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.

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 [\[R\]](#):

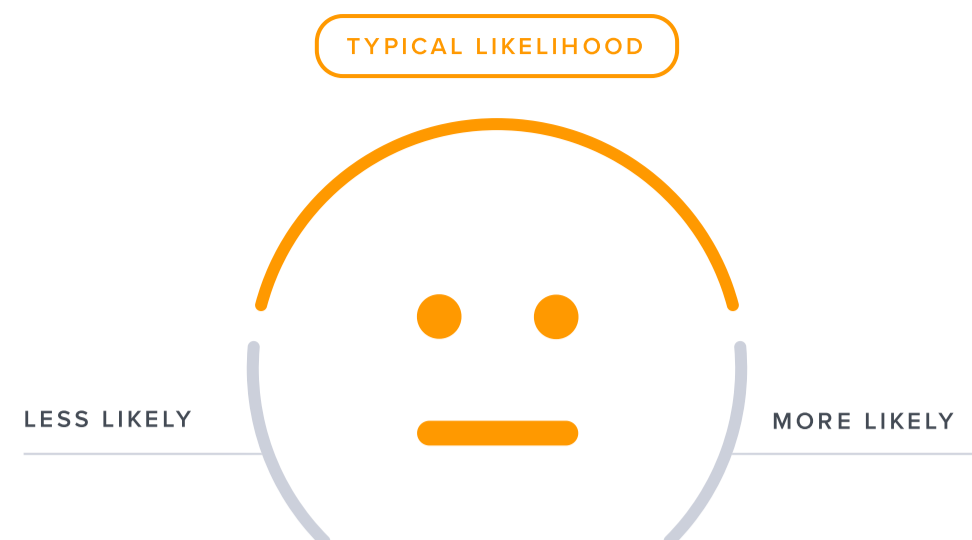
- Restlessness
- Fatigue
- Problems concentrating
- Short temper
- Muscle tension
- Heavy sweating
- Trembling
- Gut problems
- Heart rate changes
- Sleep problems

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)



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



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
MC4R	rs10871777	AA
XKR6	rs6985109	AA
ADGRB1	rs4129585	CA
PITX1	rs254560	GA
GSK3B	rs12630592	TG
UPB1	rs5751876	TC
CACHD1	rs61731122	GG
FPR1	rs112591851	CC
GLYCTK	rs61734645	AA
CADM2	rs9854869	CC
/	rs1826787	CC
GLYCTK	rs34135146	GG
CADM2	rs7355953	TT
ZFP57	rs3117425	CC
PALM	rs77432625	CG
NT5C2	rs77420391	AG
METTL14	rs57360718	TC
BORCS7	rs3740393	CG
CHMP3	rs78260322	AG

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

Caffeine-Related Anxiety

People drink coffee for an energy and mood boost. Caffeine is the main ingredient responsible for these effects. However, caffeine can make some people feel jittery and have trouble falling asleep. Caffeine may also increase the risk of anxiety and other mental health problems [R, R, R].

A gene called *ADORA2A* may change the way caffeine affects your body [R].

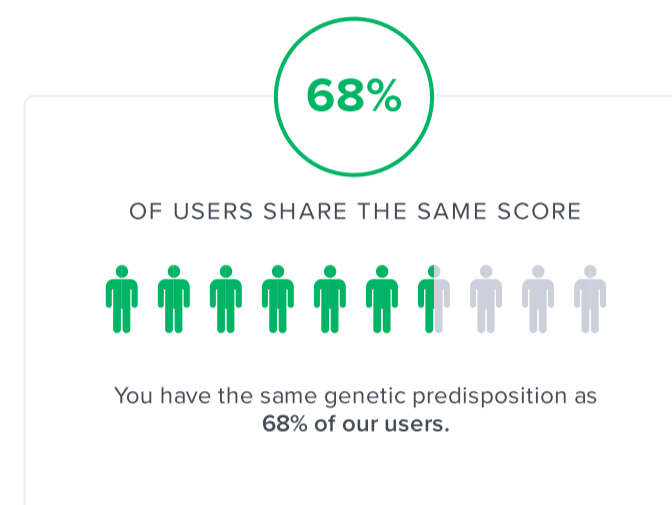
The *ADORA2A* gene makes a protein that allows the brain to use a compound called adenosine. This compound helps make you sleepy and calm. Caffeine works by blocking the *ADORA2A* protein. Then adenosine can't work on your brain, and you feel more awake [R].

For example, one *ADORA2A* gene variant may change the way you respond to caffeine. Caffeine may make people with this variant more anxious. Women tend to be affected more strongly than men [R, R, R].

People with this variant may be able to build up a kind of tolerance to caffeine. If they drink caffeinated drinks every day, it may not trigger anxiety anymore [R].



Less likely to experience caffeine-related anxiety based on 1 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
UPB1	rs5751876	TC

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

Low Mood

Key Takeaways:

- About 40% of differences in people's odds of developing depression may be due to genetics.
- It is more likely for young adults and the elderly but can affect people of all ages.
- Other risk factors include traumatic and stressful events, serious medical conditions, and substance use problems.
- If you have high genetic risk, you may want to consider optimizing your stress management.
- Click the **next steps** tab for relevant labs and lifestyle factors.

Depression is more than just a low mood. People with depression tend to have [\[R\]](#):

- Low motivation
- Problems with concentration
- Changes in appetite
- Poor sleep quality
- Aches and pains
- Thoughts of self-harm or suicide

If any of these symptoms resonate with you, you can work with your doctor to improve them. **Psychotherapy and medication are the most effective treatments for depression.** Strategies such as [exercise](#) may also boost your mood [\[R, R\]](#).

The strategies most likely to work for you may depend on your genetics. This is because genetic factors account for roughly 40% of differences in depression [\[R\]](#).

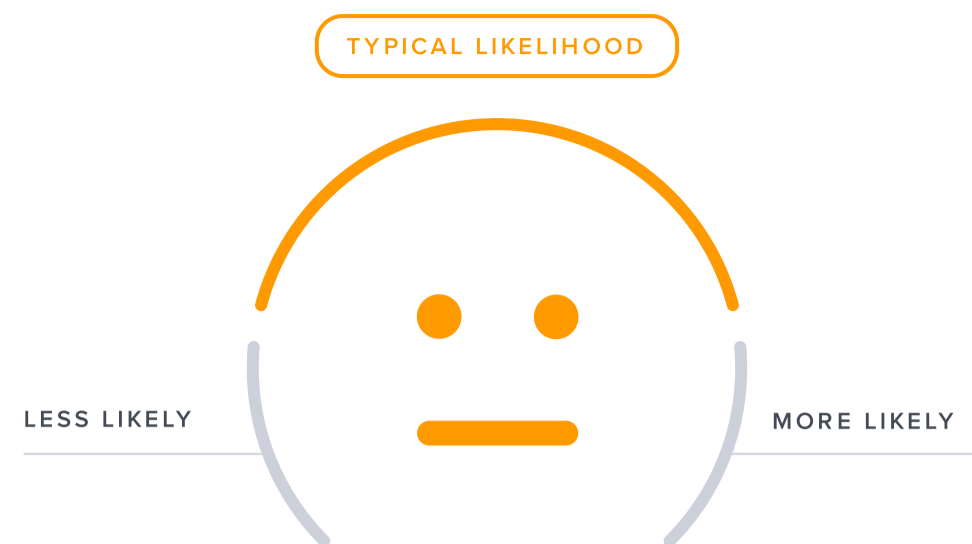
Gene variants linked to this condition may cause [\[R, R, R, R\]](#):

- An exaggerated stress response (CRHR1, [COMT](#))
- Low levels or activity of brain chemicals ([COMT](#), OPRM1, SLC6A4, DRD2)
- Impaired brain function ([BDNF](#), VRK2)
- Inflammation (IL6, VRK2)
- Sleep disturbances (CLOCK, TIMELESS)

Genetically high white blood cell count and testosterone and low DHA may be causally associated with a higher risk of depression. Moreover, depression may also lead to increased white blood cells [\[R, R, R\]](#).

It's important to note that **genetics is only one piece of the puzzle.** Other risk factors for depression include [\[R\]](#):

- Stressful or traumatic events
- Serious medical conditions, such as cancer
- Heavy drug and alcohol use



Typical likelihood of chronically low mood based on 84,205 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
MICB	rs1150757	GG
NEGR1	rs1993709	GG
MEF2C	rs409645	GG
TCF4	rs1452787	GG
ZCCHC7	rs3824344	CT
CRHR1	rs17689882	GA
RABGAP1L	rs75650221	CC
KIAA1109	rs77087420	AA
SLC44A5	rs116362708	GG
DPY19L3	rs10405382	CC
VWC2L	rs17711053	AA
/	rs10156548	GG
APEH	rs4625	AA
LINGO1	rs7175083	TT
PTPRT	rs6130328	GG
CRHR1	rs62057061	CG
CSNK1G1	rs35755513	TC
UBXN2A	rs34668726	CG
GPM6A	rs6818081	CT

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

Mood Swings

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**

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

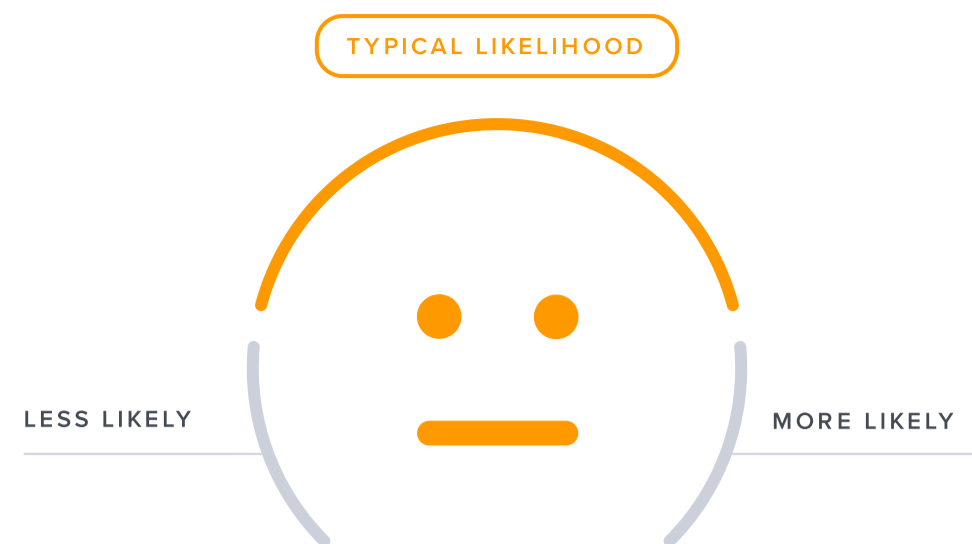
It is important to work with your doctor and find appropriate ways to manage bipolar disorder. Management options include [\[R\]](#):

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

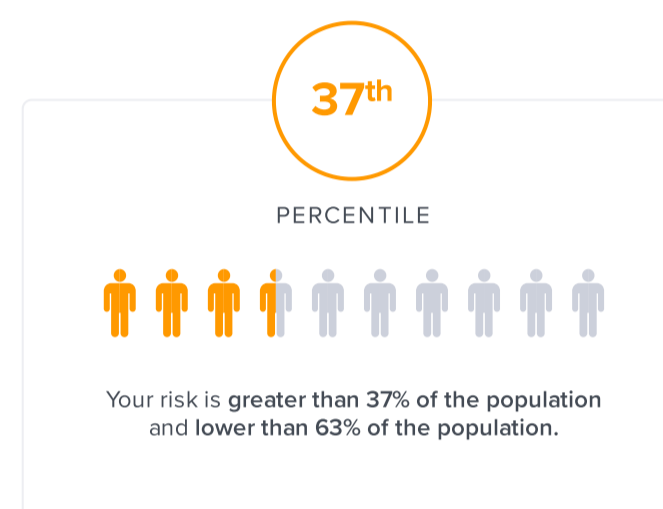
People with untreated mood disorders are considerably more likely to harm themselves and even die by suicide. If you are diagnosed with a mood disorder, it is essential to follow your doctor's treatment plan [\[R\]](#).

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)



Typical likelihood of mood swings based on 1,009,857 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
/	rs145410455	GG
SPPL3	rs58235352	GG
NEGR1	rs7531118	CC
MYH15	rs1531188	CC
EIF3M	rs143864773	TT
SOX6	rs977509	CC
ASCC3	rs7771570	CC
LRFN5	rs61990288	GG
EFNA5	rs55993664	CC
SCAMP1	rs4529173	CC
SLC30A9	rs34215985	GG
/	rs11135349	CC
POU5F2	rs71639293	AA
TEF	rs2179744	AA
NR4A2	rs1226412	TT
/	rs11137850	AA
ASTN2	rs10759881	AA
ENOX1	rs4143229	AC
ATP5MK	rs78821730	AG

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

Obsessive-Compulsive Tendencies

Key Takeaways:

- OCD is affected by genes impacting impulse control, learning, and decision making.
- OCD is a rare condition, so even if your genetic risk is high, the overall risk is low.
- High levels of stress and/or trauma can be a factor in raising the risk. If you have a high genetic risk, you may want to address these issues if they are relevant.
- Click the **next steps** tab for relevant labs.

People with OCD have recurrent obsessions, which cause anxiety, and compulsions, which are supposed to relieve the anxiety. Many factors may play a role in the development of OCD. These include [\[R, R, R, R, R\]](#):

- Stressful or traumatic life events
- **Genetics**

Genes that may play a role in OCD may influence parts of the brain that help people [\[R, R, R, R\]](#):

- Learn
- Make decisions
- Control their impulses



Less likely to have OCD based on 4,117 genetic variants we looked at



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 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
- 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].

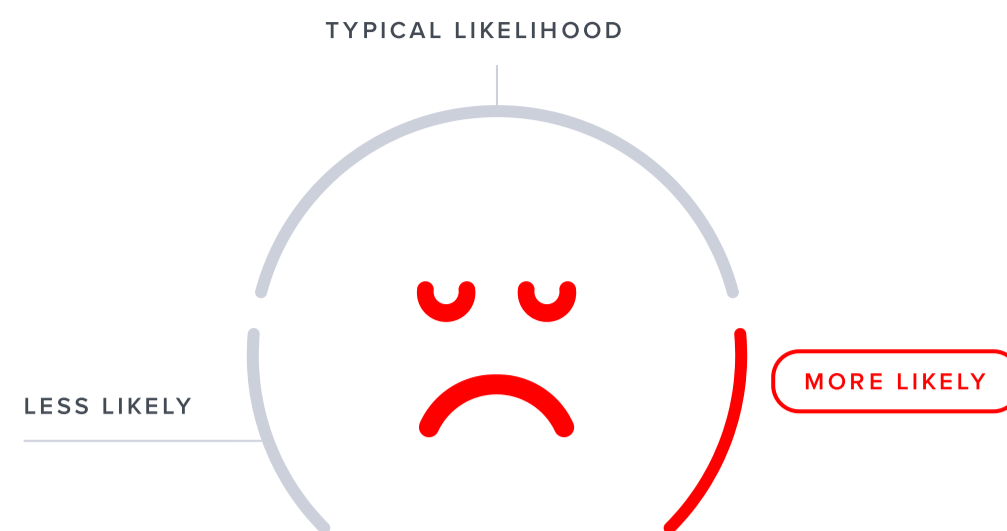
People with PTSD may be at a higher risk of [R]:

- Panic disorder
- Depression
- Substance abuse
- Suicide

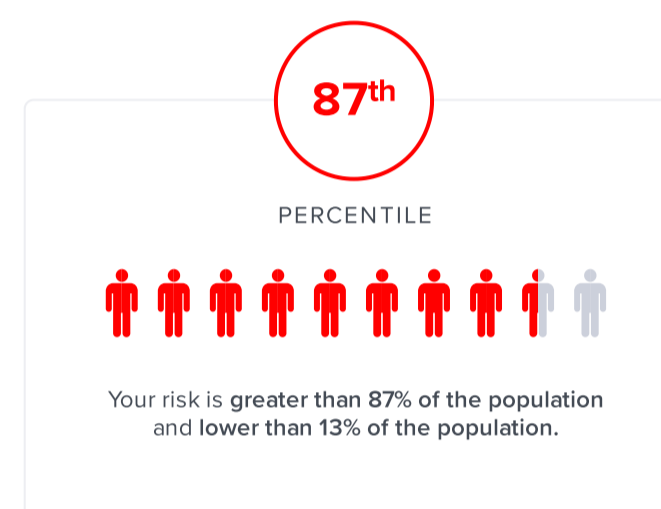
Treatment for PTSD usually includes talk therapy and medication [R, R, R].

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)



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
FAAH	rs2295633	GG
UST	rs10457838	CC
PTPN7	rs3100127	AA
PTPN7	rs4511180	AA
CRHR2	rs2267715	AG
ACE	rs4311	TC
STEAP1B	rs1800795	GC
RORA	rs8041061	GT
SRR	rs4523957	TT
MAPT	rs12938031	AG
CSMD1	rs2616978	TT
ATP10B	rs17504106	CG
OXTR	rs53576	AG
LRRC4C	rs10768747	AG
MLKL	rs62056018	AA
KIAA1109	rs45510091	AA
TCF4	rs599550	AA
ZNF804A	rs62176173	GG
MAPT	rs62056789	AC

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



Addictions And Eating Disorders

Let's face it, we all like to feel good. Our brains do this by releasing chemicals to generate that sensation, whether it be sex, great food, exercise, compliments, and so on. We will generally try to do things that promote these feelings.

Some substances cause the same chemical release in the brain, like tobacco for example. **This is part of why quitting addictive substances can be so difficult.** The same can be said for some eating disorders, where food becomes the salve to get rid of negative feelings.

This section looks at genetic predispositions toward addictions and eating disorders.



LESS LIKELY

Cannabis Addiction

Less likely to be addicted to cannabis



LESS LIKELY

Addictions

Less likely to have addictions



LESS LIKELY

Alcohol Addiction

Less likely to be addicted to alcohol



TYPICAL LIKELIHOOD

Tobacco Addiction

Typical likelihood of tobacco addiction



TYPICAL LIKELIHOOD

Eating Disorders

Typical likelihood of eating disorders

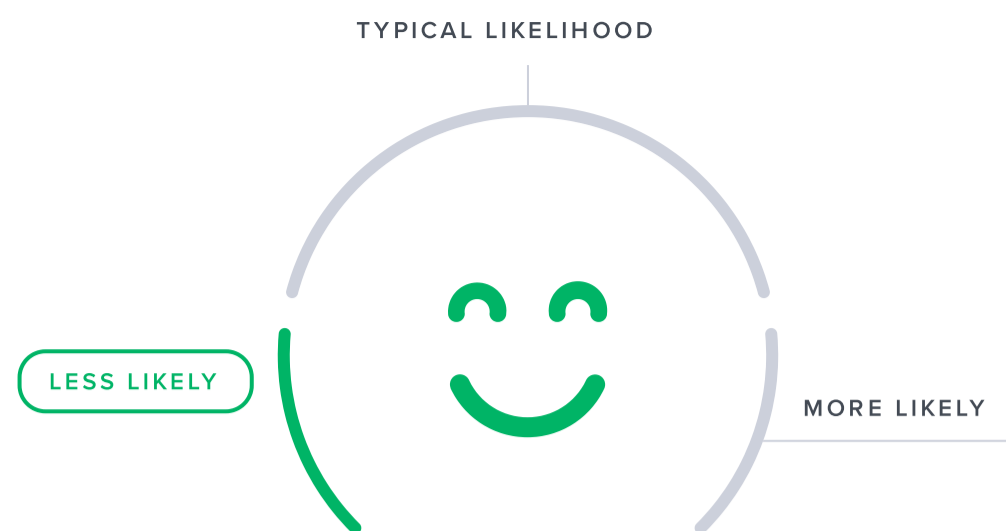
Cannabis Addiction

48.2 million people, or about 18% of Americans, used cannabis at least once in 2019. It is estimated that approximately **3 in 10 people** who use cannabis have an addiction issue.

About **50-70%** of differences in people's chances of having cannabis addiction may be due to **genetics**. Involved genes may influence the body's **cannabinoid system** and brain chemicals such as dopamine and serotonin [R].

Cannabis addiction can be influenced by a variety of other factors, including:

- Age (the younger the age of initial usage, the higher the risk)
- Frequency and amount of use
- Mental health issues like depression or PTSD
- Lower socioeconomic status



Less likely to be addicted to cannabis based on 1,648 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
AP2A2	rs7107977	AG
NCAM1	rs4471463	CC
TUFM	rs10499	AA
CADM2	rs7651996	TT
PMM1	rs4822044	CG
CSDC2	rs202629	CT
NCAM1	rs9919557	CT
SRR	rs17761723	TC
SP9	rs2033867	GG
ZNF704	rs9773390	TT
HS3ST4	rs57514421	CC
NANOS1	rs150525973	CC
ACYP2	rs2287641	GG
NR2F2	rs4984460	TT
ANO3	rs4075765	GG
CADM2	rs2875907	GG
CADM2	rs1448602	AA
SDK1	rs10085617	TT

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

Addictions

Key Takeaways:

- About 40% of differences in people's chances of developing an addiction may be attributed to genetics.
- Risk factors include mental health conditions, difficult family life, peer pressure, substance use at a young age, and your genetics.
- If you have a high genetic risk, struggle with risk factors, or experience symptoms of addiction, you may want to talk to a healthcare professional about the best action to take.
- Addiction is heavily influenced by lifestyle and environmental factors, so even with a high genetic risk, your overall risk can be low with appropriate precautions.

Addiction is defined as a dependence on a behavior or substance. Researchers think almost anything that can stimulate a person can eventually lead to an addiction. This happens when something that is first done out of habit ends up becoming an obligation [R].

Things that people can become addicted to include [R]:

- Gambling
- Technology (e.g., internet, gaming, smartphones)
- Exercise
- Sex
- Shopping
- Substances

The brain has built-in systems for feeling pleasure and reward. For example, when you have a pleasant experience, dopamine systems are activated. These systems reward behaviors that help us survive and reproduce, such as eating and having sex. In response, we become motivated to take part in these behaviors again [R, R].

However, many addictive substances and behaviors can also activate the dopamine system. This can cause changes in parts of the brain that reinforce habits related to drug use. In people with a drug addiction, just being around a certain person or object can trigger the urge to use a drug [R, R, R].

Substance use disorder is the medical term for drug addiction. Substances that people can become addicted to include [R]:

- Tobacco
- Alcohol
- Cannabis
- Opioids (e.g., heroin, morphine, codeine)
- Stimulants (e.g., amphetamines, meth, cocaine)

Up to 1 in 10 Americans may have substance use disorder at some point in their lives. What's more, only 1 in 4 of these people will seek treatment [R].

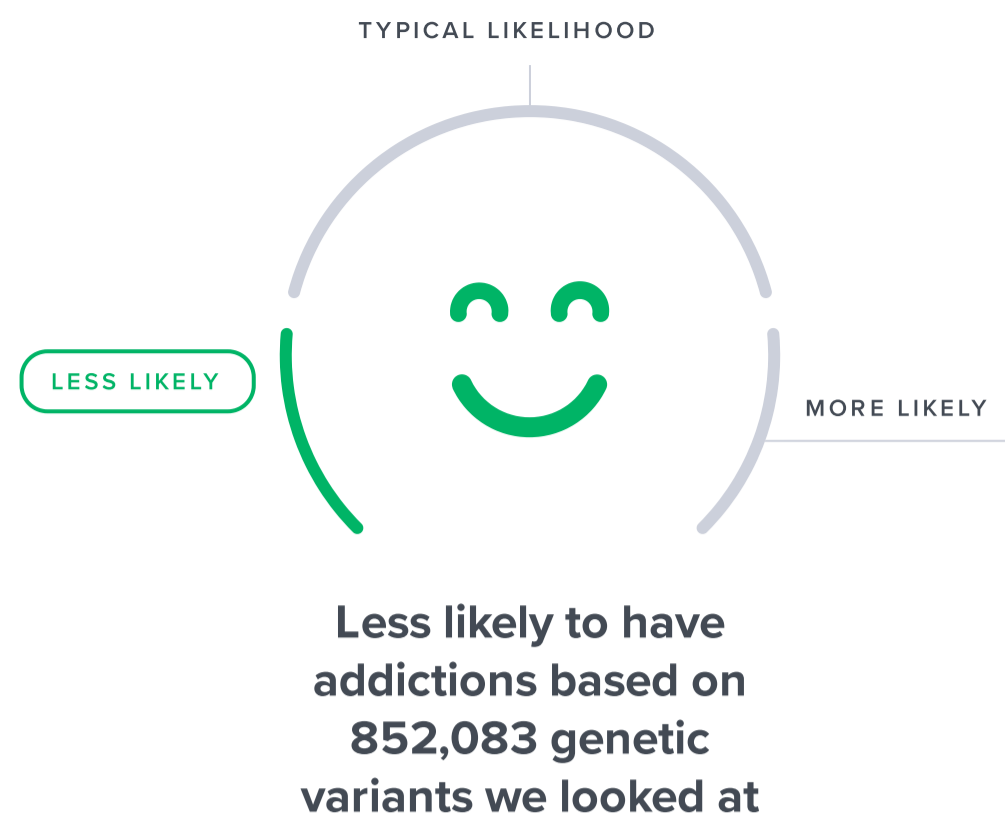
Addiction can have serious consequences. It may contribute to [R]:

- Road accidents
- Infectious disease (through shared needles or unsafe sex)
- Family or social problems
- Work or school problems
- Legal or money problems
- Mental health conditions
- Suicide or fatal overdose

Risk factors for addictions include [R]:

- Mental health conditions
- Difficult family life
- Peer pressure
- Substance use at a young age
- **Genetics**

Overcoming an addiction includes avoiding the substance, behavior, or



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
DOCK3	rs148179194	TT
ADH1B	rs1229984	CC
RGS18	rs12126348	GG
DNMT3B	rs910083	CC
PMM1	rs4822044	CG
CSDC2	rs202629	CT
EFNA5	rs71575441	TT
ZNF516	rs73973283	AA
CDH6	rs62357000	TT
MYC	rs72716801	GG
RTN4	rs1437396	TC
POLR1F	rs6461441	AA
TANC1	rs890622	GG
ZMYM6	rs77109747	GA
IREB2	rs8034191	CT
CENPW	rs139878170	CC
XYLT1	rs3943418	GG
SLC22A23	rs9503551	GG
ADH1C	rs1042026	CC

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

- Medication
- Long-term follow-up to prevent relapse

About 40% of differences in people's chances of developing an addiction may be attributed to genetics. Genes involved in addiction may influence [R]:

- Ability to control impulses (MAOA, HTR2B)
- [Dopamine](#) (COMT)
- [Serotonin](#) (SLC6A4)
- Opioids (OPRM1)
- Alcohol metabolism (ALDH2, ADH1B)

Alcohol Addiction

Key Takeaways:

- About **50%** of the differences in people's chances of developing alcohol addiction may be due to genetics.
- Other risk factors include mental health conditions like anxiety and depression, previous trauma, binge drinking at an early age, steady drinking over time, social and cultural influences.
- About **10%** of people aged 12 and older have an alcohol addiction.
- If you have high genetic risk, you may lower your overall risk by taking action on those factors you can change. If you have symptoms, speak to a healthcare professional about your options.
- Click the **Recommendations** tab for potential dietary and lifestyle changes.

Some people can drink alcohol once in a while and not think twice about it. Others crave alcohol daily. These differences may be partly due to genetics. In fact, genetics may account for up to **50%** of the differences in developing alcohol addiction [\[R\]](#).

Other risk factors for alcohol addiction include [\[R\]](#):

- Mental health conditions like anxiety and depression
- Previous trauma
- Binge drinking at an early age
- Steady drinking over some time
- Social and cultural influences

If you are struggling with alcohol addiction, talk to your doctor. There are many treatment options. These include [\[R\]](#):

- Detox and withdrawal
- Counseling
- Support groups
- Medications



Less likely to be addicted to alcohol based on 461,824 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
ADH1B	rs1229984	CC
MYC	rs72716801	GG
ADH1B	rs2066702	GG
HNRNPA1P48	rs11076221	GG
ADH1C	rs4699741	TT
RTN4	rs1437396	TC
MRPL39	rs59551326	AA
ADH4	rs6822348	TT
ADH4	rs17028615	AA
ADH1A	rs1789882	GG
ADH1A	rs1693457	TT
ADH1A	rs904092	GG
FBXO8	rs55768019	GG
TSPAN5	rs72900220	AA
PPFIA2	rs2400954	CC
GLRX3	rs10741210	GG
RBPJ	rs6810498	AG
SLC39A8	rs13107325	CC
MICB	rs9378160	AC

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

Tobacco Addiction

Key Takeaways:

- About **50%** of the differences in people's chances of developing tobacco addiction may be due to genetics.
- Other risk factors include age, parents and peers who use tobacco, other substance use, mental health issues like depression or PTSD.
- About **8%** of people in the U.S. aged 12 and older have a nicotine dependence.
- Ending tobacco addiction is difficult. Possible actions to take include nicotine replacement therapy, support groups, and talk therapy.
- Click the **Recommendations** tab for potential dietary and lifestyle changes.

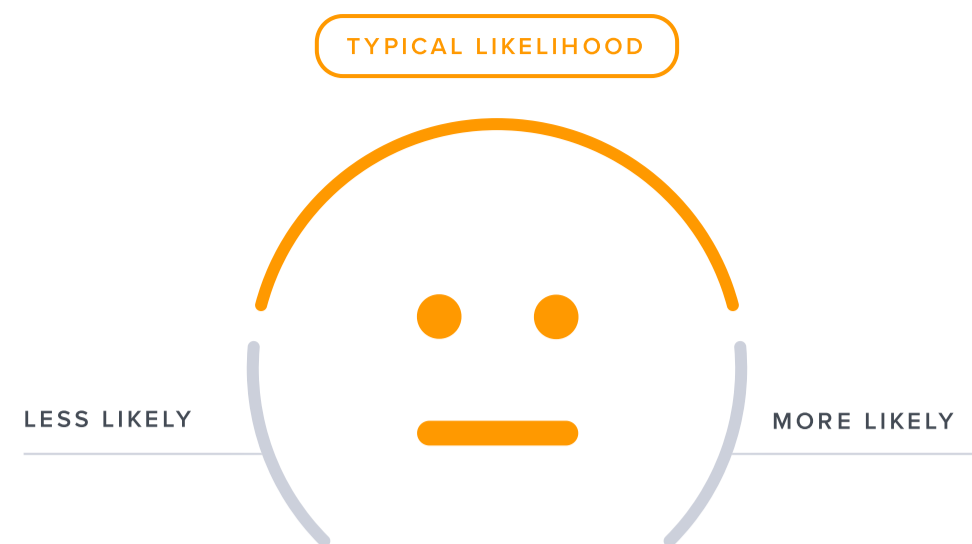
Some people only smoke in social situations or every once in a while. Others can't stop smoking. These differences may be partly due to genetics. In fact, about **50%** of the differences in people's chances of developing tobacco addiction may be due to genetics [R].

Risk factors for a nicotine addiction beyond genetics include [R]:

- Age
- Parents and peers who use tobacco
- Other substance use
- Mental health issues like depression or PTSD

It's difficult to quit tobacco if you are addicted to it. Some methods to help you quit include [R, R]:

- Nicotine replacement therapy (e.g., nicotine gum, nicotine patch)
- Talk therapy
- Support groups



Typical likelihood of tobacco addiction based on 1,143,273 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
NELL1	rs148586747	GG
POLR1F	rs6461441	AA
R3HCC1L	rs61873668	CC
GPSM1	rs28714232	TT
TANC1	rs890622	GG
SARDH	rs56116178	GA
ZMYM6	rs77109747	GA
CHRNA4	rs6062901	AG
CHRNA4	rs2273500	TC
AZIN2	rs199563603	TI
ADAMTSL1	rs17198023	AA
CHRN3	rs55828312	AA
IREB2	rs34684276	AG
DNMT3B	rs910083	CC
IREB2	rs8034191	CT
NR5A2	rs1060061	TC
PEX2	rs12680810	AA
GLIS3	rs12348139	TC
CHRN3	rs4950	AA

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

Eating Disorders

Key Takeaways:

- Up to **80%** of differences in people's chances of developing eating disorders may be due to genetics.
- Other risk factors include dieting, major stressful events, and other mental health conditions. If you have symptoms, talk to a healthcare professional.
- About **1%** of people may develop an eating disorder at some point in their life.
- If your genetic risk is high, you may lower your overall risk by taking action on those factors that you can change. However, eating disorders are rare, so a high genetic risk is still a low overall risk.
- Click the **Recommendations** tab for potential dietary and lifestyle changes and **next steps** for relevant labs.

Eating disorders are mental health conditions that impact eating habits. People with eating disorders have an unhealthy relationship with food, their weight, and the shape of their body [R].

The most common eating disorders are [R]:

- Binge eating disorder
- Anorexia nervosa
- Bulimia nervosa

Binge eating is the consumption of very large amounts of food in a short period of time. People who binge eat regularly and feel like they can't stop may have binge eating disorder [R].

Anorexia is an intense fear of gaining weight. People with this condition avoid eating and tend to lose a lot of weight. They may also use laxatives, diet aids, or other products and methods to try to reduce their calorie intake [R].

Bulimia is characterized by a "binge and purge" eating cycle. People with this condition binge eat and then attempt to get rid of the extra calories in an unhealthy way (*purge*). One common form of purging is induced vomiting [R].

About 1% of people may develop an eating disorder at some point in their life. Most eating disorders arise in adolescence or early adulthood. They are more common in women. They are also more common in Western countries [R, R, R].

Risk factors of eating disorders may include [R, R, R, R]:

- Dieting
- Major stressful events (e.g., breakups, starting a new job, etc.)
- Other mental health conditions
- **Genetics**

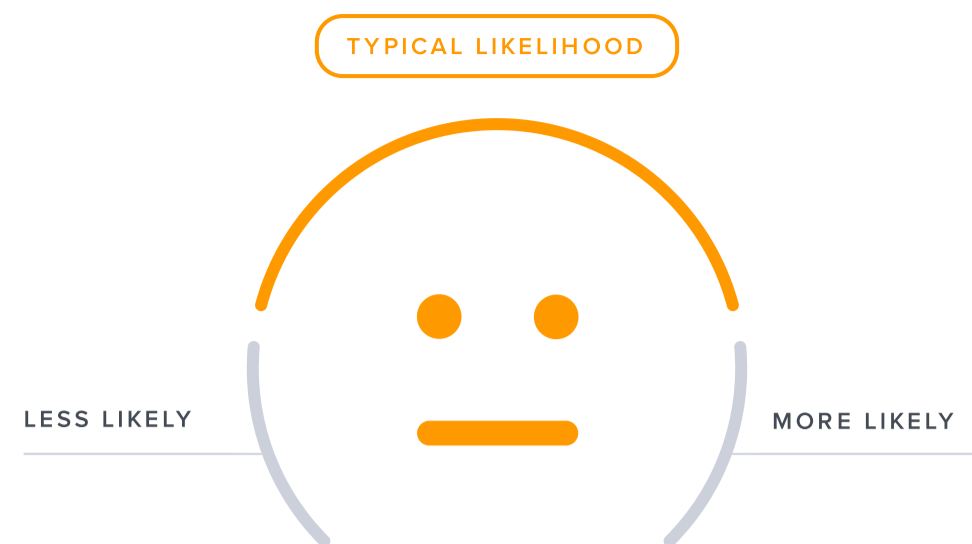
Eating disorders can cause serious physical and mental health problems. These include [R, R]:

- Depression
- Anxiety
- Suicidal thoughts
- Growth and development problems
- Substance use disorders
- Work, school, and social problems
- Malnutrition
- Heart, gut, or kidney problems

Treatment options depend on the type of eating disorder. They often include [R]:

- Talk therapy
- Family or friend support
- Nutrition education
- Medication

In severe cases, people with eating disorders may need a visit to the hospital



Typical likelihood of eating disorders based on 11,026 genetic variants we looked at

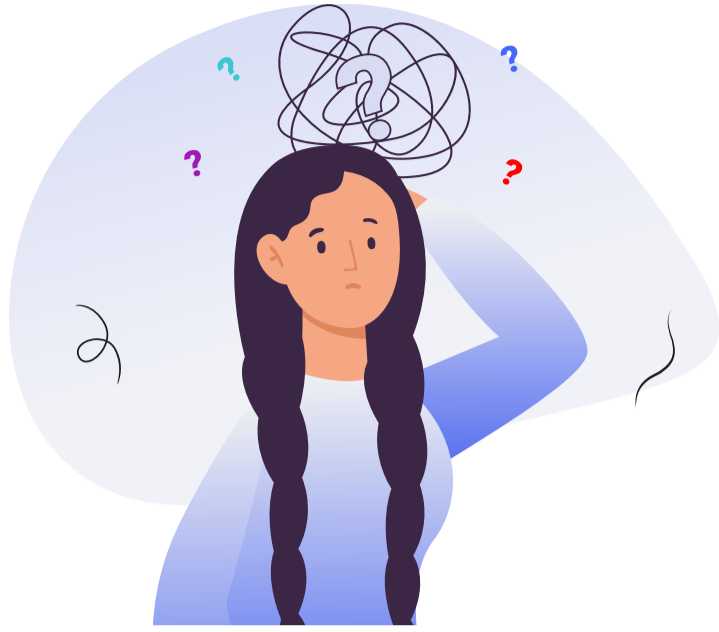


Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
RASGRF2	rs138206701	AA
MAGI3	rs61742849	GG
CAMK1D	rs75263140	AA
OLIG1	rs117124364	CC
OPTN	rs10906233	CT
KIAA0825	rs469339	AA
TAS2R5	rs145241704	TT
PCDH7	rs74879986	GG
TMEM106B	rs114945094	GG
RMI2	rs117096873	CC
NKAIN3	rs142014203	TT
CHODL	rs77600076	AA
HSD17B11	rs115694618	AA
ZNF503	rs2043090	AA
C8ORF37	rs77742018	AA
DAB1	rs985795	TT
MSRA	rs6999631	CC
SELENOM	rs111383589	CC
SMIM21	rs62090893	GG

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

- Mental health
- Weight control
- Metabolism



Cognitive Problems

Oh, look! It's a squirrel! Wait, what are we even doing in the park? **Sometimes it can be difficult to focus as distractions are our reality.** Focus can be further impaired by the fuzziness of brain fog.

What seems like minor disruptions to everyday life can become significant problems over time. **This section looks at your predispositions toward various cognitive problems.**



TYPICAL LIKELIHOOD

Cognitive Decline

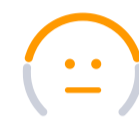
Typical likelihood of cognitive decline



LOWER RISK

Attention

Less likely to have ADHD



TYPICAL LIKELIHOOD

Dyslexia

Typical likelihood of having dyslexia



TYPICAL LIKELIHOOD

Brain Fog

Typical likelihood of brain fog

Cognitive Decline

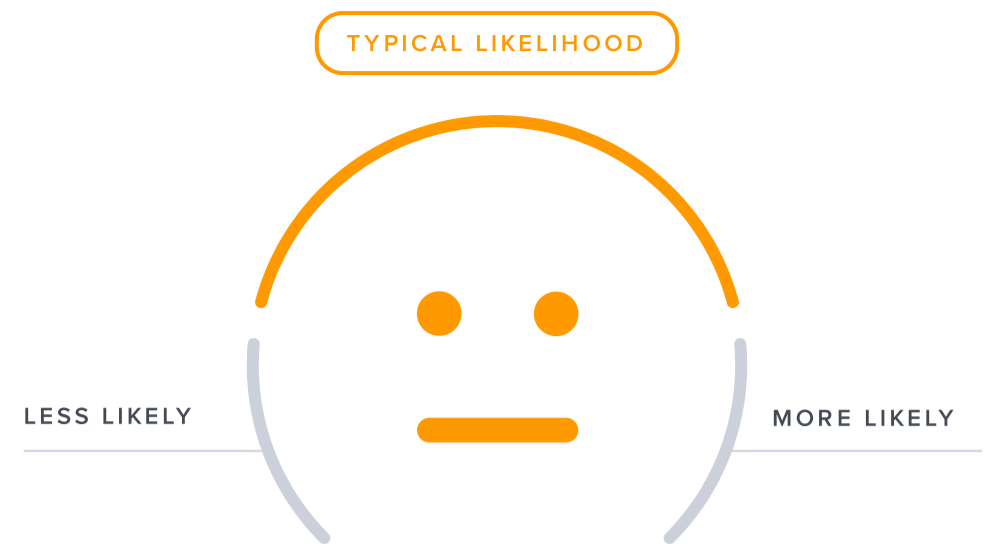
Mild cognitive decline is a normal part of aging that can affect cognitive functions such as memory, attention, and problem-solving.

About **60-70%** of the differences in people's cognitive decline may come from genetics. For example, genetically high total and bioavailable testosterone may be causally associated with larger gray matter volume in men [\[R, R, R\]](#).

Other risk factors for cognitive decline include [\[R\]](#):

- Older age
- Female sex
- Lifestyle factors like smoking and being inactive
- Lower education level

Different health conditions may play a role in cognitive decline, including high cholesterol and blood pressure [\[R\]](#).



Typical likelihood of cognitive decline based on 6,960 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
ALCAM	rs34476301	GG
TEK	rs147486058	AA
DUSP15	rs6089150	CC
CTBP2	rs61869228	CC
HHEX	rs60320343	AA
PRR16	rs3991625	CC
/	rs11706133	TT
WDFY2	rs9535753	TT
LAMP3	rs630527	GG
OPCML	rs11606197	TT
MRPS18C	rs10004897	GG
/	rs72956174	TT
B3GALNT1	rs4455332	CC
IRX2	rs72720951	AA
ZNF799	rs4804181	AA
CHD6	rs6072411	AA
OTOP1	rs34393106	AC
FOXJ2	rs7138264	GA
C3ORF56	rs11716691	GA

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

Attention

Key Takeaways:

- Up to **80%** of differences in people's chances of developing ADHD may be due to genetics.
- About **6.4 million** American children aged 4-17 have ADHD, along with **4% of adults**.
- Risk factors include: smoking, drug or alcohol use during pregnancy, toxins, brain injuries, and being male.
- ADHD can lead to substance abuse and money problems in adults.
- Since the condition is rare in adults, a high genetic risk is not necessarily a reason to worry.
- Click the **Recommendations** tab for potential dietary and lifestyle changes and **next steps** for relevant labs.

We've all struggled to stay focused on an important task. However, some people have more trouble paying [attention](#) than others.

The most important part of the brain for attention and focus is the *prefrontal cortex*. This region also helps you plan and solve problems [\[R\]](#).

Other parts of the brain help to filter important information without having to think about it. This allows you to avoid distractions [\[R\]](#).

Problems in these brain regions may make it harder to stay focused.

Some people have so much difficulty focusing that it interferes with their daily lives. This is a sign of *attention-deficit/hyperactivity disorder (ADHD)* [\[R\]](#).

ADHD affects millions of children and teenagers in the US. More boys are diagnosed with ADHD than girls [\[R\]](#).

Children and teens with ADHD tend to have trouble with school. They might also experience problems with relationships [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Attention problems often continue into adulthood. Adults with ADHD are more likely to experience [\[R\]](#):

- Substance abuse
- Car accidents
- Money problems

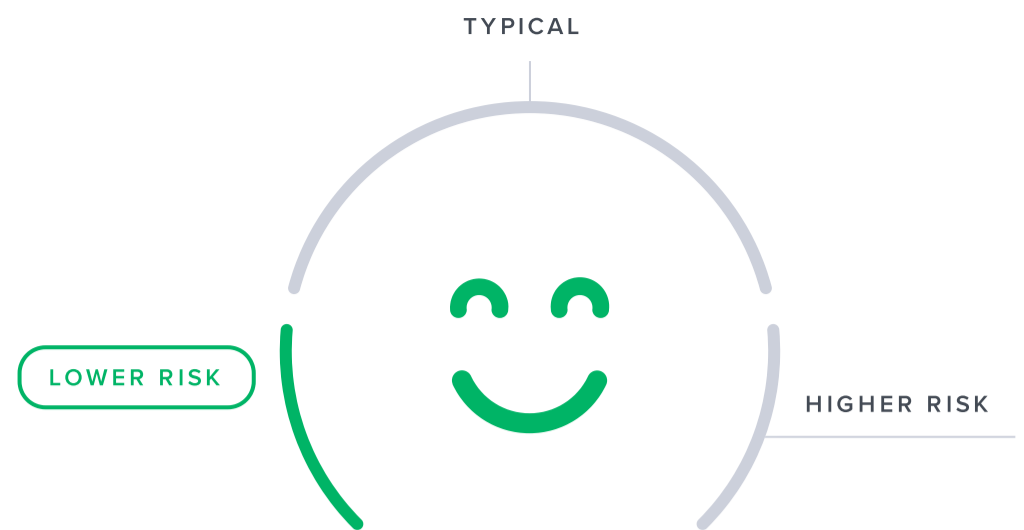
Treatment for ADHD usually includes talk therapy and medication [\[R\]](#).

The cause of ADHD is unknown. Risk factors include [\[R\]](#):

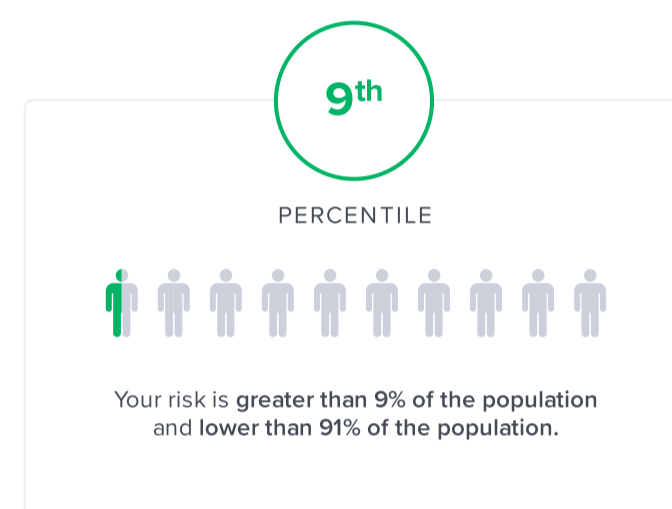
- Maternal use of cigarettes, drugs, or alcohol during pregnancy
- Environmental toxins
- Brain injuries
- Genetics

Up to 80% of differences in people's chances of developing ADHD may be attributed to genetics. Genes involved in ADHD may influence [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- [Dopamine](#) (DRD4, DRD5, COMT)
- [Serotonin](#) (HTR1B, SLC6A4, SNAP25)
- Brain cell growth (BAIAP2)



Less likely to have ADHD based on 263,165 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
TNR	rs6686722	TT
HTR2C	rs3813929	C
SLC6A2	rs3785143	CT
DLC1	rs2410116	GG
COMT	rs4680	AG
TPH2	rs1843809	TT
ANAPC4	rs28612433	CC
NRP2	rs4673294	AA
/	rs9545903	CC
HERC2	rs4778174	AG
BLOC1S2	rs35835615	CC
AXIN2	rs8074751	AG
PFKP	rs1537617	AA
OR5H14	rs75311156	CT
CNTLN	rs10962864	TC
EXOC1L	rs895614	AG
CNTLN	rs6475111	TC
ZNF584	rs35782676	TC
ESD	rs7984966	TT

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

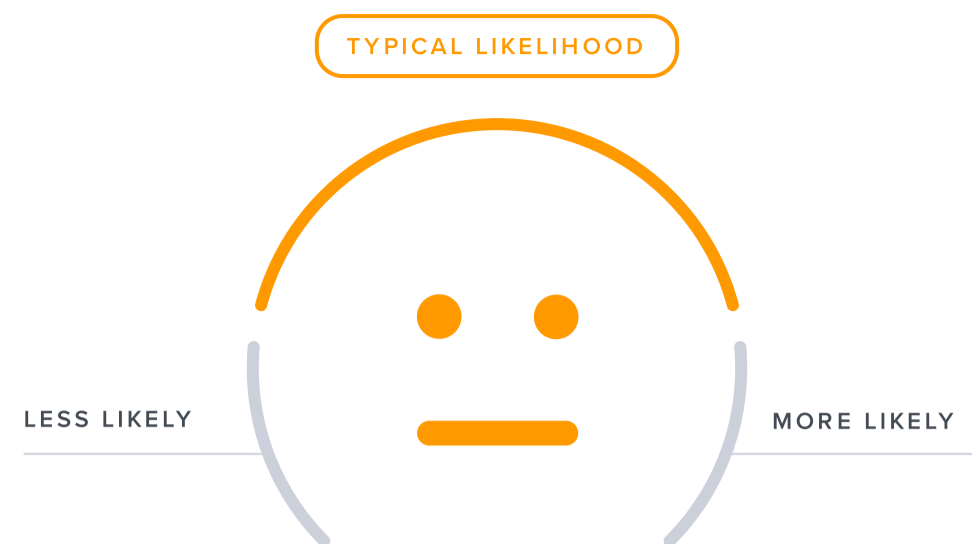
Dyslexia

Dyslexia is a learning disorder affecting reading skills. It involves issues with identifying speech sounds and learning how they relate to letters and words (decoding).

About **40-60%** of the differences in dyslexia may be due to genetics. Involved variants may play a role in brain function and development. They may also be linked to other conditions, including [\[R\]](#):

- Bipolar disorder
- ADHD
- Schizophrenia

A **family history** of dyslexia and other reading difficulties is a major risk factor. Factors like **poor support and care** for a child with dyslexia may greatly contribute to its complications [\[R\]](#).



Typical likelihood of having dyslexia based on 176 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
POM121	rs77059784	GG
KAT2B	rs17805117	TT
/	rs75197892	GG
/	rs11600333	GG
LRRC37A	rs12150530	TT
GNAQ	rs10869969	CC
/	rs906549	TT
MITF	rs13097431	GG
FHIT	rs1026989	TT
BCL11B	rs7160112	TT
UNC119B	rs4767921	GG
C1ORF87	rs12737449	GC
PCCB	rs13082684	GA
GSDMB	rs12453682	TC
SH2B3	rs7310615	CG
SMARCA2	rs10964508	AG
NRXN1	rs6749530	TC
CCDC171	rs3122702	TG
SGCD	rs867009	GA

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

Brain Fog

Key Takeaways:

- Brain fog is a common symptom of chronic fatigue syndrome.
- It manifests as memory problems, difficulty focusing, jumbled or hazy thoughts, and confusion..
- Risk factors include: stress, sleep problems, air pollution, smoking, and your genetics.
- A high genetic risk may be mitigated by addressing modifiable risk factors.
- Click the **Recommendations** tab for potential dietary and lifestyle changes and next steps for relevant labs.

Brain fog is a feeling of mental slowness and fatigue. People with brain fog may experience [\[R, R\]](#):

- Memory problems
- Difficulty focusing
- Jumbled or hazy thoughts
- Confusion

The exact cause of brain fog is unknown. Factors that may contribute to it include [\[R, R, R, R, R\]](#):

- Stress
- Sleep problems
- Air pollution
- Smoking
- **Genetics**

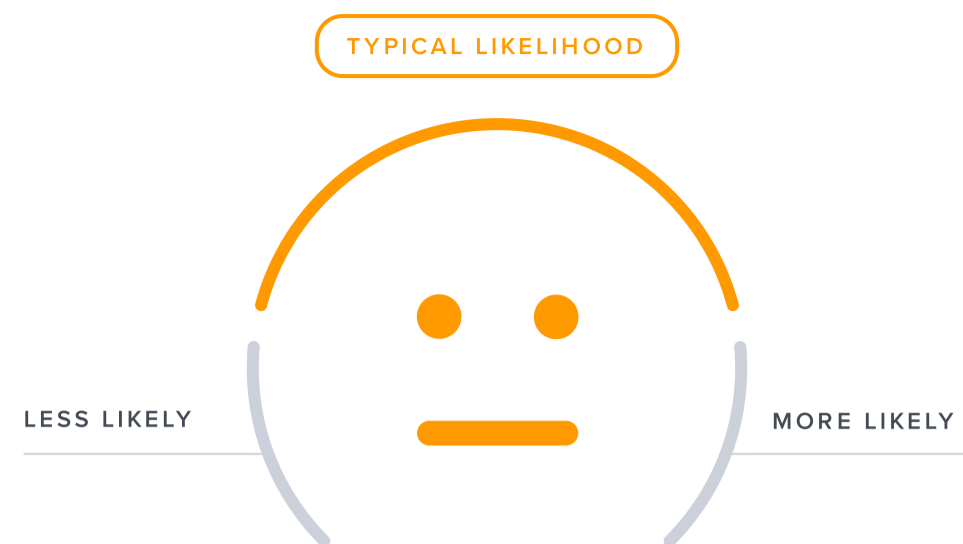
Brain fog is a common symptom of **chronic fatigue syndrome**. People with this condition are tired even after getting lots of rest [\[R, R\]](#).

Other conditions that may cause brain fog include:

- Autoimmune disease [\[R, R, R\]](#)
- Some infections [\[R, R, R, R\]](#)
- Pain [\[R, R\]](#)
- Conditions affecting the brain [\[R, R, R\]](#)

You may be able to improve brain fog by addressing its cause. If the cause is sleep deprivation, for example, it should go away with enough rest [\[R, R\]](#).

If you are struggling with brain fog, work with your doctor to figure out the cause.



Typical likelihood of brain fog based on 5,554 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
EXOC5	rs565429549	AA
/	rs77332613	GG
CNTN2	rs114589565	CC
/	rs148678515	TT
MRPS9	rs185526961	TT
CCDC138	rs115847251	AA
MRPS9	rs181406718	GG
OOSP1	rs115901332	CC
PSG9	rs115749421	CC
PSD3	rs113714584	TT
MRPS9	rs145642147	TT
MRPS9	rs138753234	GG
ACTL7B	rs190045124	GG
CNOT2	rs142649262	CC
PKD2L2	rs10070991	TT
RAB1A	rs185175713	TT
/	rs193120535	TT
MRO	rs143628339	TT
ADAMTS16	rs139940967	GG

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



Cognitive Traits

Thinking outside the box, ideas that transcend traditional concepts, or methods to create something new and original, are at the core of creativity. Some people... what was it?...Oh, yes! Some people have memory problems, like walking to the kitchen for a reason that is forgotten by the time they get there. Others can memorize Pi out to 100 digits with little effort.

DNA is greatly responsible for these differences! That's why, in this section, **we analyze your genetics of cognitive traits including creativity, memory performance, and more.**



TYPICAL

Memory Performance

Likely typical memory performance



TYPICAL

Creativity

Likely typical creativity



TYPICAL

Short-Term Memory

Likely typical short term memory



TYPICAL

Processing Speed

Likely typical processing speed



TYPICAL

Executive Function

Likely typical executive function

Memory Performance

Memory performance refers to how good your brain is at storing and recalling information [\[R\]](#).

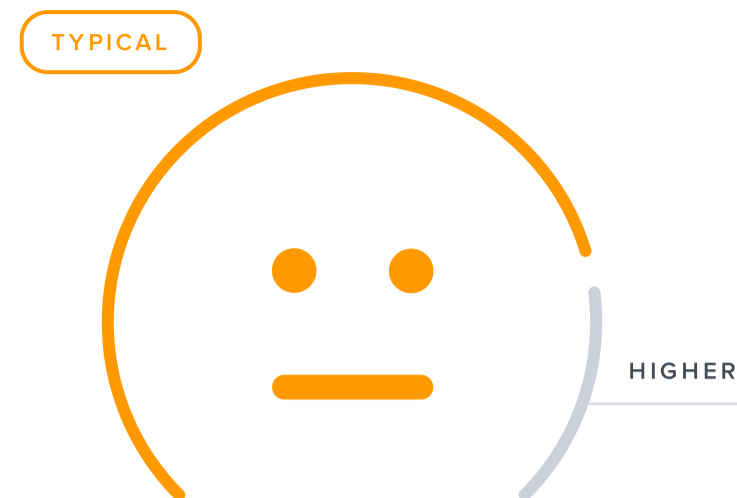
About 30-60% of differences in people's memory performance may be due to genetics. Genes involved in memory may influence [\[R, R, R, R, R, R\]](#):

- Brain cell growth and development
- Brain cell communication

Ways to boost your memory performance include [\[R, R, R, R\]](#):

- Getting regular exercise
- Getting 7-9 hours of good-quality sleep every night
- Solving puzzles, learning new skills, trying cognitive training
- Spending time with family and friends
- Eating a healthy diet

Check out your "Recommendations" and "Next Steps" for more details!



Likely typical memory performance based on 391,979 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
ITIH1	rs2239551	AA
APOE	rs4420638	AA
NT5DC2	rs4687625	TT
NT5DC2	rs2015971	TT
NT5DC2	rs11711421	TT
ITIH1	rs3774354	AA
ITIH1	rs1961958	GG
ITIH1	rs3774355	AA
ITIH1	rs6778844	CC
ITIH1	rs12487445	CC
ITIH1	rs6798246	AA
ITIH1	rs1961959	CC
PBRM1	rs17264436	AA
ITIH1	rs2289249	AA
GNL3	rs11177	AA
ITIH1	rs10865973	TT
ITIH1	rs2118540	CC
ITIH1	rs11717836	GG
ITIH1	rs6976	TT

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

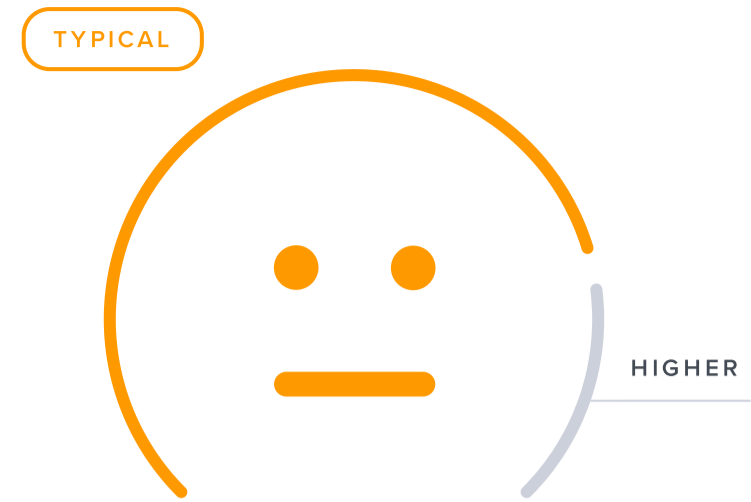
Creativity

Creativity is the ability to think "outside the box", or approach situations with novel ideas. People often count on their creativity to make works of art or to solve difficult problems [\[R\]](#), [\[R\]](#), [\[R\]](#).

Some people are more creative than others. This may partly be due to genetics. In fact, about 20% of differences in people's creativity levels may be attributed to genetics [\[R\]](#), [\[R\]](#).

To help boost your creativity, you can try [\[R\]](#):

- Following a passion that resonates with you
- Daydreaming
- Setting aside some alone time for self-reflection
- Being more open to new experiences (e.g., trying a new art form)
- Doing things in an unconventional way



**Likely typical creativity
based on 7 genetic
variants we looked at**

Short-Term Memory

Key Takeaways:

- About **40%** of differences in people's short-term memory may be due to genetics.
- Other risk factors include poor sleep quality, lack of physical activity, stress, mental health disorders, and medical conditions affecting the brain.
- Loss of short term memory is rare under the age of 50, but becomes more common with age beyond 60 years.
- If your genetic risk is high, your overall risk is going to still be low before age 50. If you are older, you may want to take action now on those factors you can change.
- Click the **next steps** tab for relevant lifestyle assessments.

Short-term memory refers to the retention of information pieces (memory chunks) for **up to 30 seconds**.

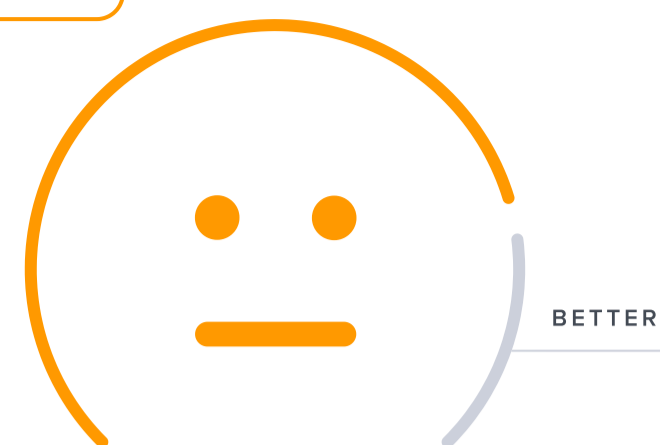
Memory is a part of cognitive function, which has a **strong genetic component**. About **40%** of differences in people's short-term memory may be due to genetics. Involved genes may affect [\[R, R, R\]](#):

- Brain development
- Brain chemicals
- Blood vessel health

Keep in mind that lifestyle factors such as **sleep quality and physical activity** also have a significant impact on memory and other aspects of cognition. In other words, there are things you can do to boost your memory regardless of genetic predisposition [\[R, R, R, R\]](#).

It's important to note that **short-term memory loss** can be a symptom of a serious underlying condition such as dementia or Alzheimer's disease. It's best to consult a doctor if you have concerns about your memory.

TYPICAL



Likely typical short term memory based on **1,038,899** genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
PCDH20	rs9528369	AC
PCDH20	rs9528371	TC
PCDH20	rs9528370	AG
PCDH20	rs9539264	AG
PCDH20	rs9528377	AC
PCDH20	rs2323486	CT
PCDH20	rs7319943	GA
PCDH20	rs9528358	AG
PCDH20	rs11148561	GA
PCDH20	rs6562198	TC
PCDH20	rs7999738	CT
PCDH20	rs7987424	TC
PCDH20	rs1417468	TA
PCDH20	rs947025	AG
PCDH20	rs11619219	GA
PCDH20	rs7317350	AG
PCDH20	rs9539274	TC
PCDH20	rs1417467	AC
PCDH20	rs9539276	AG

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

Processing Speed

Key Takeaways:

- About **65%** of the differences in people's processing speed may be due to genetics.
- Other risk factors include smoking, older age, poor sleep, poor diet, and certain medications.
- If your genetic risk is high, you may lower overall risk by taking action on those factors that you can change.
- Click the **Recommendations** tab for potential dietary and lifestyle changes.

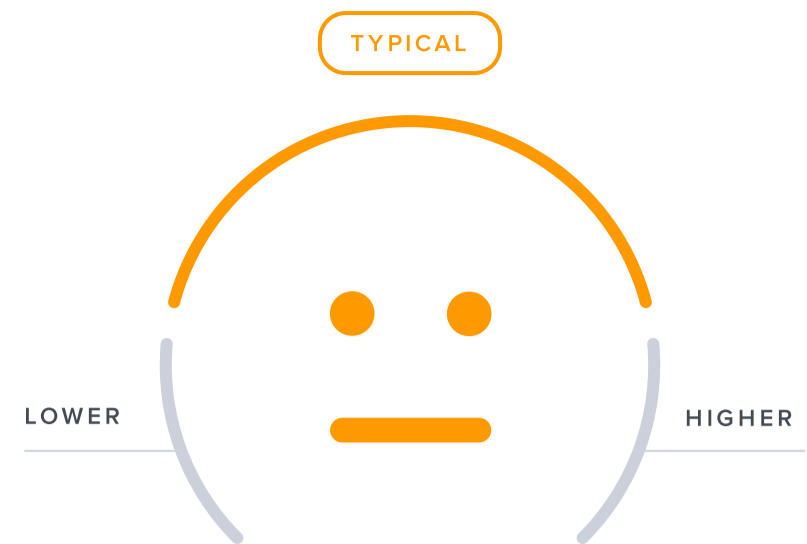
Processing speed is a measure of how fast you are able to understand visual or auditory information and respond to it.

About **65%** of the differences in people's processing speed may be due to **genetics**. Involved genes play a role in brain function and development [\[R\]](#).

As one might expect, factors that can affect brain function also impact processing speed. They include [\[R\]](#):

- Smoking
- Older age
- Poor sleep
- Poor diet
- Some medications

Health conditions like diabetes and high blood pressure may also reduce processing speed.



Likely typical processing speed based on **1,048,643** genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
KRTAP7-1	rs7283316	GG
ATP5PD	rs11077773	TT
HNF4G	rs16939046	TT
NRSN1	rs6922632	AA
ACP1	rs11542478	AA
TRIB3	rs6051520	TT
NSG2	rs10475598	TT
SHLD1	rs4815868	GA
PRB2	rs2908835	CT
TBX20	rs2392362	TC
/	rs2567426	GA
PKNOX1	rs2839627	CC
SPATA7	rs17124581	TT
MYRIP	rs9985399	TT
TMEM245	rs523340	GG
TTYH2	rs7219585	GG
JAG1	rs1884136	GG
IRX6	rs17291845	GG
DCDC2	rs793834	GG

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

Executive Function

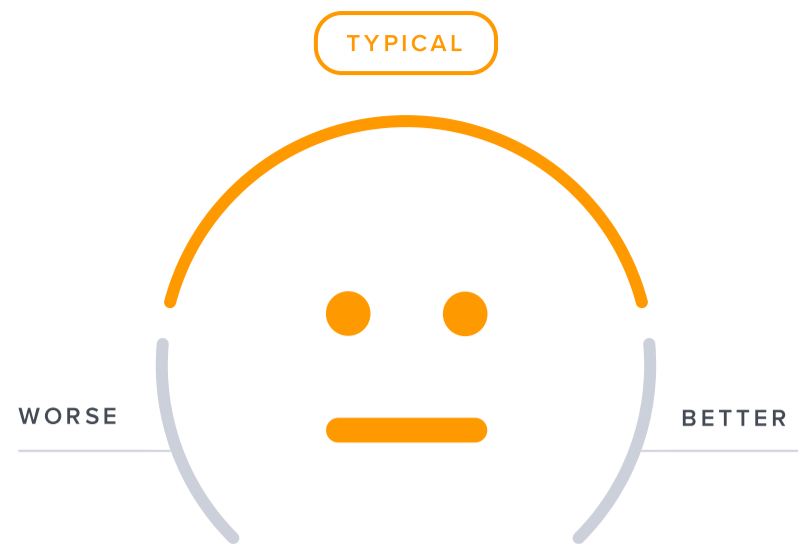
Up to **80-100%** of differences in people's executive functions may be due to **genetics!** The genetics of executive function is complex, involving different brain systems and chemicals like dopamine, norepinephrine, serotonin, and acetylcholine [\[R, R, R\]](#).

Factors beyond genetics that may affect executive function include [\[R, R, R, R\]](#):

- Older age
- Exposure to various toxins (e.g., heavy metals) and infections
- Substance abuse
- Living in high-stress or disadvantaged environments
- Poor sleep quality

The following **health conditions** may also affect executive function [\[R, R, R, R\]](#):

- Certain developmental conditions or disorders, such as ADHD
- Brain damage due to injury or stroke
- Neurological conditions like Parkinson's disease or dementia
- Mental health conditions like depression, anxiety, or schizophrenia
- Chronic health conditions like heart disease, diabetes, or autoimmune disorders



Likely typical executive function based on 321,962 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
PLEKHG1	rs140578927	GG
HUNK	rs76885705	AA
GSDMB	rs112779146	CC
ELFN2	rs144501203	GG
BARHL2	rs116496126	AA
ADRA1A	rs117710302	TT
TASP1	rs146628683	CC
METTL11B	rs2990655	GG
BIN1	rs3845674	GG
DPPA2	rs1163379	CC
/	rs10912172	CC
NUAK1	rs10507203	GA
IGFBP3	rs11763946	AG
EGFLAM	rs4562066	CT
ARL4A	rs2357052	TA
LRRTM4	rs34996456	GA
ADARB2	rs148353837	GG
CRYBB2	rs79191028	CC
IKZF1	rs186807222	GG

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

Your Recommendations

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

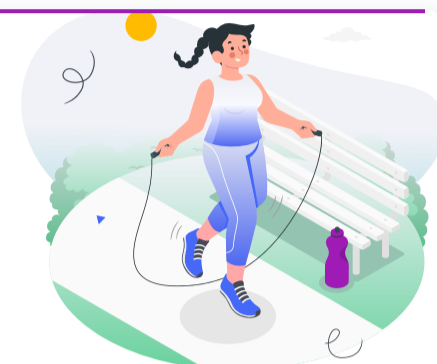
You'll likely find common healthy recommendations at the top of the list because they are often the most impactful and most researched.

1



Exercise

Helps with the following



Psychological Trauma

IMPACT



EVIDENCE



People with PTSD tend to move less. **Increased exercise, as part of a treatment plan, may help with PTSD symptoms.** It may also improve sleep and the quality of life [\[R, R, R, R, R, R, R, R, R\]](#).

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

- Reducing anxiety and depression
- Protecting the brain



PERSONALIZED TO YOUR GENES

People with your BDNF gene variant may have worse PTSD symptoms. Exercise may cancel out the negative effects of this variant [\[R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs6265	/	



Stress

IMPACT



EVIDENCE



Getting **2.5-5 hours of combined cardio and strength training per week** may [\[R, R, R, R, R\]](#):

- Reduce stress
- Improve your quality of life
- Improve your mental health

Cardio in particular may lower stress-related blood pressure and [cortisol](#) levels [\[R, R\]](#).

Other forms of exercise that may relieve stress include **yoga and tai chi**. They combine physical activity with meditation [\[R, R, R, R, R\]](#).

Seasonal Low Mood

IMPACT 

EVIDENCE 

People who work out more may be less prone to SAD [\[R\]](#).

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

- Stress
- Anxiety
- Self-image

Combining exercise with light therapy may be particularly beneficial [\[R, R\]](#).

Low Mood

IMPACT 

EVIDENCE 

People who exercise regularly have lower rates of depression and milder depression symptoms [\[R, R, R\]](#).

Exercise may boost your mood by improving [\[R\]](#):

- Stress levels
- Self-esteem
- Energy and sleep quality
- Sex drive
- Alertness
- Weight and fitness

Cardio, resistance training, and their combination can help you prevent or reduce depression [\[R, R\]](#).

The *American Psychological Association* suggests exercise for depression [\[R\]](#).

PERSONALIZED TO YOUR GENES

Exercise can boost your mood by targeting many of your genetic variants at once [\[R\]](#).

People with your [BDNF](#) gene variant may experience greater mood improvements from exercise [\[R, R, R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs6265	/	

Anxiety

IMPACT 

EVIDENCE 

Health authorities emphasize the beneficial effects of exercise on anxiety [\[R, R, R\]](#).

People who [exercise](#) regularly are less prone to anxiety and other mood problems. Both cardio and resistance training seem to reduce anxiety [\[R, R, R\]](#).

You can even be physically active and practice relaxation techniques at the same time. A Chinese martial art called *tai chi* combines exercise and meditation. It may reduce stress and help with anxiety [\[R, R, R, R\]](#).

Exercise may relieve anxiety by improving [\[R\]](#):

- Stress levels
- Self-esteem
- Energy and sleep quality

Brain Fog

IMPACT 3 / 5

EVIDENCE 4 / 5

Regular exercise may improve attention, processing speed, and other cognitive functions. Cardio may be the most helpful [R, R, R, R, R, R, R, R].

Exercise may help with brain fog by [R, R, R, R]:

- Improving brain cell communication (neuroplasticity)
- Reducing inflammation
- Reducing oxidative stress

Mood Swings

IMPACT 3 / 5

EVIDENCE 3 / 5

People with bipolar disorder tend to live sedentary lifestyles. That is, they don't tend to get up and move around very much [R, R].

Experts recommend regular exercise to help stabilize mood. Light to moderate cardio exercises may be best. These include [R, R, R]:

- Jogging
- Brisk walking
- Swimming
- Cycling

As part of a treatment plan for people with bipolar disorder, exercise may improve [R, R]:

- Depressive symptoms
- Quality of life
- Daily functioning

Exercise may help with mood swings by [R, R]:

- Releasing feel-good chemicals in the brain
- Improving brain health
- Improving sleep quality

Please note: *Intense exercise may trigger or exacerbate mania. Also, people experiencing mania may be more likely to over-exercise. Be careful not to over-exercise* [R, R].



PERSONALIZED TO YOUR GENES

People with your *BDNF* gene variant may experience greater mood improvements from exercise [R, R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs6265	/	

Tobacco Addiction

IMPACT 3 / 5

EVIDENCE 3 / 5

Physical activity may reduce **cigarette** craving and withdrawal symptoms. Higher intensity exercise may be best. It may help most as part of a broader treatment plan. However, two reviews did not find evidence to support these benefits [R, R, R, R, R].

Exercise may help by [R, R, R]:

- Boosting mood
- Taking the mind off the addiction
- Supporting a healthy self-image



Processing Speed



Exercise helps improve processing speed and reaction time, both in the short and long term. **Moderate-intensity** exercise may be the most beneficial [\[R, R, R\]](#).

Exercise may also improve processing speed in people recovering from a **stroke or concussion** [\[R, R\]](#).



Cognitive Decline



Regular exercise may boost cognitive function and **cut the risk of mild cognitive decline in half** [\[R, R, R, R, R, R\]](#).

In people with mild cognitive impairment, **exercise (3-4x/week for at least 4 weeks)** may improve speech, memory, attention, and other cognitive functions [\[R, R, R, R, R\]](#).

Cardio and strength training may provide similar protection against cognitive decline [\[R, R, R, R, R\]](#).

Exercise may have even stronger effects on cognition when combined with **cognitive training** [\[R, R, R, R\]](#).



PERSONALIZED TO YOUR GENES

Your IL12RB2 gene variant may be linked to cognitive decline. Regular exercise may lessen the impact of this variant on cognition [\[R\]](#)

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs3790558	/	



Executive Function



Regular exercise (at least 30 min/day, 3-4x /week for at least 4 weeks) may improve executive function in children, adolescents, and adults [\[R, R, R, R, R, R, R, R\]](#).

Regular exercise may offer greater benefits in those who are overweight and when combined with cognitive training. **Those with ADHD and autism may also benefit** [\[R, R, R, R, R, R, R\]](#).

However, not all studies found these benefits in people with cognitive impairment [\[R, R, R, R, R\]](#).

Combination with **cognitive training** may boost exercise benefits [\[R, R, R, R\]](#).

Exercise may also improve executive function and working memory in people recovering from a stroke and those with [\[R, R, R, R, R\]](#):

- Depression
- Neurological disorders

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

- Improving brain blood flow
- Reducing inflammation

Memory Performance

IMPACT 3 / 5

EVIDENCE 4 / 5

Regular exercise may improve memory and other cognitive functions. Cardio may be the most helpful [R, R, R, R, R, R, R, R].

Exercise may also improve and preserve memory in older people, both healthy and with cognitive decline. Resistance training and mind-body exercises may be most effective in this age group [R, R, R, R, R, R].

Combining exercise with cognitive training may further help in older people with cognitive decline [R, R].

Exercise may help by [R, R, R, R]:

- Improving [blood flow in the brain](#)
- Reducing [inflammation](#)
- Improving brain cell communication



PERSONALIZED TO YOUR GENES

Your DRD2 gene variant is linked to poor memory performance. Exercise may help cancel out this effect [R]. This variant also affects the ANKK1 and TTC12 genes.

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs1076560	/	●●●●●

Creativity

IMPACT 3 / 5

EVIDENCE 3 / 5

People who exercise regularly may be more creative. Similarly, exercise interventions may improve creativity. Exercise types proven to benefit creativity include [R, R]:

- Aerobic exercises
- Cycling
- Running
- Dancing
- Walking
- Stair climbing

Exercise may help by [R, R]:

- Improving [blood flow in the brain](#)
- Reducing [inflammation](#)
- Improving mood
- Improving brain cell communication

Short-Term Memory

IMPACT 3 / 5

EVIDENCE 4 / 5

Regular exercise may improve cognitive function, including working and short-term memory. Cardio may be the most helpful [R, R, R, R, R, R].

Exercise may also improve and preserve all types of memory in older people, both healthy and with cognitive decline. **Strength training may be most effective in healthy older people** [R, R, R, R].

Combining exercise with cognitive training may further help in older people with cognitive decline [R, R].

Exercise may help by [R, R, R, R]:

Alcohol Addiction

IMPACT 

EVIDENCE 

For people addicted to alcohol, exercise may improve mental health and reduce cravings [\[R, R\]](#).

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

- Boosting mood
- Taking the mind off the addiction
- Supporting a healthy self-image

Attention

IMPACT 

EVIDENCE 

Regular exercise may improve attention and other cognitive functions. Cardio may be the most helpful [\[R, R, R, R, R, R, R, R, R, R, R\]](#).

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

- Improving [blood flow in the brain](#)
- Reducing [inflammation](#)
- Improving brain cell communication



PERSONALIZED TO YOUR GENES

Your ST3GAL3 gene variant is linked to ADHD. It likely impairs brain cell communication. Exercise may help by improving brain cell communication [\[R, R, R, R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs112361411	/	

Addictions

IMPACT 

EVIDENCE 

Physical activity may reduce **cigarette** craving and withdrawal symptoms. Higher intensity exercise may be best. It may help most as part of a broader treatment plan. However, two reviews did not find evidence to support these benefits [\[R, R, R, R, R\]](#).

For people addicted to alcohol, stimulants, or opioids, exercise may improve mental health and reduce cravings [\[R, R, R\]](#).

Exercise may also improve **smartphone addiction** [\[R\]](#).

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

- Boosting mood
- Taking the mind off the addiction
- Supporting a healthy self-image



Cannabis Addiction

IMPACT

●●●●● 2 / 5

EVIDENCE

●●●●● 2 / 5

For people addicted to cannabis, exercise may improve mental health and reduce cravings [\[R\]](#).

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

- Boosting mood
- Taking the mind off the addiction
- Supporting a healthy self-image



Obsessive-Compulsive Tendencies

IMPACT

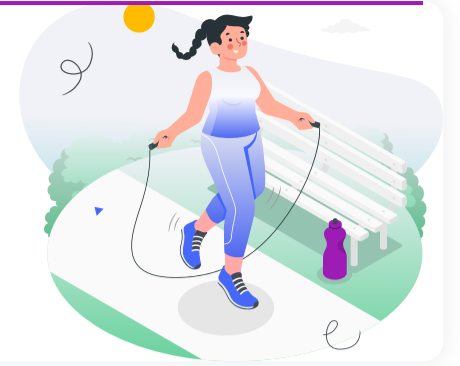
●●●●● 0 / 5

EVIDENCE

●●●●● 0 / 5



Music Therapy



Helps with the following



Seasonal Low Mood

IMPACT



EVIDENCE



In one study, music therapy based on **Chinese five-element music** (1-2 h/week for 8 weeks) helped with SAD by improving [\[R\]](#):

- Symptom severity
- Stress
- Inner peace
- Life satisfaction



Stress

IMPACT



EVIDENCE



Music therapy (15-60 min, at least 1x/week for up to 2 months) may help reduce stress. Studied music types include [\[R, R, R, R, R, R, R, R, R, R\]](#):

- Classical (e.g. Canon by Pachelbel or Eine kleine Nachtmusik by Mozart)
- Self-selected music

Music therapy may help by reducing blood pressure and the levels of the stress hormone cortisol [\[R, R, R\]](#).

Combining music therapy with progressive muscle relaxation, guided imagery, or aromatherapy may provide greater benefits [\[R, R, R, R, R, R, R\]](#).



Psychological Trauma

IMPACT



EVIDENCE



Recommendation References: [\[R\]](#)



Creativity

IMPACT



EVIDENCE



Listening to music may temporarily increase creativity [\[R\]](#).

Music may help by improving mood and arousal [\[R\]](#).



Low Mood

IMPACT



EVIDENCE



Music therapy (15-60 minutes/day for at least 3 weeks), alone and combined with standard therapy, may help with depression. Any type of music may be useful, but choosing the music you enjoy may improve the experience [\[R, R, R, R, R, R, R, R, R\]](#).

Music may boost your mood by helping [\[R, R\]](#):

- Increase your motivation
- Improve your self-image
- Reduce and cope with stress



Processing Speed

IMPACT



EVIDENCE



Playing an instrument—both on your own or as part of music therapy—may help preserve processing speed. Musical practice may help by stimulating cognitive functions [\[R\]](#).



Cognitive Decline



Keeping your brain active helps maintain cognitive function [\[R\]](#).

Musical practice is a great way to keep your brain active. Playing an instrument—on your own or as part of music therapy—may reduce the risk of cognitive decline by 65% [\[R, R, R\]](#).



Dyslexia



Group music therapy may **improve reading comprehension, writing skills, and attention** in children with dyslexia [\[R\]](#).

Please note: *There is no evidence that music therapy would provide the same benefits for adults with dyslexia.*



Anxiety



Recommendation References: [\[R, R\]](#)



Obsessive-Compulsive Tendencies



Addictions



Recommendation References: [\[R, R, R\]](#)



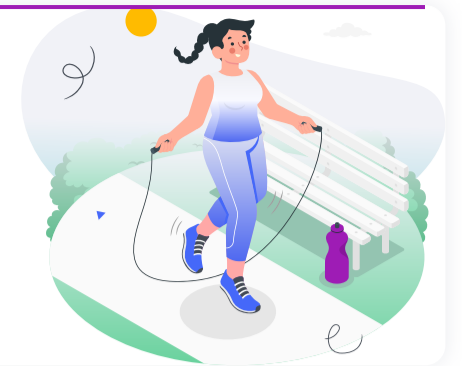
Attention



Recommendation References: [\[R\]](#)



Cognitive-Behavioral Therapy (CBT)



Helps with the following



Seasonal Low Mood

IMPACT



EVIDENCE



In people with SAD, **cognitive-behavioral therapy** may help [\[R, R, R, R, R, R\]](#):

- Improve coping mechanisms
- Maintain social and other activities
- Identify and change negative thoughts and behaviors
- Encourage healthy behaviors like exercise
- Reduce stress

It may also help prevent future episodes of SAD [\[R, R, R, R, R, R\]](#).

Psychotherapy may be more effective than light therapy in the long run, while light therapy may provide faster improvements. Combining them may be the best option [\[R, R, R, R, R, R, R\]](#).



Psychological Trauma

IMPACT



EVIDENCE



Stress

IMPACT



EVIDENCE



Cognitive-behavioral therapy (CBT) is the best type of talk therapy for stress relief. CBT can help almost anyone under stress, including [\[R, R, R\]](#):

- People with anxiety
- People with depression
- Students
- Caregivers
- Cancer patients

CBT may reduce your levels of the stress hormone cortisol. After going through CBT, people often feel less anxious and more relaxed [\[R, R, R\]](#).



Low Mood

IMPACT



EVIDENCE



Cognitive-behavioral therapy (CBT) may help with depression. It may help by reducing negative thoughts and behaviors [\[R, R, R, R, R, R, R, R, R\]](#).

CBT may help when delivered face-to-face or online [\[R, R, R, R\]](#).



Teeth Grinding

IMPACT



EVIDENCE



Psychotherapy may help with teeth grinding. Some modalities that may help include:

- Counseling and self-management (daily for 3-8 weeks) [\[R\]](#)
- Cognitive-behavioral therapy (for 12-18 weeks) [\[R, R, R\]](#)

Cognitive-behavioral therapy in combination with mouth guards may offer greater benefits [\[R\]](#)

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

- Reducing stress
- Relaxing jaw muscles

 **Anxiety**



CBT (8-20h of sessions) is the best type of psychotherapy for anxiety. Health experts worldwide recommend CBT as the “gold standard” treatment for anxiety [\[R, R, R, R, R, R, R, R\]](#).

CBT can soothe anxiety by helping you [\[R, R, R\]](#):

- Cope with stress
- Control negative thoughts and emotions
- Improve social skills
- Build stronger relationships

Studied forms of CBT include [\[R, R\]](#):

- In-person
 - Internet-based
 - Self-guided
-

 **Mood Swings**



 **Eating Disorders**



 **Cannabis Addiction**



 **Addictions**



 **Alcohol Addiction**

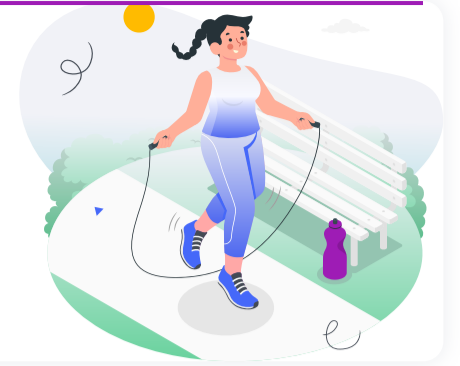


 **Attention**





Relaxation Techniques



Helps with the following



Psychological Trauma

IMPACT



EVIDENCE



Relaxation techniques such as yoga can help relieve stress. **Yoga may improve PTSD symptoms.** It may also help with associated [\[R, R, R, R, R, R, R, R, R, R, R\]](#):

- Depression
- Anxiety
- Substance abuse
- Poor sleep quality

Other techniques that may help with PTSD include:

- Meditation [\[R, R, R\]](#)
- Applied relaxation [\[R\]](#)
- Tai chi [\[R, R\]](#)
- Biofeedback [\[R, R, R, R\]](#)



PERSONALIZED TO YOUR GENES

Your BDNF gene variant is linked to worse PTSD symptoms. It likely reduces the levels of BDNF, a protein that supports mental health. Yoga may help by boosting BDNF [\[R, R, R, R, R, R\]](#).

People with your CELF4 gene variant may be more prone to stress [\[R\]](#). Relaxation techniques may help with PTSD by reducing stress.

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs6265	/	

GENE	SNP	GENOTYPE	EVIDENCE
/	rs11665070	/	

Relaxation techniques aim to improve stress and anxiety. They may be effective for both daily stress and stress from major health problems [R, R, R].

Mindfulness is the practice of being aware of the present moment without any judgment. It's likely the best relaxation technique to relieve stress [R, R, R, R, R, R, R].

Mindfulness may help by reducing your heart rate and cortisol levels [R, R].

Other relaxation techniques that may improve stress include:

- **Yoga:** combines breathing, stretching, and meditation to help calm you down [R, R, R]
- **Tai chi:** a calming Chinese martial art that combines exercise and meditation [R, R, R]
- **Progressive muscle relaxation:** involves tightening and relaxing muscle groups to help calm you down [R, R, R, R]
- **Biofeedback training:** measures bodily functions (such as breathing, heart rate, and muscle tension) and teaches you how to control them [R, R, R]
- **Guided imagery:** helps you picture positive, peaceful settings to reduce stress [R, R, R]

Applied relaxation: combines muscle relaxation and breathing exercises to calm you down [R, R, R]



PERSONALIZED TO YOUR GENES

Your BDNF gene variant is linked to low levels of BDNF, a protein that supports mental health. Stress may further reduce the levels of this protein. Yoga may help by boosting BDNF [R, R, R, R, R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs6265	/	

Stress plays a major role in anxiety. **Relaxation techniques may help by reducing stress and promoting calmness and positivity** [\[R, R, R, R\]](#).

Relaxation techniques that may improve anxiety include [\[R, R, R\]](#):

- **Applied relaxation:** teaches you to recognize anxiety triggers and relax when they occur [\[R, R, R, R\]](#)
- **Mindfulness meditation:** helps you be non-judgmental and aware of the present moment [\[R, R, R\]](#)
- **Yoga:** combines breathing, stretching, and meditation to achieve calmness [\[R, R\]](#)
- **Massage:** relaxes your body and mind by applying pleasant physical touch [\[R, R, R, R\]](#)




 PERSONALIZED TO YOUR GENES

Mindfulness may significantly improve mood in people with your OPRM1 gene variant [\[R\]](#).

Your BDNF gene variant may reduce the levels of [BDNF](#), a crucial brain chemical. Some people with anxiety have lower BDNF levels. Yoga may improve mood and reduce stress by boosting BDNF [\[R, R, R, R\]](#).

Your [OXTR](#) gene variant is associated with anxiety and issues with emotional attachment. It likely reduces oxytocin levels. Massage may help by boosting oxytocin [\[R, R, R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs495491	/	
/	rs6265	/	
OXTR	rs53576	/	

People under a lot of stress may develop brain fog [\[R\]](#).

Stress may cause brain fog by [\[R, R, R, R, R\]](#):

- Reducing the growth of brain cells
- Reducing brain activity
- Increasing inflammation

Meditation and yoga can help you relax. They may also **improve brain fog by boosting attention** and cognitive function in general [\[R, R, R, R, R, R, R, R, R, R\]](#).



PERSONALIZED TO YOUR GENES

People with your CELF4 gene variant may be more prone to stress [\[R\]](#). Take special care to reduce stress by practicing relaxation techniques.

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs11665070	/	

Teeth grinding has been linked to stress, especially work stress [\[R, R, R, R, R, R, R, R, R, R\]](#).

Experts agree that relaxation techniques may help prevent teeth grinding. Relaxation techniques that may help include [\[R, R, R, R, R, R\]](#):

- Breathing exercises
- Listening to relaxing music
- Meditation
- Progressive muscle relaxation (1-2 sessions/week for 4-6 months)

Stress may trigger teeth grinding by making the jaw muscles hyperactive [\[R\]](#).



PERSONALIZED TO YOUR GENES

People with your CELF4 gene variant may be more prone to stress [\[R\]](#). Try to manage stress by practicing relaxation techniques.

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs11665070	/	

Stressful or traumatic events are linked to mood swings. Going through these events may increase the risk of bipolar disorder. They may also worsen the symptoms in those who already have the condition [\[R, R, R, R, R\]](#).

In turn, **people with bipolar disorder may experience more stressful life events. They may also be more sensitive to them** [\[R\]](#).

Relaxation techniques may help with mood swings as part of an overall treatment plan. Examples include:

- Deep breathing [\[R\]](#)
- Yoga [\[R\]](#)
- Meditation [\[R\]](#)

 PERSONALIZED TO YOUR GENES

Stressful events may have a stronger impact on mood swings in people with your BDNF gene variant [\[R\]](#). Do your best to reduce stress by practicing relaxation techniques.

Stressful events may have a stronger impact on mood swings in people with your COMT gene variant. Relaxation techniques may reduce stress and improve your mood [\[R, R, R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs6265	/	

GENE	SNP	GENOTYPE	EVIDENCE
COMT	rs4680	/	

Eating Disorders

IMPACT 

EVIDENCE 

Insecurity, fearfulness, and anxiety are linked to unhealthy eating habits. These include [\[R\]](#):

- Binge eating
- Purging
- Emotional eating
- Dieting
- Choosing unhealthy foods

In line with this, stress is a risk factor for eating disorders [\[R\]](#).

Some experts recommend relaxation techniques to help reduce stress and anxiety in people with certain eating disorders [\[R, R\]](#).

The following techniques may help with eating disorders:


- Yoga [\[R, R\]](#)
- Mindfulness [\[R, R\]](#)



PERSONALIZED TO YOUR GENES

Your FTO gene variant is linked to eating disorders. Stressful relationship may contribute to eating disorders in people with this variant. Relaxation techniques may help with stress and eating disorders [\[R, R, R, R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs1421085	/	

Low Mood

IMPACT 

EVIDENCE 

Relaxation techniques may help reduce depression symptoms. Relaxation may help by acting as a distractor and reducing anxious feelings [\[R, R, R, R, R, R, R, R\]](#).

Tobacco Addiction

IMPACT 

EVIDENCE 

Stress is linked to an increased risk of substance use disorders. It may contribute to addictions to tobacco and other substances. It may also make recovery from addictions more difficult [\[R, R, R\]](#).

For people dependent on tobacco, relaxation techniques may help with quitting. They may also ease withdrawal symptoms. Helpful techniques include [\[R, R, R, R, R\]](#):

- Yoga
- Mindfulness

However, the evidence on mindfulness is mixed [\[R\]](#).

Relaxation techniques may help by reducing stress and taking the mind off smoking. They may also help build positive coping strategies [\[R, R, R\]](#).



Executive Function

IMPACT 3 / 5

EVIDENCE 3 / 5

Stress may worsen working memory, impulse control, and cognitive flexibility. Stressful situations, especially early in life, include [\[R, R, R\]](#):

- Insufficient or absent parental care
- Threat to one's physical well-being

Stress may affect executive function by increasing [\[R\]](#):

- Inflammation
- [Cortisol](#) levels

Relaxation techniques like **yoga and meditation** may relieve stress and improve executive function [\[R, R, R, R, R, R, R\]](#).



PERSONALIZED TO YOUR GENES

Stress may have a stronger impact on executive function in people with your COMT gene variant [\[R, R, R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
COMT	rs4680	/	



Memory Performance

IMPACT 3 / 5

EVIDENCE 4 / 5

Relaxation techniques may improve memory and other cognitive functions. These include:

- Yoga [\[R, R, R, R, R, R, R, R\]](#)
- Meditation [\[R, R, R\]](#)
- Mindfulness [\[R, R, R, R, R, R, R\]](#)

Relaxation techniques may help by:

- Reducing stress [\[R, R, R, R\]](#)
- Improving focus [\[R, R, R\]](#)



Creativity

IMPACT 3 / 5

EVIDENCE 3 / 5

High psychological stress is associated with lower creativity. In contrast, perceived social support may improve creativity [\[R, R\]](#).

Relaxation techniques may improve creativity by reducing stress. Helpful techniques include:

- Meditation [\[R, R\]](#)
- Mindfulness [\[R, R\]](#)
- Yoga [\[R\]](#)



Short-Term Memory



Relaxation techniques may improve short-term memory and other cognitive functions. These include:

- Yoga [R, R, R]
- Meditation [R, R]
- Mindfulness [R, R, R, R]

Relaxation techniques may help by:

- Reducing stress [R, R, R, R]
- Improving focus [R, R, R]



Cognitive Decline



Stress is linked to a **20%** higher risk of cognitive decline [R].

Relaxation techniques and mind-body exercises may boost memory, attention, and other cognitive functions in people with mild cognitive impairment. Examples include:

- **Yoga** [R, R, R]
- **Visual art therapy** [R]
- **Dance** [R, R]



Attention



Relaxation techniques may improve attention and other cognitive functions. These include:

- Yoga [R, R, R, R, R]
- Meditation [R, R, R, R, R, R, R, R, R, R]
- Mindfulness [R, R, R, R]

Relaxation techniques may help by:

- Reducing stress [R, R, R, R]
- Improving focus [R, R, R]



PERSONALIZED TO YOUR GENES

Mindfulness-based relaxation may improve attention more in people with your ANKK1 gene variant [R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
ANKK1	rs1800497	/	

Stress is linked to an increased risk of substance use disorders. It may contribute to addictions to alcohol, tobacco, and cannabis. It may also make recovery from addictions more difficult [\[R, R, R, R\]](#).

For people dependent on tobacco, relaxation techniques may help with quitting. They may also ease withdrawal symptoms. Helpful techniques include [\[R, R, R, R, R\]](#):

- Yoga
- Mindfulness

However, the evidence on mindfulness is mixed [\[R\]](#).

As part of a treatment plan, **relaxation techniques may also help with alcohol use disorder.** For example, yoga and mindfulness may help with [\[R, R, R, R, R\]](#):

- Withdrawal symptoms
- Staying sober
- Cravings
- Quality of life

These relaxation techniques may also help with addiction to [\[R, R, R, R, R\]](#):

- Stimulants
- Opioids
- Gaming
- Cannabis

Relaxation techniques may help by reducing stress and taking the mind off the drug. They may also help build positive coping strategies [\[R, R, R\]](#).



PERSONALIZED TO YOUR GENES

People with your GABRA2 gene variant may be more likely to misuse alcohol when under stress [\[R\]](#). Try to reduce stress by practicing relaxation techniques.

People with your PER2 gene variant may be more prone to alcohol misuse when under stress [\[R\]](#). Try to reduce stress by practicing relaxation techniques.

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs279826	/	

GENE	SNP	GENOTYPE	EVIDENCE
/	rs56013859	/	



Stress is linked to an increased risk of alcohol addiction and other substance use disorders. It may also make recovery from addictions more difficult [R, R, R, R].

As part of a treatment plan, **relaxation techniques may help with alcohol use disorder.** For example, yoga and mindfulness may help with [R, R, R, R, R, R]:

- Withdrawal symptoms
- Staying sober
- Cravings
- Quality of life

Relaxation techniques may help by reducing stress and taking the mind off alcohol. They may also help build positive coping strategies [R, R, R].



PERSONALIZED TO YOUR GENES

People with your GABRA2 gene variant may be more likely to misuse alcohol when under stress [R]. Try to reduce stress by practicing relaxation techniques.

People with your PER2 gene variant may be more prone to alcohol misuse when under stress [R]. Try to reduce stress by practicing relaxation techniques.

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs279826	/	

GENE	SNP	GENOTYPE	EVIDENCE
/	rs56013859	/	



Stress is linked to an increased risk of substance use disorders, including cannabis addiction. It may also make recovery more difficult [R, R, R].

The following relaxation techniques may help with addiction to cannabis:

- Mindfulness [R, R, R]
- Yoga [R, R].

Relaxation techniques may help by reducing stress and taking the mind off the drug. They may also help build positive coping strategies [R, R, R].



PERSONALIZED TO YOUR GENES

Stressful life events may have a stronger impact on cannabis addiction in people with your MGLL gene variant (also linked to the TPRA1 gene) [R].

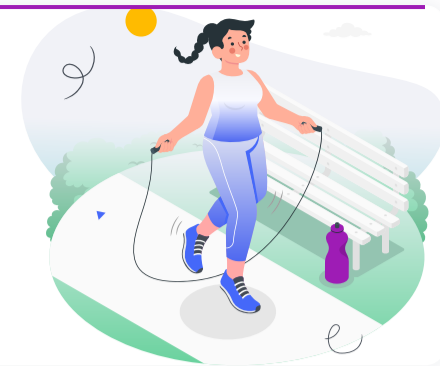
YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs604300	/	3 / 5

5



Yoga



Helps with the following



Stress



Yoga (at least 2x/week for 3-12 weeks) may improve stress by [\[R, R, R, R\]](#):

- Calming down your "fight-or-flight" response
- Reducing blood pressure
- Lowering cortisol, the stress hormone



Psychological Trauma



Creativity



Low Mood



Practicing yoga may relieve anxiety and depression [\[R, R, R, R\]](#).

It helps improve your mood by [\[R, R, R, R, R\]](#):

- Reducing stress hormones
- Boosting important brain chemicals
- Clearing your thoughts

The *American Psychological Association* suggests considering yoga for depression [\[R, R\]](#).



PERSONALIZED TO YOUR GENES

Your BDNF gene variant may be linked to low mood. It likely reduces the levels of [BDNF](#), a crucial brain chemical. Yoga may improve mood by boosting BDNF levels [\[R, R, R, R, R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs6265	/	



Anxiety





Executive Function



Stress may impair executive function [\[R, R, R\]](#).

Practicing yoga for at least 4 weeks may improve executive function and working memory in adults and older people [\[R, R, R, R, R, R\]](#).

Combining yoga (45 min, 2x/day) with working memory training (45 min/day) may offer greater benefits [\[R\]](#).



Short-Term Memory



Regular yoga practice may improve short-term and working memory [\[R, R, R\]](#).

Yoga may help by reducing stress [\[R, R, R\]](#).



Cognitive Decline



Stress is linked to a **20%** higher risk of cognitive decline [\[R\]](#).

Yoga is a popular relaxation technique. It may boost memory, attention, and other cognitive functions in people with mild cognitive impairment [\[R, R, R\]](#).



Processing Speed



Yoga may moderately improve processing speed. It combines exercise and relaxation, both of which are great for cognition [\[R, R\]](#).



Brain Fog



Eating Disorders



Memory Performance



Cannabis Addiction



Yoga practice may improve cravings, well-being, and cognitive function in people with addiction to cannabis and other substances [\[R, R\]](#).

Relaxation techniques such as yoga may help by reducing stress and taking the mind off the drug. They may also help build positive coping strategies [\[R, R, R\]](#).



Addictions





Alcohol Addiction

IMPACT

●●●●● 0/5

EVIDENCE

●●●●● 0/5



Attention

IMPACT

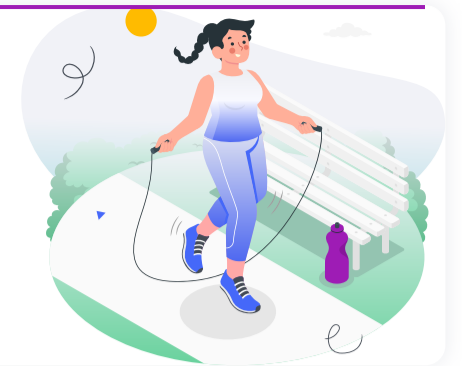
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EVIDENCE

●●●●● 0/5



Aerobic Exercise (Cardio)



Helps with the following



Psychological Trauma

IMPACT



EVIDENCE



Seasonal Low Mood

IMPACT



EVIDENCE



People who work out more may be less prone to SAD [\[R\]](#).

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

- Stress
- Anxiety
- Self-image

The following types of cardio may be beneficial, especially when combined with light therapy [\[R\]](#), [\[R\]](#):

- Cycling (1 h/day for at least 1 week)
- Group cardio training (2x/week for at least 8 weeks)



Low Mood

IMPACT



EVIDENCE



Executive Function

IMPACT



EVIDENCE



Regular cardio exercise (3-4x/week for at least 4 weeks) may improve [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- **Executive function**
- Working memory
- Task switching
- Impulse control

People with mild cognitive impairment may also benefit from cardio activities like dancing. Cardio exercise may offer similar benefits to mind-body exercises or cognitive training in older people [\[R\]](#), [\[R\]](#), [\[R\]](#).

Cardio may help by [\[R\]](#):

- Improving brain blood flow
- Reducing inflammation



Cognitive Decline

IMPACT



EVIDENCE



Regular exercise may boost cognitive function and **cut the risk of mild cognitive decline in half** [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

According to some studies, a workout routine must involve cardio in order to provide cognitive benefits [\[R\]](#).

Interestingly, **aerobic dance** (25-50 minutes, 1-3 times/week) may improve cognition in particular [\[R\]](#), [\[R\]](#), [\[R\]](#).

Short-Term Memory

IMPACT  3 / 5

EVIDENCE  3 / 5

Cardio may be the most helpful type of exercise to improve short-term and working memory in people of all ages, especially in interventions longer than 13 weeks [\[R, R, R, R\]](#).

A single bout of cardio may be beneficial, especially in people with lower baseline short-term memory. High-intensity cardio may be most effective [\[R, R\]](#).

Combining cardio with cognitive training may further help in older people with cognitive decline [\[R, R\]](#).

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

- Improving [blood flow in the brain](#)
- Reducing [inflammation](#)
- Improving brain cell communication

Processing Speed

IMPACT  3 / 5

EVIDENCE  3 / 5

Cardio may improve processing speed and reaction time, **especially in older people** [\[R, R, R, R\]](#).

However, it may not improve processing speed and other cognitive functions after a concussion or brain injury [\[R\]](#).

Tobacco Addiction

IMPACT  2 / 5

EVIDENCE  3 / 5

Anxiety

IMPACT  0 / 5

EVIDENCE  0 / 5

Memory Performance

IMPACT  0 / 5

EVIDENCE  0 / 5

Addictions

IMPACT  3 / 5

EVIDENCE  3 / 5

Alcohol Addiction

IMPACT  2 / 5

EVIDENCE  3 / 5

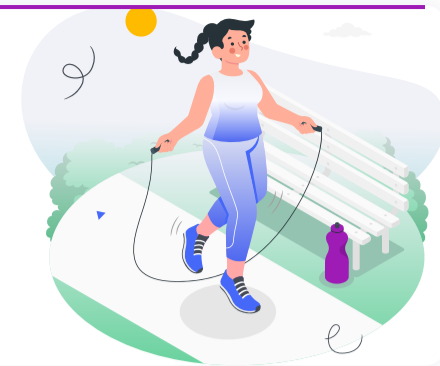
Attention

IMPACT  0 / 5

EVIDENCE  0 / 5



Avoid Cigarette Smoke



Helps with the following



Stress

IMPACT



EVIDENCE



Some people turn to smoking when they're stressed out. **However, smoking only makes things worse in the long run.** It stimulates your nervous system and increases stress hormones [R].

People who smoke cigarettes may feel less stressed after they quit smoking. Quitting smoking may also improve your overall mental health and quality of life [R, R].



Seasonal Low Mood

IMPACT



EVIDENCE



According to one study, smokers may be more likely to have SAD [R].



Brain Fog

IMPACT



EVIDENCE



Smoking is linked to problems with attention. It may even speed up cognitive decline in older people, especially in men [R, R, R, R, R].

Many people who quit have trouble concentrating early on. However, quitting smoking may improve brain fog in the long run [R, R, R].



Anxiety

IMPACT



EVIDENCE



Some people turn to smoking when they're stressed out. **However, smoking only makes things worse in the long run.** It stimulates your nervous system and increases stress hormones [R].

People who smoke cigarettes may feel less stressed after they quit smoking. Quitting smoking may also improve your overall mental health and quality of life [R, R].



Teeth Grinding

IMPACT



EVIDENCE



Smoking may increase the risk of teeth grinding [R, R, R, R, R, R, R, R, R].

Secondhand smoke has also been linked to teeth grinding during sleep [R, R].

Cigarette smoke may contribute to teeth grinding by lowering sleep quality and overstimulating the nervous system [R, R].



Processing Speed

IMPACT



EVIDENCE



Cigarette smoke has well-known adverse effects on brain health. Older people who smoke or used to smoke tend to have worse processing speed [R, R].



Memory Performance

IMPACT



EVIDENCE



Regularly or heavily smoking is associated with worse performance in memory and other cognitive aspects [R, R, R, R, R].

In contrast, low doses of nicotine may improve memory in the short term [R, R].

People who smoke may experience faster cognitive decline, resulting in worse memory performance at older ages [D, D, D]

 **Short-Term Memory**



Regular or heavy smoking is associated with worse performance in short-term memory and other cognitive aspects [R, R].

People who smoke may experience faster cognitive decline, resulting in worse short-term memory performance at older ages [R, R, R].

Cigarette smoke may worsen cognitive function by increasing oxidative stress and inflammation in brain cells [R, R].

 **Cognitive Decline**



Smoking speeds up cognitive decline. Passive smoking may also raise the risk of cognitive decline by **43%**. Cigarette smoke damages the blood vessels that feed the brain [R, R, R].

For this reason, **experts recommend avoiding cigarette smoke to prevent cognitive decline** [R].

 PERSONALIZED TO YOUR GENES

Smoking may have a stronger impact on cognitive decline in people with your APOE gene variant [R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs429358	/	

 **Executive Function**



Regular or heavy smoking is associated with worse cognitive function, including executive function and working memory [R, R, R, R, R].

 **Attention**



8



Mindfulness



Helps with the following

 **Stress**

IMPACT  3 / 5

EVIDENCE  4 / 5

Mindfulness (2-3h/week for at least 4 weeks) may help relieve stress by reducing heart rate and cortisol levels [[R](#), [R](#), [R](#), [R](#), [R](#), [R](#)].

 **Psychological Trauma**

IMPACT  0 / 5

EVIDENCE  0 / 5

 **Executive Function**

IMPACT  1 / 5

EVIDENCE  3 / 5

Recommendation References: [[R](#), [R](#), [R](#), [R](#)]

 **Memory Performance**

IMPACT  1 / 5

EVIDENCE  3 / 5

Recommendation References: [[R](#), [R](#), [R](#), [R](#)]

 **Creativity**

IMPACT  0 / 5

EVIDENCE  0 / 5

 **Low Mood**

IMPACT  3 / 5

EVIDENCE  3 / 5

Practicing mindfulness may alleviate and prevent depression [[R](#), [R](#), [R](#), [R](#)].

It helps **increase your awareness and emotional control**, which are both important for balancing mood [[R](#), [R](#), [R](#)].

People who practice mindfulness tend to have **lower levels of the stress hormone *cortisol*** [[R](#), [R](#)].



PERSONALIZED TO YOUR GENES

Mindfulness may improve mood more in people with your OPRM1 gene variant [[R](#)].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs3823010	/	

 **Anxiety**



Mindfulness (1-4 sessions/week for 2-6 months) may improve anxiety by [\[R, R, R, R\]](#):

- Improving emotional control
- Increasing self-compassion
- Reducing intrusive thoughts

 **Short-Term Memory**



Mindfulness meditation may improve working memory and other cognitive areas [\[R, R, R\]](#).

A mindfulness-based stress reduction program may also improve working memory [\[R\]](#).

Mindfulness may help by:

- Improving focus [\[R\]](#)
- Reducing stress [\[R\]](#)

 **Eating Disorders**



 **Obsessive-Compulsive Tendencies**



Recommendation References: [\[R\]](#)

 **Cannabis Addiction**



Mindfulness-based interventions may reduce use frequency and severity, cravings, withdrawal symptoms, and stress in people addicted to cannabis and other substances [\[R, R, R\]](#)

Relaxation techniques such as mindfulness may help by reducing stress and taking the mind off the drug. They may also help build positive coping strategies [\[R, R, R\]](#).

 **Addictions**



 **Alcohol Addiction**



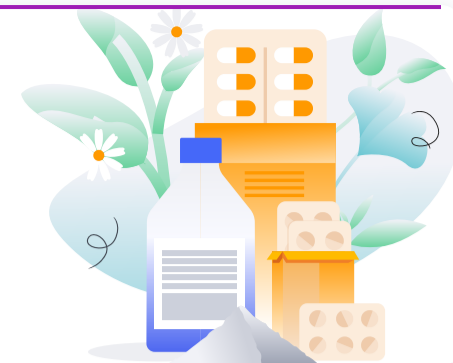
 **Attention**





Omega-3 (Fish Oil)

Helps with the following



Stress

IMPACT



EVIDENCE



Supplementing with omega-3s (0.3-3.4 g/day for 3-12 weeks) may make you more resistant to stress. It may prevent increases in [\[R, R, R, R, R\]](#):

- Blood pressure
- Heart rate
- Muscle tension

Omega-3s may help with stress by:

- Lowering stress hormones [\[R, R, R\]](#)
- Boosting [dopamine \[R\]](#)
- Reducing inflammation [\[R\]](#)

Please note: Fish oil can interact with blood thinners (like aspirin, Plavix, Coumadin). Consult your doctor before taking fish oil [\[R\]](#).



PERSONALIZED TO YOUR GENES

Your **CRHR1** gene variant is linked to higher cortisol levels in response to stress. Omega-3s may relieve stress by reducing cortisol [\[R, R, R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs242924	/	



Psychological Trauma

IMPACT



EVIDENCE



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 [\[R\]](#).



Anxiety

IMPACT



EVIDENCE



Omega-3s help **support brain function and reduce inflammation** [\[R, R, R\]](#).

People with low levels of omega-3 fatty acids tend to be more anxious. **Taking omega-3 supplements (at least 2,000 mg per day) may reduce anxiety** [\[R, R, R\]](#).

Please note: Fish oil can interact with blood thinners (like aspirin, Plavix, Coumadin). Consult your doctor before taking fish oil [\[R\]](#).

Mood Swings



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* [\[R\]](#).

Low Mood



Omega-3s help **support brain function and reduce inflammation** [\[R, R\]](#).

People with higher omega-3 intakes and blood levels may be less prone to depression [\[R, R, R, R, R\]](#).

Supplementing with 200-2200 mg/day of EPA may improve mood when taken alone or with antidepressants. Only supplements containing **60% or more EPA** showed beneficial effects on mood [\[R, R, R, R\]](#).

Cognitive Decline



High intake of omega-3s, especially from fish, is linked to a lower risk of cognitive decline [\[R, R, R, R\]](#).

Supplementation with omega-3s (400-1800 mg/day) may improve cognitive function and reduce cognitive decline. However, many studies have failed to confirm these benefits [\[R, R, R, R, R, R\]](#).

A combination of omega-3s and B vitamins may improve cognition in the elderly [\[R\]](#).

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

Processing Speed



Omega-3s, especially EPA and DHA, are crucial nutrients for brain health. Higher omega-3 blood levels may be linked to better processing speed [\[R\]](#).

Omega-3 supplementation may improve processing speed, but many studies didn't find this benefit. People with **mild cognitive impairment** may be more likely to benefit from omega-3s [\[R, R, R\]](#).

Memory Performance



Tobacco Addiction



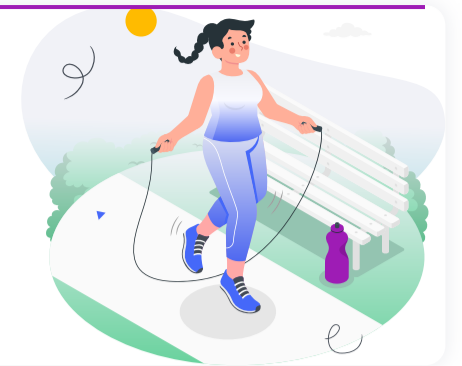
Attention





Biofeedback

Helps with the following



Stress

IMPACT



EVIDENCE



Biofeedback (1x-7x/week for 3-8 weeks) may reduce stress and improve well-being [\[R, R, R, R, R, R, R, R, R, R, R, R, R, R\]](#).

Studied biofeedback trainings measure bodily functions, such as [\[R, R, R, R\]](#):

- Breathing
- Heart rate

Biofeedback may help by reducing the stress hormone cortisol [\[R\]](#).



Psychological Trauma

IMPACT



EVIDENCE



Teeth Grinding

IMPACT



EVIDENCE



Biofeedback training, including biofeedback via modified mouth guards, may help with teeth grinding [\[R, R, R, R, R, R, R, R, R, R, R, R, R\]](#).

However, one review didn't find biofeedback effective [\[R\]](#).

The benefits may disappear immediately after biofeedback cessation, so ongoing use may be required [\[R, R\]](#).

Biofeedback may help by:

- Relaxing jaw muscles [\[R\]](#)
- Improving self-control [\[R\]](#)



Creativity

IMPACT



EVIDENCE



Neurofeedback may improve creativity and imaginative expression. Neurofeedback using virtual reality may be more effective [\[R, R\]](#).



Dyslexia

IMPACT



EVIDENCE



Neurofeedback (EEG-based, 2x/week for 10 weeks) may improve spelling and speaking skills in children with dyslexia [\[R, R\]](#).

Please note: *There is no evidence that biofeedback would provide the same benefits for adults with dyslexia.*



Anxiety

IMPACT



EVIDENCE



Recommendation References: [\[R, R, R\]](#)



Memory Performance

IMPACT

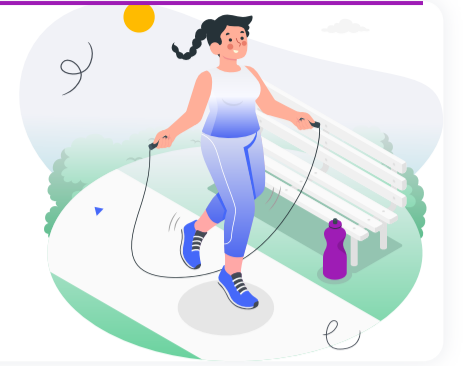


EVIDENCE





Tai Chi



Helps with the following

 **Stress**

IMPACT  3 / 5

EVIDENCE  4 / 5

Tai chi (at least 20 minutes, 1x-7x/week for 2-12 months) may reduce stress by improving emotional control. However, most studies are low-quality [[R](#), [R](#), [R](#)].

 **Psychological Trauma**

IMPACT  0 / 5

EVIDENCE  0 / 5

 **Low Mood**

IMPACT  2 / 5

EVIDENCE  3 / 5

Tai chi (once a week for at least 4 weeks) may improve depression symptoms and well-being, especially in old adults. However, most studies are of low quality and some show that tai chi doesn't benefit depression [[R](#), [R](#), [R](#)].

Tai chi may help with depression by supporting deep breathing and body relaxation [[R](#)].

 **Anxiety**

IMPACT  3 / 5

EVIDENCE  3 / 5

Tai chi (30-60 min at least twice a week) may reduce stress and help with anxiety. However, most studies are small and low-quality [[R](#), [R](#), [R](#), [R](#), [R](#), [R](#), [R](#), [R](#)].

 **Executive Function**

IMPACT  2 / 5

EVIDENCE  4 / 5

Practicing mind-body exercises may improve executive function, attention, and short-term memory. People with mild cognitive impairment may also benefit. The most common example is tai chi (30-60 min, 3x/week at least for 12 weeks) [[R](#), [R](#), [R](#), [R](#), [R](#)].

Tai chi may help by [[R](#), [R](#)]:

- Stimulating brain regions linked to executive function
- Improving brain blood flow
- Increasing BDNF levels

 **Cognitive Decline**

IMPACT  2 / 5

EVIDENCE  3 / 5

Tai chi may slightly improve cognitive performance in older people with mild cognitive decline [[R](#), [R](#), [R](#), [R](#), [R](#)].

It combines relaxation and physical activity, both of which help support cognition [[R](#), [R](#), [R](#), [R](#), [R](#)].



Processing Speed

IMPACT

●●●●● 3/5

EVIDENCE

●●●●● 3/5

Tai chi may improve processing speed in healthy people and those with health conditions such as [\[R\]](#), [\[R\]](#):

- Parkinson's disease
- Stroke
- Mild cognitive impairment
- Dementia
- Traumatic brain injury

Tai chi combines exercise and relaxation, both of which are great for cognitive function [\[R\]](#).



Memory Performance

IMPACT

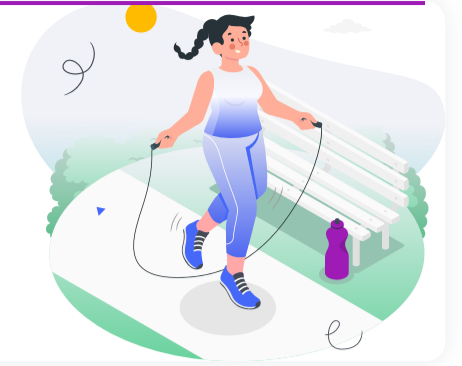
●●●●● 0/5

EVIDENCE

●●●●● 0/5



Psychotherapy



Helps with the following



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

Talk therapy can help improve PTSD by targeting many of your gene variants at once [R].

Cognitive-behavioral therapy (CBT) is the best type of talk therapy for stress relief. CBT can help almost anyone under stress, including [\[R\]](#), [\[R\]](#), [\[R\]](#):

- People with anxiety
- People with depression
- Students
- Caregivers
- Cancer patients

CBT may reduce your levels of the stress hormone [cortisol](#). After going through CBT, people often feel less anxious and more relaxed [\[R\]](#), [\[R\]](#), [\[R\]](#).

Other types of psychotherapy that may help with stress include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Music therapy
- Animal-assisted therapy
- Art therapy



PERSONALIZED TO YOUR GENES

CBT may help you cope with stress by targeting many of your gene variants at once [\[R\]](#).

The relaxing effects of CBT may be stronger in people with your COMT gene variant [\[R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
COMT	rs4680	/	

Cognitive-behavioral therapy (CBT) is the best type of psychotherapy for anxiety. Health experts worldwide recommend CBT as the “gold standard” treatment for anxiety [R, R, R].

CBT can soothe anxiety by helping you [R, R, R]:

- Cope with stress
- Control negative thoughts and emotions
- Improve social skills
- Build stronger relationships

Other types of psychotherapy that may help with anxiety include:

- **Cognitive bias modification:** teaches you not to focus on negative information [R, R]
- **Art therapy:** helps you manage and express your feelings through art [R, R, R]
- **Animal-assisted therapy:** involves human-animal interaction to foster emotional healing [R, R]



PERSONALIZED TO YOUR GENES

Psychotherapy can reduce anxiety by targeting many of your genetic variants at once [R].

People with your HCRTR1 gene variant may benefit more from CBT for anxiety [R]. Ask your doctor about CBT.

People with anxiety may benefit more from CBT if they carry your CNR1 gene variant [R]. Ask your doctor about CBT.

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs2271933	/	

GENE	SNP	GENOTYPE	EVIDENCE
/	rs806365	/	

Psychotherapy can boost your mood by helping you [\[R, R, R, R, R\]](#):

- Cope with stress
- Control negative thoughts and emotions
- Improve social skills
- Build stronger relationships

Types of psychotherapy that can help with depression include:

- **Cognitive-behavioral therapy (CBT)**: aims to improve your coping mechanisms by altering thinking patterns and behavior [\[R, R, R\]](#)
- **Psychodynamic therapy**: tries to reduce the negative impact of feelings from your past experiences [\[R, R, R\]](#)
- **Interpersonal therapy**: focuses on improving your communication, relationships, and emotional control [\[R, R, R\]](#)

CBT is part of the “gold standard” treatment for depression, recommended by health experts worldwide [\[R, R, R, R\]](#).

 PERSONALIZED TO YOUR GENES

Psychotherapy can boost your mood by targeting many of your genetic variants at once [\[R\]](#).

People with your COMT gene variant may experience greater mental health improvements from CBT [\[R\]](#). Ask your doctor about CBT.

CBT may be more effective for depression in people with your [BDNF](#) gene variant [\[R\]](#). Ask your doctor about CBT.

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
COMT	rs4680	/	

GENE	SNP	GENOTYPE	EVIDENCE
/	rs6265	/	

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

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

Psychotherapy can improve your mood by targeting many of your genetic variants at once [\[R\]](#).

Eating Disorders

IMPACT
 4 / 5

EVIDENCE
 5 / 5

Experts recommend psychotherapy (talk therapy) for people with anorexia, bulimia, or binge eating disorder. Types of therapy that may help include [\[R, R, R, R, R, R, R, R, R, R, R\]](#):

- Cognitive-behavioral therapy (CBT)
- Family-based therapy
- Guided self-help
- Internet-based therapies

For a person with an eating disorder, talk therapy may help [\[R, R, R, R, R, R\]](#):

- Reduce food avoidance
- Support a positive body image
- Reduce bingeing and purging episodes
- Improve the quality of life

Some types of therapy may work better for certain eating disorders than others. Work with your doctor to decide on a treatment option that works best for you [\[R, R\]](#).

Tobacco Addiction

IMPACT
 5 / 5

EVIDENCE
 4 / 5

Experts say that talk therapy can help with tobacco addiction. Individual or group therapy may help [\[R, R\]](#).

Talk therapy, such as CBT, may help with tobacco addiction and other substance use disorders [\[R\]](#)

Other forms of talk therapy may also help with addictions. **Techniques that motivate behavior changes may be especially helpful.** These include [\[R, R\]](#):

- **Motivational enhancement therapy:** focuses on a person's innate ability to change
- **Contingency management:** provides motivation through incentives

For some people, talk therapy combined with medication may work even better. **Your healthcare provider can help you decide which options may be best for you** [\[R\]](#).

Text- and computer-based therapy may also help. However, face-to-face therapy may be more effective for some people [\[R, R, R, R, R, R\]](#).

Attention

IMPACT
 4 / 5

EVIDENCE
 4 / 5

Cognitive-behavioral therapy (CBT) is often used for ADHD. It may help adults improve their attention, hyperactivity and impulse control [\[R, R, R, R, R, R\]](#).

CBT may help ADHD by improving connectivity between brain cells [\[R\]](#).

 PERSONALIZED TO YOUR GENES

We recommend psychotherapy if you have attention issues or have been diagnosed with ADHD.

Obsessive-Compulsive Tendencies

IMPACT
 5 / 5

EVIDENCE
 5 / 5

Experts recommend cognitive-behavioral therapy (CBT) as a first-line treatment for OCD. It may help improve OCD symptoms. In some cases, a combination of CBT and medication may have even better effects [\[R, R, R, R, R, R, R, R\]](#).

One important component of CBT for OCD is **exposure and response prevention (ERP)**. ERP involves gradually exposing a person to things that may trigger an obsession. Then, the person tries to resist the associated compulsion [\[R, R, R, R, R\]](#).

Experts say that talk therapy can help with drug addictions. Individual or group therapy may help [\[R, R\]](#).

Talk therapy, such as CBT, may help with a number of substance use disorders. These include addictions to:

- Alcohol [\[R, R, R\]](#)
- Cannabis [\[R, R\]](#)
- Stimulants (such as cocaine or amphetamines) [\[R, R\]](#)
- Tobacco [\[R\]](#)

CBT may help with addictions to **sex, gambling, shopping, or the internet**. It may also help people dealing with multiple addictions [\[R, R, R, R, R, R, R\]](#).

Other forms of talk therapy may also help with addictions. **Techniques that motivate behavior changes may be especially helpful**. These include [\[R, R, R, R, R, R\]](#):

- **Motivational enhancement therapy**: focuses on a person's innate ability to change
- **Contingency management**: provides motivation through incentives

For some people, talk therapy combined with medication may work even better. **Your healthcare provider can help you decide which options may be best for you** [\[R, R, R, R\]](#).

Text- and computer-based therapy may also help. They may be good for alcohol, cannabis and tobacco addictions. However, face-to-face therapy may be more effective for some people [\[R, R, R, R, R, R, R, R, R, R\]](#).



PERSONALIZED TO YOUR GENES

People with your COMT gene variant may see greater benefits of CBT for addiction [\[R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
COMT	rs4680	/	

Experts say that talk therapy can help with alcohol addiction. Individual or group therapy may help [\[R, R\]](#).

Talk therapy, such as CBT, may help with alcohol addiction. It may also help people dealing with multiple addictions [\[R, R, R, R, R, R\]](#).

Other forms of talk therapy may also help with alcohol addiction. **Techniques that motivate behavior changes may be especially helpful**. These include [\[R, R\]](#):

- **Motivational enhancement therapy**: focuses on a person's innate ability to change
- **Contingency management**: provides motivation through incentives

For some people, talk therapy combined with medication may work even better. **Your healthcare provider can help you decide which options may be best for you** [\[R, R\]](#).

Text- and computer-based therapy may also help. However, face-to-face therapy may be more effective for some people [\[R, R, R, R, R\]](#).



Experts say that talk therapy can help with cannabis addiction. Individual or group therapy may help [\[R, R\]](#).

Talk therapy, such as CBT, may help with several substance use disorders but may be most effective for cannabis addiction [\[R, R, R\]](#).

Other forms of talk therapy may also help with cannabis addiction. **Techniques that motivate behavior changes may be especially helpful.** These include [\[R, R, R, R\]](#):

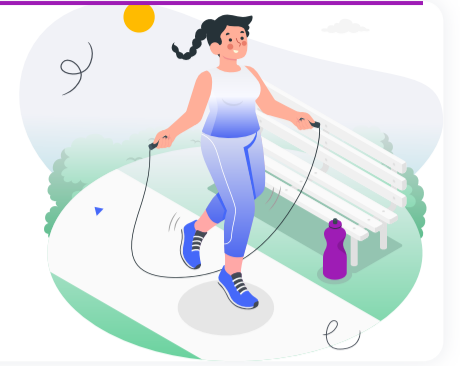
- **Motivational enhancement therapy:** focuses on a person's innate ability to change
- **Contingency management:** provides motivation through incentives

These techniques may be most effective when combined with CBT. For some people, talk therapy combined with medication may work even better. **Your healthcare provider can help you decide which options may be best for you** [\[R, R\]](#).

Text- and computer-based therapy may also help. However, face-to-face therapy may be more effective for some people [\[R, R, R\]](#).



Neurofeedback



Helps with the following



Psychological Trauma

IMPACT
●●●●● 2 / 5

EVIDENCE
●●●●● 3 / 5

Recommendation References: [\[R, R, R, R\]](#)



Stress

IMPACT
●●●●● 1 / 5

EVIDENCE
●●●●● 1 / 5

Recommendation References: [\[R\]](#)



Low Mood

IMPACT
●●●●● 1 / 5

EVIDENCE
●●●●● 2 / 5

Recommendation References: [\[R, R\]](#)



Memory Performance

IMPACT
●●●●● 1 / 5

EVIDENCE
●●●●● 3 / 5

Recommendation References: [\[R, R, R, R\]](#)



Executive Function

IMPACT
●●●●● 1 / 5

EVIDENCE
●●●●● 1 / 5

Recommendation References: [\[R\]](#)



Eating Disorders

IMPACT
●●●●● 1 / 5

EVIDENCE
●●●●● 2 / 5

Recommendation References: [\[R, R, R, R, R\]](#)



Tobacco Addiction

IMPACT
●●●●● 0 / 5

EVIDENCE
●●●●● 0 / 5

Recommendation References: [\[R\]](#)

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.*



Attention

IMPACT
●●●●● 1 / 5

EVIDENCE
●●●●● 2 / 5

Recommendation References: [\[R, R, R, R\]](#)



Addictions

IMPACT
●●●●● 1 / 5

EVIDENCE
●●●●● 1 / 5

Recommendation References: [\[R, R\]](#)



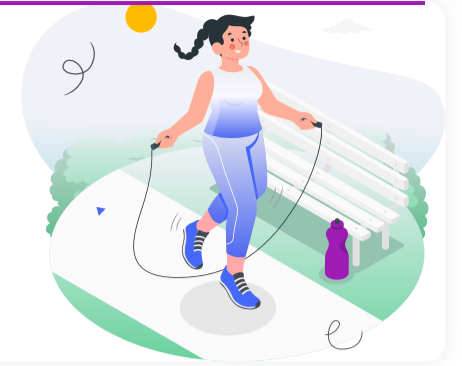
Obsessive-Compulsive Tendencies

IMPACT

● ● ● ● ● 0 / 5

EVIDENCE

● ● ● ● ● 0 / 5



Guided Imagery

Helps with the following



Psychological Trauma

IMPACT



EVIDENCE



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.*

Recommendation References: [\[R\]](#)



Stress

IMPACT



EVIDENCE



Guided imagery (1x-2x/week for up to 12 weeks) may improve stress, mood, and well-being [\[R, R, R, R, R, R, R, R, R, R, R, R\]](#).

Combining guided imagery with music therapy or progressive muscle relaxation (1x-2x/week for 3-13 weeks) may also help [\[R, R, R, R, R, R\]](#).

However, some studies show that guided imagery doesn't reduce stress [\[R, R, R\]](#).



Low Mood

IMPACT



EVIDENCE



Recommendation References: [\[R, R, R, R, R\]](#)



Memory Performance

IMPACT



EVIDENCE



Recommendation References: [\[R\]](#)



Eating Disorders

IMPACT



EVIDENCE



Recommendation References: [\[R\]](#)



Anxiety

IMPACT



EVIDENCE



Recommendation References: [\[R, R, R, R, R, R, R, R\]](#)



Attention

IMPACT



EVIDENCE



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.*

Recommendation References: [\[R\]](#)



Addictions

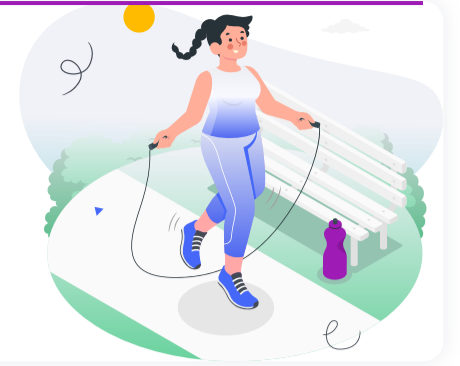
IMPACT



EVIDENCE



Morning Light



Helps with the following



Seasonal Low Mood

IMPACT

●●●●● 4 / 5

EVIDENCE

●●●●● 4 / 5



Psychological Trauma

IMPACT

●●●●● 1 / 5

EVIDENCE

●●●●● 1 / 5



Low Mood

IMPACT

●●●●● 4 / 5

EVIDENCE

●●●●● 3 / 5



Mood Swings

IMPACT

●●●●● 2 / 5

EVIDENCE

●●●●● 2 / 5



Eating Disorders

IMPACT

●●●●● 0 / 5

EVIDENCE

●●●●● 0 / 5

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.



Anxiety

IMPACT

●●●●● 0 / 5

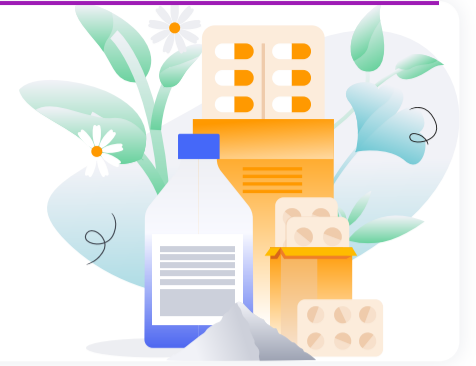
EVIDENCE

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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.



Tryptophan



Helps with the following



Seasonal Low Mood

IMPACT



EVIDENCE



Depleting dietary tryptophan may worsen SAD symptoms. However, some studies didn't find this effect [\[R, R, R, R, R\]](#).

Tryptophan supplementation (3-4.5 g/day for 1-2 weeks) may improve SAD symptoms. **However, the available evidence is limited and of low quality** [\[R, R, R\]](#).



Stress

IMPACT



EVIDENCE



Your body uses tryptophan to make serotonin. Serotonin is an important brain chemical for controlling the stress response [\[R, R\]](#).

Tryptophan deficiency may make you more prone to stress [\[R, R, R, R, R\]](#).

On the other hand, **eating tryptophan-rich food for 3 weeks may lower stress** [\[R\]](#).

Taking **tryptophan supplements (0.8-3 g/day for up to 7 days)** may also make you more resistant to stress [\[R, R, R, R\]](#).



Mood Swings

IMPACT



EVIDENCE



Low Mood

IMPACT



EVIDENCE



Low tryptophan levels are associated with depression [\[R, R, R\]](#).

Consider increasing your intake of tryptophan-rich foods.



Anxiety

IMPACT



EVIDENCE



Alcohol Addiction

IMPACT



EVIDENCE



Following an alcohol treatment program, L-tryptophan (3 g/day for 4 days) may help reduce depression linked to **alcohol use disorder**. However, this is based on a single old study [\[R\]](#).

Tryptophan may help with withdrawal by improving mood [\[R, R\]](#).



Addictions

IMPACT



EVIDENCE



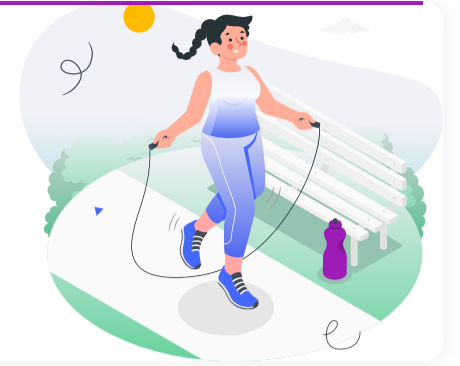
A combination of L-tryptophan (50 mg per kg of body weight per day), a high-carb diet, and group cessation therapy may support withdrawal from **cigarettes** [\[R\]](#).

Following an alcohol treatment program, L-tryptophan (3 g/day for 4 days) may help reduce depression linked to **alcohol use disorder**. However, this is based on a single old study [\[R\]](#).

Tryptophan may help with withdrawal by improving mood [\[R, R\]](#)



Dance



Helps with the following

 **Stress**

IMPACT
 3 / 5

EVIDENCE
 4 / 5

Recommendation References: [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)

 **Psychological Trauma**

IMPACT
 3 / 5

EVIDENCE
 3 / 5

Recommendation References: [\[R\]](#)

 **Low Mood**

IMPACT
 3 / 5

EVIDENCE
 4 / 5

Recommendation References: [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)

 **Anxiety**

IMPACT
 3 / 5

EVIDENCE
 4 / 5

Recommendation References: [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)

 **Cognitive Decline**

IMPACT
 2 / 5

EVIDENCE
 2 / 5

Stress is linked to a **20%** higher risk of cognitive decline [\[R\]](#).

Dancing combines relaxation and physical activity, both of which help support cognition. It may boost memory, attention, and other cognitive functions in people with mild cognitive impairment [\[R\]](#), [\[R\]](#).

 **Addictions**

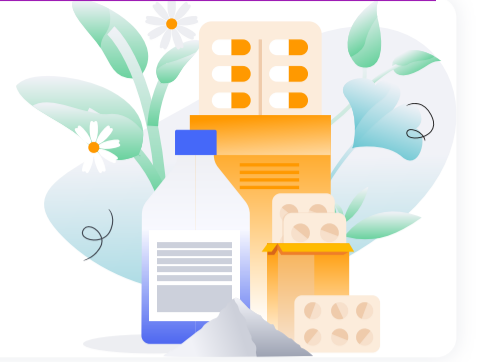
IMPACT
 1 / 5

EVIDENCE
 1 / 5

Recommendation References: [\[R\]](#)



Phosphatidylserine



Helps with the following



Seasonal Low Mood

IMPACT



EVIDENCE



Stress

IMPACT



EVIDENCE



Cognitive Decline

IMPACT



EVIDENCE



Supplementation with phosphatidylserine (100-300 mg/day for 12-24 weeks) may **improve cognition and behavior** in people with mild cognitive impairment. However, one study didn't find this benefit [\[R, R, R, R, R\]](#).

Phosphatidylserine may help by supporting the structure of brain cells and boosting crucial brain chemicals [\[R\]](#).



Memory Performance

IMPACT



EVIDENCE



Short-Term Memory

IMPACT



EVIDENCE



Attention

IMPACT

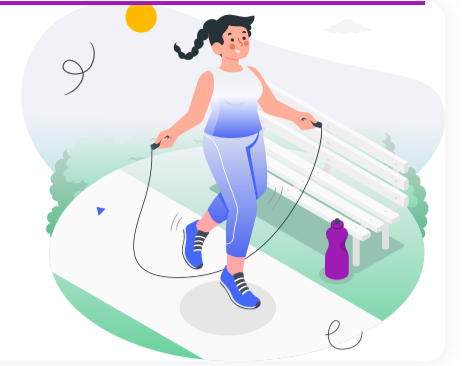


EVIDENCE





Light Therapy



Helps with the following



Psychological Trauma

IMPACT



EVIDENCE



Seasonal Low Mood

IMPACT



EVIDENCE



The lack of sunlight exposure is the main cause of seasonal affective disorder [\[R, R, R\]](#).

Light therapy is the first-line treatment for SAD. It targets the root cause of the issue by replacing sunlight exposure. People can expect notable improvements in **1-2 weeks** [\[R, R, R, R, R, R\]](#).

Light therapy typically involves sitting a few feet from a special light box within the first hour of waking up. A light therapy box should [\[R, R, R, R\]](#):

- Provide 10,000 lux of light
- Provide a spectrum of visible light (typically, blue to yellow)
- Filter out UV light

Single-color light therapy may not be as effective [\[R, R\]](#).

Light therapy may provide faster improvements than psychotherapy, but it may be less effective in the long run. Combining them may be the best option [\[R, R, R, R, R, R, R\]](#).

You should still **try to get as much natural light as possible** during the cold months, especially in the morning. Some ways to achieve this include [\[R, R\]](#):

- Spending more time outside
- Increasing light in your home
- Visiting sunnier and warmer areas



Low Mood

IMPACT



EVIDENCE



Light therapy may help with depression in people with **anorexia** [\[R\]](#).

In people with **bulimia**, it may improve depression and binge eating. It may especially help those who develop symptoms during the winter months. However, the evidence is mixed and the benefits may be short-lived [\[R, R, R, R\]](#).



PERSONALIZED TO YOUR GENES

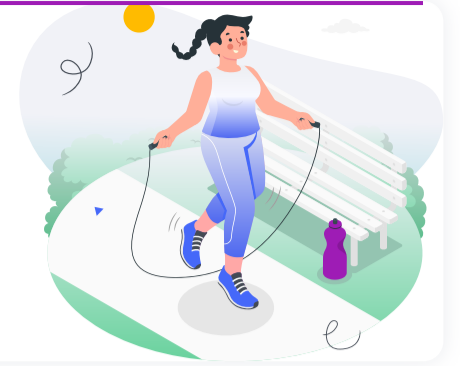
In people with your QKI gene variant, the lack of light exposure may cause mood problems. Consider trying light therapy, especially during the winter months [\[R, R, R, R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs9364726	/	



Transcendental Meditation



Helps with the following



Stress



Recommendation References: [\[R, R, R, R, R, R\]](#)



Psychological Trauma



Recommendation References: [\[R, R, R, R, R\]](#)



Anxiety



Recommendation References: [\[R, R, R, R\]](#)



Low Mood

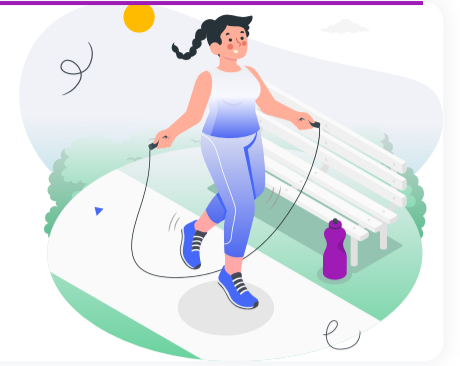


Recommendation References: [\[R, R, R, R, R, R\]](#)

21



Yoga Nidra



Helps with the following



Stress



Recommendation References: [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)



Psychological Trauma



Recommendation References: [\[R\]](#)



Anxiety



Recommendation References: [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)



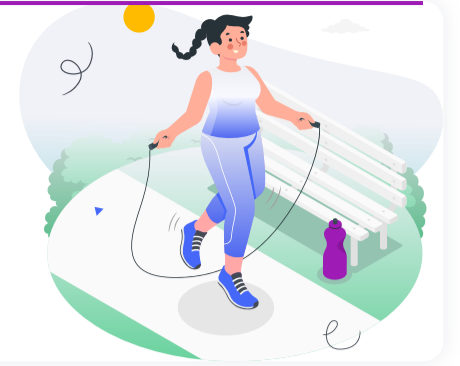
Low Mood



Recommendation References: [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)



EFT Tapping



Helps with the following



Psychological Trauma



Stress

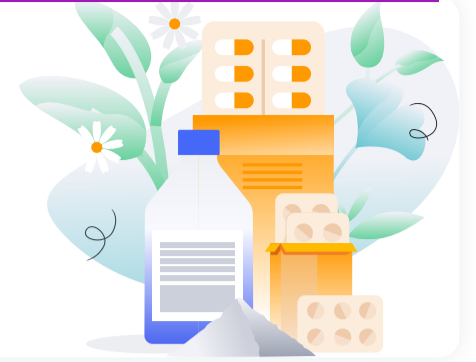


Anxiety



Low Mood





Phosphatidic Acid

Helps with the following



Seasonal Low Mood



Stress



Memory Performance

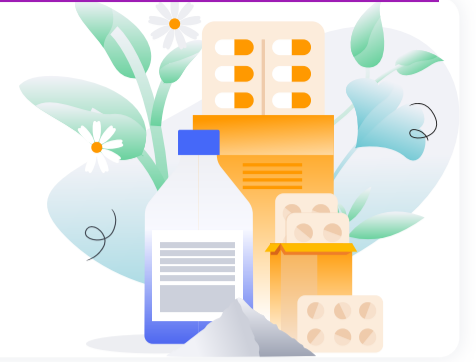


Short-Term Memory





Phosphatidylserine And Phosphatidic Acid



Helps with the following



Seasonal Low Mood



Stress



Short-Term Memory

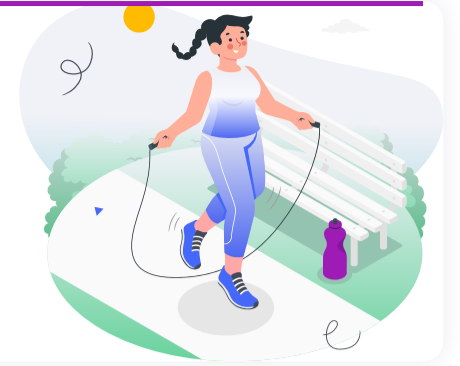


Memory Performance





Diaphragmatic Breathing



Helps with the following



Stress



Recommendation References: [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)



Psychological Trauma



Recommendation References: [\[R\]](#)



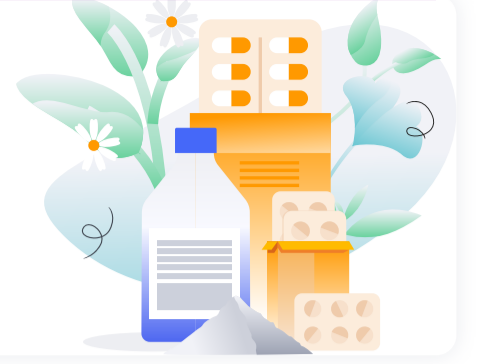
Anxiety



Recommendation References: [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)



L-Arginine



Helps with the following



Stress

IMPACT

●●●●● 0 / 5

EVIDENCE

●●●●● 0 / 5

L-lysine and L-arginine (3 grams each/day for 7-10 days) may reduce anxiety by reducing stress hormone levels [[R](#), [R](#)].



Psychological Trauma

IMPACT

●●●●● 0 / 5

EVIDENCE

●●●●● 0 / 5



Anxiety

IMPACT

●●●●● 0 / 5

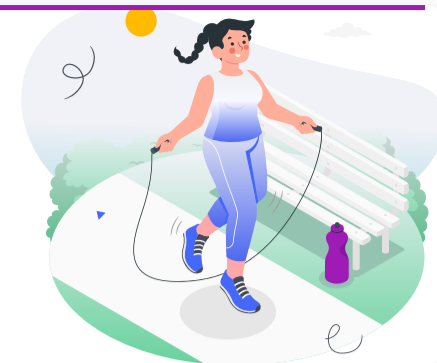
EVIDENCE

●●●●● 0 / 5

L-lysine and L-arginine (3 grams each/day for 7-10 days) may reduce anxiety by reducing stress hormone levels [[R](#), [R](#)].



Pet Therapy



Helps with the following



Stress

IMPACT



EVIDENCE



Animal-assisted therapy (10-45 min) may reduce stress. However, most studies are low-quality [[R](#), [R](#), [R](#)].



Psychological Trauma

IMPACT



EVIDENCE



Anxiety

IMPACT



EVIDENCE



Animal-assisted therapy may help with anxiety. However, most studies are of low quality [[R](#), [R](#), [R](#), [R](#), [R](#)].

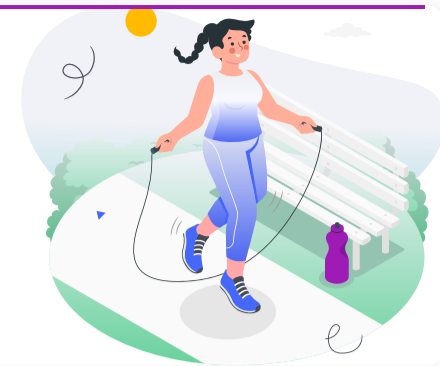
Animal-assisted therapy may help by [[R](#)]:

- Distracting from negative thoughts
- Increasing social interaction



Optimize Sleep

Helps with the following



Seasonal Low Mood

IMPACT



EVIDENCE



People with SAD may be more likely to **have sleep disturbances and to be night owls**. Sleep problems may be particularly common in those with combined SAD and alcohol use disorder [\[R, R, R\]](#).

To improve SAD, some experts suggest [\[R\]](#):

- Maintaining a regular sleep schedule
- Avoiding napping and sleeping too much

Most people need **7-9 hours** of high-quality sleep each night [\[R, R\]](#).

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

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



Low Mood

IMPACT



EVIDENCE



Poor sleep may worsen depression. At the same time, people with depression may have more difficulty falling or staying asleep [\[R, R, R, R, R\]](#).

Getting too little sleep may worsen depression by [\[R\]](#):

- Affecting the way you think
- Making you more emotional

Experts recommend applying strategies to improve sleep to help with depression. For example, cognitive-behavioral therapy (CBT) for insomnia may also help reduce depression symptoms [\[R, R\]](#).

Sleep issues are common in people with mood swings. Examples include [\[R\]](#), [\[R\]](#), [\[R\]](#):

- **Trouble falling and staying asleep**
- **Lower sleep quality**
- **Decreased total sleep time**

The internal clock helps regulate sleep-wake cycles. Problems with this clock may impact the activity of serotonin and dopamine, chemicals that play a role in mood [\[R\]](#).

People who work night shifts are more likely to experience mood swings [\[R\]](#).

Experts agree that people who experience mood swings should pay special attention to their sleep cycle. Establishing a consistent nighttime routine may help increase overall rest [\[R\]](#), [\[R\]](#).



PERSONALIZED TO YOUR GENES

In people with mood swings, your CLOCK gene variant is linked to sleep issues [\[R\]](#). Take care to improve your sleep quality.

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs1801260	/	

Sleep loss is a common trigger of brain fog. It may impair attention and memory [R, R, R, R, R].

People with sleep apnea (interrupted breathing during sleep) tend to have poor sleep. They may have problems with attention, memory, and emotional control [R, R, R, R].

Sleep loss may cause brain fog by:

- Increasing oxidative damage in the brain [R, R]
- Increasing inflammation [R, R, R, R, R]

Getting more sleep may improve attention and reaction time [R].

 PERSONALIZED TO YOUR GENES

Optimizing sleep is a great way to improve brain fog by targeting many of your gene variants at once [R].

In people with your COMT gene variant, a lack of sleep may contribute to brain fog by worsening attention [R, R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
COMT	rs4680	/	

Sleep issues may increase the risk of teeth grinding. Some of them include:

- Insomnia [R]
- Snoring [R, R, R, R, R]
- Sleep apnea [R]
- Insufficient or restless sleep [R, R]

Night owls may also have a higher risk of teeth grinding. However, one study didn't find this link [R, R, R, R].

People who grind their teeth more often have:

- Early awakenings [R, R, R]
- Nightmares [R]
- Poor sleep quality [R, R, R, R]

Optimize your sleep to decrease the risk of teeth grinding. If you snore or have sleep apnea, talk to your doctor about steps you can take to improve your sleep [R, R].

Executive Function

IMPACT  4 / 5

EVIDENCE  5 / 5

Sleep deprivation (for 24-48h) may reduce cognition including [\[R, R, R, R, R, R, R\]](#):

- **Executive function**
- Attention
- Long-term memory
- Alertness

Both very long (9 h or more) and very short (5h or less) sleep may also reduce executive function [\[R\]](#).

In line with this, **executive function** and working memory may drop due to [\[R, R, R, R, R, R, R\]](#):

- Insomnia
- Sleep apnea

Standard therapy for sleep apnea may reduce its negative effects [\[R, R, R, R\]](#).

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

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

Short naps, even during night shifts, may also improve executive function. However, not all studies found this benefit [\[R, R, R\]](#).

Memory Performance

IMPACT  4 / 5

EVIDENCE  5 / 5

Short sleep worsens overall cognitive function, including memory. Specifically, sleep loss reduces short-term, long-term, procedural, and working memory [\[R, R, R, R\]](#).

Similarly, people with insomnia may have worse performance in episodic and working memory [\[R, R\]](#).

Taking short times during the day may also improve memory and other cognitive aspects. However, naps during night shifts may be ineffective at improving memory [\[R, R, R\]](#).

Sleep helps by promoting memory consolidation [\[R, R, R, R\]](#).

Creativity

IMPACT  2 / 5

EVIDENCE  2 / 5

Taking a nap during the day may improve problem-solving ability [\[R\]](#).

The REM phase of sleep may improve creative problem solving by enhancing the integration of unassociated information [\[R\]](#).

Short-Term Memory

IMPACT  4 / 5

EVIDENCE  5 / 5

Sleep loss worsens overall cognitive function and all types of memory, including short-term memory [\[R, R\]](#).

Similarly, people with insomnia may have worse performance in working memory (both retention and manipulation of short-term memories) [\[R, R\]](#).

Taking short naps during the day may improve all aspects of memory, including short-term memory. However, naps during night shifts may be less effective [\[R, R, R\]](#).

Sleep helps by promoting memory consolidation [\[R, R, R, R\]](#).

Cognitive Decline

IMPACT  3 / 5

EVIDENCE  4 / 5

Experts say that healthy sleep is crucial for cognitive function [\[R\]](#).

Sleeping for **less than 7 hours** per night may raise the risk of cognitive decline by up to **34%** [\[R, R, R\]](#).

Various **sleep disturbances** can contribute to cognitive decline. They may increase the risk by up to **170%** if they are severe [\[R, R, R\]](#).

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

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



PERSONALIZED TO YOUR GENES

Sleep apnea may have a stronger effect on cognitive decline in people with your APOE gene variant. On the other hand, taking naps may be more beneficial [\[R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs429358	/	

Processing Speed

IMPACT  3 / 5

EVIDENCE  3 / 5

Proper sleep is essential for cognitive function. Short-term **sleep deprivation**—but not insomnia—may greatly impair reaction time [\[R, R\]](#).



PERSONALIZED TO YOUR GENES

Sleep disturbances may have a stronger impact on processing speed in people with your BDNF gene variant [\[R\]](#)

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs6265	/	

Short sleep duration is linked to attention problems and ADHD [\[R, R, R\]](#).

This is likely because sleep loss reduces the activity of brain regions involved in attention [\[R, R, R, R, R, R, R\]](#).

Optimizing sleep may help improve [\[R, R, R, R\]](#):

- Attention
- Mood
- Quality of life

 PERSONALIZED TO YOUR GENES

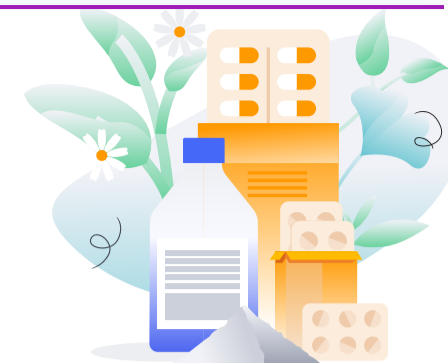
In people with your COMT gene variant, a lack of sleep may have a stronger impact on attention [\[R, R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
COMT	rs4680	/	



Curcumin



Helps with the following



Stress

IMPACT



EVIDENCE



Bioavailable curcumin (80-1,000 mg/day for 1-8 weeks) may reduce stress. However, one study didn't find this benefit [\[R, R\]](#).

Note that curcumin is hard to absorb. Look for supplements with *bioavailable* curcumin, which is easier to absorb. Combining it with piperine (a compound in black pepper) may also help [\[R, R\]](#).



Anxiety

IMPACT



EVIDENCE



Curcumin (up to 1 g/day for 1-2 months) may relieve anxiety. Bioavailable curcumin may have a greater impact [\[R, R, R, R, R\]](#).

Note that the evidence is mixed. Curcumin did not lower anxiety in some studies [\[R\]](#).

Note that curcumin is hard to absorb. Look for supplements with *bioavailable* curcumin, which is easier to absorb. Combining it with piperine (a compound in black pepper) may also help [\[R, R\]](#).



Low Mood

IMPACT



EVIDENCE



Curcumin (500-1,000 mg/day for 6-8 weeks) may improve mood. However, the evidence is limited and additional research is required [\[R, R, R, R\]](#).

Curcumin may help by **increasing brain levels of [serotonin](#) and [dopamine](#)**, which help you feel happy, positive, and energetic. Curcumin may also support brain health [\[R, R\]](#).

Note that curcumin is hard to absorb. Look for supplements with *bioavailable* curcumin, which is easier to absorb. Combining it with piperine (a compound in black pepper) may also help [\[R, R\]](#).



Processing Speed

IMPACT



EVIDENCE



According to a single study, curcumin (160 mg/day for 4 months) may slightly improve processing speed [\[R\]](#).

Curcumin may protect the brain by reducing oxidative stress and inflammation [\[R\]](#).



Brain Fog

IMPACT



EVIDENCE



Cognitive Decline

IMPACT



EVIDENCE



Memory Performance

IMPACT



EVIDENCE





Attention

IMPACT

●●●●● 0/5

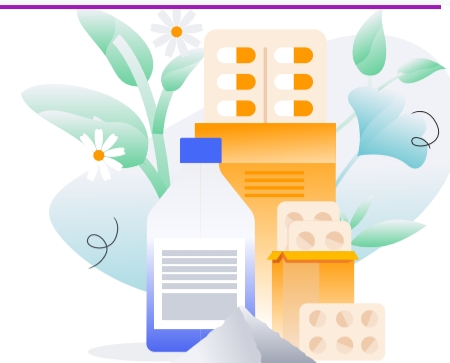
EVIDENCE

●●●●● 0/5

30



Cocoa



Helps with the following

**Stress**

IMPACT



EVIDENCE

**Memory Performance**

IMPACT



EVIDENCE



People who regularly consume cocoa may have better visual-spatial and working memory [\[R\]](#).

In line with this, consumption of dark chocolate (providing 520-720 mg flavanols) may improve memory. However, the evidence is mixed [\[R, R, R, R\]](#).

In older people, cocoa may help prevent cognitive decline and preserve memory [\[R, R, R\]](#).

**Brain Fog**

IMPACT



EVIDENCE



Consuming **cocoa** may boost attention and other cognitive functions. However, some studies found no benefits [\[R, R, R, R, R, R\]](#).

Cocoa is rich in active compounds called *flavanols*. They may help by [\[R, R, R\]](#):

- Improving blood flow in the brain
- Decreasing oxidative stress
- Reducing inflammation

Note that pure cocoa is likely a healthier choice than chocolate. If you eat chocolate, choose dark chocolate with more cocoa and less sugar and fat.

**Short-Term Memory**

IMPACT



EVIDENCE



In older people, cocoa (520-990 mg flavanols for 8-12 weeks) may help prevent the decline of short-term memory and other cognitive functions [\[R, R\]](#).

Flavanols found in cocoa may improve blood flow to the brain and reduce oxidative damage to brain cells [\[R\]](#).

**Cognitive Decline**

IMPACT



EVIDENCE



Cocoa flavanols are powerful antioxidants that protect the brain from oxidative stress. They may enhance cognition and reduce cognitive decline [\[R\]](#).

Consuming cocoa (3-10 g/day for at least 3 months) may improve memory, attention, and other aspects of cognitive function [\[R, R\]](#).

**Processing Speed**

IMPACT



EVIDENCE



Cocoa is rich in antioxidants called flavanols, which have well-known benefits for brain health and cognition [\[R\]](#).

Consuming cocoa (10 g/day for at least 6 months) may increase processing speed [\[R\]](#).

A single dose of cocoa (providing 350-900 mg of flavanols) may improve reaction time in the short term, but one study didn't find this benefit [\[R, R, R\]](#).



Low Mood

IMPACT



EVIDENCE



Anxiety

IMPACT



EVIDENCE



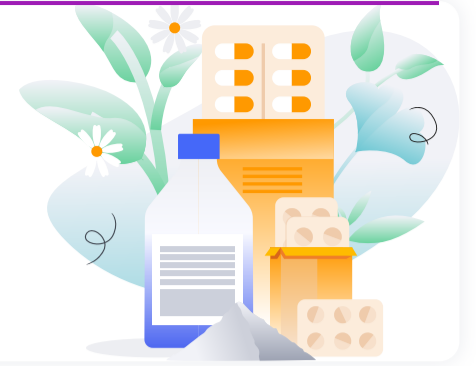
Attention

IMPACT



EVIDENCE





Ashwagandha

Helps with the following



Stress

IMPACT



EVIDENCE



Supplementing with ashwagandha extract (240-1000 mg/day for 8-12 weeks) may relieve stress [\[R, R, R, R\]](#).

It may help by:

- Calming brain regions involved in stress [\[R, R\]](#)
- Reducing stress hormones [\[R\]](#)
- Reducing [oxidative stress](#) [\[R, R\]](#)



PERSONALIZED TO YOUR GENES

Your **NR3C1** gene variant is linked to higher cortisol levels in response to stress. Ashwagandha may relieve stress by reducing cortisol [\[R, R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs41423247	/	



Anxiety

IMPACT



EVIDENCE



Ashwagandha extract (240-600 mg/day for 8 weeks) may improve anxious feelings in healthy people [\[R, R, R\]](#).

Ashwagandha extract (up to 1000 mg/day for 2-12 weeks) may also help relieve anxiety in people with mental health conditions [\[R, R, R, R, R\]](#).

It may help by:

- Calming brain regions involved in anxiety [\[R, R\]](#)
- Reducing stress hormones [\[R\]](#)
- Reducing [oxidative stress](#) [\[R, R\]](#)



Processing Speed

IMPACT



EVIDENCE



Supplementation with ashwagandha extract (500-600 mg/day for 2 months) may improve processing speed in healthy people and those with bipolar disorder [\[R, R\]](#).

Please note: Ashwagandha is likely unsafe to take during pregnancy [\[R\]](#).



Memory Performance

IMPACT



EVIDENCE





Executive Function



Mood Swings



Attention

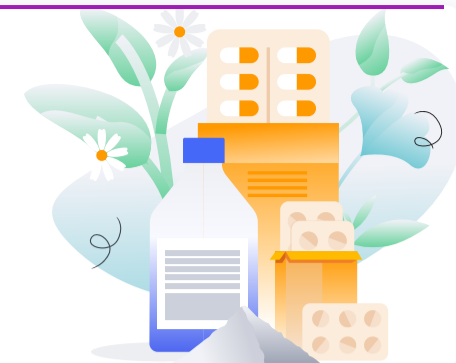


Recommendation References: [[R](#), [R](#)]



Obsessive-Compulsive Tendencies





Ginkgo

Helps with the following



Stress

IMPACT



EVIDENCE



A single dose of standardized ginkgo extract (EGb 761, 120 mg) may prevent a rise in blood pressure and [cortisol](#) in response to stress [\[R\]](#).

Long-term supplementation with ginkgo extract (160-240 mg/day for up to 9 months) may improve stress from chronic health conditions [\[R\]](#), [\[R\]](#).

Please note: Do not consume ginkgo seeds or unprocessed ginkgo leaves. They are poisonous. Ginkgo may also interact with blood thinners. Consult your doctor before taking ginkgo supplements [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).



Memory Performance

IMPACT



EVIDENCE



Brain Fog

IMPACT



EVIDENCE



Ginkgo extract (120-360 mg) may improve attention. However, its effects may decline with time [\[R\]](#), [\[R\]](#), [\[R\]](#).

A combination of ginkgo and Korean red [ginseng](#) may help boost memory [\[R\]](#), [\[R\]](#).

Ginkgo is a popular supplement for brain fog. However, many studies show that it doesn't improve cognitive function. It may even worsen attention and memory [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Please note: Do not consume ginkgo seeds or unprocessed ginkgo leaves. They are poisonous. Ginkgo may also interact with blood thinners. Consult your doctor before taking ginkgo supplements [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).



Anxiety

IMPACT



EVIDENCE



Standardized ginkgo extract (up to 240 mg/day for up to 6 months) may help relieve anxiety [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Ginkgo may help by preventing a rise in blood pressure and [cortisol](#) in response to stress [\[R\]](#).

Please note: Do not consume ginkgo seeds or unprocessed ginkgo leaves. They are poisonous. Ginkgo may also interact with blood thinners. Consult your doctor before taking ginkgo supplements [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).



Cognitive Decline

IMPACT



EVIDENCE



Ginkgo leaf extract (240 mg/day for 6 months) may improve cognitive function in patients with mild cognitive impairment [\[R\]](#), [\[R\]](#).

Taking lower doses for longer periods of time (120 mg/day for 2 years) may also be effective [\[R\]](#).

Ginkgo may help by promoting blood flow in the brain [\[R\]](#), [\[R\]](#).

Please note: Do not consume ginkgo seeds or unprocessed ginkgo leaves. They are poisonous. Ginkgo may also interact with blood thinners. Consult your doctor before taking ginkgo supplements [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).



Processing Speed



Ginkgo is rich in antioxidants called flavonoids. They help protect the brain and improve reaction time and other cognitive functions [\[R\]](#).

Taking ginkgo extract (120-240 mg/day for 2 months) may improve reaction time. However, several small studies didn't find this benefit [\[R, R, R, R, R\]](#).

Older people may see greater cognitive improvements from ginkgo supplementation [\[R\]](#).

Please note: Do not consume ginkgo seeds or unprocessed ginkgo leaves. They are poisonous. Ginkgo may also interact with blood thinners. Consult your doctor before taking ginkgo supplements [\[R, R, R, R\]](#).



Dyslexia

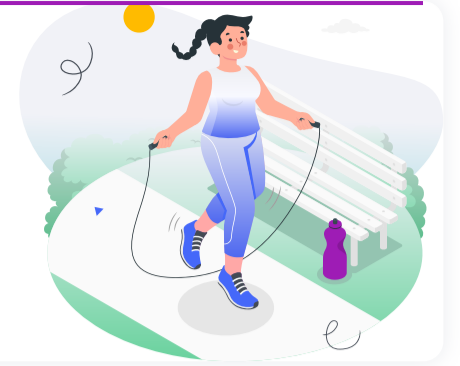


Attention





Hatha Yoga



Helps with the following

 **Stress**

IMPACT
●●●●● 2 / 5

EVIDENCE
●●●●● 2 / 5

Recommendation References: [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)

 **Tobacco Addiction**

IMPACT
●●●●● 1 / 5

EVIDENCE
●●●●● 2 / 5

Recommendation References: [\[R\]](#), [\[R\]](#)

 **Creativity**

IMPACT
●●●●● 1 / 5

EVIDENCE
●●●●● 1 / 5

Recommendation References: [\[R\]](#)

 **Eating Disorders**

IMPACT
●●●●● 1 / 5

EVIDENCE
●●●●● 1 / 5

Recommendation References: [\[R\]](#)

 **Processing Speed**

IMPACT
●●●●● 1 / 5

EVIDENCE
●●●●● 1 / 5

Recommendation References: [\[R\]](#)

 **Executive Function**

IMPACT
●●●●● 1 / 5

EVIDENCE
●●●●● 1 / 5

Recommendation References: [\[R\]](#)

 **Addictions**

IMPACT
●●●●● 2 / 5

EVIDENCE
●●●●● 2 / 5

Recommendation References: [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)

 **Attention**

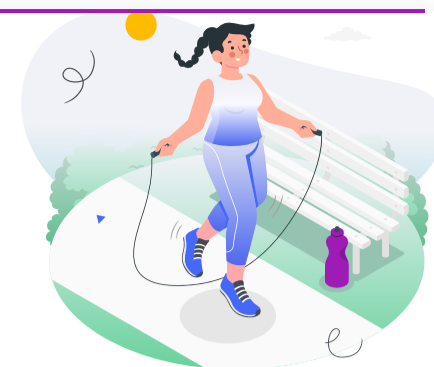
IMPACT
●●●●● 1 / 5

EVIDENCE
●●●●● 1 / 5

Recommendation References: [\[R\]](#)



Binaural Beats



Helps with the following



Stress

IMPACT



EVIDENCE



Memory Performance

IMPACT



EVIDENCE



Short-Term Memory

IMPACT



EVIDENCE



Brain Fog

IMPACT



EVIDENCE



Anxiety

IMPACT



EVIDENCE



Creativity

IMPACT



EVIDENCE



Binaural beats (regardless of the frequency) may improve divergent but not convergent thinking [\[R\]](#).

Binaural beats may help by improving dopamine levels or activity [\[R\]](#).



Attention

IMPACT



EVIDENCE



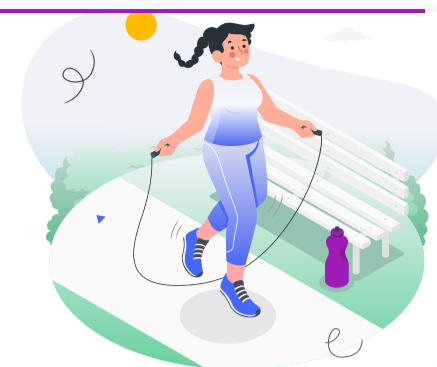
Addictions

IMPACT



EVIDENCE





High-Intensity Interval Training (HIIT)

Helps with the following



Stress

IMPACT



EVIDENCE



Please note: Intense exercise may not be suitable for people with chronic health conditions. Talk to your doctor before starting a new exercise regimen [R].

Recommendation References: [R, R, R, R, R]



Processing Speed

IMPACT



EVIDENCE



Please note: Intense exercise may not be suitable for people with chronic health conditions. Talk to your doctor before starting a new exercise regimen [R].

Recommendation References: [R]



Anxiety

IMPACT



EVIDENCE



Please note: Intense exercise may not be suitable for people with chronic health conditions. Talk to your doctor before starting a new exercise regimen [R].

Recommendation References: [R, R]



Low Mood

IMPACT



EVIDENCE



Please note: Intense exercise may not be suitable for people with chronic health conditions. Talk to your doctor before starting a new exercise regimen [R].

Recommendation References: [R, R, R, R, R]



Executive Function

IMPACT



EVIDENCE



Please note: Intense exercise may not be suitable for people with chronic health conditions. Talk to your doctor before starting a new exercise regimen [R].

Recommendation References: [R, R, R, R, R]



Executive Function

IMPACT



EVIDENCE



High-Intensity Interval Training (HIIT) may slightly improve executive function. However, more studies are needed to confirm this benefit [R].

HIIT may help by increasing the levels of brain chemicals such as [R]:

- BDNF
- Dopamine

Please note: Intense exercise may not be suitable for people with chronic health conditions. Talk to your doctor before starting a new exercise regimen [R].



Addictions

IMPACT



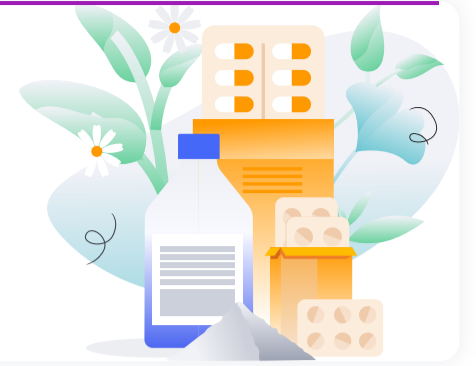
EVIDENCE



Please note: Intense exercise may not be suitable for people with chronic health conditions. Talk to your doctor before starting a new exercise regimen [R].



L-Theanine



Helps with the following



Stress

IMPACT

3 / 5

EVIDENCE

2 / 5

Supplementing with L-theanine may make you more resilient to stress [\[R, R\]](#).

A single dose of L-theanine (200 mg) may [\[R, R, R, R, R\]](#):

- Reduce stress
- Lower heart rate and blood pressure
- Improve sleep quality

L-theanine may help by [\[R, R, R, R, R\]](#):

- Increasing “feel good” chemicals in the brain
- Preventing excessive brain activity
- Promoting new brain cell connections



PERSONALIZED TO YOUR GENES

Your **GRM8** gene variant is linked to higher stress. This gene may affect the levels of **glutamate**, a brain chemical involved in stress. L-theanine may help by lowering glutamate [\[R, R, R, R, R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs4731328	/	1 / 5



Low Mood

IMPACT

1 / 5

EVIDENCE

1 / 5

Recommendation References: [\[R\]](#)



Brain Fog

IMPACT

2 / 5

EVIDENCE

3 / 5

A single dose of **L-theanine (50-250 mg)** may improve brain fog by increasing alertness and attention [\[R, R, R, R, R\]](#).

A combination of L-theanine with **caffeine (40-160 mg)** may also help [\[R, R, R, R, R\]](#).

 **Anxiety**



L-theanine (250-400 mg/day for 2-8 weeks) may help reduce anxiety [\[R, R, R, R, R, R, R, R\]](#).

L-theanine anti-anxiety effects include [\[R, R, R, R\]](#):

- Reducing stress
- Lowering heart rate and blood pressure
- Improving sleep quality

L-theanine may help by [\[R, R, R, R, R\]](#):

- Increasing “feel good” chemicals in the brain
- Preventing too much brain activity
- Promoting new brain cell connections

Note that higher doses of L-theanine (450-900 mg/day) may not help [\[R\]](#).

 **Executive Function**



A single dose of L-theanine (100 mg) may improve working memory [\[R\]](#).

Longer supplementation with L-theanine (200-250 mg/day for 4-8 weeks) may improve executive function and verbal fluency [\[R, R, R\]](#).

L-theanine may help by improving sleep quality [\[R\]](#):

L-theanine may also improve executive function when combined with other components like caffeine, L-tyrosine, and alpha-linolenic acid [\[R, R\]](#).

 **Memory Performance**

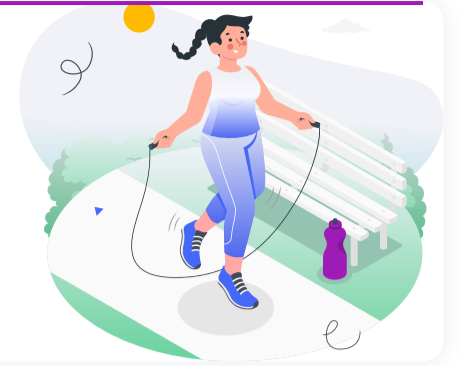


 **Attention**





Art Therapy



Helps with the following

Stress

IMPACT  3 / 5

EVIDENCE  3 / 5

Art therapy sessions (1x-2x/week for 8-10 weeks) may reduce stress and improve quality of life [\[R, R, R, R, R, R, R\]](#).

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

- Reducing heart rate
- Improving memory and attention

Anxiety

IMPACT  3 / 5

EVIDENCE  3 / 5

Art therapy (1-2.5h/week for at least 4 weeks) may reduce anxiety by improving emotional control [\[R, R, R, R, R, R, R\]](#).

Low Mood

IMPACT  2 / 5

EVIDENCE  3 / 5

Art therapy (for at least 1 h/week for 3-6 months) may help reduce depressive symptoms, especially if combined with mindfulness [\[R, R, R, R, R, R, R, R, R, R\]](#).

Note that the evidence is mixed. Some studies show that art therapy doesn't reduce depression [\[R\]](#).

Cognitive Decline

IMPACT  2 / 5

EVIDENCE  2 / 5

Stress is linked to a **20%** higher risk of cognitive decline [\[R\]](#).

Visual art therapy and other relaxation techniques may boost memory, attention, and other cognitive functions in people with mild cognitive impairment [\[R, R\]](#).

Eating Disorders

IMPACT  1 / 5

EVIDENCE  1 / 5

Recommendation references: [\[R\]](#)

Tobacco Addiction

IMPACT  1 / 5

EVIDENCE  1 / 5

Recommendation references: [\[R\]](#)

Obsessive-Compulsive Tendencies

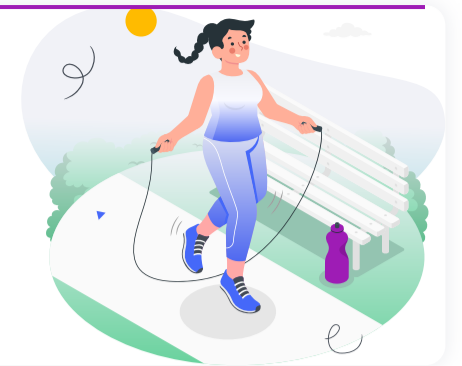
IMPACT  1 / 5

EVIDENCE  1 / 5

Recommendation references: [\[R\]](#)



Strength Training



Helps with the following



Psychological Trauma

IMPACT



EVIDENCE



Executive Function

IMPACT



EVIDENCE



Moderate to vigorous strength training (at least 45 min/day, at least 2x/week) may improve executive function. Adults and older people with mild cognitive decline may also benefit [\[R, R, R, R\]](#).

Strength training may help by improving [\[R\]](#):

- Brain blood flow
- BDNF levels



Short-Term Memory

IMPACT



EVIDENCE



Regular exercise may improve cognitive function, including working and short-term memory. Although cardio may be more effective, strength training may also help [\[R, R, R\]](#).

In older people, strength training may improve short-term memory **only in those who are cognitively healthy** [\[R\]](#).

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

- Improving [blood flow in the brain](#)
- Reducing [inflammation](#)
- Improving brain cell communication



Cognitive Decline

IMPACT



EVIDENCE



Regular exercise may boost cognitive function and **cut the risk of mild cognitive decline in half** [\[R, R, R, R, R, R\]](#).

Strength training may reduce mild cognitive decline. Exercising **2 times per week for at least 60 minutes** may be more effective than shorter, more frequent sessions [\[R\]](#).



Anxiety

IMPACT



EVIDENCE



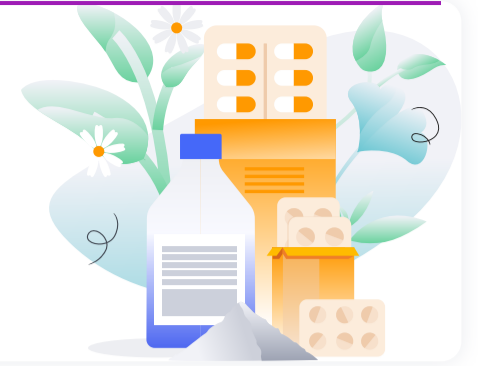
Low Mood

IMPACT



EVIDENCE





Lemon Balm

Helps with the following

Stress

IMPACT
 3 / 5

EVIDENCE
 2 / 5

A single dose of lemon balm (0.3-1.6 g) may help manage stress. A combination of lemon balm and valerian may work better than lemon balm alone [\[R, R, R, R\]](#).

Lemon balm may fight stress by [\[R, R, R, R\]](#):

- Increasing “feel-good” chemicals in the brain
- Calming the mind
- Reducing inflammation
- Reducing oxidative stress

Long-term supplementation with lemon balm (3 g/day for 8 weeks) may also help you manage stress [\[R\]](#).

Please note: *If you are taking medications, consult your doctor before using lemon balm* [\[R\]](#).

Low Mood

IMPACT
 1 / 5

EVIDENCE
 1 / 5

Anxiety

IMPACT
 2 / 5

EVIDENCE
 2 / 5

Lemon balm extract may reduce stress and anxiety. Most studies used pills with [\[R, R, R, R, R\]](#):

- 600 mg of lemon balm extract
- 1,600-3,000 mg of dried herb

Components from lemon balm may calm your mind by:

- Boosting [GABA](#), a brain-calming chemical [\[R\]](#)
- Protecting your brain cells against damage [\[R\]](#)

Please note: *If you are taking medications, consult your doctor before using lemon balm* [\[R\]](#).

Memory Performance

IMPACT
 0 / 5

EVIDENCE
 0 / 5

Teeth Grinding

IMPACT
 0 / 5

EVIDENCE
 0 / 5

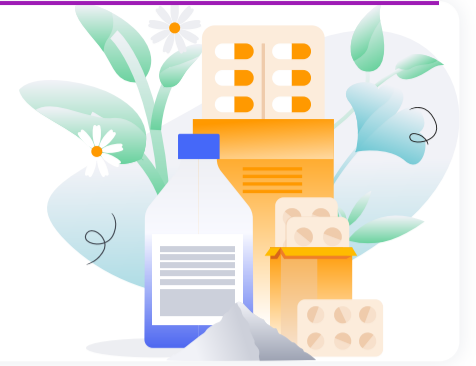
Short-Term Memory

IMPACT
 0 / 5

EVIDENCE
 0 / 5



Saffron



Helps with the following



Stress

IMPACT



EVIDENCE



Saffron extract (28 mg/day for 4 weeks) may improve stress [\[R\]](#).



Low Mood

IMPACT



EVIDENCE



Pills with saffron extract (30 mg per day for 6-8 weeks) may improve your mood [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Saffron may work by **increasing brain levels of [serotonin](#) and [dopamine](#)**. These chemicals help you feel happy, positive, and energetic [\[R\]](#), [\[R\]](#), [\[R\]](#).



Anxiety

IMPACT



EVIDENCE



Saffron extract (up to 30 mg/day for 4-12 weeks) may help improve anxiety. It may help by supporting healthy cortisol levels [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Interestingly, **smelling saffron for 20 minutes** may also relieve anxiety [\[R\]](#).

Note that the evidence is mixed. Saffron did not improve anxiety in some studies [\[R\]](#).



Cognitive Decline

IMPACT



EVIDENCE



Processing Speed

IMPACT



EVIDENCE



Attention

IMPACT



EVIDENCE



Recommendation References: [\[R\]](#)



Addictions

IMPACT



EVIDENCE

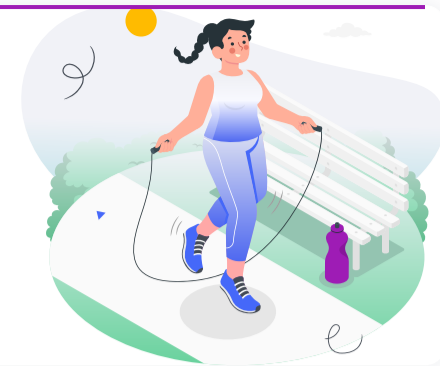


In people being treated for **opioid use disorder** (methadone maintenance treatment), crocin (30 mg/day for 12 weeks) may help reduce cravings and withdrawal symptoms. However, this is based on a single small study. Larger well-designed studies are needed to confirm any potential benefits [\[R\]](#).

Saffron may reduce withdrawal symptoms by interacting with the body's opioid system [\[R\]](#).



Progressive Muscle Relaxation



Helps with the following



Stress

IMPACT



EVIDENCE



Progressive muscle relaxation (1x-7x/week for 1-8 weeks) may reduce stress [\[R, R, R, R, R, R\]](#).

Combining progressive muscle relaxation with music therapy, guided imagery, or mindfulness may also help [\[R, R, R, R, R\]](#).

Progressive muscle relaxation may help by reducing [\[R, R, R, R\]](#):

- Blood pressure
- Levels of cortisol, the stress hormone



Low Mood

IMPACT



EVIDENCE



Recommendation References: [\[R, R, R, R, R, R, R, R, R, R, R, R, R, R, R\]](#)



Executive Function

IMPACT



EVIDENCE



Recommendation References: [\[R\]](#)



Anxiety

IMPACT



EVIDENCE



Recommendation References: [\[R, R\]](#)



Tobacco Addiction

IMPACT



EVIDENCE



Recommendation References: [\[R\]](#)



Attention

IMPACT



EVIDENCE



Recommendation References: [\[R\]](#)



Addictions

IMPACT



EVIDENCE



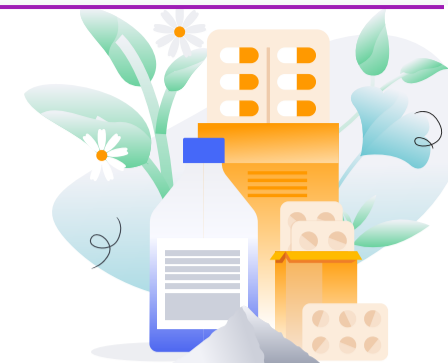
Please note: *There is no evidence from controlled clinical trials to support this recommendation. It is included based on uncontrolled clinical trials, animal or cell studies, or non-scientific criteria. Please take this recommendation with a grain of salt until more research is available.*

Recommendation References: [\[R\]](#)



Aromatherapy

Helps with the following



Stress

IMPACT



EVIDENCE



Aromatherapy (for 5-10 min) may help control stress by promoting relaxation [\[R, R\]](#).

Studied essential oils include those of [\[R, R, R, R, R, R, R, R, R, R, R, R, R, R, R\]](#):

- Lavender
- Rose
- Peppermint

Oil blends may also help e.g., clary sage, lavender, and bergamot.

However, note that most studies are low-quality and some show that aromatherapy doesn't reduce stress [\[R, R\]](#).

Please note: Some essential oils may cause skin irritation, allergic reactions, sun sensitivity, or breathing problems. Avoid using them near the eyes, nose, or other sensitive areas. Some oils are not safe for children, pregnant women, or pets. Consult your health provider before using essential oils [\[R\]](#).



Cognitive Decline

IMPACT



EVIDENCE



Recommendation References: [\[R\]](#)



Tobacco Addiction

IMPACT



EVIDENCE



Recommendation References: [\[R\]](#)



Memory Performance

IMPACT



EVIDENCE



Aromatherapy with plant essential oils may improve some aspects of memory. Essential oils that may help include:

- Peppermint oil [\[R\]](#)
- English lavender oil [\[R\]](#)
- Sage oil [\[R\]](#)
- Rosemary oil [\[R\]](#)



Anxiety

IMPACT



EVIDENCE



Lavender aromatherapy may reduce stress and anxiety. However, most studies are of low quality. You can try using it in a diffuser or applying it on the skin [\[R, R, R, R, R, R\]](#).

Lavender may help by reducing stress hormone levels and boosting [GABA](#), which helps calm the mind [\[R, R\]](#).



Addictions

IMPACT

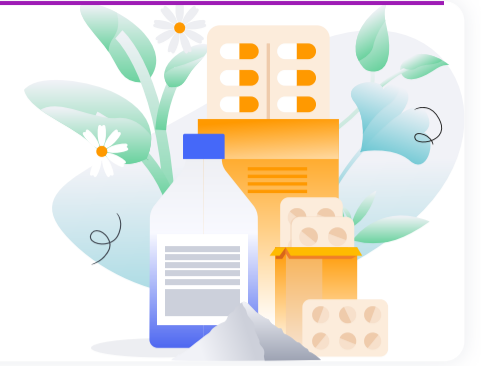


EVIDENCE





Vitamin D



Helps with the following



Psychological Trauma

IMPACT



EVIDENCE



Mood Swings

IMPACT



EVIDENCE



Low vitamin D levels may be linked to depressive and manic symptoms of bipolar disorder. Vitamin D supplements may help reduce these symptoms by boosting serotonin [\[R\]](#), [\[R\]](#).

However, low vitamin D may just be a consequence of bipolar disorder. People with this condition may have trouble getting enough vitamin D due to poor diet or lack of outdoor activity [\[R\]](#).

Please note: Experts recommend getting 600-800 IU of vitamin D per day. Medical bodies recommend against taking more than 4,000 IU per day [\[R\]](#).



PERSONALIZED TO YOUR GENES

People with your GC gene variant may have lower vitamin D levels [\[R\]](#). Make sure to get enough vitamin D to potentially improve mood.

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs2282679	/	



Low Mood

IMPACT



EVIDENCE



Vitamin D (400-5,000 IU/day for 6-8 weeks) may improve symptoms of depression. However, more research is necessary to confirm this benefit [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Vitamin D may help by increasing the levels of [\[R\]](#), [\[R\]](#):

- [Dopamine](#)
- [Norepinephrine](#) (noradrenaline)
- [Epinephrine](#) (adrenaline)

Please note: Experts recommend getting 600-800 IU of vitamin D per day. Medical bodies recommend against taking more than 4,000 IU per day [\[R\]](#).



Processing Speed



Low vitamin D levels may be linked to impaired cognitive function, especially processing speed [\[R\]](#).

Supplementation with vitamin D (800-4000 IU/day for 1-2 years) may **improve reaction time** in older people [\[R, R\]](#).

Please note: *Experts recommend getting 600-800 IU of vitamin D per day. Medical bodies recommend against taking more than 4,000 IU per day [\[R\]](#).*



Cognitive Decline



Vitamin D helps support brain function. Low vitamin D levels may be linked to a 25-140% higher risk of mild cognitive impairment [\[R, R, R\]](#).

However, it's not sure if vitamin D supplementation helps reduce cognitive decline.

Please note: *Experts recommend getting 600-800 IU of vitamin D per day. Medical bodies recommend against taking more than 4,000 IU per day [\[R\]](#).*



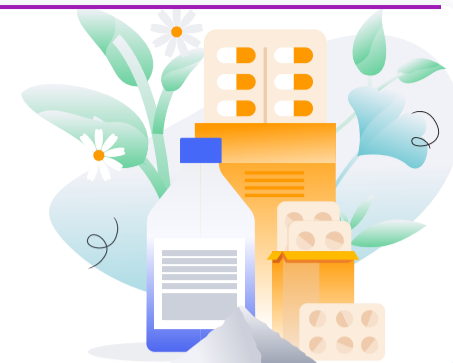
Attention





Melatonin

Helps with the following



Stress

IMPACT



EVIDENCE



Melatonin supplements (3-10 mg/day at 1:00 PM) may help manage stress. They may do so by calming down your "fight-or-flight" response [\[R, R\]](#).

Taking melatonin before a surgery may help you relax. This may reduce the need for other medications during and after a stressful procedure [\[R, R\]](#).

Note: Melatonin may interact with multiple medications, including blood thinners, anticonvulsants, blood pressure drugs, diabetes medication, and immunosuppressants. Consult your doctor before taking melatonin.



Anxiety

IMPACT



EVIDENCE



Melatonin (5-10 mg, 1 hour before bedtime for 2-3 months) may help with anxiety [\[R, R, R, R\]](#).

Melatonin may help by calming down your "fight-or-flight" response [\[R\]](#).

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



Tobacco Addiction

IMPACT



EVIDENCE



A single dose of melatonin (0.3 mg) may help reduce mood symptoms of **cigarette** withdrawal. These include restlessness and irritability. It may also reduce cigarette cravings [\[R\]](#).

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



Low Mood

IMPACT



EVIDENCE



Mood Swings

IMPACT



EVIDENCE



Addictions

IMPACT



EVIDENCE



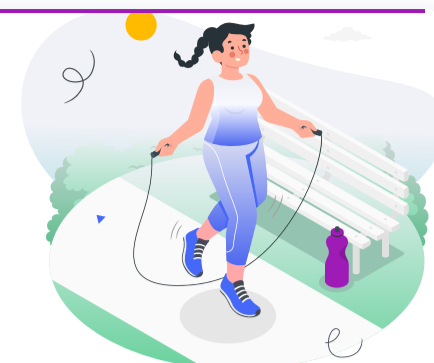
A single dose of melatonin (0.3 mg) may help reduce mood symptoms of **cigarette** withdrawal. These include restlessness and irritability. It may also reduce cigarette cravings [\[R\]](#).

In a single study, melatonin (10 mg before bedtime for 12 weeks) improved mental health during treatment for **opioid use disorder** (methadone maintenance treatment). It also reduced oxidative stress and inflammation. However, a smaller dose (5 mg/day) may not be effective [\[R, R, R\]](#).

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



N-Back Training



Helps with the following



Psychological Trauma

IMPACT
● ● ● ● ● 1 / 5

EVIDENCE
● ● ● ● ● 1 / 5

Recommendation References: [\[R\]](#)



Executive Function

IMPACT
● ● ● ● ● 3 / 5

EVIDENCE
● ● ● ● ● 3 / 5

Recommendation References: [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)



Memory Performance

IMPACT
● ● ● ● ● 3 / 5

EVIDENCE
● ● ● ● ● 3 / 5

Recommendation References: [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)



Short-Term Memory

IMPACT
● ● ● ● ● 3 / 5

EVIDENCE
● ● ● ● ● 3 / 5

Recommendation References: [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)



Anxiety

IMPACT
● ● ● ● ● 2 / 5

EVIDENCE
● ● ● ● ● 2 / 5

Recommendation References: [\[R\]](#), [\[R\]](#)



Attention

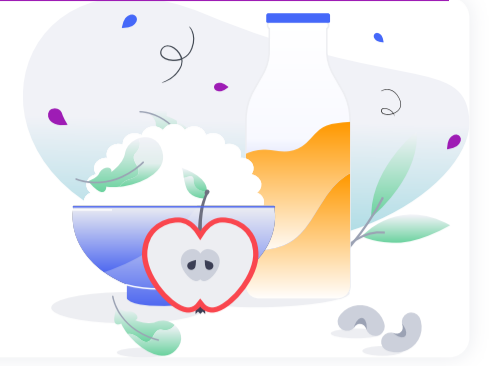
IMPACT
● ● ● ● ● 1 / 5

EVIDENCE
● ● ● ● ● 1 / 5

Recommendation References: [\[R\]](#), [\[R\]](#), [\[R\]](#)



Limit Alcohol Intake



Helps with the following



Seasonal Low Mood

IMPACT



EVIDENCE



SAD and alcohol use disorder may be closely linked [\[R\]](#).

People with both disorders may be particularly prone to sleep problems [\[R\]](#).



Teeth Grinding

IMPACT



EVIDENCE



Excessive alcohol intake, including binge drinking, may increase the risk of teeth grinding [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Avoiding alcohol, especially in the evening, may help [\[R\]](#), [\[R\]](#).



PERSONALIZED TO YOUR GENES

People with your KLB gene variant tend to drink more alcohol [\[R\]](#). Try limiting your alcohol intake.

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs11940694	/	



Executive Function

IMPACT 3 / 5

EVIDENCE 3 / 5

Drinking alcohol may reduce working memory [\[R\]](#).

Chronic alcohol misuse may also impair [\[R\]](#):

- Planning
- Problem solving
- Impulse control

People with alcohol use disorder may recover their executive function after ceasing alcohol for at least 1 year [\[R\]](#), [\[R\]](#).



PERSONALIZED TO YOUR GENES

Alcohol misuse may have a stronger impact on executive function in people with your GRM3 gene variant [\[R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs1468412	/	



Cognitive Decline

IMPACT 2 / 5

EVIDENCE 2 / 5

Experts advise against drinking large amounts of alcohol to prevent cognitive decline [\[R\]](#).

Having more than 2 drinks per day may raise the risk of cognitive decline and its progression to dementia [\[R\]](#).

Large amounts of alcohol may damage the brain [\[R\]](#).



Processing Speed

IMPACT 2 / 5

EVIDENCE 3 / 5

Alcohol may impair reaction time. The more alcohol is consumed, the stronger the negative effects tend to be [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).



PERSONALIZED TO YOUR GENES

Alcohol may have a stronger impact on processing speed in people with your GABRA4 gene variant [\[R\]](#).

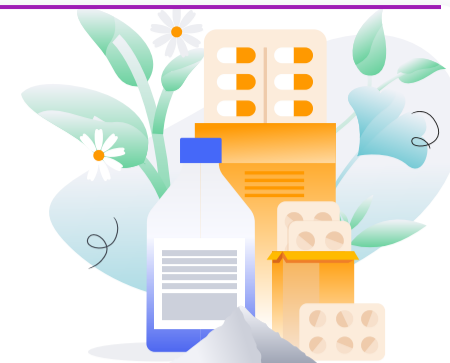
YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs2229940	/	

47



Spirulina



Helps with the following



Stress

IMPACT
●●●●● 0 / 5

EVIDENCE
●●●●● 0 / 5



Cognitive Decline

IMPACT
●●●●● 0 / 5

EVIDENCE
●●●●● 0 / 5



Brain Fog

IMPACT
●●●●● 0 / 5

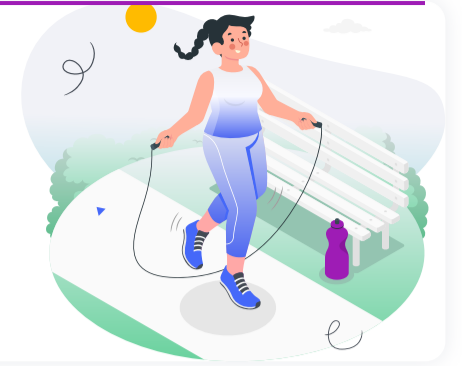
EVIDENCE
●●●●● 0 / 5



Executive Function

IMPACT
●●●●● 0 / 5

EVIDENCE
●●●●● 0 / 5



Singing

Helps with the following



Stress



Recommendation references: [\[R\]](#)



Cognitive Decline



Recommendation references: [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)



Low Mood



Recommendation references: [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)



Anxiety



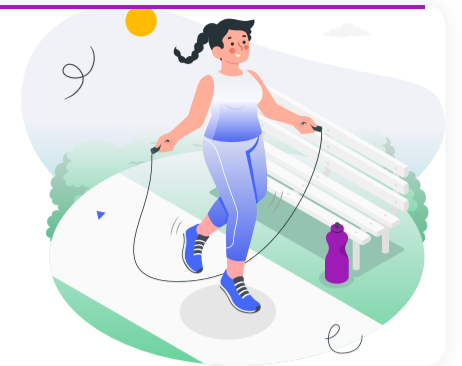
Recommendation references: [\[R\]](#)



Memory Performance



Recommendation references: [\[R\]](#)



Massage

Helps with the following



Stress

IMPACT



EVIDENCE



Weekly massages may reduce stress. People who get massages tend to have lower stress hormones, blood pressure, and heart rates. They may also sleep better [\[R, R, R, R\]](#).

Stress due to major health issues can be hard to manage. Massage may help reduce this kind of stress [\[R, R, R, R\]](#).

Aromatherapy may enhance the relaxing effects of massage. A therapist uses scented massage oils such as lavender essential oil [\[R, R, R\]](#).

Reflexology is another type of massage that may help with stress. During reflexology, a practitioner applies pressure to specific points on the feet and hands [\[R, R\]](#).



PERSONALIZED TO YOUR GENES

People with your OXTR gene variant are more likely to feel stressed. This gene affects the levels of [oxytocin](#), a social bonding hormone. Massage may help by boosting oxytocin [\[R, R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
OXTR	rs53576	/	



Low Mood

IMPACT



EVIDENCE



Massage therapy may improve depression symptoms. However, more research is needed to confirm this benefit [\[R\]](#).

Massage may help with depression by [\[R\]](#):

- Increasing [dopamine](#) and [serotonin](#) (important for mood)
- Lowering cortisol and [norepinephrine](#) (involved in stress)



Anxiety

IMPACT



EVIDENCE



Massage (20-30 min sessions twice a week) may improve anxiety and relax your body and mind through pleasant physical touch [\[R, R, R, R, R, R, R\]](#).

Massage may help by lowering the levels of [norepinephrine](#) and [ACTH](#), which are stress-promoting hormones [\[R\]](#).



Brain Fog

IMPACT



EVIDENCE





Addictions

IMPACT

●●●●● 0/5

EVIDENCE

●●●●● 0/5



Alcohol Addiction

IMPACT

●●●●● 0/5

EVIDENCE

●●●●● 0/5



Attention

IMPACT

●●●●● 0/5

EVIDENCE

●●●●● 0/5

50



CBD



Helps with the following



Stress

IMPACT



EVIDENCE



Supplementing with CBD (300 mg) may improve stress from public speaking, medical procedures, and more [R, R, R, R].

CBD may help by:

- Raising your body's [cannabinoids](#), which play a role in reducing stress [R, R]
- Calming brain regions involved in stress [R, R]

Please note: CBD can interact with medications, and it may not be safe for pregnant women. Never use CBD without consulting your doctor. Also, make sure to verify the legality of CBD products in your country or state [R, R, R, R].



PERSONALIZED TO YOUR GENES

Your FAAH gene variant is linked to higher FAAH enzyme activity. This enzyme plays a role in stress by reducing cannabinoid levels. CBD may help by blocking FAAH [R, R, R, R, R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs324420	/	

Anxiety

IMPACT  3 / 5

EVIDENCE  3 / 5

CBD (300-800 mg) may improve anxiety caused by:

- Social anxiety disorder [\[R, R\]](#)
- Public speaking [\[R, R, R, R\]](#)
- Drug abuse [\[R, R\]](#)

CBD may boost [serotonin](#), an essential brain chemical. It also raises your body's **cannabinoids**, which support mental health [\[R, R, R, R, R\]](#).

Please note: CBD can interact with medications, and it may not be safe for pregnant women. Never use CBD without consulting your doctor. Also, make sure to verify the legality of CBD products in your country or state [\[R, R, R, R\]](#).

 PERSONALIZED TO YOUR GENES

Your FAAH gene variant is linked to anxiety. It may increase FAAH, an enzyme that reduces cannabinoid levels. CBD may help by inhibiting FAAH [\[R, R, R, R, R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs324420	/	

Memory Performance

IMPACT  1 / 5

EVIDENCE  1 / 5

Please note: CBD can interact with medications and raise the levels of liver enzymes. It may not be safe for pregnant women. Never use CBD without consulting your doctor. Also, make sure to verify the legality of CBD in your country or state [\[R, R, R, R, R\]](#).

Tobacco Addiction

IMPACT  1 / 5

EVIDENCE  1 / 5

CBD may help reduce cigarette use by 40% based on a single study [\[R\]](#).

CBD may act on parts of the brain that control reward and motivation. In this way, it may help reduce drug-seeking behavior [\[R, R\]](#).

Please note: CBD can interact with medications, and it may not be safe for pregnant women. Never use CBD without consulting your doctor. Also, make sure to verify the legality of CBD in your country or state [\[R, R, R, R\]](#).

Addictions

IMPACT
 2 / 5

EVIDENCE
 2 / 5

Drugs for replacement therapy combining CBD and THC may help those with **cannabis use disorder**. Together with psychotherapy, the combination may [\[R, R, R, R, R\]](#):

- Support abstinence
- Reduce withdrawal symptoms

CBD alone (400-800 mg/day for 4 weeks) may work in a similar way [\[R\]](#).

Similar doses may also reduce cravings and withdrawal symptoms in people with **heroin use disorder** [\[R\]](#).

CBD may also help with alcohol and cigarette use [\[R, R\]](#).

CBD may act on parts of the brain that control reward and motivation. In this way, it may help reduce drug-seeking behavior [\[R, R\]](#).

CBD may not help with drug use for people using stimulants, such as cocaine. However, it may reduce inflammation in these people [\[R, R, R\]](#).

Please note: *CBD can interact with medications, and it may not be safe for pregnant women. Never use CBD without consulting your doctor. Also, make sure to verify the legality of CBD in your country or state* [\[R, R, R, R\]](#).

Alcohol Addiction

IMPACT
 1 / 5

EVIDENCE
 1 / 5

CBD may help reduce the number of drinks per day, number of drinking days, and alcohol and cannabis co-use based on a single study [\[R, R\]](#).

CBD may act on parts of the brain that control reward and motivation. In this way, it may help reduce drug-seeking behavior [\[R, R\]](#).

Please note: *CBD can interact with medications, and it may not be safe for pregnant women. Never use CBD without consulting your doctor. Also, make sure to verify the legality of CBD in your country or state* [\[R, R, R, R\]](#).

Cannabis Addiction

IMPACT
 2 / 5

EVIDENCE
 2 / 5

Combined with psychotherapy, CBD may help those with **cannabis use disorder**. This combination may [\[R, R, R, R, R\]](#):

- Support abstinence
- Reduce withdrawal symptoms

CBD alone (400-800 mg/day for 4 weeks) may work in a similar way [\[R\]](#).

CBD may act on parts of the brain that control reward and motivation. In this way, it may help reduce drug-seeking behavior [\[R, R\]](#).

Please note: *CBD can interact with medications, and it may not be safe for pregnant women. Never use CBD without consulting your doctor. Also, make sure to verify the legality of CBD in your country or state* [\[R, R, R, R\]](#).