

Brain Fog

DNA Health Report

REPORT CATEGORY —



COGNITION

Sample Client

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Table of Contents

03

Introduction

04

Your genetics

06

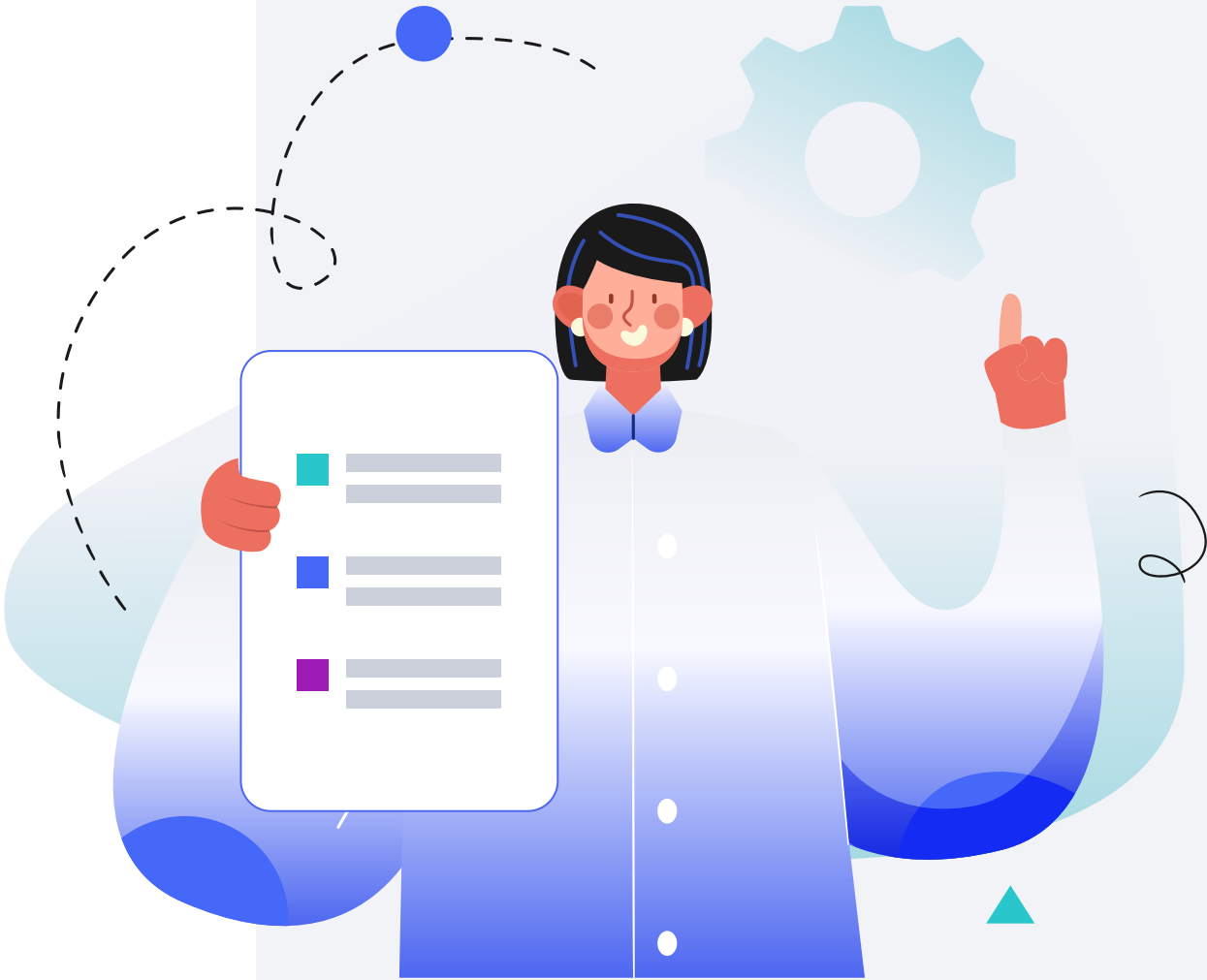
Your recommendations

Personal information

NAME	
Sample Client	
SEX AT BIRTH	
Male	
HEIGHT	
5ft 9"	175.0cm
WEIGHT	
165lb	75.0kg

DISCLAIMER

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



Introduction

We all get a bit of a fuzzy brain from time to time. Maybe after a big night out or when you’re trying to get back into the groove of working after a nice vacation. **But what happens when that fuzz just won’t go away?** This is called **brain fog**.

Brain fog is like having a hangover every day. It can make your brain feel tangled, causing you to be forgetful and impacting your ability to have conversations. It can even be embarrassing at times [R].

These effects can be distressing, particularly if you’re used to your brain functioning at a higher level.

Another frustrating aspect is that **not all brain fog is equal**.

Some people may experience mild brain fog, causing them to occasionally forget an item from their grocery list. For others it can be more severe, finding themselves muddling words mid-conversation because their brain can’t keep up with their mouth.

All in all, brain fog can be very challenging to live with. In addition, we don’t know exactly what causes it. It’s often linked to chronic health conditions like chronic fatigue syndrome. It can also be brought on by something as nondescript as a poor night's sleep or stress [R].

Your genetics may indicate how likely certain factors are to impair your brain function. Those who carry specific variants of the COMT and ADA genes may have more trouble paying attention after a poor night's sleep [R, R, R].

Your genes may also indicate the most beneficial ways of clearing your brain fog. For example, you may find cognitive training more helpful if you carry one variant of the COMT gene [R].

In this report, you will learn about the genetics of brain fog, and what you can do to target your genes in order to potentially gain some mental clarity.

Read on to find out more about:

- **How your genetics play a role in brain fog**
- **Your genetic risk score based on over 5,000 genetic variants**
- **Personalized recommendations based on your genetics**

About 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 [\[R\]](#), [\[R\]](#).



More likely to have brain fog based on 5,554 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
CNR1	rs1049353	TT
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

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

GENE	SNP	GENOTYPE
ATXN3	rs10137541	GG
GBE1	rs57463270	TT
PTPRN2	rs75917522	TT
CHGA	rs147711399	GG
/	rs376394962	TT
MEIS1	rs116270157	TT
KLF5	rs112829029	CC
/	rs181434062	AA
UBASH3B	rs192926887	TT
BCL9	rs190129535	CC
N4BP2L2	rs75423524	TT
ADAM2	rs141786817	GG
ASAH2B	rs183843763	CC
FOXA2	rs191545966	CC
POT1	rs140241460	AA
ASAH2B	rs112784518	GG
POMZP3	rs186085204	GG
SNTG2	rs75614170	TT
FOXA2	rs187277830	CC
PAX1	rs190927285	GG
TCF12	rs147774332	TT

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

Your Recommendations

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

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

DOSAGE		DOSAGE	
1	Sleep for 7+ Hours	2	Drink at Least 8 Glasses of Water a Day
3	Coffee	4	Avoid Malnourishment
5	Elimination Diet	6	Yoga30 minutes
7	Meditation30 minutes	8	Dietary Iron
9	Cognitive Training15 minutes	10	L-Theanine100 mg
11	Optimize Indoor Air Quality	12	Dark Chocolate
13	Ashwagandha120 mg	14	Rhodiola500 mg
15	Binaural Beats30 minutes		

1



Sleep for 7+ Hours

IMPACT

5 / 5

EVIDENCE

4 / 5

How to implement

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

Description

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

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

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

Ways to sleep better include [R]:

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

How it helps

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

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

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
COMT	rs4680	AG	
GENE	SNP	GENOTYPE	EVIDENCE
ADA	rs73598374	TC	

2



Drink at Least 8 Glasses of Water a Day

IMPACT

5 / 5

EVIDENCE

3 / 5

How to implement

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

Description

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

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

Water helps maintain [R]:

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

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

How it helps

Dehydration may impair communication between brain cells, leading to brain fog [R, R, R, R, R, R, R].

In line with this, **rehydration may improve memory, attention, and other cognitive functions** [R, R].



PERSONALIZED TO YOUR GENES

People with your **AHR** gene variant tend to drink less water [R, R]. Make sure to stay hydrated to avoid brain fog.

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
AHR	rs4410790	TC	

3



Coffee

IMPACT

4 / 5

EVIDENCE

4 / 5

How to implement

Drink 1 to 3 cups of black coffee daily, preferably in the morning to minimize potential sleep disturbances. Avoid adding sugar or cream to keep it healthy. Continue this habit daily for long-term benefits.

Description

Coffee is a drink extracted from the roasted seeds (beans) of the coffee plant. Coffee consumption, in moderation, has been associated with potential health benefits, including improved alertness, cognitive function, and reduced risk of certain chronic diseases like Parkinson's and type 2 diabetes.

People drink coffee for an energy and mood boost. [Caffeine](#) is the main ingredient responsible for these effects [\[R\]](#), [\[R\]](#).

Drinking moderate amounts of coffee may also [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Improve heart health
- Improve mood
- Help reduce blood sugar

How it helps

Some of the compounds in coffee may improve cognitive function. The effects are strongest for attention, alertness, and decision-making [\[R\]](#), [\[R\]](#), [\[R\]](#).

For example, **caffeine (100-250 mg)** may improve alertness and attention during tasks that demand mental focus. The effects may be stronger in people who don't often consume caffeine [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Similarly, caffeine may increase alertness in shift workers who are sleep-deprived [\[R\]](#), [\[R\]](#).

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

- Promoting wakefulness
- Increasing activity in certain parts of the brain

Robusta coffee is high in caffeine. Decaffeinated and arabica coffee are lower in caffeine and higher in chlorogenic acid. They may all improve brain fog, but robusta tends to have stronger effects [\[R\]](#), [\[R\]](#).

Importantly, the effects of coffee may be limited to the short term [\[R\]](#).

Please note: *Too much caffeine may lead to sleep problems, high blood pressure and cholesterol, fast heart rate, and dependence. If you're pregnant, try to limit caffeine to 200 mg per day* [\[R\]](#).

Please note: *polyphenols and tannins from coffee may bind to iron and form insoluble complexes, which reduces iron absorption in the gut. If you have anemia, consult your healthcare provider before using coffee or coffee supplements.*



PERSONALIZED TO YOUR GENES

Caffeine may improve brain fog by boosting attention more in people with your [CYP1A2](#) gene variant [R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
CYP1A2	rs762551	AA	



Avoid Malnourishment



How to implement

Incorporate a balanced diet consisting of all essential nutrients including proteins, carbohydrates, fats, vitamins, and minerals. Eating at least three meals a day with healthy snacks in between and ensuring variety in food selections can help avoid malnourishment. Regularly monitor your weight and nutritional status to make adjustments as necessary.

Description

Avoiding malnourishment by consuming a balanced and varied diet can help prevent nutritional deficiencies and promote overall health and vitality. Meeting daily nutrient requirements supports proper growth, development, and immune function.

How it helps

Two studies of 46 healthy people found that severe calorie restriction (for 2 days) may result in not only weight loss, but also mental and physical fatigue. Importantly, a very reduced food intake may increase the risk of nutrient deficiencies [R, R, R].

A poor diet may be associated with brain fog. In line with this, brain fog may be one the possible adverse effects of an insufficiently mindful vegetarian diet. Moreover, food supplementation in malnourished children may improve executive function, brain health, and nutritional status [R, R, R].

5



Elimination Diet

IMPACT

4 / 5

EVIDENCE

3 / 5

How to implement

Begin by removing foods you suspect might be causing adverse reactions for 2-3 weeks. These often include dairy, gluten, soy, nuts, eggs, corn, and processed sugars. After this period, reintroduce each food group one at a time every 3 days, while noting any symptoms that may reappear. This process helps identify food intolerances or sensitivities.

Description

An elimination diet involves removing specific foods or food groups from the diet to identify and address potential food sensitivities or allergies. It can help alleviate symptoms such as digestive issues, skin problems, and allergic reactions by pinpointing trigger foods.

An elimination diet omits foods that can cause your body to have a reaction. Foods are removed for a period of time and then added back in. This helps figure out what foods are causing symptoms or making them worse [\[R\]](#).

Salicylates are compounds naturally found in many foods and drinks. These include wine, tea, beans, and tomatoes [\[R\]](#), [\[R\]](#).

One form (*salicylic acid*) is found in aspirin. People who are sensitive to salicylates may have a reaction to aspirin and other NSAIDs [\[R\]](#), [\[R\]](#).

How it helps

Mental and physical fatigue are common symptoms of food sensitivity. Intolerance to food components such as lactose and FODMAP often coexists with fatigue, as seen in 3 studies of 141 people with digestive issues (most of them with IBS) and food intolerances [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Gut inflammation may be linked to cognitive problems and behavioral changes. Interestingly, people with chronic fatigue syndrome often have IBS as well. For instance, a study of 94 people found that 92% of patients with chronic fatigue syndrome also developed IBS during their lifetime [\[R\]](#), [\[R\]](#), [\[R\]](#).

Some foods may increase gut inflammation and worsen IBS symptoms, although more research is needed to confirm their potential effects on cognitive function. These include those rich in [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Lectins (such as beans, peanuts, lentils, tomatoes, and eggplants)
- Casein (dairy products)
- FODMAPs (such as many fruits, vegetables, cereals, and dairies)
- Salicylates (such as apricots, oranges, pineapples, dates, and raspberries)
- Amines (such as chocolate, cheese, wine, beer, and fish)
- Tannins (such as bananas, chocolate, tea, nuts, and whole spices)
- Trypsin inhibitors (such as legumes, cereals, potatoes, and eggs)
- Oxalates (such as leafy vegetables, dark chocolate, legumes, and nuts)
- Yeast (such as gluten-free bread)
- Food additives like carrageenan and carboxymethylcellulose (such as ice cream, almond milk, candy bars, and some cheeses)
- Caffeine (such as coffee, tea, and cocoa)

To find out if any of these food groups might be worsening your “brain fog” symptoms, you can try to follow an elementary diet for 2 weeks and then add one at a time back in. Because elementary diets can lead to deficiencies, follow your doctor’s instructions carefully.

In line with this, an analysis of 12 studies found that elimination diets or interventions eliminating artificial food colorings could improve inattention symptoms in children and adolescents with ADHD [\[R\]](#).

6



Yoga

IMPACT

3 / 5

EVIDENCE

4 / 5

How to implement

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

TYPICAL STARTING DOSE

30 minutes

Description

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

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

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

How it helps

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

7

Meditation

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

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

TYPICAL STARTING DOSE

30 minutes

Description

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

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

- Mindfulness
- Focused
- Transcendental
- Mantra
- Moving

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

- Stress and anxiety
- Mood
- Sleep disturbances
- Pain

How it helps

Different meditation modalities may moderately improve sustained attention, selective attention, executive attention, and attentional control and increase the gray matter volume of brain areas involved in attention. Among them, mindfulness meditation may increase sustained attention and reduce mind wandering [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

In 3 studies of 119 older people, meditation improved cognitive function (including sustained attention) while preventing cognitive decline and the thinning of the cortex [\[R\]](#), [\[R\]](#), [\[R\]](#).

8



Dietary Iron

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Incorporate iron-rich foods into your daily meals, such as red meat, chicken, turkey, fish, beans, lentils, tofu, cooked spinach, and fortified cereals. Aim for at least 18 mg of iron per day for adult women and 8 mg per day for adult men. It's also beneficial to pair these foods with vitamin C-rich foods like oranges, strawberries, or bell peppers to enhance iron absorption.

Description

Iron (Fe) is an essential mineral. It helps make [hemoglobin](#), a protein that carries oxygen to cells. In this way, iron **increases energy** and supports **brain and immune system function** [\[R, R, R\]](#).

Foods rich in iron include [\[R\]](#):

- Oysters
- White beans
- Beef
- Chocolate
- Spinach
- Fortified cereals

Women should be getting **8-18 mg** of iron per day, while **men** should be getting **8 mg** [\[R\]](#).

Groups at risk of iron deficiency include [\[R\]](#):

- Menstruating women
- Children
- Vegetarians
- Routine blood donors

How it helps

Iron deficiency is detrimental to cognitive function. Women are at a higher risk of having low iron levels. In fact, **brain fog is a common symptom** in women lacking iron [\[R, R, R\]](#).

Taking **iron supplements** or eating **iron-enriched foods** may improve attention and processing speed in those who lack iron [\[R, R, R, R, R\]](#).

Please note: *A high dose of iron can be toxic. If you are not deficient, it is best to get iron from food. Talk to your doctor before taking iron supplements* [\[R\]](#).

Please note: *Increased iron intake from meat is linked to higher odds of diabetes and heart disease. Try to find a balance between plant and animal iron sources* [\[R, R, R, R\]](#).

9

Cognitive Training

IMPACT

2 / 5

EVIDENCE

4 / 5

How to implement

Engage in exercises that challenge your brain for at least 15 minutes per day, five days a week. This can include puzzles, memory games, learning a new language, or playing a musical instrument.

TYPICAL STARTING DOSE
15 minutes

Description

Cognitive training involves structured exercises and activities designed to improve specific cognitive functions, such as memory, attention, and problem-solving skills. It can be beneficial for individuals looking to enhance cognitive abilities or address cognitive challenges associated with conditions like Alzheimer's disease or attention deficit hyperactivity disorder (ADHD).

Cognitive training programs guide you through challenging tasks. They aim to support some cognitive functions, including [\[R\]](#):

- Memory
- Attention
- Problem-solving skills

Some scientists like to think of the brain as a muscle. They say people should “use it or lose it.” In line with this, cognitive training can be considered “brain exercise.” It is often provided through computer programs [\[R, R\]](#).

How it helps

Cognitive training programs may improve attention and processing speed in older people [\[R, R, R, R, R\]](#).

They may help with brain fog by increasing [\[R, R\]](#):

- Connections between brain cells
- Blood flow in the brain

However, there is disagreement about the effectiveness of cognitive training. Experts are also not sure if it provides real-life improvements [\[R, R, R\]](#).

PERSONALIZED TO YOUR GENES

Cognitive training may boost cognitive performance more in people with your [COMT](#) gene variant [\[R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
COMT	rs4680	AG	

10



L-Theanine

IMPACT2 / 5

EVIDENCE3 / 5

How to implement

Take 100-400 mg of L-theanine supplement daily. It can be consumed at any time of the day, with or without food.

TYPICAL STARTING DOSE

100 mg

Description

L-theanine is an amino acid found in tea leaves, known for its calming and relaxation-promoting effects. It is often used to reduce stress and anxiety and may contribute to improved focus and cognitive performance.

[L-theanine](#) is an amino acid found in black and [green tea](#) [\[R\]](#).

People take L-theanine as a supplement to [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Improve cognition
- Boost immunity
- Relieve anxiety and stress

How it helps

A single dose of **L-theanine (50-250 mg)** may improve brain fog by increasing alertness and attention [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

A combination of L-theanine with [caffeine \(40-160 mg\)](#) may also help [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

11



Optimize Indoor Air Quality

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

To optimize indoor air quality, regularly clean or replace air filters in your HVAC system at least every three months, use an air purifier in rooms where you spend the most time, ensure proper ventilation by opening windows when weather permits, and reduce the use of air fresheners and candles that can add pollutants to the air. Aim to maintain these practices year-round to consistently improve indoor air quality.

Description

Optimizing indoor air quality involves implementing measures to reduce pollutants and allergens in indoor environments. It can promote respiratory health, reduce allergy symptoms, and create a more comfortable living space.

Cars, factories, and other sources increase outdoor air [pollution](#) [\[R\]](#).

But air pollution can also happen indoors. Indoor air pollutants include vapors from cooking and cleaning, mold, and smoke [\[R\]](#), [\[R\]](#).

Sick building syndrome is a collection of symptoms that seem to be caused by exposure to these air pollutants. People with this syndrome tend to have [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Breathing problems
- Headaches
- Drowsiness
- Brain fog

How it helps

Brain fog is one symptom of *sick building syndrome*. It may be worse in people who [\[R\]](#):

- Work indoors for over 5 days a week
- Are exposed to dry indoor air and low air flow

Exposure to germs from indoor moisture, such as mold, may also lead to brain fog. However, some studies didn’t find a significant link between mold exposure and brain fog [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Air pollution may lead to brain fog by increasing inflammation [\[R\]](#), [\[R\]](#).

Some ways to reduce your exposure to indoor air pollutants include [\[R\]](#):

- Regularly cleaning heating, ventilation, and air conditioning (HVAC) systems
- Storing chemicals in closed canisters and well-ventilated areas
- Adding more indoor plants
- Not smoking indoors
- Using air filters

12



Dark Chocolate

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

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

Description

Dark chocolate, when consumed in moderation and with a high cocoa content, offers potential health benefits due to its antioxidants and flavonoids. It may support heart health, improve mood, and provide a source of natural energy.

[Cocoa](#) comes from the beans of the *Theobroma cacao* tree. It’s often used for making chocolate, hot chocolate, and pastries. People have also used it as a medicine for over a thousand years [\[R\]](#), [\[R\]](#).

Cocoa contains flavanols and other active components that may help [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Control weight
- Lower fatigue
- Boost mood
- Improve digestion
- Balance blood sugar
- Support heart health

Dark chocolate contains more cocoa (50-90%) and less added sugars and fat than white or milk chocolate.

How it helps

In a study of 30 healthy people, consuming flavonol-rich cocoa (supplying 520-994 mg flavanols) before sustained mental effort reduced mental fatigue and improved cognitive performance [\[R\]](#).

In 4 studies of 126 healthy adults, acute consumption of cocoa (providing 374-994 flavonols) improved complex, sustained, spatial, and selective attention but not other aspects of attention (such as temporal attention). However, dark chocolate only improved mood and heart health but had no effect on cognition in 2 studies of 173 middle-aged and older people [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

In another study of 16 healthy volunteers, consuming 150 mg cocoa flavonols for 5 days improved blood flow in a brain region associated with attention switch [\[R\]](#).

13



Ashwagandha

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 250-600 mg of ashwagandha supplement daily. It can be consumed with water or a meal, depending on your preference or as advised by a healthcare provider.

TYPICAL STARTING DOSE
120 mg

Description

[Ashwagandha](#) (*Withania somnifera*) is an herb used in traditional Indian medicine. This herb is known as an *adaptogen* because it helps people adapt to stress.

This herb is known as an *adaptogen* because it helps people adapt to stress [\[R\]](#), [\[R\]](#).

How it helps

Ashwagandha supplementation (300 mg, 2x/day for 8 weeks) may enhance cognitive performance and mental clarity, which are often impaired in people experiencing brain fog. This includes improvements in memory, attention, and information processing speed, which are critical for alleviating symptoms of brain fog [\[R\]](#).

Ashwagandha (240 mg/day for 8 weeks) has been reported to reduce stress and anxiety levels, factors that can exacerbate brain fog. By modulating the body's stress response, Ashwagandha may help improve overall mental clarity and cognitive function [\[R\]](#).

14



Rhodiola

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 500 mg of rhodiola supplement daily, preferably in the morning to avoid potential interference with sleep.

TYPICAL STARTING DOSE

500 mg

Description

Rhodiola is a plant native to the arctic regions of Europe and Asia, where it's traditionally used to enhance stamina, combat stress and fatigue, and improve mental performance and resilience in harsh environments. Its main compounds include rosavins and salidroside.

[Rhodiola](#) (*Rhodiola rosea*) is a plant that grows in the mountains of eastern Europe and Asia [\[R\]](#).

Rhodiola is an *adaptogen*, meaning that it may help you adapt to stress. According to early research, this herb may help with [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Fatigue
- Burnout
- Low mood

How it helps

Rhodiola extract (100-576 mg/day for up to 28 days) may reduce brain fog caused by stress or burnout [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

However, rhodiola worsened brain fog in one study [\[R\]](#).

15



Binaural Beats

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Listen to binaural beats through headphones for 30 minutes to 2 hours daily. Choose frequencies that match your goal, such as relaxation or focus, and ensure a quiet, comfortable environment for the best experience.

TYPICAL STARTING DOSE

30 minutes

Description

Binaural beats are audio recordings that use specific sound frequencies to create a perception of a beating or pulsing sound in the brain. Some people use binaural beats for relaxation, meditation, and potential cognitive benefits.

Binaural beats are an auditory illusion perceived by the brain when two slightly different frequencies of sound are played into each ear (*bi* – two, *aural*-ear). When wearing earphones that are playing slightly different notes in each ear, our brain perceives the volume to pulse (oscillate) at a fixed rate. This is called a ‘beat.’

People use binaural beats to improve cognition, mood, and anxiety [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

How it helps

In a [non-placebo-controlled trial of 25 healthy adults](#), the combination of mechanical massage and binaural beats for 20 min **reduced mental fatigue better than rest and the mechanical massage alone** [\[R\]](#).

Binaural beats work by creating a certain frequency that the brain synchronizes with, which can promote mental clarity and focus. These sound waves might help reduce symptoms of brain fog by enhancing cognitive performance and promoting ease of thought.