

Cognitive Decline

DNA Health Report

REPORT CATEGORY —



COGNITION

Sample Client

Report date: 03 September 2025

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Table of Contents

03

Introduction

04

Your genetics

06

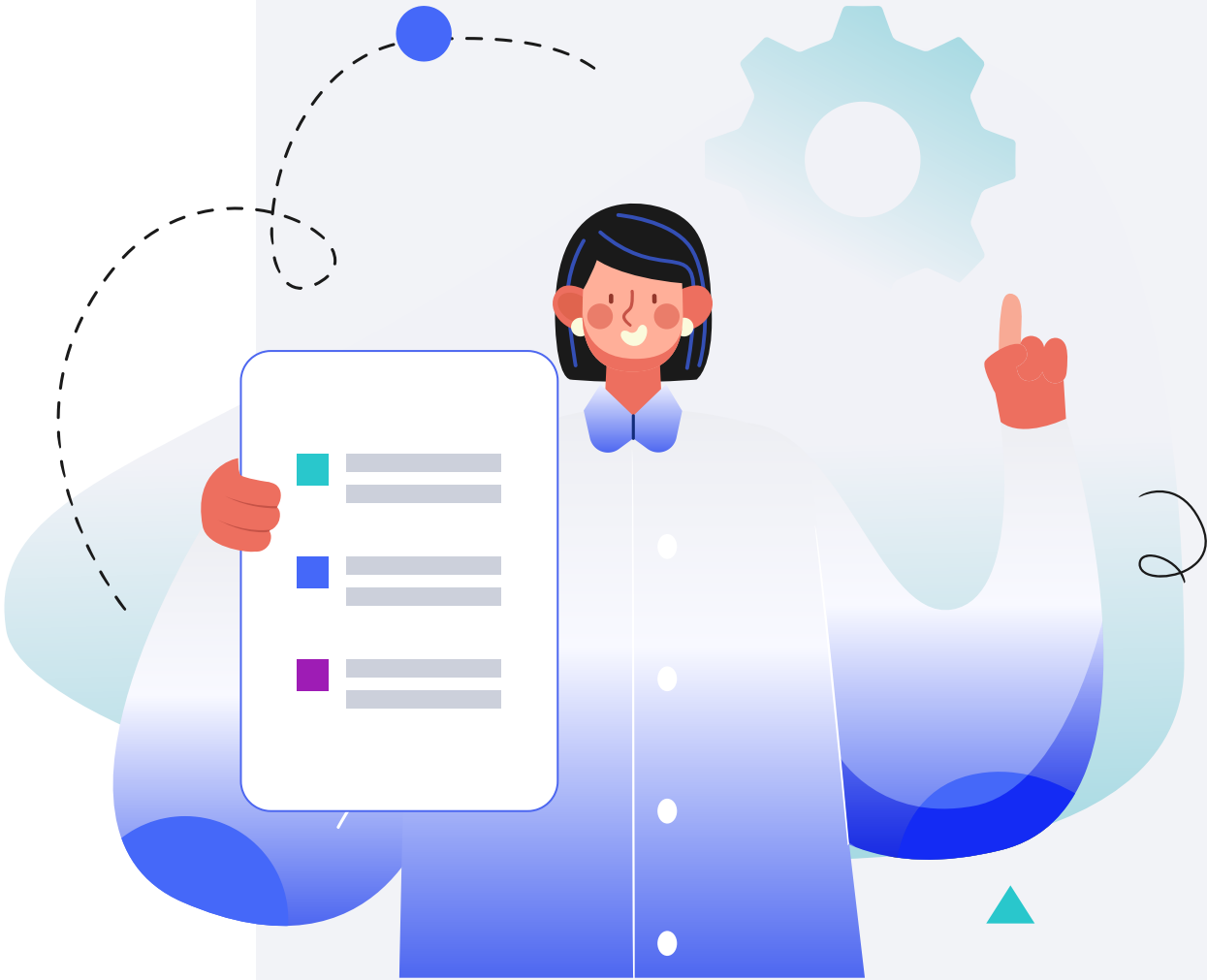
Your recommendations

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

Mild cognitive decline—also known as age-related cognitive impairment or age-related memory loss—is a normal part of aging that can affect cognitive functions such as memory, attention, and problem-solving.

It is **not the same as dementia**, which is a more serious decline in cognitive function that can significantly interfere with daily life.

Symptoms of cognitive decline are typically subtle and don’t interfere that much with daily living. They include [R](#):

- Forgetting things more often
- Losing your train of thought
- Trouble following a conversation
- Finding it hard to make decisions, finish a task or follow instructions
- Trouble finding your way around places you know well
- Low mood
- Anxiety
- A short temper and aggression
- A lack of interest in things normally found interesting

Speak with your doctor if you are concerned about cognitive decline. They can help assess cognitive function and provide guidance on ways to maintain brain health as you age.

Risk Factors and Genetics

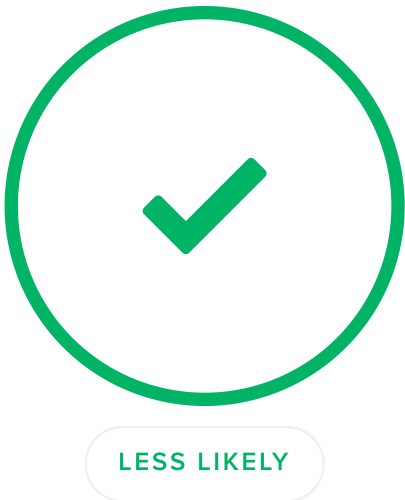
Mild cognitive decline is a normal part of aging that can affect cognitive functions such as memory, attention, and problem-solving.

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 [\[R\]](#).



Less likely to have cognitive decline based on **272,168 genetic variants we looked at**



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
CDCA7	rs182734936	CC
ANXA5	rs141005242	CC
/	rs200668351	GG
TEK	rs147486058	AA
DUSP15	rs6089150	CC
CTBP2	rs61869228	CC
HHEX	rs60320343	AA
CRP	rs1205	CC
FOXO3	rs4946936	CC
APOE	rs7412	CC
CLU	rs11136000	CC
KIF11	rs6583817	CC
MS4A6A	rs610932	GG
TRIM32	rs7852872	CC
LHFPL6	rs9315702	AA
DPP4	rs6741949	GG
/	rs11706133	TT
WDFY2	rs9535753	TT
LAMP3	rs630527	GG
FOXJ2	rs7138264	GG

GENE	SNP	GENOTYPE
OPCML	rs11606197	TT
/	rs72956174	TT
B3GALNT1	rs4455332	CC
C3ORF56	rs11716691	AA
IRX2	rs72720951	AA
ZNF799	rs4804181	AA
/	rs57169846	GG
BDNF	rs6265	TC
ALCAM	rs34476301	GA
SIRT1	rs3758391	CT
TNF	rs1799724	TC
SNRPB	rs2076650	TC
A2M	rs11609582	TA
APBB2	rs13133980	GC
BCHE	rs1803274	TC
PRR16	rs3991625	TC
CEMIP2	rs12237894	CG
SALL1	rs2075199	CT
MRPS18C	rs10004897	AG
SALL3	rs7231688	AG
CHD6	rs6072411	GA
HSD11B1	rs60686175	TC
/	rs10457441	TT
TMEM106B	rs1990622	AG
APOE	rs429358	TT
TNS1	rs13013766	GG
/	rs62477365	TT
BCL11A	rs6545794	GG
IFNL3	rs73050457	CC
ABCA2	rs908832	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.

DOSAGE		DOSAGE			
1	Cognitive Activity	15 minutes	2	Ginkgo	120 mg
3	Sleep for 7+ Hours		4	Methylfolate	400 mcg
5	Cognitive Training	15 minutes	6	Strength Training	1 hour
7	Tea		8	Mediterranean Diet	
9	Avoid Air Pollution		10	Nuts	3 oz
11	Music Therapy	30 minutes	12	Pet Therapy	30 minutes
13	Huperzine A	50 mcg	14	Berries	
15	Dietary B Vitamins				

1



Cognitive Activity

IMPACT

5 / 5

EVIDENCE

4 / 5

How to implement

Engage in mentally stimulating activities, such as puzzles, reading, or learning a new skill, for at least 15 minutes daily. Consistency is key, so incorporate these activities into your daily routine for ongoing cognitive health benefits.

TYPICAL STARTING DOSE

15 minutes

Description

Engaging in cognitive activities, such as puzzles, reading, or learning new skills, can help maintain mental sharpness and potentially reduce the risk of age-related cognitive decline. Staying mentally active supports cognitive health and overall quality of life.

Some scientists like to think of the brain as a muscle. They say people should “use it or lose it” [\[R\]](#).

In line with this, keeping the brain stimulated may help support cognition [\[R\]](#).

There are many ways to keep your brain active. These include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Reading a book
- Solving a word or number puzzle (e.g., crossword, Sudoku)
- Completing a jigsaw puzzle
- Learning a new language

How it helps

Keeping your brain active may boost cognitive function. The following activities may reduce the risk of cognitive decline [\[R\]](#):

- Playing an instrument (by 65%) [\[R\]](#), [\[R\]](#), [\[R\]](#)
- Playing games and puzzles [\[R\]](#)
- Performing mental work (by 45%) [\[R\]](#)
- Reading books
- Practicing cognitive training (e.g., dual task training) [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)
- Staying socially active (by up to 50%) [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)

The **combination of cognitive training and exercise** may be particularly beneficial for cognition in the elderly [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).



PERSONALIZED TO YOUR GENES

People with your [COMT](#) gene variant may see bigger memory improvements from cognitive training [\[R\]](#).
People with your [APOE](#) gene variant may see bigger improvements from cognitive training [\[R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
COMT	rs4818	CG	
APOE	rs429358	TT	

2



Ginkgo

IMPACT

4 / 5

EVIDENCE

4 / 5

How to implement

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

TYPICAL STARTING DOSE

120 mg

Description

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

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

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

How it helps

A series of meta-analyses and systematic reviews on Ginkgo biloba extract EGb 761® across multiple dementia studies showed mixed results. While the treatment significantly improved behavioral symptoms, cognition, and caregiver distress in dementia patients, it did not prevent dementia or significantly enhance daily living activities. Specifically, EGb 761® showed efficacy in mild to moderate dementia, including Alzheimer's, vascular, and mixed types, by improving cognitive functions and daily functioning. However, it was ineffective in preventing dementia when compared to a placebo. Additional findings highlighted that Ginkgo biloba combined with standard drugs for vascular cognitive impairment showed marked improvements in cognitive and functional assessments, though more high-quality trials are needed to confirm these outcomes [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

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

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

3



Sleep for 7+ Hours

IMPACT4 / 5

EVIDENCE4 / 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

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
APOE	rs429358	TT	

4



Methylfolate

IMPACT

4 / 5

EVIDENCE

4 / 5

How to implement

Take an L-methyl folate supplement (400-800 micrograms daily), ideally with a meal, to improve absorption. This dosage is recommended for adults, including pregnant women, to support overall health, especially to reduce the risk of neural tube defects in developing fetuses. Continue daily use as part of your regular supplement routine.

TYPICAL STARTING DOSE
400 mcg

Description

Folate, a B-vitamin, is crucial for DNA synthesis, cell growth, and the formation of red blood cells. Adequate folate intake supports overall health and reduces the risk of neural tube defects during pregnancy.

[Vitamin B9](#) (*folate*) plays an essential role in [\[R, R, R\]](#):

- Making DNA
- Metabolism
- Energy production

SelfDecode recommends L-methylfolate as the preferred folate supplement for those who need one. It is superior to folic acid because it doesn't require activation, but the research is still ongoing [\[R, R\]](#).

How it helps

Folate aids in brain function and helps with mental and emotional health. It could slow cognitive decline by lowering levels of homocysteine in the blood, a compound linked to an increased risk of Alzheimer's disease and cognitive decline.

Two meta-analyses linked high B vitamin levels to better elderly cognitive performance, while lower levels increased cognitive decline risk by 24%. Low folate raised dementia risk by 76%. Another meta-analysis found low folate lowered cognitive function by 66%. However, another meta-analysis revealed excessive levels may also be associated with higher risk [\[R, R, R, R, R\]](#).

Supplementing B vitamins for 12+ months may prevent cognitive decline, as per three meta-analyses. It improves overall cognitive function and lowers homocysteine levels, but doesn't affect processing speed, episodic memory, or executive function. However, older meta-analyses found B vitamins had minimal impact on cognitive function [\[R, R, R, R, R, R\]](#).

A [meta-analysis of 5 trials](#) found **moderate beneficial effects of B vitamin supplementation on memory, but not on other cognitive functions** in patients with mild cognitive impairment. However, another [meta-analysis \(3 trials\)](#) found **no benefits of folic acid** [\[R, R\]](#).

A placebo-controlled trial with mild cognitive impairment, found folic acid (400 µg/day) supplementation improved cognitive function. Another trial found that folic acid (400 µg/day) and methylcobalamin (500 µg/day) slowed cognitive decline progression [\[R, R\]](#).

A meta-analysis found that omega-3s and B vitamins combined to improve cognition in the elderly, possibly preventing decline. In another trial, folic acid, DHA, or both for 6 months improved cognition and reduced Aβ production, especially in the combination group [\[R, R\]](#).

5

Cognitive Training

IMPACT

4 / 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

Keeping your brain active helps maintain cognitive functions. Practicing cognitive training (e.g., dual task training) may reduce the risk of cognitive decline [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

The **combination of cognitive training and exercise** may be particularly beneficial for cognition in the elderly [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

PERSONALIZED TO YOUR GENES

People with your [COMT](#) gene variant may see bigger memory improvements from cognitive training [\[R\]](#).

People with your [APOE](#) gene variant may see bigger improvements from cognitive training [\[R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
COMT	rs4818	CG	
APOE	rs429358	TT	

6



Strength Training

IMPACT3 / 5

EVIDENCE4 / 5

How to implement

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

TYPICAL STARTING DOSE

1 hour

Description

Strength training, also called resistance or *anaerobic* training, contracts the muscles against an external resistance for short periods of time. This helps gain muscle strength, tone, and mass. This can include activities like weight lifting, pushups, and crunches.

Strength training, also known as resistance training, is a type of physical exercise that uses resistance to build strength, anaerobic endurance, and size [R]. Some of the most common strength training methods include [R]:

- Weight lifting
- Bodyweight exercises like push-ups, pull-ups, squats, and lunges.
- Resistance bands
- Plyometrics or explosive force exercises

The benefits of strength training are numerous, and include [R]:

- Increased muscle strength
- Improved bone health
- Reduced risk of injury
- Improved balance and coordination
- Enhanced mood
- Boost metabolism

Consult with a doctor before starting any new exercise program, especially if you have any health conditions.

How it helps

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].

7



Tea

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Drink 1-3 cups of tea daily, choosing from green, black, or herbal varieties according to preference. It's beneficial to consume tea throughout the day, either hot or cold, for ongoing hydration and health benefits.

Description

Tea is a beverage made by steeping the leaves of the *Camellia sinensis* plant in hot water. It comes in various types, including black, green, white, and herbal teas, and is known for its diverse flavors and potential health benefits due to polyphenols and other bioactive compounds.

[Green](#) and black tea are made from the same plant (*Camellia sinensis*). This plant is processed in different ways to make each type of tea [\[R\]](#) [\[R\]](#).

Tea contains many active compounds. These include antioxidants like EGCG and amino acids like [L-theanine](#). Active components of tea help support [\[R\]](#) [\[R\]](#), [\[R\]](#) [\[R\]](#) [\[R\]](#) [\[R\]](#):

- Heart health
- Cognition
- Immunity
- Relaxation

How it helps

Drinking tea is linked to a lower risk of mild cognitive decline. [Green tea](#) may be the best option [\[R\]](#) [\[R\]](#) [\[R\]](#).

A combination of **green tea extract and [L-theanine](#)** (1,680 mg/day for 16 weeks) improved cognitive alertness in people with mild cognitive impairment [\[R\]](#).

Tea is rich in L-theanine and antioxidants that help protect the brain [\[R\]](#).

A [meta-analysis of 26 studies](#) associated tea drinking with a **reduced risk of mild cognitive impairment in the elderly** [\[R\]](#).

8



Mediterranean Diet

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Incorporate a variety of primarily plant-based foods, such as fruits, vegetables, whole grains, nuts, and legumes, into every meal. Choose healthy fats, like olive oil, over saturated fats and consume fish and poultry at least twice a week. Limit red meat to a few times a month and include a moderate amount of dairy products. Opt for water and red wine in moderation as your beverages.

Description

The [Mediterranean diet](#) is based on the traditional cuisine from the Mediterranean regions. It moderates the intake of red meat and dairy, while being rich in fruits and vegetables, whole grains, and healthy fats ([olive oil](#)).

The [Mediterranean diet](#) focuses on traditional cuisine from the Mediterranean regions. It’s rich in [\[R\]](#):

- [Olive oil](#)
- Fruits and vegetables
- Whole grains
- Nuts and seeds
- Fish

This type of diet may **reduce inflammation and protect the brain and heart** [\[R, R, R, R\]](#).

Limited intake of animal products, saturated fat, and refined sugar likely contribute to the health benefits of the Mediterranean diet [\[R\]](#).

How it helps

The [Mediterranean diet](#) is rich in fruits and vegetables and low in saturated fat. Experts say that such diets may help prevent cognitive decline [\[R\]](#).

People following the Mediterranean diet tend to have better cognitive function. This diet is linked to a 35-65% lower risk of mild cognitive decline [\[R, R, R, R, R, R\]](#).

9



Avoid Air Pollution

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Stay indoors on days when air quality indexes (AQI) indicate high pollution levels, which are often reported by weather services or government environmental agencies. **Install air purifiers** in your home, especially in bedrooms, to reduce indoor pollutants. Limit outdoor exercise when air pollution warnings are issued, opting for indoor activities instead.

Description

Avoiding air pollution by reducing exposure to pollutants in the environment is essential for respiratory and overall health. It can help lower the risk of respiratory diseases, cardiovascular conditions, and other health issues associated with poor air quality.

While city life is convenient in a lot of ways, it comes with some health hazards. Cars, factories, and other sources increase air [pollution](#) [\[R\]](#).

Air pollution plays a role in [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Lung disease
- Heart disease
- Diabetes
- Asthma
- Skin conditions

How it helps

Air pollution is linked to cognitive decline. Studied pollutants include [\[R\]](#), [\[R\]](#), [\[R\]](#):

- **PM2.5**
- **NO2**
- **Cooking fumes**

For every 5-unit increase in PM2.5, the risk of cognitive decline rises by **8%** [\[R\]](#), [\[R\]](#)!

Air pollution may harm the parts of the brain involved in cognition [\[R\]](#).

A meta-analysis of 10 cohort studies involving 519,247 cases and 12,523,553 participants found that each 5 µg/m3 increase in PM2.5 exposure was associated with a 1.08 risk of cognitive impairment. No such link was observed for NO2/NOx or O3. Subgroup analysis indicated a stronger association in population-based studies, North American populations, and studies with follow-up durations over 10 years. Therefore, exposure to PM2.5 may increase the risk of cognitive impairment [\[R\]](#).

Tips for lowering exposure to air pollution include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Monitoring air pollution levels regularly
- Using an appropriate face mask when pollution levels are high
- Avoiding outdoor exercise when pollution levels are high
- Cleaning and maintaining air filtration systems
- Not burning wood or trash
- Using protective respiratory equipment at work, if needed

10



Nuts

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

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

TYPICAL STARTING DOSE

3 oz

Description

Nuts are nutrient-dense foods rich in healthy fats, protein, fiber, vitamins, and minerals. They are associated with numerous health benefits, including heart health, weight management, and reduced risk of chronic diseases when consumed as part of a balanced diet.

Nuts are a healthy source of both energy and nutrients. They are rich in [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Protein
- Dietary fiber
- Vitamins ([folate](#), [niacin](#), [vitamin E](#), [vitamin B6](#))
- Minerals ([calcium](#), [magnesium](#), [potassium](#))
- Healthy fats
- Plant sterols

Most of the energy in nuts comes from healthy *unsaturated fats*. Some nuts, like walnuts and pine nuts, are very rich in *polyunsaturated fats* (PUFAs). These are considered some of the healthiest fats we can eat [\[R\]](#).

People who eat a lot of nuts may be less likely to develop [\[R\]](#):

- High cholesterol
- High blood pressure
- High blood sugar

How it helps

In 22 studies involving 43,793 people, walnuts were found to be potentially more beneficial for individuals at higher risk of cognitive decline [\[R\]](#), [\[R\]](#), [\[R\]](#).

Further studies on over 22,000 people found that regular nut consumption (3 to more than 7 servings/week for at least 4 weeks to over 2 years) in older adults with metabolic syndrome and older women led to a slower decline in cognitive function and slightly better cognitive function. Studied nuts include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- **Walnuts**
- Pistachios
- Cashews
- Hazelnuts

Nuts may help by increasing blood flow in brain areas important for memory and thinking [\[R\]](#), [\[R\]](#).

11



Music Therapy

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

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

TYPICAL STARTING DOSE

30 minutes

Description

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

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

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

How it helps

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

12



Pet Therapy

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

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

TYPICAL STARTING DOSE

30 minutes

Description

Pet therapy, also known as animal-assisted therapy, involves the interaction between trained animals and individuals to provide emotional and physical benefits. Spending time with therapy animals, typically dogs or cats, can reduce stress, improve mood, and enhance overall well-being by promoting relaxation and social interaction, making it particularly beneficial for people facing mental health challenges or chronic conditions.

Animal-assisted therapy, also known as **pet therapy**, involves human-animal interaction to foster physical and emotional healing and provide social support. This therapy may use different animals, such as [\[R\]](#), [\[R\]](#):

- Dogs
- Horses
- Dolphins

Animal-assisted therapy may involve touching, playing, grooming, and talking with the animal [\[R\]](#).

How it helps

A meta-analysis of 11 trials and 825 participants concluded that animal-assisted therapy improves behavioral and psychological symptoms of dementia, especially depression, but not cognitive function, activities of daily living, agitation, or quality of life, in people with dementia [\[R\]](#).

A Cochrane review of 10 studies only found evidence that animal-assisted therapy helps with depression in people with dementia [\[R\]](#).

Another meta-analysis (10 studies and 413 participants) found that animal-assisted evidence improves behavioral and psychological symptoms of dementia, especially depression and agitation, but not cognitive scores or activities of daily living [\[R\]](#).

Similarly, animal-assisted therapy decreased anxiety and sadness while increasing positive emotions and motor activity in a non-placebo-controlled trial of 10 patients with advanced Alzheimer’s disease [\[R\]](#).

However, a meta-analysis of 10 studies found that dog-assisted therapy doesn’t improve daily life activities, depression, agitation, quality of life, or cognitive impairment and may only help with apathy [\[R\]](#).

13



Huperzine A

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Take a Huperzine A supplement daily, starting with a low dose of about 50 micrograms (mcg) in the morning, and gradually increase the dosage based on tolerance, not exceeding 200 mcg per day. It's recommended to cycle the supplement, taking it for a duration of 2-4 weeks followed by a break of 1 week to prevent tolerance build-up.

TYPICAL STARTING DOSE
50 mcg

Description

Huperzine A is a compound extracted from Chinese club moss and is sometimes used in supplements for its potential cognitive-enhancing properties. It is believed to support memory and cognitive function, though its effectiveness can vary among individuals.

Huperzine A is an alkaloid found in Chinese club moss (*Huperzia serrata*). Its cognitive-enhancing effects may be due to its involvement in inhibiting the breakdown of acetylcholine, a neurotransmitter that is important for memory and learning [\[R\]](#).

People take huperzine A supplements for a variety of purposes, including [\[R\]](#):

- Improving memory and cognitive function
- Reducing anxiety and depression

How it helps

A meta-analysis of 9 trials concluded that supplementation with huperzine A improves memory quotient and mini-mental state examination. However, the authors warned about the low quality of the included studies [\[R\]](#).

Huperzine A may help by increasing acetylcholine levels.

14



Berries

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Incorporate a variety of berries such as strawberries, blueberries, raspberries, and blackberries into your daily diet. Aim for at least one cup of fresh or frozen berries every day, either as a snack, part of your breakfast (such as in oatmeal or yogurt), or as a dessert.

Description

Berries, such as strawberries, blueberries, and raspberries, are packed with antioxidants, vitamins, and fiber. Regular consumption of berries may support heart health, improve cognitive function, and contribute to overall well-being.

How it helps

Consuming berries regularly may help slow cognitive decline and improve cognitive function in young and older people without cognitive problems or with mild cognitive impairment by improving [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Memory
- Executive function (e.g., problem-solving and planning)
- Thinking speed
- Attention

Consumed forms of berry include [\[R\]](#):

- Frozen blueberries
- Blueberry concentrate
- Berry beverages
- Supplements (e.g., capsules, extracts, and powders)

15



Dietary B Vitamins

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Incorporate foods rich in B vitamins like whole grains, meat, eggs, dairy products, leafy green vegetables, beans, peas, and nuts into your daily meals. For a balanced intake, aim to include at least one serving of a B vitamin-rich food in each meal throughout the day.

Description

B-vitamins are a group of water-soluble vitamins that play essential roles in metabolism, energy production, and overall health. They include B1 (thiamine), B2 (riboflavin), B3 (niacin), B5 (pantothenic acid), B6 (pyridoxine), B7 (biotin), B9 (folate), and B12 (cobalamin).

B vitamins help the body function properly. Three examples are [vitamin B9 \(folate\)](#), [vitamin B12](#), and [vitamin B6](#). They play essential roles in heart, brain, and kidney health [\[R, R, R, R\]](#).

You can get these vitamins from [\[R, R, R\]](#):

- Animal products
- Green leafy vegetables
- Fortified foods
- Supplements

Every day, adults should be getting [\[R\]](#):

- **Folate:** 400 mcg
- **Vitamin B12:** 2.4 mcg
- **Vitamin B6:** 1.7 mg

Folic acid is a form of folate found in most supplements [\[R\]](#).

Folate deficiency is rare but can happen in people that don’t eat enough fruits and vegetables. Alcoholics and lactating mothers may also be at an increased risk [\[R\]](#).

Vitamin B12 deficiency often takes years to develop, as the body is able to store large amounts in the liver. Groups that may be at an increased risk include [\[R, R\]](#):

- Vegans
- Pregnant women
- Older people
- People with gut issues

People with kidney problems or gut issues may be at increased risk of vitamin B6 deficiency [\[R\]](#).

How it helps

Lower levels of B vitamins are linked to a **25%** higher risk of cognitive decline. [Folate](#) is crucial for cognitive function, but excessive folate intake may have the opposite effects [\[R, R, R, R\]](#).

Supplementation with B vitamins for at least 12 months may prevent cognitive decline. However, many studies failed to confirm this benefit [\[R, R, R, R, R, R\]](#).

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

B vitamins may help by reducing homocysteine levels and protecting the brain [\[R, R, R\]](#).

