SelfDecode™

Stroke

Disease Report

REPORT CATEGORIES

- HEART & BLOOD VESSELS
- NERVE HEALTH
- LONGEVITY

Sample Client

Report date: 15 January 2026

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Table of Contents

Personal information

NAME

Sample Client

SEX AT BIRTH

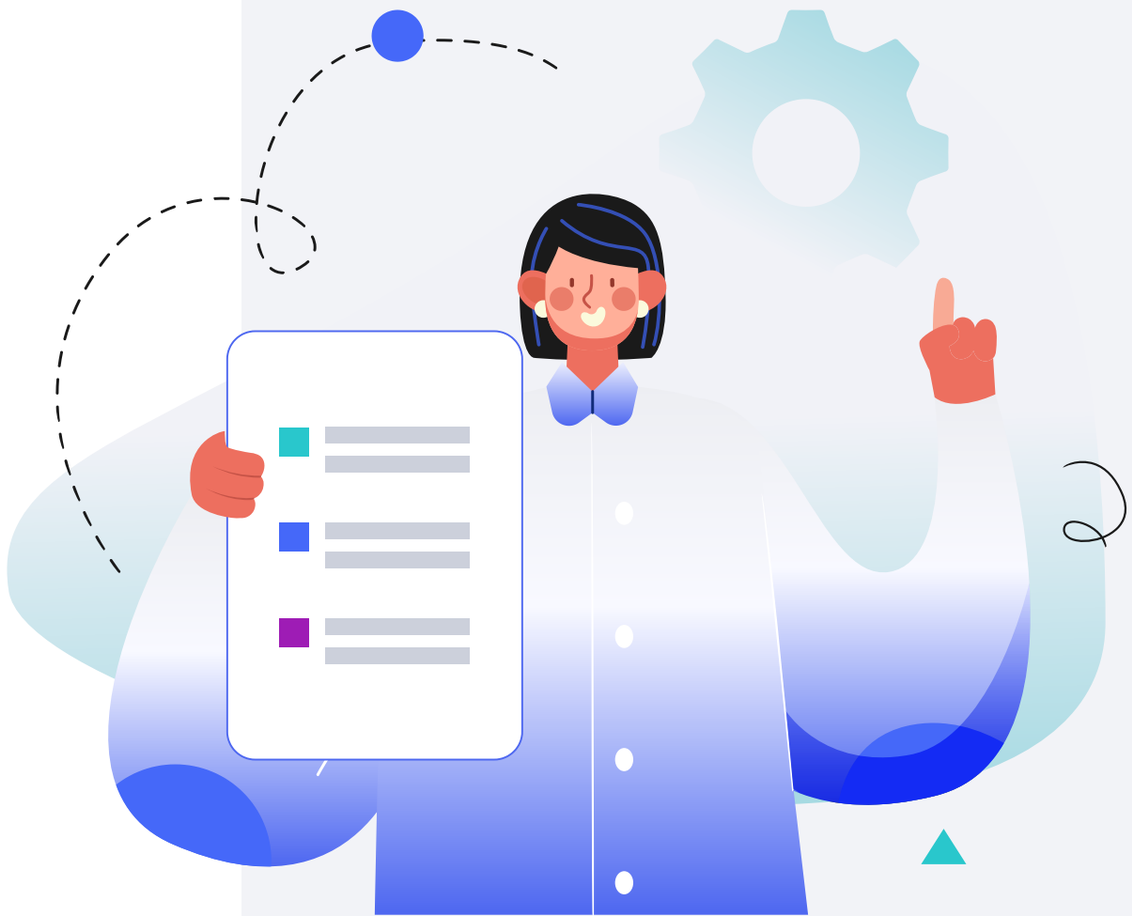
Male

HEIGHT

5ft 5" 165cm

WEIGHT

137lb 62kg

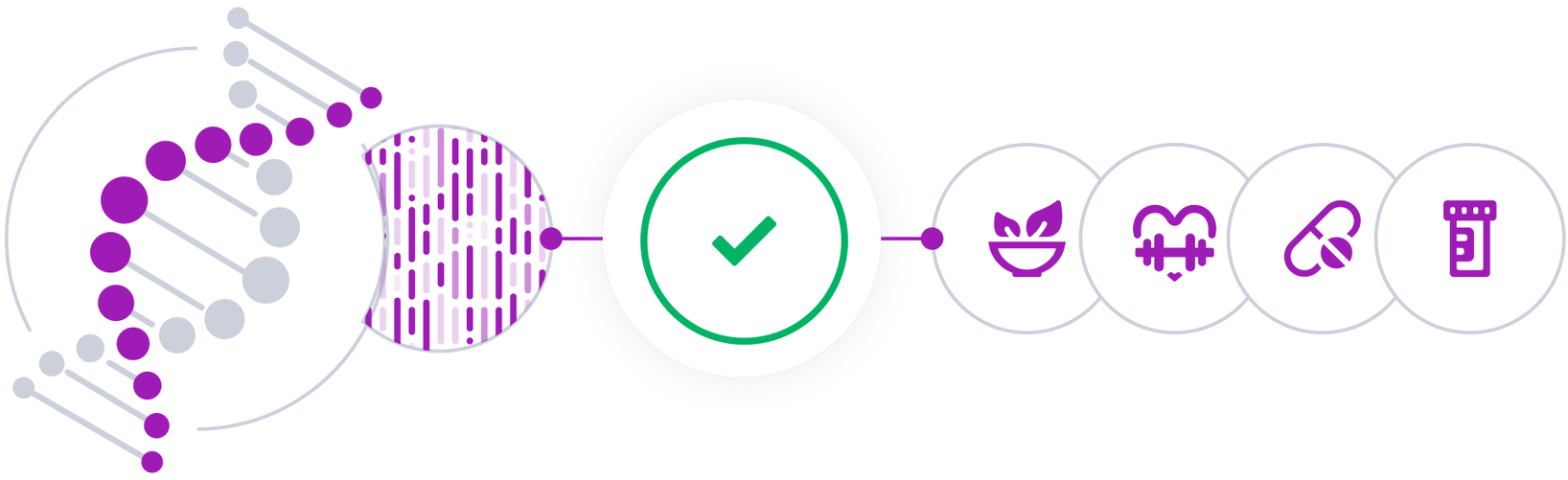


DISCLAIMER

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

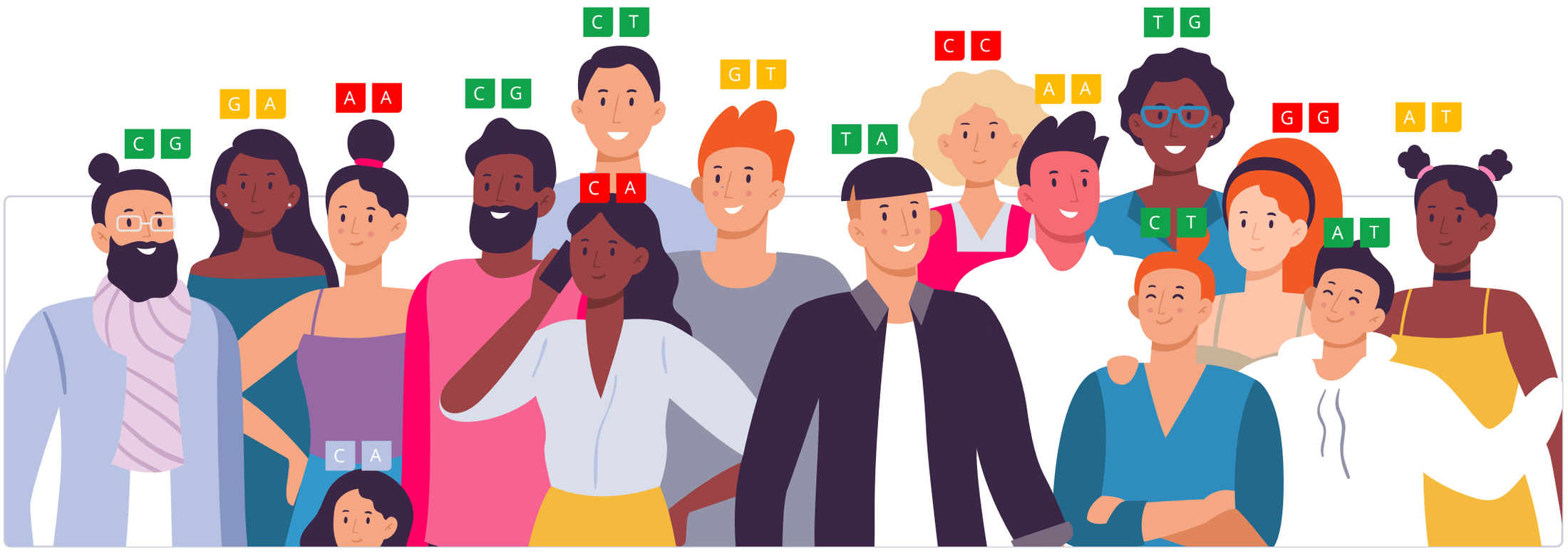
Our Wellness Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.



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

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

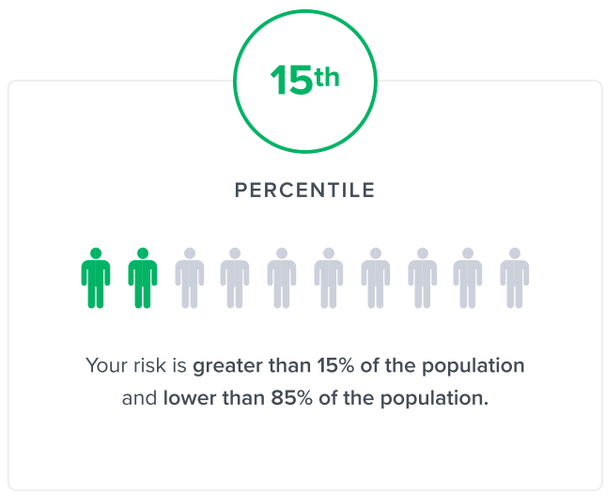
Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.



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

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.



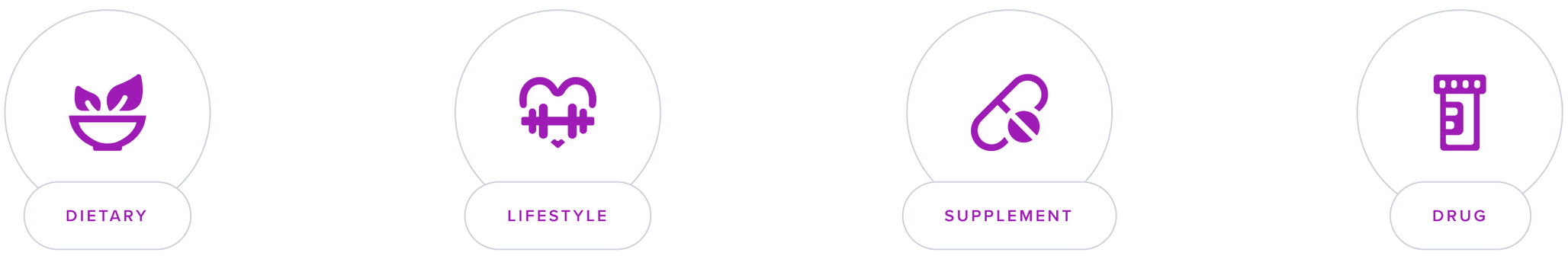
Genotype color info: AA You don't have any risk alleles | AA You have 1 risk allele | AA You have 2 risk alleles

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

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

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

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



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

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

Impact

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

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

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

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

Recommendation Evidence

5 / 5

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

4 / 5

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

3 / 5

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

2 / 5

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

1 / 5

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

0 / 5

No evidence in humans.

Genotype-specific Evidence

High-quality

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

Medium-quality

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

Low-quality

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

Indirect

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

In theory

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

Some things to keep in mind:

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

Introduction

A stroke is an emergency medical condition that occurs when the blood flow to a part of the brain is disrupted. There are two major types. An ischemic stroke occurs when a blood clot blocks an artery leading to the brain. A hemorrhagic stroke is bleeding in the brain caused by a blood vessel bursting.

Strokes can have serious and long-lasting effects depending on how much damage is done to the brain. Symptoms may include :

- Sudden weakness or numbness on one side of the body
- Difficulty speaking or understanding speech
- Confusion
- Vision loss on one or both eyes
- Difficulty walking

If you suspect that someone is experiencing a stroke, it is important to call for emergency medical assistance immediately.

Longevity Screener

Longevity Screener analyzes your DNA and biometric data to holistically determine your risk of developing serious medical conditions.

Your lifetime risk is Normal

Your 10-year risk is Normal

Summary or results

Your results are indicating a Normal risk of developing Stroke in your lifetime and within the next decade.

Monitor your risk by regularly checking your related labs and implementing the recommendations provided.

The risk of developing Stroke can be influenced by non-genetic factors such as High blood pressure, elevated BMI.

What to do if you get a High risk

Analyze your labs

Analyze your lab results to establish a baseline and track any changes or improvements in your health markers over time.

Find out your out-of-optimal labs

We will pinpoint any values that fall outside the optimal range, allowing you to focus on what matters most.

Optimize labs

Aim to bring all your lab results to optimal levels through lifestyle changes, treatments, and ongoing monitoring for the best health outcomes.

Disclaimer

The Longevity Screener feature is designed to provide insights based on genetic predispositions and basic health data to help you understand factors that may influence your longevity. This tool is for informational purposes only and does not constitute medical advice, diagnosis, or treatment. Always consult with a qualified healthcare provider before making any decisions related to your health, lifestyle, or medical treatments. The information provided by the Longevity Screener is based on current scientific research and should be used as a supplementary tool in conjunction with professional medical advice.

Stroke Risk Factors

Key Takeaways:

- A stroke is a serious emergency condition that requires immediate medical care.
- The most common symptom is sudden weakness or numbness on one side of the body.
- Up to **40%** of differences in people's stroke rates may be due to genetics.
- Obesity, smoking, alcohol, and a lack of physical activity are among risk factors for stroke.

Up to **40%** of differences in people's stroke rates may be due to genetics [R].
Genetically predicted high levels of the following markers may be causally associated with a higher risk of stroke [R, R, R, R, R]:

- Fasting insulin
- Apolipoprotein B
- Neutrophils
- Testosterone

In contrast, genetically high alpha-linolenic acid levels may be causally associated with a lower risk [R, R].
Other risk factors for stroke include:

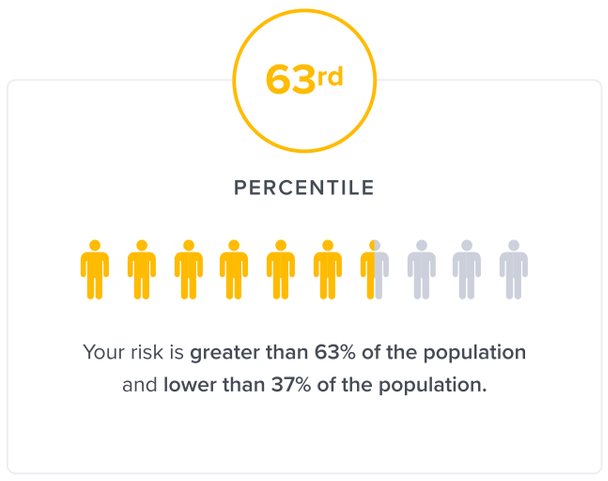
- Age: the risk of stroke increases with age.
- Sex: men have a slightly higher risk of stroke than women.
- Race: African Americans have a higher risk of stroke than Caucasians.
- Personal or family history
- Chronic stress
- Smoking
- A lack of physical activity
- Being overweight or obese
- Excessive alcohol consumption
- Using recreational drugs, such as cocaine and amphetamines

Health conditions that may contribute to stroke include:

- High blood pressure
- Diabetes
- High cholesterol

TYPICAL LIKELIHOOD

Typical likelihood of stroke based on 1,030,648 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
TWIST1	rs2107595	AG
HP	rs879324	AA
PITX2	rs6843082	AG
ALDH2	rs2238151	TT
ABCG5	rs76866386	TT
ABO	rs532436	AA
PTPRF	rs6695915	AA
LIPA	rs1412444	TT
SPSB4	rs16851055	AG
HTRA1	rs60401382	CC
SWAP70	rs10840293	AA
EDNRA	rs1878406	CT
FES	rs8027450	TC
DACH1	rs339800	TC
JCAD	rs2487928	GA
FN1	rs17517928	CT
SH2B3	rs10774625	AG
FGD5	rs748431	GT
MMP8	rs12792912	TG
COL4A1	rs9521634	TC
ASB3	rs13407662	CC
LPA	rs55730499	CC
MPO	rs2632512	CC
NEDD4	rs12442374	CC

- Heart disease

GENE	SNP	GENOTYPE
FLT1	rs1924981	CC
IL6R	rs11265613	CC

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
1	Exercise At Least One Hour a Day	1 hour
2	Mediterranean Diet	
3	Aerobic Exercise (Cardio)	1 hour
4	Swimming	30 minutes
5	Core-Strengthening Exercises	20 minutes
6	Cycling	
7	Physical Therapy	30 minutes
8	Avoid Secondhand Smoke	
9	Limit Salt Intake	
10	Walking	30 minutes
11	Tomato	
12	Cruciferous Vegetables	
13	Avoid Noise Pollution	
14	Airway Muscle Training	30 minutes
15	Choose Healthy Fats	
16	Occupational Therapy	45 minutes
17	Cognitive-Behavioral Therapy (CBT)	
18	Dietary Omega-3 Fatty Acids	
19	Speech Therapy	45 minutes
20	Shock Wave Therapy	
21	Avoid Sugary Foods & Drinks	
22	DASH Diet	
23	Relaxation Techniques	30 minutes
24	Backward Walking	10 minutes
25	Tai Chi	1 hour
26	Whole Grains	
27	Acupuncture	1 hour
28	Nerve Stimulation	30 minutes
29	Extra Virgin Olive Oil (EVOO)	
30	Music Therapy	30 minutes
31	Vitamin C	500 mg
32	Avoid Air Pollution	

33	Eat Fiber-Rich Foods		34	Tea	
35	Dietary Antioxidants		36	Strength Training	1 hour
37	Methylfolate	400 mcg	38	Leafy Green Vegetables	
39	Dietary Calcium		40	Dietary B Vitamins	
41	Sleep for 7+ Hours		42	Stability Training	30 minutes
43	Dietary Magnesium		44	Biofeedback	
45	Ginkgo	120 mg	46	Maintain Optimal Vitamin D Levels	1000 iu
47	Dietary Vitamin E		48	Low-Carbohydrate Diet	
49	Magnesium Sulfate	200 mg	50	Yoga	30 minutes
51	Emoxypine		52	Dance	30 minutes
53	Safflower Yellow		54	Take Naps	20 minutes
55	Pet Therapy	30 minutes	56	Pomegranate Juice	
57	Panax Notoginseng		58	Lycopene	10 mg
59	Alpha-GPC Choline	300 mg	60	Hyperbaric Oxygen Therapy	90 minutes
61	Fruits		62	Avoid Cadmium Exposure	
63	Vegetables		64	Avoid Arsenic Exposure	
65	Chinese Rhubarb	500 mg	66	Carrots	
67	Pears		68	Glucosamine	1500 mg
69	Neurofeedback	1 hour	70	Omega-3 (Fish Oil)	2000 mg
71	Apples		72	Autogenic Training	10 minutes

73	Avoid PAHs Exposure		74	Brown Seaweed	500 mg
75	Avoid Phthalate Exposure		76	Nattokinase	
77	Tocotrienols	100 mg	78	Astragalus	500 mg
79	Mindfulness	30 minutes	80	Glycine	3 g
81	Acetyl-L-Carnitine	500 mg	82	Dong Quai	500 mg
83	Fisetin	100 mg	84	Golf	
85	Mobility Training	10 minutes	86	Molybdenum and Vitamin C	
87	Avoid Lead Exposure		88	Saffron	20 mg
89	Aromatherapy	30 minutes	90	Boswellia	350 mg
91	Avoid Long Naps		92	Celery Seed	600 mg
93	GABA Supplement	1500 mg	94	Taurine	500 mg
95	Molybdenum		96	Avoid Calcium Supplements	
97	Dietary Nitrates		98	Green Tea	400 mg
99	Aquatic Therapy	30 minutes	100	Repetitive Transcranial Magnetic Stimulation	
101	Avoid Substance Abuse		102	Transcutaneous Electrical Nerve Stimulation (TENS)	30 minutes
103	Acceptance and Commitment Therapy (ACT)		104	Flavonoids	
105	Berries		106	Dietary Folate	
107	Mirror Therapy	5 minutes	108	Polyunsaturated Fatty Acids (PUFAs)	
109	Avoid BCAA Supplements		110	Fruits And Vegetables	
111	Myofascial Release	5 minutes	112	Massage	30 minutes

113	Balance And Mobility Training	30 minutes	114	Transcranial Direct Current Stimulation (tDCS)	30 minutes
115	Avoid Dietary Vitamin K1 Supplements		116	Avoid Leucine Supplements	
117	Aquatic Exercise	1 hour	118	Kinesio Taping	
119	Chiropractic Adjustment	30 minutes	120	Exercise Therapy	1 hour
121	Alpha-Linolenic Acid (ALA)		122	Dietary Polyphenols	

1 Exercise At Least One Hour a Day

IMPACT 5 / 5

EVIDENCE 5 / 5

How to implement

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

TYPICAL STARTING DOSE

1 hour

Description

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

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

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

How it helps

High physical activity may **reduce the risk of stroke by up to a half**. Exercise may reduce the risk of stroke by lowering [R, R, R, R, R, R, R, R, R, R, R]:

- Blood pressure
- Blood sugar
- Insulin resistance
- Weight
- Stress

Experts suggest gradually working up to at least 30 min/day of moderate physical activity — such as walking, jogging, swimming, or cycling (at least 3-4 days/week) [R].

In stroke survivors, exercise may improve [R, R, R, R, R, R]:

- Fitness and movement
- Cognitive function
- Social participation
- Mood and anxiety

Exercise may even help people who can’t walk.

Exercise may offer greater benefits when [R, R, R, R, R, R, R]:

- Initiated within 6 months after stroke
- Done at least 150 min/week and for at least 12 weeks

Some studied exercise modalities include [R, R, R, R, R, R, R, R, R, R]:

- Cardio
- Strength training
- Core exercises
- Tai chi

2

Mediterranean Diet

IMPACT 5 / 5

EVIDENCE 4 / 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

Experts recommend the Mediterranean diet to help prevent stroke because it may lower [R, R]:

- Blood pressure
- Blood cholesterol levels

Indeed, **following the Mediterranean diet is associated with a reduced risk of stroke**. The following key components of the Mediterranean diet may be responsible for this benefit [R, R, R, R]:

- Olive oil [R]
- Fruits and vegetables [R, R, R, R, R]
- Nuts [R, R, R, R]
- Reduced intake of red and processed meat [R, R, R, R, R, R]

PERSONALIZED TO YOUR GENES

Your *LPL* gene variant may be linked to lower odds of stroke, but only in people who follow the Mediterranean diet [R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
LPL	**rs13702**	TC	

3

Aerobic Exercise (Cardio)

IMPACT 4 / 5

EVIDENCE 5 / 5

How to implement

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

TYPICAL STARTING DOSE

1 hour

Description

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

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

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

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

How it helps

High physical activity may **reduce the risk of stroke by up to a half**. Cardio may reduce the risk of stroke by lowering [R, R, R, R, R, R, R, R, R]:

- Blood pressure
- Blood sugar

In stroke survivors, cardio (20-40 min, 3-5 days/week) may improve [R, R, R, R, R, R, R]:

- Fitness and movement
- Cognitive function
- Muscle relaxation

Cardio exercise for at least **20 weeks** and **combined with strength training** may offer greater benefits [R].

Some studied cardio modalities include [R, R, R, R]:

- Treadmill training
- Ergometer (indoor rower machine) training

4

Swimming

IMPACT 4 / 5

EVIDENCE 4 / 5

How to implement

Incorporate swimming into your routine for at least 30 minutes, 3 times a week. Choose a pace and stroke that keeps your heart rate elevated yet allows you to breathe comfortably. Continue this practice regularly for long-term health benefits.

TYPICAL STARTING DOSE

30 minutes

Description

Swimming is a whole-body workout that engages various muscle groups, promoting strength and endurance. It helps keep the heart and lungs healthy, improves flexibility, and can even help reduce stress. Regular swimming is a great way to maintain a balanced, fit, and healthy lifestyle.

How it helps

High physical activity may **reduce the risk of stroke by up to a half**. Exercise may reduce the risk of stroke by lowering [R, R, R, R, R, R, R, R, R, R, R]:

- Blood pressure
- Blood sugar
- Insulin resistance
- Weight
- Stress

Experts suggest gradually working up to at least 30 min/day of moderate physical activity — such as walking, jogging, swimming, or cycling (at least 3-4 days/week) [R].

In stroke survivors, exercise may improve [R, R, R, R, R, R]:

- Fitness and movement
- Cognitive function
- Social participation
- Mood and anxiety

Exercise may even help people who can’t walk.

Exercise may offer greater benefits when [R, R, R, R, R, R, R]:

- Initiated within 6 months after stroke
- Done at least 150 min/week and for at least 12 weeks

Some studied exercise modalities include [R, R, R, R, R, R, R, R, R, R]:

- Cardio
- Strength training
- Core exercises
- Tai chi

5

Core-Strengthening Exercises

IMPACT 4 / 5

EVIDENCE 4 / 5

How to implement

Incorporate exercises like planks, bridges, abdominal crunches, and leg lifts into your daily routine. Aim to do these exercises for 20-30 minutes, 3 times a week. Each exercise should be performed in sets of 10-15 repetitions.

TYPICAL STARTING DOSE

20 minutes

Description

Core-strengthening exercises target the muscles of the abdomen, lower back, and pelvis, helping improve posture, stability, and reduce the risk of back pain. Regular core workouts support a strong and balanced musculoskeletal system.

The core, or trunk, includes several groups of muscles in your abdomen, back, and pelvis. Keeping these muscles strong helps stabilize your body, twist and bend your back, protect your back from injuries, and enhance your overall fitness [R].

Some exercises that help strengthen the core include [R]:

- Crunches
- Planks
- Bridges
- Supine toe taps
- Bird dogs

The core can also be strengthened by practicing Pilates, kettlebell training, and some types of yoga [R, R, R].

How it helps

High physical activity may **reduce the risk of stroke by up to a half**. Exercise may reduce the risk of stroke by lowering [R, R, R, R, R, R, R, R, R, R, R]:

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Some studied exercise modalities include [R, R, R, R, R, R, R, R, R, R]:

- Cardio

- Strength training
- Core exercises
- Tai chi

6

Cycling

IMPACT 4 / 5

EVIDENCE 4 / 5

How to implement

Begin cycling with moderate rides to build up your stamina, targeting 2 to 4 times a week for 30 to 60 minutes per session. Ensure your bicycle is the right size and properly adjusted for your comfort. Safety gear, including helmets, is essential. Mix up your routes for interest and challenge, and consider joining a cycling group for social and motivational benefits. Maintenance of your bicycle will ensure a smooth ride and prolong its life.

Description

Cycling is a low-impact, environmentally friendly exercise that offers significant cardiovascular benefits, muscle strengthening, and flexibility improvement. It's suitable for all fitness levels and can be enjoyed both recreationally and competitively. Cycling promotes weight loss, decreases stress levels, and improves joint mobility. It's also a convenient mode of transportation that encourages outdoor exploration and reduces air pollution.

How it helps

High physical activity may **reduce the risk of stroke by up to a half**. Exercise may reduce the risk of stroke by lowering [R, R, R, R, R, R, R, R, R, R, R]:

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- Cardio
- Strength training
- Core exercises
- Tai chi

7

Physical Therapy

IMPACT 4 / 5

EVIDENCE 4 / 5

How to implement

Attend physical therapy sessions 2-3 times per week for a duration of 4-6 weeks, depending on your specific condition and the advice of your healthcare provider. Each session typically lasts about 30-60 minutes, where a licensed therapist will guide you through targeted exercises, stretches, and possibly other treatments like electrical stimulation or ultrasound therapy.

TYPICAL STARTING DOSE

30 minutes

Description

Physical therapy is a therapeutic practice focused on optimizing physical function and mobility through specialized exercises, manual techniques, and therapeutic modalities. It helps individuals recover from injuries, manage chronic conditions, and improve overall physical well-being by enhancing strength, flexibility, and pain management.

Physical therapy (**physiotherapy**) helps people regain or maintain their ability to move [R].

Physical therapy can involve [R]:

- Joint or muscle exercises
- Corrective movements
- Massage
- Education and advice

People mainly use physical therapy to help with [R, R]:

- Pain and injury
- Stroke recovery
- Chronic health conditions
- Headaches

Mirror therapy uses a mirror placed between the arms or legs. The image of a moving arm or leg gives the illusion of normal movement in the affected one. This therapy stimulates different brain regions and aims to improve mobility [R].

Constraint-induced movement therapy is another type of physical therapy. It consists of restraining the healthy leg or arm to increase the use of the affected one [R].

How it helps

Experts suggest including physical therapy in the rehabilitation program after a stroke, especially for people with [R]:

- Walking difficulties
- Movement loss
- Poor muscle control

People should be **assessed within the first 24 hours after a stroke.** However, not everyone should get intense physical therapy during that period of time to prevent problems during later recovery [R].

Both early and late physical therapy may help improve movement, fitness, and independence in daily activities. Some evidence indicates that **early therapy may speed up recovery** [R, R, R, R, R, R, R, R].

Some useful physical therapy strategies include:

- Water therapy [R, R, R, R, R, R, R, R, R]
- Mirror therapy [R, R, R, R, R]
- Constraint-induced movement therapy [R, R, R, R, R, R, R, R, R, R, R]

- Core exercises (e.g., using a sling) [R, R, R]
- Ankle-foot orthosis [R, R, R, R, R].
- Kinesio taping [R, R]
- Massage therapy [R]

8

Avoid Secondhand Smoke

IMPACT 4 / 5

EVIDENCE 4 / 5

How to implement

Implementing a smoke-free lifestyle involves communicating your needs to family, friends, and coworkers, requesting they respect your choice by smoking away from you. At home, establish strict no-smoking policies indoors. When out, choose smoke-free venues and accommodations. Advocate for smoke-free environments in your community and support legislation that promotes public health by reducing exposure to secondhand smoke. Utilize air purifiers at home to reduce any residual particles.

Description

Avoiding secondhand smoke is crucial for maintaining good health. Exposure to secondhand smoke can lead to respiratory problems, cardiovascular disease, and an increased risk of lung cancer, even in non-smokers. Protecting oneself from secondhand smoke involves staying away from smoking areas, ensuring smoke-free environments at home and work, and advocating for smoke-free policies in public spaces.

How it helps

Smoking may increase the risk of stroke. Indeed, smoking just one cigarette per day may increase the risk by **48% in men and 57% in women**. The risk may double in people smoking 20 cigarettes per day [R].

Former smokers, especially women, may also have a higher risk of stroke but not as much as active smokers. **Quitting smoking may reduce the risk of stroke** [R, R, R, R].

People who keep smoking after a stroke may also get affected by [R]:

- Getting worse complications
- Doubling the risk of a new stroke

Secondhand smoke is associated with a 16-56% higher risk of stroke, depending on the amount of smoke [R, R, R, R, R].

9

Limit Salt Intake

IMPACT 4 / 5

EVIDENCE 4 / 5

How to implement

Reduce your daily salt intake to less than 2,300 milligrams (mg), equivalent to about one teaspoon of table salt. This includes all salt consumed, whether added during cooking, at the table, or present in processed and ready-to-eat foods.

Description

Limiting salt intake involves lowering the amount of sodium in the diet, which can help lower blood pressure and reduce the risk of heart disease. It often involves avoiding processed and other high-sodium foods such as cured meats, soups and sauces, and various pickled foods.

Your body needs a certain amount of sodium to function. For example, it helps support your blood pressure. This sodium usually comes from salt. However, eating too much salt is linked to an increased risk of stroke and heart disease [R, R].

Foods higher in salt include [R, R, R]:

- Prepared soups, broths, gravies, and sauces
- Fermented or pickled foods (such as pickles, soy sauce, olives, and capers)
- Cured meats and sausages (such as bacon, salt pork, and salami)
- Cheese (such as Roquefort and Parmesan)

Try to limit your daily intake to 1 teaspoon of salt (2,400 mg of sodium) [R].

How it helps

Low salt consumption is associated with lower stroke risk, especially in people who don't get enough potassium [R, R, R, R].

Reduced salt intake is one of the key features of the DASH diet. Following the DASH diet is associated with a decreased risk of stroke. The more you stick to the diet, the greater the benefit [R, R, R, R].

10

Walking

IMPACT 4 / 5

EVIDENCE 3 / 5

How to implement

Incorporate at least 30 minutes of brisk walking into your daily routine, aiming for a minimum of five days a week. This can be done in one continuous session or broken into shorter periods, such as three 10-minute walks throughout the day.

TYPICAL STARTING DOSE

30 minutes

Description

Walking is a low-impact form of exercise that can contribute to cardiovascular fitness, weight management, and improved overall health. It is used to support physical activity goals, enhance mood, and promote better cardiovascular health.

How it helps

Walking can increase blood flow and provide more oxygen to the brain, which helps to heal and improve brain function after a stroke. Regular walking also helps maintain healthy blood pressure levels, preventing the occurrence of another stroke.

Various studies and meta-analyses have shown the effectiveness of different walking training approaches in stroke rehabilitation [R, R, R, R, R, R, R, R]:

- Backward walking training (BWT) was found to improve motor functions in stroke patients, including walk tests, balance, and stride length.
- Treadmill walking proved beneficial for improving walking speed and distance, and it was comparable to overground walking.
- Virtual reality-based training enhanced walking speed compared to non-virtual reality interventions.
- Walking training with cueing of cadence improved walking speed, stride length, cadence, and symmetry.
- Specific walking training in the subacute and chronic stages of stroke improved walking speed and distance, with higher training frequency needed.
- Mechanically assisted walking with body weight support resulted in more independent walking compared to overground walking.
- Treadmill walking and overground walking protocols, conducted regularly for about 8 weeks, were beneficial for improving motor impairments, activity limitations, participation, and quality of life in chronic stroke patients.
- Backward walking training showed potential for improving gait velocity, balance, and walk test performance, but further high-quality research is needed.

These findings collectively support the effectiveness of various walking training methods in stroke rehabilitation, emphasizing the importance of individualized approaches and consistent training for positive outcomes.

11

Tomato

IMPACT 4 / 5

EVIDENCE 3 / 5

How to implement

Incorporate fresh or cooked tomatoes into your daily diet. This can be achieved by adding them to salads, sandwiches, pastas, and sauces or simply eating them on their own. Aim for at least one serving (approximately 1 medium-sized tomato or 1/2 cup of chopped or cooked tomatoes) per day.

Description

Tomatoes are a fruit grown widely in numerous varieties, and are rich in vitamins C and K, as well as the antioxidant lycopene, which may contribute to heart health and protect against certain chronic diseases when incorporated into a balanced diet.

Tomato (*Solanum lycopersicum*) is a fruit originally from the Andes in South America. It is usually consumed as a vegetable in juices, sauces, or fresh. Tomate is an important source of [R]:

- Vitamin C
- Potassium
- Antioxidants (e.g., lycopene)
- Vitamin B9 (folate)

Tomato is traditionally used for [R, R]:

- High cholesterol
- High blood pressure

How it helps

Tomatoes are rich in lycopene, a powerful antioxidant that helps prevent stroke by inhibiting the formation of harmful blood clots. Also, they can lower blood pressure and reduce inflammation, two key factors in stroke occurrence.

A systematic review of 17 studies found that **tomato consumption reduces cerebrovascular disease mortality**, while **lycopene intake or serum levels reduce the risk of stroke** [R].

In line with this, a meta-analysis of 25 studies associated high intake of lycopene with **lower risk of stroke (by 35%)** [R].

12

Cruciferous Vegetables

IMPACT 4 / 5

EVIDENCE 3 / 5

How to implement

Incorporate a serving of cruciferous vegetables, such as broccoli, cauliflower, Brussels sprouts, kale, or cabbage, into at least one meal each day. A serving size is about a half cup cooked or one cup raw. Try to maintain this habit consistently over time for the best health outcomes.

Description

Cruciferous vegetables like broccoli, cauliflower, and kale are rich in vitamins, fiber, and antioxidants. Including them in your diet can promote overall health and may offer cancer-protective properties.

Cruciferous vegetables are a group of vegetables that belong to the Brassicaceae family. They are rich in fiber, vitamins, minerals, and other nutrients.

Some common cruciferous vegetables include broccoli, cauliflower, cabbage, kale, and brussels sprouts.

How it helps

Consuming fruits and vegetables (at least 5 servings/day) is associated with a lower risk of stroke. The more servings per day, the greater the benefit [R, R, R, R, R, R, R, R, R].

Cruciferous vegetables are among the most protective foods. Eating 5-6 servings per day may reduce the risk of stroke by **47-50%.** Some studied cruciferous vegetables include [R, R]:

- Broccoli
- Cabbage
- Cauliflower
- Brussels sprouts

The antioxidants in cruciferous vegetables may help protect the brain [R].

Consuming fruits and vegetables is linked to lower risk of cardiovascular diseases, including coronary heart disease and stroke, as well as reduced mortality from these conditions. Certain fruits and vegetables offer greater benefits [R].

PERSONALIZED TO YOUR GENES

Increased vegetable intake may offer greater protection against stroke in people with your *PON1* gene variant [R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
PON1	**rs662**	TT	

13

Avoid Noise Pollution

IMPACT 3 / 5

EVIDENCE 4 / 5

How to implement

Minimize exposure to loud environments by using noise-cancelling headphones or earplugs, especially in areas known for high noise levels such as construction sites, concerts, and busy urban streets. Aim to keep the volume of personal audio devices below 60% of their maximum. At home, use carpets, curtains, and wall fabrics to reduce indoor noise, and prefer quieter appliances. Try to dedicate at least one hour of quiet time before bed to aid in relaxation and improve sleep quality.

Description

Noise pollution refers to the presence of excessive, disruptive, or unwanted sound in the environment. It often includes sounds from traffic, industrial machinery, construction, loud music, and other sources that exceed acceptable or comfortable noise levels. Noise pollution disrupts normal activities and can have detrimental effects on human health, well-being, and the natural world.

Prolonged exposure to high noise levels can lead to a range of health issues, including:

- Stress
- Anxiety,
- Sleep disturbances
- High blood pressure
- Heart disease
- Impaired cognitive function

How it helps

Two meta-analyses (the largest one with 23 studies) found that the risk of stroke increased by 3.4-7% for every 10-dB increment in road traffic and aircraft sound. The risk was higher in men [R, R].

14

Airway Muscle Training

IMPACT 3 / 5

EVIDENCE 4 / 5

How to implement

Perform airway muscle training exercises daily for at least 30 minutes. This can involve using specific devices designed to resist airflow in and out, thereby strengthening the respiratory muscles, or practicing breathing exercises that focus on inhaling and exhaling against resistance. Consistency is key, so aim to integrate this practice into your daily routine for ongoing respiratory health.

TYPICAL STARTING DOSE

30 minutes

Description

Airway muscle training is exercise that builds strength in the throat and tongue muscles. This can involve anything from controlled breathing to singing long notes. People use airway muscle training to improve [R, R, R, R]:

- Sleep apnea
- Respiratory conditions like COPD
- Exercise performance

How it helps

Seven meta-analyses (the largest one with 19 trials) found that respiratory muscle training after a stroke improves maximal inspiratory (by 6.94 cmH2O) but not expiratory muscle strength, inspiratory muscle endurance, forced vital capacity, forced expiratory volume at 1 second, peak expiratory flow, 6 min walking test performance, diaphragm thickness, exercise tolerance, and swallowing function while reducing respiratory complications and pulmonary infections [R, R, R, R, R, R, R].

Airway muscle training may help by strengthening the muscles used to swallow and speak. This training can also stimulate memory and cognitive functions, thereby aiding in the recovery process.

15

Choose Healthy Fats

IMPACT 3 / 5

EVIDENCE 4 / 5

How to implement

Incorporate sources of unsaturated fats such as olive oil, avocados, nuts, seeds, and fatty fish into your daily diet. Aim for at least two servings of fatty fish per week and use olive oil for cooking and salad dressings. Replace saturated fats found in red meat, butter, and processed foods with these healthier options whenever possible.

Description

Choosing healthy fats, such as those found in avocados, nuts, and fatty fish, can support cardiovascular health, reduce inflammation, and promote overall well-being. A diet balanced in healthy fats can help manage cholesterol levels and reduce the risk of heart disease.

Based on their structure, the fats in our diet can be broadly divided into *saturated* and *unsaturated* fat. Trans fat is a type of unsaturated fat [R, R, R].

In large amounts, trans fat and saturated fat may have a negative impact on your heart and reproductive health. Processed foods and animal products like red meat and dairy are rich in these fats [R, R, R, R, R].

Some types of unsaturated fat can protect your heart and support fertility. **Experts say you should add more unsaturated fats to your diet**. Some good sources include [R, R, R]:

- Nuts
- Seeds
- Fish

Unsaturated fats include polyunsaturated fats or PUFAs (omega-3 and omega-6) and monounsaturated fats or MUFAs [R, R].

How it helps

Dietary changes that prioritize healthy fats may reduce stroke risk. Some strategies include [R, R, R, R, R, R, R]:

- Eating less fat, especially trans fats
- Eating more monounsaturated fats (MUFA) (e.g., olive oil)
- Eating more omega-3s fatty acids (e.g., eating fish at least 1x/week)

Choosing healthy fats may help by **reducing cholesterol buildup** in the arteries [R, R, R].

In line with this, experts recommend following diets that emphasize healthy fats like the Mediterranean diet [R].

Even though some experts recommend limiting saturated fat, studies show that moderate SF intake may be beneficial in some groups of people, such as [R, R]:

- East Asians
- Men
- Those with a healthy weight
- Those consuming less than 25 g of fat per day

16

Occupational Therapy

IMPACT 3 / 5

EVIDENCE 4 / 5

How to implement

Participate in occupational therapy sessions 1-2 times per week for a duration of 45-60 minutes each session. These sessions should be guided by a licensed occupational therapist who will tailor activities to your specific needs. Continue therapy for as long as recommended by your healthcare provider to achieve the best outcomes.

TYPICAL STARTING DOSE

45 minutes

Description

Occupational therapy is a healthcare profession focused on helping individuals of all ages develop or regain skills for everyday activities, improve physical and mental well-being, and enhance overall quality of life.

Occupational therapy helps people do everyday activities. A therapist teaches them new ways and methods to perform the activities. This therapy helps people adapt to issues like chronic pain. It also helps them learn to use assistive devices [R, R].

Occupational therapy aims to help people with injury or illness. It may help with things like [R]:

- Eating without help from others
- Taking part in leisure activities
- Doing office or school work
- Bathing and getting dressed
- Doing laundry or house cleaning

How it helps

Experts suggest that occupational therapy may contribute to stroke recovery [R, R].

Occupational therapy may help stroke survivors regain their **independence with daily activities** [R, R, R, R, R, R].

It may also teach family and caregivers how to help the person recovering from a stroke [R].

Additionally, it may provide assistive devices and modifications to the home environment to improve safety and function [R].

17

Cognitive-Behavioral Therapy (CBT)

IMPACT 3 / 5

EVIDENCE 4 / 5

How to implement

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

Description

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

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

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

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

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

How it helps

Experts suggest that psychotherapy may help people recovering from a stroke. In particular **CBT** may help by improving [R]:

- Mood
- Anxiety
- Independence in daily activities

18

Dietary Omega-3 Fatty Acids

IMPACT 3 / 5

EVIDENCE 4 / 5

How to implement

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

Description

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

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

Fatty fish are rich in EPA and DHA. They include [R]:

- Salmon
- Tuna
- Herring
- Sardines

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

How it helps

High intake of dietary omega-3 fatty acids is associated with a **16-25% lower risk of stroke**, especially in women and people with a healthy weight. Studied sources of omega-3s include [R, R, R, R, R]:

- Seafood
- Fish

Fish intake (1-5x/week) is associated with up to **45%** lower risk of stroke. Increasing fish intake by 3 servings a week may reduce the risk by 6% [R, R, R, R, R, R, R].

High intake of omega-3 fatty acids may help by [R, R, R]:

- Reducing cholesterol buildup in the arteries
- Lowering blood pressure
- Decreasing inflammation

In line with this, experts recommend following diets that emphasize omega-3s like the Mediterranean diet [R].

19

Speech Therapy

IMPACT 3 / 5

EVIDENCE 4 / 5

How to implement

Attend speech therapy sessions with a certified speech-language pathologist for 45 to 60 minutes per session, 1-2 times per week, for a period that can range from a few months to over a year, depending on the specific needs and progress.

TYPICAL STARTING DOSE

45 minutes

Description

Speech therapy is a specialized form of therapy that focuses on improving communication skills, speech fluency, and language development in individuals with speech and language disorders, offering support for improved communication and quality of life.

Speech therapy is used to assess and treat speech and communication problems. It helps people develop the skills needed for more effective communication. It is used to treat everything from childhood speech disorders to speech impairments caused by stroke or brain injury.

Speech and language therapy (SLT) aims to improve [R, R]:

- Communication
- Eating
- Drinking
- Swallowing

These programs support children and adults who [R]:

- Recover from a stroke or brain injury
- Have speech disorders (e.g., stuttering)
- Have swallowing or joint disorders

How it helps

Experts suggest that speech therapy may help people with communication problems after a stroke. It may help improve [R, R]:

- Speaking
- Reading
- Writing

High-intensity (5-7x/week), high-dose (at least 2.5 hours/day), or long-term (for 1-22 months) therapies may offer a greater benefit. However, they may also increase dropout rates [R].

20

Shock Wave Therapy

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

Schedule and attend sessions for extracorporeal shock wave therapy (ESWT) with a qualified healthcare provider. Typically, treatments may involve 1 to 3 sessions a week over a span of 3 to 4 weeks, depending on the condition being treated and the severity of symptoms.

Description

Extracorporeal shockwave therapy is a medical treatment that uses shockwaves to stimulate healing and reduce pain in various musculoskeletal conditions. It is often used for conditions such as plantar fasciitis and tendinitis.

In extracorporeal shockwave therapy, sound waves are emitted and passed through parts of the body. Doctors use it to help reduce pain and stimulate tissue recovery in people [R, R].

How it helps

Seven meta-analyses (the largest one with 42 trials and 1973 participants) concluded that extracorporeal shock wave therapy **reduces upper and lower limb spasticity and pain, increases ROM, and further improves the effectiveness of physiotherapy** in people recovering from a stroke or motor neuron injury. The effects may be **most effective in patient who had stroke for less than 45 months and persist for 3 months** [R, R, R, R, R, R, R].

Another meta-analysis (18 trials) concluded that extracorporeal shock wave therapy **improves pain levels, motor function, active mobility, comprehensive function of shoulder, and activities of daily living better than conventional treatment in people with shoulder pain after a stroke** [R].

21

Avoid Sugary Foods & Drinks

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

To avoid sugary foods, eliminate or significantly reduce consumption of foods and beverages high in added sugars such as sodas, candies, baked goods, and sugary cereals from your diet. Instead, opt for natural sugar sources like fruits. Aim to do this daily for ongoing health benefits.

Description

High-sugar foods like baked goods, sweets, and sugary drinks, can spike your blood sugar levels. Consuming a lot of these types of foods can contribute to to health issues like diabetes, obesity, insomnia, and heart disease.

High-sugar foods and refined carbs have a high glycemic index (GI). This means they tend to spike your blood sugar levels. They include [R, R, R]:

- Sugary drinks
- Baked goods
- Sweets
- White bread
- White rice
- Pasta

Eating a lot of sugary foods can contribute to:

- Diabetes [R, R, R]
- Weight gain and obesity [R, R]
- Insomnia [R]
- Heart disease [R]

You may also want to avoid processed sugars and sugary drinks. They may have a role in increasing IL-1B [R, R].

How it helps

Consuming sugary foods is associated with an increased risk of stroke. For example, every 250-mL serving of sugar-sweetened beverages is linked to a 10% higher stroke risk [R, R, R, R].

Sugary foods may influence stroke risk by increasing [R]:

- Blood sugar levels
- Blood pressure
- Cholesterol

22

DASH Diet

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

Adopt a dietary pattern that emphasizes fruits, vegetables, whole grains, lean proteins, and low-fat dairy, while reducing sodium, red meat, sweets, and sugary beverages. Aim for 4-5 servings of both fruits and vegetables per day, 6-8 servings of grains (with at least half being whole grains), and 2-3 servings of low-fat dairy. This diet should be followed daily to manage blood pressure effectively.

Description

The DASH (Dietary Approaches to Stop Hypertension) diet is a dietary plan designed to reduce high blood pressure. It emphasizes fruits, vegetables, lean proteins, and whole grains while limiting sodium intake.

Health experts developed the DASH diet to reduce blood pressure. This diet also helps support weight control while reducing inflammation and cholesterol [R].

It **limits salt, sweets, and saturated fat**, while promoting the intake of [R]:

- Fruits (4-5 servings/day)
- Vegetables (4-5 servings/day)
- Whole grains (6-8 servings/day)
- Low-fat dairy (2-3 servings/day)
- Nuts, seeds, and legumes (4-5 servings/week)
- Fish and poultry (up to 6 ounces/day)

The DASH diet focuses on fresh, minimally processed food rich in nutrients. Magnesium, calcium, and potassium-rich foods are particularly important due to their beneficial effects on the heart and blood vessels [R].

Although similar to the Mediterranean diet, DASH is lower in sodium (<2,300 mg a day) and omega-3 fatty acids. On the other hand, it's higher in red meat and dairy [R].

How it helps

High salt intake is associated with a **23-34%** higher risk of stroke. The risk of stroke may increase by **6%** for every **1-g/day increase** in salt intake. Excess salt is especially harmful in people who don't get enough potassium [R, R, R].

Reduced salt intake is one of the key features of the DASH diet. In line with this, following the DASH diet is associated with a 13-24% lower risk of stroke. The more you stick to the diet, the greater the benefit [R, R, R, R, R].

23

Relaxation Techniques

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

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

TYPICAL STARTING DOSE

30 minutes

Description

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

We all get stressed from time to time.

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

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

People use relaxation techniques to improve conditions like [R, R, R]:

- Anxiety
- Depression
- Chronic pain

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

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

How it helps

Perceived stress is associated with a 33-70% higher risk of stroke, especially in women.

For example, job strain and long working hours may increase the risk of stroke. Working **more than 40 hours/week** may increase the stroke risk by 4-35% [R, R, R, R].

Relaxation techniques like **mindfulness (daily for 8 weeks)** and **yoga (2x-6x/week for 6-10 weeks)** may help people recovering from a stroke by [R, R, R, R]:

- Reducing mental fatigue
- Alleviating anxiety and depression
- Improving memory
- Increasing balance and fitness

Practicing **autogenic relaxation (5x/week for 1 month)** may help people recovering from a stroke to reduce anxiety [R, R].

24

Backward Walking

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

Engage in backward walking for 10-15 minutes daily, preferably in a safe, obstacle-free environment to minimize the risk of falls. This can be done in a straight line or in a loop. Ensure to start slowly to maintain balance and gradually increase your pace as you become more comfortable with the movement.

TYPICAL STARTING DOSE

10 minutes

Description

Backward walking, also known as retro walking, can provide unique benefits for balance, coordination, and muscle engagement compared to forward walking. It's used as a form of exercise to improve motor skills and lower-body strength.

How it helps

Two meta-analyses (the largest one with 10 studies) concluded that backward walking helps improve 10-m walk test performance (by 0.1 m/s), gait velocity, cadence (by 4 steps/min), balance, paretic step length (by 5.32 cm), and stride length (by 6.61 cm) in people recovering from a stroke. Two studies not included in the meta-analyses found similar benefits of backward walking [R, R, R, R].

Backward walking may help by improving balance, coordination, and mobility. Additionally, it stimulates neural recovery and encourages better muscle utilization.

25

Tai Chi

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

Practice Tai Chi for 30 to 60 minutes at least twice a week. Choose a quiet, spacious area and follow along with a qualified instructor, either in person at a class or through an online video tutorial, to ensure proper technique and maximum benefit.

TYPICAL STARTING DOSE

1 hour

Description

Tai Chi is a traditional Chinese mind-body practice involving slow, flowing movements and deep breathing. It is known for its potential to reduce stress, improve balance, and enhance overall physical and mental well-being.

Tai chi involves gentle movements and breathing to strengthen and relax the mind and body. Practicing tai chi may help [R, R, R]:

- Manage pain
- Improve fitness
- Increase well-being
- Improve sleep and mood

How it helps

High physical activity may **reduce the risk of stroke by up to a half**. Tai chi in particular may reduce the risk of stroke by lowering [R, R, R, R, R]:

- Blood pressure
- Blood sugar
- Insulin resistance
- Weight

In stroke survivors, tai chi may improve [R, R, R, R]:

- Fitness
- Mood and anxiety

26

Whole Grains

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

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

Description

Whole grains encompass a variety of grains like wheat, oats, and quinoa, where the entire grain kernel is intact. They are rich in fiber, vitamins, minerals, and antioxidants, supporting heart health and reducing the risk of chronic diseases.

Unlike refined grains, whole grains contain nutritious parts of the grain like bran and germ.

Whole grains provide many crucial nutrients, including:

- Fiber
- B-vitamins
- Iron
- Magnesium
- Phosphorus

Due to their high fiber content, whole grains don’t tend to spike blood sugar like refined grains do.

How it helps

Following a diet rich in whole grains is associated with a **33%** lower risk of stroke. The fiber in whole grains may help by supporting heart health and blood sugar control [R, R, R].

The Mediterranean diet emphasizes whole grains and may help reduce the risk of stroke [R].

27

Acupuncture

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

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

TYPICAL STARTING DOSE

1 hour

Description

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

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

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

How it helps

Acupuncture may help with **post-stroke complications** by:

- Improving leg and arm function [R, R, R, R]
- Easing swallowing and reducing hiccups [R, R, R, R]
- Improving mood [R, R, R, R]
- Improving cognitive performance (e.g., writing, listening, reading) [R, R, R]

Acupuncture may also reduce the risk of insomnia and help control blood pressure [R, R, R].

However, most supporting studies are small and low-quality [R, R, R, R, R, R].

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

28

Nerve Stimulation

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

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

TYPICAL STARTING DOSE

30 minutes

Description

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

Health professionals can stimulate your nerves using different strategies [R].

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

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

Nerve stimulation may improve [R, R, R, R, R, R, R, R]:

- Cognition
- Mood
- Pain
- Seizures
- Tinnitus

How it helps

Nerve stimulation may support **stroke recovery**. It may help improve [R, R, R, R, R, R, R, R, R, R, R, R]:

- Fitness and movement
- Muscle relaxation
- Swallowing

Studied modalities include [R, R, R, R]:

- Repetitive transcranial magnetic stimulation (rTMS)
- Transcranial direct current stimulation (tDCS)
- Transcutaneous electrical nerve stimulation (TENS)

TENS may be the best at improving swallowing. **rTMS may be the best option at all the other outcomes**, including [R, R, R, R, R, R, R, R, R]:

- Language recovery [R, R, R, R, R]
- Cognitive function (e.g., attention) [R, R]
- Depression [R, R]
- Unilateral neglect (the inability to respond to people or objects on the affected side) [R, R]

Please note: *Nerve stimulation may not be safe for people that have metal implanted devices, have epilepsy, or are pregnant. Some types of nerve stimulation should also be avoided by people with bleeding disorders or heart disease. Consult your doctor before using nerve stimulation devices of any kind* [R, R, R].

29

Extra Virgin Olive Oil (EVOO)

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

Incorporate 1-2 tablespoons of extra virgin olive oil into your daily diet. Use it as a dressing for salads, vegetables, or incorporate it into cooking, but avoid using it at high temperatures to preserve its health benefits.

Description

Extra virgin olive oil is a high-quality olive oil obtained from the first pressing of olives. It is rich in monounsaturated fats and antioxidants, like polyphenols, and is associated with various health benefits, including heart health and anti-inflammatory properties.

Olive oil is fat from the olive, a traditional tree of the Mediterranean Basin [R].

Olive oil has anti-inflammatory and antioxidant properties. It may also reduce the risk of [R, R]:

- Heart disease
- Diabetes
- Cancer

Olive oil is also the primary fat source in the Mediterranean diet, which may improve brain and heart health [R].

How it helps

Increasing daily olive oil intake by **25 g** may reduce the risk of stroke by **35%** [R].

In line with this, experts recommend following diets that emphasize healthy fats like the Mediterranean diet, in which olive oil is a key component [R, R].

Consuming the monounsaturated fats (MUFAs) in olive oil may help by **reducing cholesterol buildup** in the arteries [R, R, R].

30

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

Music therapy (20-45 min/session, 3-5x/week) may support the **recovery of muscle function after a stroke**. As a result, it may improve walking, speed, and quality of life [R, R, R, R, R].

Music therapy may also **help people with language impairment after a stroke** by improving communication. However, it may not help with language comprehension. Studied music therapy modalities include [R, R, R]:

- Standard therapy
- Five-element music
- Metronome

Listening to music may also improve **mood, memory, and attention**, but the evidence for these benefits is weaker [R, R].

31

Vitamin C

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

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

TYPICAL STARTING DOSE

500 mg

Description

Vitamin C is an essential nutrient. This means that our bodies can't produce it on their own, so we have to get it from food or supplements [R].

Foods rich in Vitamin C include: [R]

- Citrus Fruits
- Peppers
- Brussel sprouts
- Kiwi
- Broccoli
- Tomato
- Cantaloupe
- Cauliflower
- Spinach

Vitamin C has antioxidant properties. It supports immunity, heart health, and wound healing [R, R].

Vitamin C deficiency is called *scurvy.* In the past, many sailors suffered from it [R].

How it helps

High vitamin C levels and intake are associated with a reduced risk of stroke. For every 100-mg increase in daily vitamin C intake, the risk may drop by 22% [R].

Vitamin C may help by [R, R]:

- Reducing blood pressure
- Reducing inflammation
- Fighting oxidative stress

Foods rich in vitamin C include fruits and vegetables like [R]:

- Citrus fruits
- Kiwi
- Red peppers
- Broccoli

Please note: *Supplementing with vitamin C is linked to a slightly higher risk of kidney stones in men. Talk to your doctor before taking vitamin C* [R, R, R].

32

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

Both long- and short-term exposure to air pollution, especially **nitrogen oxides and particulate matter**, is associated with an increased risk of stroke. Other studied harmful pollutants include [R, R, R, R, R, R, R, R, R, R, R, R]:

- Carbon monoxide
- Ozone
- Sulfur oxides

These pollutants may also **worsen complications** after a stroke.

Tips for lowering exposure to air pollution include [R, R]:

- Monitoring air pollution levels regularly
- 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

PERSONALIZED TO YOUR GENES

Your *ALOX15* gene variant is linked to heart problems. Air pollution may have a stronger effect on stroke risk factors in people with this variant [R, R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
ALOX15	**rs2664593**	CG	

33

Eat Fiber-Rich Foods

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

Incorporate foods high in fiber, such as fruits, vegetables, whole grains, and legumes, into your daily meals. Aim for a total dietary fiber intake of 25 to 30 grams per day, spread out over all meals.

Description

Fiber is a type of carb that your body can't digest which supports digestion, heart health, and blood sugar control. You can get fiber by eating things like whole grains, fruits, nuts, seeds, and leafy greens.

Fiber is a type of carb that your body can't digest. It supports digestion, heart health, blood sugar control, and more [R, R].

Adults should get 28 g of fiber every day. Most people in the US don't get enough fiber [R, R].

You can get more fiber by eating [R, R]:

- Whole grains
- Fruits
- Leafy greens
- Nuts and seeds
- Beans
- Broccoli

Fiber supplements, such as psyllium husk, are available for people who don't get enough fiber from their diets [R, R].

How it helps

A high dietary intake of fiber is associated with a reduced risk of stroke. **The risk may drop by 7% for every 7-g increase in daily fiber intake.** Fiber may help by [R, R, R]:

- Reducing blood pressure
- Reducing cholesterol levels
- Improving weight control
- Improving insulin sensitivity

Fiber-rich foods that may help protect against stroke include [R, R, R, R, R, R]:

- Whole grains
- Fruits
- Vegetables
- Nuts

34

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

Tea intake is associated with a reduced risk of stroke, especially ischemic stroke. The benefit may be greater with green tea and more cups per day [R, R, R, R].

The antioxidants in tea may help by [R, R]:

- Fighting oxidative stress
- Reducing inflammation
- Lowering blood pressure
- Reducing cholesterol

35

Dietary Antioxidants

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

Incorporate foods rich in antioxidants, such as fruits (berries, oranges, plums), vegetables (spinach, kale, bell peppers), nuts (walnuts, almonds), and seeds (flaxseeds, chia seeds) into your daily meals. Aim for at least 5 servings of fruits and vegetables per day, ensuring a variety of colors to cover different antioxidants.

Description

Dietary antioxidants are compounds found in foods that help neutralize harmful molecules called free radicals, potentially reducing the risk of oxidative stress-related diseases and supporting overall health. Examples include vitamins C and E, beta-carotene, and polyphenols.

Our cells sometimes produce molecules called **reactive oxygen species (ROS)** [R].

High levels of ROS can cause oxidative stress and damage our cells. Oxidative stress plays a role in many health conditions, including [R]:

- High blood sugar
- Type 2 diabetes
- Heart disease

Antioxidants are substances that help combat ROS [R].

Antioxidants are found in many plants. Good sources include [R, R, R]:

- Fruits like tomatoes, berries, and pomegranates
- Vegetables like onions, spinach, and celery
- Chocolate
- Olive oil
- Wine

How it helps

A high intake of dietary antioxidants called *flavonoids* is associated with a reduced risk of stroke, especially in men. Antioxidants may help by reducing [R, R, R, R, R]:

- Blood pressure
- Inflammation

Studied antioxidants sources include [R, R]:

- Tea
- Fruits
- Vegetables

36

Strength Training

IMPACT 3 / 5

EVIDENCE 3 / 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

High physical activity may **reduce the risk of stroke by up to a half**. Exercise may offer greater benefits when it includes **strength training** [R, R, R, R, R, R].

In stroke survivors, strength training may improve [R, R, R, R, R, R]:

- Fitness and movement
- Quality of life

They may particularly benefit from exercises that strengthen the core (trunk) [R, R, R, R, R, R].

Strength training may even help people who can’t walk.

37

Methylfolate

IMPACT 3 / 5

EVIDENCE 3 / 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 may reduce the risk of stroke. Each **100-µg/day** increase in dietary folate intake may reduce the risk of stroke by **6%** [R].

Folate supplementation (400-800 µg/day) may **reduce the risk of stroke by 8-22%,** especially in men. Supplements may produce the greatest benefits when taken over 36 months, combined with vitamin B6, and in people with [R, R, R, R, R, R, R, R]:

- Folate or vitamin B12 deficiency
- Normal cholesterol levels
- No history of stroke

However, not all studies found this benefit [R].

Folate may help by [R, R]:

- Reducing homocysteine levels
- Delaying artery hardening

PERSONALIZED TO YOUR GENES

People with your *MTHFR* gene variant may have slightly lower folate levels. This variant may be linked to higher odds of stroke in populations with lower folate intakes [R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
MTHFR	**rs1801133**	AA	

38

Leafy Green Vegetables

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

Incorporate at least one serving of leafy green vegetables, such as spinach, kale, or Swiss chard, into your diet daily. This can be done by adding them to salads, smoothies, or as a side dish to your meals.

Description

Leafy green vegetables like spinach and kale are packed with vitamins, minerals, and antioxidants. Incorporating them into your diet can promote overall health by providing essential nutrients, supporting digestion, and reducing the risk of chronic diseases like heart disease and certain cancers.

Leafy green vegetables, also called leafy greens, or greens, are edible plant leaves, which can include stalks and shoots as well. Common examples include: lettuce, spinach, kale, chard, endive, and fennel.

Leafy greens contain a host of vitamins and minerals, as well as fiber. Most of them are a particularly good source of vitamin K.

How it helps

Consuming fruits and vegetables (at least 5 servings/day) is associated with a lower risk of stroke. The more servings per day, the greater the benefit [R, R, R, R, R, R, R, R, R].

Green leafy vegetables are among the most protective foods. Eating 5-6 servings per day may reduce the risk of stroke by **9-26%.** Some studied green leafy vegetables include [R, R]:

- Spinach
- Lettuce

Consuming fruits and vegetables is linked to lower risk of cardiovascular diseases, including coronary heart disease and stroke, as well as reduced mortality from these conditions. Certain fruits and vegetables offer greater benefits [R].

PERSONALIZED TO YOUR GENES

Increased vegetable intake may offer greater protection against stroke in people with your *PON1* gene variant [R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
PON1	**rs662**	TT	

39

Dietary Calcium

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

Consume 1,000-1,200 mg of calcium daily through dietary sources such as dairy products (milk, yogurt, cheese), green leafy vegetables (kale, broccoli), and fortified foods (orange juice, plant-based milks). Adults under 50 need 1,000 mg per day, while those over 50 should aim for 1,200 mg per day.

Description

Dietary calcium is a mineral found in dairy products, leafy greens, and fortified foods. It is essential for bone health, muscle function, and nerve transmission.

Calcium is the most abundant mineral in the human body. It is vital for the bones, heart, muscles, and nervous system [R].

Your body gets calcium from food and needs vitamin D to help absorb it. Calcium can be found in a variety of foods, including [R]:

- Dairy products
- Green, leafy vegetables
- Fish with edible soft bones (e.g., sardines)
- Calcium-fortified foods and beverages

How it helps

Increasing the dietary intake of calcium is associated with a reduced risk of stroke, especially in people with low calcium intake (700 mg/day). Eat more calcium-rich foods like **yogurt, sardines, and orange juice** [R, R, R, R, R, R].

In contrast, **supplementing with calcium may increase the risk of stroke**, especially in men [R].

40

Dietary B Vitamins

IMPACT 2 / 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

A high dietary intake of **folate and vitamin B6** may reduce the risk of stroke by fighting artery hardening [R].

Supplementing with B vitamins may also reduce the risk of stroke. The benefit may be greater in men and those taking **folate and vitamin B6** simultaneously [R, R, R].

41

Sleep for 7+ Hours

IMPACT 2 / 5

EVIDENCE 3 / 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

Short sleep (less than 7 hours/night) is associated with a 10-33% higher risk of stroke [R, R].

People with sleep disorders may also have worse complications after a stroke [R].

Poor sleep contributes to many risk factors for stroke, including [R]:

- High blood pressure
- Increased cortisol levels
- Chronic inflammation

If you have an ongoing sleep problem, it's a good idea to discuss it with your doctor. Getting too much sleep or having trouble falling or staying asleep may be a sign of an underlying health issue.

42

Stability Training

IMPACT 2 / 5

EVIDENCE 3 / 5

How to implement

Integrate stability exercises into your workout routine 2-3 times per week. These exercises include activities such as using a stability ball, performing balance exercises on a balance board, or doing body-weight exercises that focus on balance and core strength, such as planks and single-leg stands. Spend approximately 20-30 minutes per session focusing on these exercises.

TYPICAL STARTING DOSE

30 minutes

Description

Stability training is a form of exercise that focuses on enhancing core strength and balance through targeted movements and exercises, often incorporating equipment like stability balls, balance boards, or resistance bands. It helps improve overall stability and posture while reducing the risk of falls and injury.

How it helps

A meta-analysis of 11 trials involving stroke patients found that adding core stability exercises to usual physiotherapy improved trunk control, dynamic balance, and walking speed [R].

However, force platform feedback improved stance symmetry but not sway in standing, clinical balance outcomes, or measures of independence in another meta-analysis of 7 trials [R].

Nevertheless, several meta-analyses support the use of trunk exercises to improve stability and balance [R, R, R, R, R].

Stability training can enhance balance and muscle strength in stroke survivors, making daily activities easier and safer by reducing the risk of falls. It can also improve the functionality of the affected limbs, contributing to overall recovery.

43

Dietary Magnesium

IMPACT 2 / 5

EVIDENCE 3 / 5

How to implement

Increase your intake of magnesium-rich foods such as leafy green vegetables, nuts, seeds, and whole grains. Aim to include these foods in your diet daily, following the recommended dietary allowance of 320 mg per day for women and 420 mg per day for men.

Description

Magnesium is a vital mineral involved in over 300 biochemical reactions in the body. It supports various functions, including muscle and nerve function, bone health, and blood sugar regulation.

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

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

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

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

How it helps

High dietary magnesium intake is associated with a reduced risk of stroke. For every 100-mg increase in daily magnesium intake, the risk may drop by up to 15%. Magnesium may help by [R, R, R, R]:

- Reducing blood pressure
- Improving sugar metabolism
- Reducing blood fat levels

Please note: *A daily dose of magnesium supplements should not exceed 350 mg* [R].

44

Biofeedback

IMPACT 2 / 5

EVIDENCE 3 / 5

How to implement

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

Description

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

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

Biofeedback is used to help with [R, R]:

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

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

How it helps

Biofeedback training, combined with physical therapy, may support recovery after stroke by improving [R, R, R, R]:

- Muscle strength
- Leg function
- Walking
- Cognitive function

However, the studies are small and low-quality [R, R, R].

45

Ginkgo

IMPACT 2 / 5

EVIDENCE 3 / 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

Ginkgo leaf extract (120-160 mg/day for 2-4 weeks) may improve brain function and independence in daily activities in stroke survivors. However, it may not improve some complications and mortality [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].

46

Maintain Optimal Vitamin D Levels

IMPACT 2 / 5

EVIDENCE 3 / 5

How to implement

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

TYPICAL STARTING DOSE

1000 iu

Description

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

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

- Mood
- Immunity
- Heart health
- Blood sugar control

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

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

How it helps

People with low vitamin D levels or intake may be at increased risk of stroke and have a worse prognosis. Low vitamin D may increase the risk of ischemic but not hemorrhagic stroke [R, R, R, R].

Low vitamin D levels may also increase the risk of stroke recurrence [R].

However, supplementation may not help prevent strokes [R, R].

47

Dietary Vitamin E

IMPACT 2 / 5

EVIDENCE 3 / 5

How to implement

Incorporate foods high in Vitamin E into your daily diet. This includes almonds, hazelnuts, sunflower seeds, and green leafy vegetables such as spinach and broccoli. Aim for a daily intake of 15mg of Vitamin E from your diet, which is roughly a handful of almonds (about 23 almonds) or 2 tablespoons of sunflower seeds.

Description

Dietary vitamin E is a fat-soluble antioxidant vitamin found in nuts, seeds, and vegetable oils. It helps protect cells from oxidative damage and supports immune function.

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

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

- Wheat germ
- Sunflower seeds
- Almonds
- Plant oils

Adults need about **15 mg** of vitamin E per day [R].

How it helps

A high dietary intake of vitamin E is associated with a reduced risk of stroke, especially in women. Vitamin E may help by fighting [R, R]:

- Oxidative stress
- Artery hardening

Foods rich in vitamin E include [R]:

- Wheat germ
- Sunflower seeds
- Almonds
- Plant oils

Genetically higher vitamin E levels may be causally associated with stroke. [R]

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

48

Low-Carbohydrate Diet

IMPACT 2 / 5

EVIDENCE 3 / 5

How to implement

Limit your daily intake of carbohydrates to less than 26% of your total daily calories. For a standard 2000-calorie diet, this means consuming no more than 130 grams of carbohydrates per day. Focus on including non-starchy vegetables, lean proteins, and healthy fats in your meals while minimizing the intake of sugars, bread, pasta, and other high-carb foods.

Description

Low-carbohydrate diets can promote weight loss, improve blood sugar control, and support heart health. They may also be beneficial for individuals with certain medical conditions, such as epilepsy or metabolic syndrome.

How it helps

A low-carb diet helps manage weight and control blood pressure, both of which are risk factors for stroke. By reducing these risks, it could help prevent stroke occurrence.

A meta-analysis of 19,850 participants followed up for an average of 13.1 years associated with eating an **animal-based (but not plant-based) low-carb diet with a 13% lower risk of stroke** [R].

49

Magnesium Sulfate

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

Take 200-400 mg of magnesium sulfate orally with water once daily, ideally in the evening or as directed by your healthcare provider. Continue this supplementation as recommended by your healthcare provider, often for several weeks to months for optimal benefits.

TYPICAL STARTING DOSE

200 mg

Description

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

How it helps

Magnesium sulfate works by reducing brain swelling and helping the nerves function properly, crucial factors affecting recovery from a stroke. It can also potentially reduce the risk of disability after a stroke by protecting nerve cells and improving blood flow to the brain.

A systematic review and meta-analysis of 7 trials (4347 patients post-acute stroke) found that intravenous magnesium sulfate (MgSO4) did not improve functional outcome (Barthel Index >60 or >95) or global outcome (modified Rankin Scale) at 90 days poststroke. In ischemic stroke patients, MgSO4 led to lower modified Rankin Scale scores but did not impact mortality [R].

50

Yoga

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

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

TYPICAL STARTING DOSE

30 minutes

Description

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

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

- Reduce stress
- Improve fitness
- Lower blood pressure and heart rate
- Manage pain

How it helps

Practicing yoga (2-6x/week for 6-10 weeks) may support stroke recovery by improving [R, R, R]:

- Anxiety and mood
- Memory
- Balance and fitness
- Quality of life

51

Emoxypine

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

Emoxypine is typically available in oral capsules, tablets, or injectable forms, with the dosage depending on the condition being treated. For general antioxidant or neuroprotective purposes, the oral dose ranges from 125–250 mg taken 2–3 times daily, while more intensive treatments may require higher doses or injectable administration under medical supervision. It is usually recommended to take Emoxypine with meals to minimize gastrointestinal discomfort. Treatment duration can vary from a few weeks to several months, depending on the therapeutic goal.

Description

Emoxypine (2-ethyl-6-methyl-3-hydroxypyridine succinate) is a synthetic antioxidant and nootropic compound primarily used in Russia and some Eastern European countries. It is derived from pyridoxine (vitamin B6) and known for its neuroprotective, anti-stress, and anti-inflammatory properties.

Emoxypine can reduce anxiety, stress, and symptoms of depression by normalizing neurotransmitter levels and protecting brain cells from oxidative stress. Additionally, it has applications in managing cognitive impairment, improving memory, and protecting against age-related neurodegeneration. Emoxypine is also used for cardiovascular health, as it can improve blood flow and protect tissues from ischemia-reperfusion injuries.

Emoxypine works by scavenging free radicals, enhancing membrane fluidity, and improving the body's antioxidant defenses.

How it helps

A meta-analysis of 11 studies concluded that Emoxypine may reduce NIHSS and Rankin scale scores in patients recovering from a stroke, especially with longer treatments or in patients with more severe neurological deficit [R].

Emoxypine also improved neurological deficit, cognition, mood, and quality of life in two more recent trials of 112 stroke patients [R, R].

52

Dance

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

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

TYPICAL STARTING DOSE

30 minutes

Description

Dancing involves moving your body to music. Many people take dance classes to learn various styles of dance and improve their skills. Examples include:

- Ballet
- Zumba
- Belly dancing
- Hip hop
- Salsa

Dancing is a fun, creative, and relaxing activity. It can also provide a range of health benefits, improving your heart health, brain health, fitness, and more.

How it helps

Dance provides a fun, engaging activity that improves balance, coordination, physical strength and flexibility, important factors when recovering from a stroke. It can also aid mental well-being and cognitive functions by stimulating brain activities and reducing stress levels.

A systematic review of 8 studies concluded that dance (typically, tango or ballet in 30- to 110-minute sessions) **improves post-stroke body functions and activities such as gait and balance** [R].

53

Safflower Yellow

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

Take safflower yellow as a dietary supplement in capsule form, usually available in dosages ranging from 250mg to 500mg. Consume one capsule daily with water, preferably with a meal to enhance absorption. It is often recommended to continue this supplementation for a minimum of 8 to 12 weeks to observe potential health benefits.

Description

Safflower yellow is a natural yellow dye derived from the safflower plant, Carthamus tinctorius. The main compounds in safflower yellow are carthamin and carthamidin. Its use as a dietary supplement is relatively new, with its compounds potentially benefitting heart and brain function, as well as blood sugar and cholesterol levels.

Safflower or false saffron (*Carthamus tinctorius*) is an annual herb used in traditional Chinese herbal medicine. It was first cultivated 4,000 years ago for culinary, textile, and medicinal purposes [R, R].

Safflower petals are also used to produce a natural pigment called **safflower yellow**, which is used to improve [R]:

- Heart and brain function
- Blood sugar and cholesterol levels

How it helps

Safflower yellow (100-150 mg/day for 2 weeks) may improve brain function in people recovering from a stroke [R].

54

Take Naps

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

Take short naps of about 20-30 minutes in the early afternoon, preferably between 1 pm and 3 pm, to avoid interfering with nighttime sleep.

TYPICAL STARTING DOSE

20 minutes

Description

Taking short naps, typically lasting 20-30 minutes, can improve alertness, mood, and cognitive performance. Napping can be a beneficial practice for combating fatigue and enhancing daytime productivity.

How it helps

Daytime napping was associated with a 38% increased risk of stroke in a meta-analysis, with the risk rising by 3% for every 10-minute increase in napping [R].

55

Pet Therapy

IMPACT 2 / 5

EVIDENCE 2 / 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

Pet therapy with **dogs and horses** may support stroke recovery by improving [R, R, R, R]:

- Walking and balance
- Memory
- Motivation and mood
- Quality of life

56

Pomegranate Juice

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

Drink 8 ounces (about 240 milliliters) of 100% pomegranate juice daily, ideally in the morning to incorporate it into your daily routine. Continue this practice regularly as part of your daily diet.

Description

Pomegranate juice is made from the seeds and pulp of the fruit. It is rich in nutrients, including vitamin C, vitamin K, folate, potassium, and dietary fiber., and provides a source of dietary antioxidants that may provide addition benefits for inflammation and heart health.

Pomegranates are red fruits that contain seeds covered by edible sweet coats. They are rich in antioxidants [R, R].

Pomegranate may reduce inflammation and support heart health. People use pomegranate seed oil and peel in cosmetics and traditional medicine [R, R].

How it helps

In a placebo-controlled trial of 100 ischemic stroke patients, the daily consumption of pomegranate juice (220 mL) significantly decreased the severity, frequency, and duration of angina pectoris episodes, along with reduced serum troponin and malondialdehyde levels. Another placebo-controlled trial involving 16 ischemic stroke patients showed that a 2-week intake of pomegranate juice containing 1 gram of polyphenols improved cognitive and functional recovery [R, R].

Pomegranate juice is rich in antioxidants that can help reduce the damage to cells caused by free radicals. Additionally, it aids in lowering blood pressure.

57

Panax Notoginseng

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

Take 200-400mg of Panax notoginseng extract daily, preferably with food to enhance absorption. This can be done indefinitely for general health benefits or specifically for certain conditions as directed by a healthcare provider.

Description

Panax notoginseng (Sanqi) is a plant native to China and other parts of Asia. It has been utilized in traditional Chinese medicine for centuries and in recent decades as a supplement, to promote cardiovascular health, reduce bleeding, and alleviate pain. The primary active compounds are saponins called notoginsenosides, and it is commonly consumed in the form of herbal teas, capsules, or powders.

Ginseng is a plant people use to improve [R, R, R, R]:

- Sexual function
- Immunity
- Fatigue
- Attention

There are many different types of ginseng. The most common ones are [R, R, R]:

- Korean red ginseng, also called Asian ginseng (*Panax ginseng*)
- American ginseng (*Panax quinquefolius*)
- Chinese notoginseng, also called Sanchi (*Panax notoginseng*)

How it helps

Chinese ginseng (400-600 mg/day for 1-4 weeks) may help improve brain function in stroke survivors when used with standard treatment [R, R].

58

Lycopene

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

Take a lycopene supplement of 10 to 30 mg per day. It can be consumed with a fat-containing meal to enhance absorption. This supplementation can be ongoing daily to support overall health benefits such as heart health and antioxidant protection.

TYPICAL STARTING DOSE

10 mg

Description

Lycopene is a powerful antioxidant found in tomatoes and other red or pink fruits and vegetables. Consuming lycopene-rich foods may help reduce the risk of chronic diseases and support heart and prostate health.

Lycopene is a bright red substance that gives color to a number of fruits such as [R, R]:

- Tomato
- Watermelon
- Papaya
- Apricot

Lycopene has antioxidant properties. It may help support [R, R, R]:

- Heart health
- Prostate health
- Cognition

How it helps

Lycopene, a powerful antioxidant found in tomatoes, reduces stroke risk by preventing oxidative damage, which causes harm to blood vessels in the brain. Regular intake can therefore lower the risk of stroke by maintaining healthy blood vessels.

In a review of 17 articles, dietary lycopene intake or serum lycopene was inversely associated with all-cause mortality, prostate cancer, stroke, cardiovascular disease, metabolic syndrome, and male infertility [R].

Circulating lycopene, not dietary lycopene, was associated with a statistically significant decrease in stroke risk (RR=0.693, 95% CI=0.503-0.954) [R].

Meta-analysis of 5 studies found that high lycopene intake or serum levels were associated with reduced stroke (HR 0.74), cardiovascular disease (HR 0.86), and mortality risk (HR 0.63), but not with myocardial infarction. Limited data on other heart conditions [R].

59

Alpha-GPC Choline

IMPACT 2 / 5

EVIDENCE 1 / 5

How to implement

Take 300-600 mg of Alpha-GPC choline supplement daily, preferably in the morning or early afternoon to avoid interference with sleep. It can be taken with or without food. Continue this supplementation for at least 4-6 weeks to assess its effectiveness.

TYPICAL STARTING DOSE

300 mg

Description

Alpha-GPC (L-alpha glycerylphosphorylcholine) is a natural compound that can be found in small amounts in various foods, including soy, and is also produced in the body. It is a choline-containing compound that may support cognitive function and memory.

How it helps

Alpha-GPC Choline boosts the production of acetylcholine, a neurotransmitter crucial for brain function, potentially aiding in stroke recovery. It may accelerate neural repair, improve cognitive functions, and reduce symptoms like fatigue and mood changes post-stroke.

In a trial with 40 patients, supplementation of Cereton (alpha-GPC, 1,000 mg IM for 15 days) enhanced cognitive function recovery, as assessed by MMSE and the "learning of 10 words" test. It increased blood supply, especially in the left hemisphere, suggesting reduced resistance artery tonus in both hemispheres, primarily on the left side. Alpha-GPC also reduced deviations in the center of pressure, particularly in the frontal plane. This suggests potential utility for alpha-GPC in late rehabilitation and residual stages of hemorrhagic stroke [R].

In a study of 80 stroke patients, choline alfoscerate (ChA), succinate combination (SC), and their combination improved dysphagia (38% above controls), while SC enhanced vocal cord closure (55% above controls). Combined treatment was more effective (15% over ChA, 21% over SC for swallowing; 33% and 22% for vocal closure; 37% and 76% for larynx movement), possibly due to synergism. [R].

60

Hyperbaric Oxygen Therapy

IMPACT 1 / 5

EVIDENCE 3 / 5

How to implement

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

TYPICAL STARTING DOSE

90 minutes

Description

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

How it helps

A meta-analysis of 11 trials and 705 participants found some evidence that hyperbaric oxygen therapy improves disability and functional performance after a stroke, but not case fatality rate at 6 months. Another meta-analysis (27 trials and 2250 participants) found that hyperbaric oxygen therapy improves post-stroke depression. In contrast, normobaric oxygen therapy has no significant effect on early neurological recovery, functional outcome, or mortality in acute stroke according to a meta-analysis of 15 trials and 9,255 participants [R, R, R].

Hyperbaric oxygen therapy may help by delivering pure oxygen to the brain, which can aid the recovery of damaged cells. This therapy could potentially stimulate the growth of new blood vessels, improve cerebral blood flow, and reduce the size of the damaged brain area.

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

61

Fruits

IMPACT 1 / 5

EVIDENCE 3 / 5

How to implement

Incorporate at least two servings of fresh, frozen, or canned fruits into your daily diet, aiming for a variety of colors and types to ensure a broad intake of vitamins, minerals, and antioxidants. One serving is equivalent to one medium-sized fruit, such as an apple or banana, or one-half cup of chopped fruit.

Description

Fruits are rich in vitamins, minerals, fiber, and antioxidants, making them essential for a balanced diet. Regular fruit consumption is associated with various health benefits, including better heart health, improved digestion, and reduced risk of chronic diseases.

Fruits are tasty and healthy foods high in vitamins, minerals, and antioxidants. They help reduce inflammation and support health in different ways.

Common examples include:

- Apples
- Oranges
- Bananas
- Grapes
- Watermelons

How it helps

Consuming fruits can benefit stroke patients because many fruits are rich in antioxidants and fiber that can help lower blood pressure and cholesterol levels, reducing the risk of stroke. The potassium in fruits also aids in heart health and can decrease the likelihood of having a stroke.

Consuming fruits and vegetables is linked to lower risk of cardiovascular diseases, including coronary heart disease and stroke, as well as reduced mortality from these conditions. Certain fruits and vegetables offer greater benefits [R].

62

Avoid Cadmium Exposure

IMPACT 1 / 5

EVIDENCE 3 / 5

How to implement

To avoid cadmium exposure, refrain from smoking or exposure to secondhand smoke, reduce consumption of foods high in cadmium like shellfish, liver, kidney meats, and certain leafy vegetables, and use ceramic or glass containers instead of plastic when microwaving food. Limit intake of cadmium-contaminated workplace air by using protective gear if you work in battery manufacturing, welding, or metal refining industries.

Description

Avoiding cadmium exposure is essential to prevent potential health risks associated with this heavy metal, such as kidney damage and increased cancer risk. Reducing exposure to cadmium-containing products and contaminated foods is crucial.

Heavy metals are elements naturally found in the environment. They are also used for agricultural, industrial, and medicinal purposes. Some can even be found in small amounts in your body [R, R].

Long-term exposure to high amounts of heavy metals can be harmful to your health [R, R].

Heavy metals that are most often linked to health problems include [R, R]:

- Lead
- Cadmium
- Arsenic
- Chromium
- Mercury

How it helps

Elevated cadmium exposure, measured by increased urinary and blood levels, is linked to higher cardiovascular disease mortality (34% and 78%, respectively), coronary heart disease, stroke, and peripheral artery disease. It's also associated with unfavorable lipid profiles. A systematic review of 12 studies found a significant connection between cadmium exposure and cardiovascular disease, particularly coronary heart disease. Smokers have higher serum cadmium levels, potentially linking cadmium exposure to cardiovascular disease risk [R, R, R, R, R].

Cadmium can increase blood pressure, a major risk factor for stroke.

63

Vegetables

IMPACT 1 / 5

EVIDENCE 3 / 5

How to implement

Incorporate at least 2-3 cups of various vegetables into your daily diet, ensuring a mix of colors like greens, reds, and yellows to maximize nutrient intake. Aim to include vegetables in most meals, either as a side, part of the main dish, or snacks.

Description

Vegetables are edible parts of plants that offer various health benefits due to their rich nutrient content, including vitamins, minerals, fiber, and antioxidants. They are essential components of a balanced diet and contribute to overall health, supporting various bodily functions.

How it helps

Vegetables are rich in dietary fiber and antioxidants, which help lower blood pressure and reduce the risk of atherosclerosis, two major factors that can lead to strokes. Additionally, they offer essential vitamins such as potassium and folate, which are known to protect against stroke.

Consuming fruits and vegetables is linked to lower risk of cardiovascular diseases, including coronary heart disease and stroke, as well as reduced mortality from these conditions. Certain fruits and vegetables offer greater benefits [R].

64

Avoid Arsenic Exposure

IMPACT 1 / 5

EVIDENCE 3 / 5

How to implement

Use a water filter certified to remove arsenic if you rely on well water, opt for arsenic-tested rice or rice products, and avoid using contaminated pesticides or herbicides in gardening or farming. Test your home for arsenic if you live in an area known for high levels of arsenic in soil or water. Limit consumption of foods known to accumulate arsenic such as rice and rice-based products, especially if you are pregnant, nursing, or preparing meals for young children.

Description

Avoiding arsenic exposure is essential for preventing potential health risks associated with arsenic contamination in drinking water and foods. Chronic exposure to arsenic has been linked to various health issues, including cancer and cardiovascular problems.

Arsenic is a heavy metal naturally found in the environment. It is used for mining, fracking, and industrial applications, such as the production of pesticides and wood preservatives, and the use of fossil fuels [R].

The main sources of exposure to arsenic are contaminated [R, R, R]:

- **Drinking water**
- **Rice** and fish
- Air

Long-term exposure to high amounts of arsenic may be linked to health problems, including [R, R, R, R, R]:

- Skin disorders
- Heart disease
- High blood pressure
- Stroke
- Diabetes
- Cancer

Please note: *Soaking, washing until clear, and cooking rice with a high (1:6) water-to-rice ratio may help reduce rice's arsenic content* [R, R, R].

How it helps

Avoiding arsenic exposure decreases your risk of developing high blood pressure, a major risk factor for stroke. Also, arsenic can damage blood vessels, making it easier for clots to form and cause a stroke.

In a study of 4990 participants, higher urinary total arsenic levels showed a potential association with fatal heart disease mortality, particularly at low exposure levels (<4.5 µg/L). Water arsenic doubling was linked to a 16% increased risk of coronary heart disease mortality [R].

A meta-analysis of 31 studies (2005 onwards) found high arsenic exposure (>50 µg/L) in drinking water linked to increased risks: cardiovascular disease (1.32), coronary heart disease (1.89), peripheral arterial disease (2.17), but stroke evidence was inconclusive at lower arsenic levels [R].

A meta-analysis of 11 studies found that exposure to 20 µg/l water arsenic was associated with increased relative risks for cardiovascular diseases and coronary heart diseases compared to 10 µg/l, as follows: CVD incidence (1.09), CVD mortality (1.07), CHD incidence (1.11), CHD mortality (1.16), stroke incidence (1.08), and stroke mortality (1.06) [R].

Exposure to drinking water with 10 µg/L arsenic (As) concentration, compared to 1 µg/L, led to significant risks of coronary heart disease (CHD), cardiovascular disease (CVD), carotid atherosclerosis, and hypertension. Lowering the guideline value is recommended [R].

This study found that higher urine arsenic levels were associated with increased 10-year atherosclerotic cardiovascular disease (ASCVD) risk in hypertensive men but not women, even at low arsenic levels. [R].

65

Chinese Rhubarb

IMPACT 1 / 5

EVIDENCE 2 / 5

How to implement

Take a supplement containing Chinese rhubarb extract, typically available in tablet or capsule form. The common dosage ranges from 500 to 1,000 mg per day, taken with water. It is advised to consult with a healthcare provider for the exact dosage based on individual health needs. Use this supplement daily for a period as recommended by the healthcare provider, usually not exceeding 8 weeks without medical advice.

TYPICAL STARTING DOSE

500 mg

Description

Chinese rhubarb is another traditional Chinese herbal remedy known for its potential to support digestive health and relieve constipation. It contains compounds that may have mild laxative effects.

Rhubarb (also named *Rhei* or *Dahuang*) is one of the most ancient herbs in traditional Chinese medicine. Rhubarb includes approximately 60 species of plants of the genus *Rheum L.* [R, R].

The rhubarb rhizome is considered a top medicinal plant in Chinese medicine. It is used for [R, R]:

- Constipation
- Kidney disease
- Herpes
- Gum disease

It may help due to its antibacterial and anti-inflammatory effects [R].

How it helps

Taking Chinese herbal remedies with rhubarb root or rhizome (1-3x/day for 1-4 weeks) may improve recovery after a stroke. However, the studies are small and low-quality [R, R].

Rhubarb may help by reducing inflammation [R].

Please note: *Be careful with rhubarb if you are prone to allergies. High doses of rhubarb may cause diarrhea and abdominal cramps. Avoid long-term use due to dependence risk. Rhubarb is not safe for people with gut conditions, women who are pregnant or breastfeeding, and children under 12 years of age. Make sure to consult your doctor before taking rhubarb* [R, R].

66

Carrots

IMPACT 1 / 5

EVIDENCE 2 / 5

How to implement

Incorporate at least one medium-sized carrot (about 61 grams) into your daily diet by either eating it raw, steamed, or as part of salads, soups, and stews to support eye health and provide essential nutrients.

Description

Carrots are a nutritious vegetable known for their high vitamin A content and numerous health benefits. They support eye health, provide essential nutrients, and contribute to a well-rounded diet.

Carrots are an excellent source of vitamin A, as well as biotin, vitamins K1 and B6, potassium, and antioxidants. A ½ cup serving provides 459 mcg of vitamin A or 51%DV.

How it helps

Carrots are high in antioxidants and potassium, elements that assist in lowering cholesterol and blood pressure, known risks for stroke. They also promote good eye health, and stimulate brain function, potentially reducing the chances of stroke.

Consuming fruits and vegetables is linked to lower risk of cardiovascular diseases, including coronary heart disease and stroke, as well as reduced mortality from these conditions. Certain fruits and vegetables offer greater benefits [R].

67

Pears

IMPACT 1 / 5

EVIDENCE 2 / 5

How to implement

Incorporate one medium-sized pear into your daily diet, either as a snack or part of a meal. You can eat it raw, add it to salads, or use it in recipes. Continue this practice daily for ongoing health benefits.

Description

Pears are a fruit that originates from the Pyrus tree, and have been eaten for centuries in various parts of the world. they are a good source of dietary fiber, vitamin C and K, and various antioxidants, which may be beneficial for gut health, help fight inflammation, and aid in weight loss.

How it helps

Pears are loaded with dietary fiber which helps in controlling cholesterol levels, a significant factor in stroke risk. They also contain important vitamins like C and K that support overall vascular health.

A meta-analysis of 95 studies (142 publications) revealed that higher fruit and vegetable consumption is associated with reduced risk of heart disease, stroke, cancer, and all-cause mortality. Maximum benefit observed at 800 g/day for most outcomes, except cancer (600 g/day). Certain items like apples, citrus fruits, and leafy greens showed strong links to lower risk of cardiovascular disease and all-cause mortality [R].

In 20 prospective cohort studies, higher consumption of total fruits and vegetables was associated with a 21% reduced risk of stroke. Specifically, fruit consumption reduced risk by 23%, while vegetable consumption lowered it by 14%. For every 200 g/day increase in fruits, stroke risk decreased by 32%, and for vegetables, it decreased by 11%. Citrus fruits, apples/pears, and leafy vegetables seemed to have protective effects against stroke [R].

In observational studies, apple or pear intake significantly decreased the risk of cerebrovascular disease, cardiovascular death, type 2 diabetes mellitus, and all-cause mortality [R].

68

Glucosamine

IMPACT 1 / 5

EVIDENCE 2 / 5

How to implement

Take glucosamine as a dietary supplement, commonly available in capsules or liquid form. The standard dose is 1500 mg per day, which can be taken all at once or divided into multiple doses throughout the day. It's often recommended to continue taking glucosamine for at least 3 to 4 months to evaluate its effectiveness in relieving joint pain or osteoarthritis symptoms.

TYPICAL STARTING DOSE

1500 mg

Description

Glucosamine is a supplement commonly used to support joint health and may help alleviate symptoms of osteoarthritis. It's believed to promote cartilage health and reduce joint discomfort, but individual responses can vary.

Glucosamine is a compound naturally made by the body. It helps keep the connective tissues, such as the cartilage in the joints, strong and elastic [R].

Many people use glucosamine supplements to support joint health [R, R, R].

How it helps

Glucosamine supplements are often used to help with arthritis pain, as they are believed to promote cartilage repair. However, there is no scientific evidence supporting its use in treatment or prevention of stroke.

In a study with 479,650 participants, glucosamine use was associated with a reduced risk of heart failure (HF) by 13%. This protective effect was stronger in males and those with an unfavorable lifestyle. Mendelian randomization analysis confirmed this protective effect and suggested that it may be partially mediated by a 10.5% reduction in coronary heart disease risk and a 14.4% reduction in stroke risk, with both mediators contributing to a total of 22.7% reduction in HF risk associated with glucosamine use [R].

69

Neurofeedback

IMPACT 1 / 5

EVIDENCE 2 / 5

How to implement

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

TYPICAL STARTING DOSE

1 hour

Description

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

How it helps

Neurofeedback aids stroke recovery by helping to retrain the brain to regain functions lost due to the stroke, such as movement or speech. It works by providing real-time feedback about brain activity, encouraging the brain to re-establish healthy patterns and connections, therefore improving symptoms.

The majority of 8 studies analyzed identified improvements in participant cognitive deficits following the initiation of therapy [R].

70

Omega-3 (Fish Oil)

IMPACT 1 / 5

EVIDENCE 2 / 5

How to implement

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

TYPICAL STARTING DOSE

2000 mg

Description

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

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

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

Fatty fish are rich in EPA and DHA. They include [R]:

- Salmon
- Tuna
- Herring
- Sardines

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

How it helps

Supplementation with omega-3 fatty acids may not help prevent strokes but may reduce their mortality. Omega-3s may also reduce risk factors such as total cholesterol and triglyceride levels [R].

71

Apples

IMPACT 1 / 5

EVIDENCE 2 / 5

How to implement

Incorporate at least one whole apple into your daily diet, either as a snack or part of your meals, ensuring to eat them consistently every day for an ongoing period to derive potential health benefits.

Description

Apples are a nutritious fruit known for their fiber content and antioxidant-rich skin. They support overall health by aiding digestion, reducing the risk of chronic diseases, and promoting heart health.

Apples (*Malus domestica Borkh.*) are one of the most widely consumed fruits in the world. They have a high nutritional value and content of antioxidants [R, R].

Eating apples is associated with a lower risk of [R, R]:

- Heart disease
- Asthma
- Diabetes

How it helps

Apples are rich in dietary fiber and antioxidants which help to lower cholesterol levels and reduce inflammation, respectively. This aids in preventing the build-up of plaque in arteries that can cause a stroke.

72

Autogenic Training

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

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

TYPICAL STARTING DOSE

10 minutes

Description

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

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

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

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

How it helps

According to limited evidence, practicing **autogenic training (5x/week for 1 month)** may help people recovering from a stroke to reduce anxiety [R, R].

73

Avoid PAHs Exposure

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Minimize your exposure to Polycyclic Aromatic Hydrocarbons (PAHs) by avoiding or reducing consumption of charred, grilled, or smoked foods, not smoking or avoiding secondhand smoke, and limiting time spent in areas with heavy traffic or industrial fumes. Use exhaust fans in kitchens and ensure proper ventilation when cooking at high temperatures to reduce indoor levels of PAHs.

Description

PAHs or Polycyclic Aromatic Hydrocarbons are harmful substances found in smoke and grilled foods. Try to limit exposure to them for better health. For example, avoid inhaling smoke from cigarettes or barbeques and choose alternative cooking techniques over grilling. Minimizing PAHs can reduce the risk of several health issues, particularly lung and skin diseases.

How it helps

A study of 5537 participants associated being in the third quantile of urinary 1-hydroxynaphthalene, 2-hydroxynaphthalene, and 3-hydroxyfluorene and the second quantiles of 3-hydroxyfluorene and 1-hydroxypyrene with respectively 2.327-, 2.449-, 2.289-, 2.066-fold higher risk of stroke [R].

PAHs can lead to plaque build-up in your arteries, increasing the likelihood of a stroke.

74

Brown Seaweed

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take a supplement containing brown seaweed extract, such as Fucus vesiculosus or Ascophyllum nodosum, in capsule or powder form. Aim for a daily dosage of 500-1000 mg, preferably with meals to enhance absorption. Continue this regimen for at least 8-12 weeks to evaluate its effects on your health.

TYPICAL STARTING DOSE

500 mg

Description

Brown seaweed, such as kelp and wakame, is a nutrient-dense marine alga often used in Asian cuisine and dietary supplements. It's a natural source of essential minerals like iodine and may offer various health benefits, including thyroid support and potential antioxidant effects.

How it helps

A study of 6169 participants associated seaweed intake with approximately 66% lower stroke and cerebral infarction rates [R].

75

Avoid Phthalate Exposure

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

To avoid phthalate exposure, check product labels and choose phthalate-free options for personal care items, plastics (look for recycling codes 3 and 7 or the letters 'V' or 'PVC'), and household products. Additionally, reduce the use of plastic containers for food storage, especially those not marked as 'phthalate-free', and avoid microwaving food in plastic containers. Aim to make these changes consistently in your daily life for long-term health benefits.

Description

Avoiding phthalate exposure involves choosing phthalate-free products, such as personal care items and plastics, to minimize potential endocrine-disrupting effects and protect reproductive and hormonal health.

How it helps

NHANES: Urine phthalate concentrations are potentially associated with increased risk of stroke, although the causality cannot be established in the current cross-sectional study design [R].

76

Nattokinase

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take 100-200mg of nattokinase supplement daily, preferably on an empty stomach to enhance absorption. This dosage can be taken continuously, but it is important to consult with a healthcare professional before starting, especially if taking blood-thinning medications.

Description

Nattokinase is an enzyme derived from natto (fermented soybean) and is believed to have potential blood-thinning properties, potentially supporting cardiovascular health by promoting healthy blood circulation.

How it helps

In a non-placebo-controlled trial of 61 patients diagnosed with subacute-stage ischemic stroke, supplementation with nattokinase as an add-on to standard care for 60 days improved stroke-related symptoms [R].

77

Tocotrienols

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take tocotrienols as a dietary supplement in doses ranging from 100 to 200 mg, 1-2 times a day, ideally with meals to enhance absorption. This intake can be continuous, but it's recommended to review its effects with a healthcare provider periodically, typically every 6 to 12 months.

TYPICAL STARTING DOSE

100 mg

Description

Tocotrienols are a form of vitamin E that helps to protect your cells. They fight harmful substances in your body called free radicals, which can damage our cells and lead to illness. By helping your body in this way, tocotrienols contribute to overall health, boosting immunity, and slowing down aging processes.

How it helps

Tocotrienols, a form of Vitamin E, have shown potential in protecting brain cells from damage during stroke by suppressing substances that cause inflammation and cell demise. They also help improve blood flow to the brain, which can minimize stroke severity and enhance recovery.

78

Astragalus

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take a 500 mg astragalus supplement once daily with a meal. Continue this regimen for at least 4 to 6 weeks to evaluate its effectiveness on your overall health.

TYPICAL STARTING DOSE

500 mg

Description

Astragalus is an herb used in traditional Chinese medicine. It is believed to have immune-boosting properties and may help reduce stress and support overall vitality.

Astragalus *(Astragalus membranaceus*) is an herb used in traditional Chinese medicine. It is commonly used for “tonifying Qi” or fatigue. It may help [R, R]:

- Reduce inflammation
- Fight oxidative stress

Astragalus root is a staple of traditional Chinese medicine, where it is also known as *Huang Qi*.

How it helps

According to one study, supplementing with astragalus (2.8 g, 3x/day for 4 weeks) may improve fatigue, brain function, and quality of life in people recovering from a stroke [R].

79

Mindfulness

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

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

TYPICAL STARTING DOSE

30 minutes

Description

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

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

Mindfulness and other types of meditation may improve [R]:

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

How it helps

Practicing **mindfulness (daily for 8 weeks)** may help people recovering from a stroke by [R]:

- Reducing mental fatigue
- Improving memory and attention

80

Glycine

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take 3 to 5 grams of glycine supplement per day with water, preferably before bedtime for sleep improvement or spread throughout the day for general health benefits. Continue indefinitely as needed, but consult a healthcare provider for long-term use beyond three months.

TYPICAL STARTING DOSE

3 g

Description

Glycine is an amino acid that may have calming and anti-inflammatory effects, potentially benefiting sleep quality and joint health.

If you can't get enough glycine from food sources, glycine supplements are available. Daily doses of up to **6 g** have been safely used for up to **4 weeks**. Consult your doctor before supplementing.

How it helps

Glycine, an amino acid, can provide neuroprotective benefits during a stroke by limiting the spread of ischemic injury in the brain through controlling glutamate release. This potentially reduces stroke symptoms and aids recovery.

In a placebo-controlled trial of 50 patients with acute ischemic stroke, sublingual application of glycine (0.5-2 g/day) for 5 days decreased 30-day mortality and improved stroke scores [R].

81

Acetyl-L-Carnitine

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take 500-1,000 mg of Acetyl-L-Carnitine per day, split into 2 or 3 doses, with or without food. Joe prefers taking 500 mg in the morning. It can be taken indefinitely for chronic conditions or for a period of several months for acute concerns.

TYPICAL STARTING DOSE

500 mg

Description

Carnitine is a protein building block (amino acid). It comes in many forms, such as acetyl-L-carnitine. Acetyl-L-carnitine may help with nerve damage and mood problems.

Carnitine is a protein building block (amino acid). It comes in many forms, such as acetyl-L-carnitine [R, R, R].

Acetyl-L-carnitine may help with [R, R, R]:

- Nerve damage
- Mood problems
- Cognitive decline

Doctors are also studying its potential effect on drug addiction [R].

How it helps

Acetyl-L-Carnitine may boost brain function and may help repair damaged nerve cells after a stroke. It may help in regaining neurological functions and improves recovery time when used alongside standard treatment.

69 cases with acute ischemic stroke with the onset of symptoms less than 24 hours not candidates for reperfusion therapy were randomly assigned to either the ALC group (1000 mg 3 times per day for 3 days) or the matching placebo group. ALC administration during the acute phase of ischemic stroke might help improve functional and neurological outcomes that are probably linked to its anti-inflammatory and antioxidant properties [R].

82

Dong Quai

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take a 500-600 mg capsule of Dong Quai supplement once daily with food. It is generally recommended to cycle Dong Quai use, taking it for three weeks followed by a one week break. Consult a healthcare provider before starting to ensure it's appropriate for your health condition.

TYPICAL STARTING DOSE

500 mg

Description

Dong quai is an herb commonly used in traditional Chinese medicine to support women's health, particularly during menstruation and menopause. It is believed to have hormonal-regulating properties.

How it helps

In a non-placebo-controlled trial of 1404 patients with acute cerebral infarction, Angelica root injection improved neuro-function deficit scores while reducing infarcted volume [R].

Dong quai may aid in improving circulation, which could help with restoring blood flow after a stroke.

83

Fisetin

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take 100 to 500 mg of fisetin supplement daily, with or without food. It is recommended to start with a lower dose to assess tolerance and then gradually increase as needed. Continue this regimen daily, especially if focusing on long-term health benefits like anti-inflammatory or anti-aging effects.

TYPICAL STARTING DOSE

100 mg

Description

Fisetin is a natural flavonoid found in certain fruits and vegetables, known for its potential antioxidant and anti-inflammatory properties. Some research suggests that fisetin may have neuroprotective effects and contribute to overall health.

How it helps

In a placebo-controlled trial of 192 patients with ischemic stroke, supplementation with fisetin (100 mg/day) for 7 days improved the National Institutes of Health Stroke scale and lowered MMP-2, MMP-9, and CRP levels [R].

Fisetin may help by reducing inflammation and oxidative stress - factors linked to stroke damage.

84

Golf

IMPACT 1 / 5

EVIDENCE 1 / 5

Description

Golf is a low-impact sport that is easy on your joints. It can help improve your balance, coordination, and mental focus.

How it helps

In a non-placebo-controlled trial of 24 stroke patients, practicing golf 2x/week for 10 weeks improved mental rotation performance, visual-spatial memory, and well-being [R].

85

Mobility Training

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Incorporate mobility exercises into your daily routine, allocating at least 10-15 minutes each morning or evening to perform stretches and mobilizations that target all major joints and muscles in your body. Consistency is key, aim to practice mobility training daily for ongoing improvements in flexibility and joint health.

TYPICAL STARTING DOSE

10 minutes

Description

Mobility training is a form of physical therapy that focuses on improving an individual's range of motion, flexibility, and functional movement patterns. It helps enhance joint mobility, reduce the risk of injuries, and promote better physical performance in daily activities or sports.

How it helps

In a study of 63 older individuals with chronic stroke, those receiving mobility training showed greater improvements in cardiorespiratory fitness, mobility, and paretic leg muscle strength compared to the control group. Additionally, the intervention group maintained femoral neck bone density in the paretic leg, while the control group experienced a significant decline [R].

Mobility training helps stroke survivors regain the use of affected limbs and restore balance, aiding in their ability to move around independently.

86

Molybdenum and Vitamin C

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Molybdenum supplements are available in several different forms including:

- Sodium molybdate
- Ammonium molybdate
- Molybdenum aspartate
- Molybdenum citrate
- Molybdenum glycinate
- Molybdenum picolinate

Supplements are available in various dosages that can range from 50 to 1000 mcg per dose. Manufacturers typically recommend taking 1 or 2 doses per day without exceeding 2000 mc/day.

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

Description

Molybdenum (Mo) is a mineral that we need in very small amounts (trace mineral) [R].

Molybdenum helps process sulfur-containing amino acids such as methionine and cysteine. It also helps make uric acid and is part of the tooth enamel [R, R].

Adults should get about **45 micrograms** of molybdenum each day [R].

Foods rich in molybdenum include [R]:

- Black-eyed peas (288 mcg per serving)
- Beef liver (104 mcg per serving)
- Lima beans (104 mcg per serving)
- Yogurt (26 mcg per serving)
- Baked potato (16 mcg per serving)
- Wheat cereals (15 mcg per serving)

Water also contains some molybdenum, although the exact amount can vary greatly depending on the region [R].

People easily get all the molybdenum they need through food and water, so **molybdenum deficiency is extremely rare** [R].

Vitamin C is an essential nutrient. This means that our bodies can’t produce it on their own, so we have to get it from food or supplements [R].

Foods rich in Vitamin C include: [R]

- Citrus Fruits
- Peppers
- Brussel sprouts
- Kiwi
- Broccoli
- Tomato
- Cantaloupe
- Cauliflower
- Spinach

Vitamin C has antioxidant properties. It supports immunity, heart health, and wound healing [R, R].

Vitamin C deficiency is called *scurvy.* In the past, many sailors suffered from it [R].

How it helps

A large study followed up for 25 years found that supplementation with a combination of molybdenum and vitamin C reduced stroke mortality [R, R].

87

Avoid Lead Exposure

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Prevent lead exposure by using cold water for drinking and cooking, regularly cleaning dust from windowsills and floors, and ensuring that your home's paint is not chipping if it was built before 1978. For occupations involving potential lead exposure, use protective gear and follow safety protocols. Test your home for lead if it's old or you're concerned about contamination.

Description

Lead is a heavy metal. It is naturally found in the environment in small amounts [R, R].

Exposure to lead can cause it to build up in the body. A buildup of lead can contribute to oxidative stress and cell damage. This is called **lead poisoning** [R, R].

Lead is no longer used in the manufacturing of some products like gasoline and paint. However, it can still be found in some pipes, batteries, and the wall paint of older homes [R, R, R].

How it helps

A study of 5736 adults found that high blood lead levels increased the risk of heart attack and stroke [R].

Lead has been linked to high blood pressure, a major risk factor for stroke. Lead may also harm the inner lining of the arteries, promoting blockages that lead to stroke.

88

Saffron

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take 20 mg of saffron supplement daily. This can be taken at any time of the day, with or without food.

TYPICAL STARTING DOSE

20 mg

Description

Saffron is a spice derived from the stigma of the saffron crocus flower, and is native to the Mediterranean and Asia. Its main compounds include crocin, picrocrocin, and safranal, which may contribute to its antioxidant properties and potential mood-enhancing effects.

Saffron is a yellow spice praised for its color, taste, and potential health benefits [R].

Saffron is rich in antioxidants such as *crocin*. Researchers are looking into its potential benefits for [R, R, R, R]:

- Gut conditions
- Heart health
- Mental health

How it helps

Saffron contains antioxidants which may reduce brain inflammation and help brain cells survive after a stroke. It also possibly improves cognitive functions that might be impaired following a stroke.

In a study with 40 acute ischemic stroke patients, one group received routine care, and the other received saffron capsules (400 mg/day) in addition to routine care for four days. The saffron group showed higher antioxidant enzyme activity, GSH, and TAC levels, while MDA levels were lower. Their stroke severity (NIHSS scores) decreased significantly, and stroke severity correlated negatively with GSH and TAC, and positively with MDA [R].

89

Aromatherapy

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Select essential oils like lavender, peppermint, or eucalyptus. Use a diffuser to disperse the scent into your room for 30-60 minutes at a time, up to 3 times a day. Alternatively, apply a few drops diluted in a carrier oil directly to your skin, such as on your temples or wrists, twice a day.

TYPICAL STARTING DOSE

30 minutes

Description

Aromatherapy is a holistic practice that uses the scents and aromas of essential oils to promote physical, mental, and emotional well-being. It is often used for relaxation, stress reduction, and to address various health concerns through inhalation or topical application of essential oils.

Aromatherapy uses concentrated plant extracts known as **essential oils**. They can be inhaled using a diffuser (a device that releases small amounts of oil into the air) or applied to the skin using a roller [R].

Lavender is a decorative flower and a calming herb and its essential oil is commonly used in aromatherapy. People use it to [R, R, R]:

- Reduce anxiety [R]
- Improve sleep quality [R, R]
- Relieve pain [R, R]

Essential oils can be harmful if not used properly. Tips for using them safely include [R, R]:

- Diluting them properly using a plant-based carrier oil (such as olive oil or almond oil)
- Using diffusers in a well-ventilated area for a maximum of 1 hour
- If using on the skin, testing a small area first and waiting a day before using more
- Keeping essential oils away from candles or other heat sources

How it helps

In a non-placebo-controlled trial of 30 stroke patients with hemiplegic shoulder pain, aromatherapy acupressure using lavender, rosemary, and peppermint (20 min, 2x/day for 2 weeks) improved shoulder pain and motor power [R].

90

Boswellia

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take a 350 mg Boswellia supplement daily, ideally with a meal to enhance absorption.

TYPICAL STARTING DOSE

350 mg

Description

Boswellia is an herbal remedy derived from the resin of certain trees. It's known for its potential anti-inflammatory properties and is often used to support joint health.

Boswellia, also known as frankincense, is the hardened sap of the *Boswellia serrata* tree [R].

In traditional medicine, boswellia is used for joint pain and gut conditions [R].

Today, some people use boswellia for [R, R, R, R, R]:

- Osteoarthritis
- IBD
- Skin aging
- Asthma
- Gum health

How it helps

According to one study, boswellia (800 mg, 3x/day for 4 weeks) may improve brain function and reduce inflammation in people recovering from a stroke [R].

91

Avoid Long Naps

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Limit your daily naps to 20-30 minutes. Try to nap before 3 pm to avoid interfering with nighttime sleep.

Description

Limiting long naps during the day can help improve nighttime sleep quality and reduce the risk of sleep disturbances. Shorter naps are generally more beneficial for enhancing daytime alertness without interfering with nighttime rest.

How it helps

Daytime napping was associated with a 38% increased risk of stroke, with the risk rising by 3% for every 10-minute increase in napping [R].

Taking lengthy naps could raise your blood pressure, increasing the risk of stroke.

92

Celery Seed

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take a celery seed supplement capsule of 600-1000 mg daily with a glass of water, preferably with a meal to aid absorption and minimize potential stomach discomfort. Continue this regimen for at least 4-6 weeks to evaluate its effects on your condition.

TYPICAL STARTING DOSE

600 mg

Description

Celery seed extract is a natural supplement derived from the seeds of the celery plant, known scientifically as *Apium graveolens*. This extract is rich in various bioactive compounds, including flavonoids, linoleic acid, and volatile oils like limonene and selinene. These compounds contribute to its potential health benefits, which may include anti-inflammatory properties, support for joint health (often used in treating conditions like arthritis), and assistance in managing blood pressure levels. Celery seed extract is available in various forms, including capsules, tablets, and tinctures, and is often used in traditional medicine for its diuretic and antispasmodic effects.

How it helps

In a placebo-controlled trial of 573 patients within 48 hours of the onset of an ischemic stroke, supplementation with celery seed-derived Dl-3-n-butylphthalide for 90 days improved the modified Rankin scale [R].

Celery seeds may lower blood pressure and improve circulation, which can minimize the risk of stroke.

93

GABA Supplement

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take a GABA supplement in a dose up to 500 mg, three times daily. This supplementation should be taken with water, preferably with food to minimize gastrointestinal discomfort. The duration of supplementation can vary, but many users may start to see benefits within a few weeks of consistent use.

TYPICAL STARTING DOSE

1500 mg

Description

GABA is an amino acid that acts as an inhibitory neurotransmitter in the brain. It is used in some supplements for its potential to promote relaxation and reduce anxiety.

How it helps

In a double-blind clinical trial involving 432 patients with cerebrovascular disorders, GABA was compared to pyrithioxine and placebo. Patients took 12 tablets (3 g) of GABA or 3 tablets (600 mg) of pyrithioxine daily for 8 weeks. GABA showed significantly better global improvement rates at both 4 and 8 weeks compared to the other two groups. It was particularly effective in treating cerebral arteriosclerosis and showed superior improvement in subjective complaints and psychiatric findings [R].

GABA may help by reducing damage to the neurons and supporting their regrowth and repair.

94

Taurine

IMPACT 0 / 5

EVIDENCE 1 / 5

How to implement

Take 1-4 g of taurine supplement daily, divided into two or three doses with meals for optimal absorption. It can be taken continuously, with periodic evaluations of its effects and benefits.

TYPICAL STARTING DOSE

500 mg

Description

Taurine is an amino acid found in various foods and often used in energy drinks and supplements. It plays a role in neurological and cardiovascular health and can help support energy metabolism.

Taurine is the most abundant free amino acid in humans. It's not essential, which means we can produce it. We can also get it from protein-rich foods, such as [R]:

- Seafood
- Meat
- Dairy

Taurine is a popular additive in energy drinks and can also be taken as a supplement [R].

Taurine plays an important role in [R, R]:

- Bile production
- Calcium metabolism

It is also well-known for its antioxidant and anti-inflammatory properties [R].

How it helps

In an uncontrolled trial of 10 patients with recurrent stroke-like episodes, supplementation with taurine (9-12 g/day) for 52 weeks **reduced the recurrence of the episodes by 100% in 60% of the patients and by at least 50% in 80%. Taurine reduced the annual relapse rate of stroke-like episodes from 2.22 to 0.72** [R].

95

Molybdenum

IMPACT 0 / 5

EVIDENCE 1 / 5

How to implement

Adults should get about **45 micrograms** of molybdenum each day [R].

Foods rich in molybdenum include [R]:

- Black-eyed peas (288 mcg per serving)
- Beef liver (104 mcg per serving)
- Lima beans (104 mcg per serving)
- Yogurt (26 mcg per serving)
- Baked potato (16 mcg per serving)
- Wheat cereals (15 mcg per serving)

Description

Molybdenum (Mo) is a mineral that we need in very small amounts (trace mineral) [R].

Molybdenum helps process sulfur-containing amino acids such as methionine and cysteine. It also helps make uric acid and is part of the tooth enamel [R, R].

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- Baked potato (16 mcg per serving)
- Wheat cereals (15 mcg per serving)

Water also contains some molybdenum, although the exact amount can vary greatly depending on the region [R].

People easily get all the molybdenum they need through food and water, so **molybdenum deficiency is extremely rare** [R].

How it helps

A large study followed up for 25 years found that supplementation with a combination of molybdenum and vitamin C reduced stroke mortality [R, R].

96

Avoid Calcium Supplements

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

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

Description

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

How it helps

Genetically higher levels of calcium may be causally associated with an increased risk of stroke [R].

Taking high doses of calcium supplements could potentially lead to the formation of calcium deposits in the blood vessels. This can increase the risk of stroke as it may block blood flow to the brain.

97

Dietary Nitrates

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Incorporate foods high in dietary nitrates, such as beets, spinach, arugula, and celery, into your daily meals. Aim for about 300-400 mg of dietary nitrates daily, which equates to roughly 2 cups of nitrate-rich vegetables.

Description

Nitrates found in foods like leafy greens and beets can convert into nitric oxide in the body, which may help dilate blood vessels, lower blood pressure, and enhance exercise performance.

How it helps

Dietary nitrates, found in foods like beetroot and leafy greens, can improve vascular function by dilating blood vessels, thus potentially aiding in stroke prevention.

98

Green Tea

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

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

TYPICAL STARTING DOSE

400 mg

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 antioxidants 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 antioxidants called **flavonoids**, which may help prevent [R, R, R, R]:

- Heart disease
- Cancer
- Diabetes

How it helps

Green tea is rich in antioxidants, known as flavonoids, that help in reducing inflammation and oxidative stress associated with stroke. Additionally, it helps in reducing blood clots, a major cause of stroke, thus lowering the risk of stroke.

99

Aquatic Therapy

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Participate in aquatic therapy sessions 2-3 times a week for at least 30 minutes. These sessions should be guided by a professional therapist who specializes in aquatic therapy, and the program should be tailored to your specific health condition and physical capabilities.

TYPICAL STARTING DOSE

30 minutes

Description

Aquatic therapy involves performing exercises and rehabilitation activities in a water environment. It is particularly beneficial for individuals recovering from injuries, surgeries, or certain medical conditions, as the buoyancy of water reduces the impact on joints, eases pain, and improves mobility and muscle strength.

How it helps

Aquatic therapy can help stroke patients by providing a low-impact environment to improve their balance, muscle strength, and range of motion. The water's buoyancy reduces weight-bearing stress, allowing easier movement, while its resistance helps in gradual muscle building.

100

Repetitive Transcranial Magnetic Stimulation

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Attend sessions at a certified medical facility, where a healthcare professional will use a coil placed near your head to generate brief magnetic pulses. Typically, sessions occur 5 days a week for 4-6 weeks.

Description

Repetitive transcranial magnetic stimulation (rTMS) is a noninvasive procedure that stimulates the brain to improve symptoms of [R, R]:

- Depression
- Muscle disease
- Parkinson's disease

rTMS delivers several magnetic pulses through an electromagnetic coil placed on the scalp. The pulses stimulate the region of the brain involved in mood and depression [R, R].

This technique is used in people who don’t respond to standard care. rTMS is generally painless and safe when performed by trained professionals [R, R].

How it helps

Repetitive Transcranial Magnetic Stimulation (rTMS) uses magnetic fields to stimulate nerve cells in parts of the brain affected by stroke, potentially improving neuronal recovery and motor function. Regular treatments can lead to improvements in speech, cognition, and motor skills that were disrupted by the stroke.

101

Avoid Substance Abuse

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Eliminate the use of illegal drugs, excessive alcohol, and tobacco from your daily routine. Seek professional help if needed to stop substance use and engage in support groups or counseling for sustained recovery. Implement this change permanently for long-term health benefits.

Description

Substance abuse is the excessive use of alcohol or drugs. It can lead to dependence on the substance. Abusing drugs or alcohol can have long-term health and social consequences.

Substance abuse is the excessive use of alcohol or drugs. It can lead to dependence on the substance [R].

Abusing drugs or alcohol can have long-term health and social consequences [R].

How it helps

Substance abuse increases the risk of strokes, so avoiding illicit drug use can reduce the chances of stroke occurrence or recurrence.

102

Transcutaneous Electrical Nerve Stimulation (TENS)

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

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

TYPICAL STARTING DOSE

30 minutes

Description

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

How it helps

TENS sends small electrical pulses through the skin which helps to stimulate nerve fibers, reducing pain and improving mobility. In stroke patients, this can enhance muscle strength by aiding muscle re-education, hence improving quality of life.

103

Acceptance and Commitment Therapy (ACT)

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

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

Description

ACT is a type of psychotherapy that focuses on accepting one's thoughts and feelings while committing to actions that align with personal values. It is used to improve mental well-being and treat conditions like anxiety and depression.

How it helps

Acceptance and commitment therapy helps by increasing psychological flexibility and reducing stress, which can improve outcomes after a stroke.

104

Flavonoids

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Incorporate flavonoid-rich foods into your diet daily, such as berries, apples, pears, onions, kale, and dark chocolate. Aim for at least 2-3 servings of these foods each day to maximize flavonoid intake.

Description

Flavonoids are a group of plant compounds that give color and flavor to fruits and vegetables. They are commonly taken as supplements for their antioxidant and anti-inflammatory effects

Flavonoids are a group of plant compounds that give color and flavor to fruits and vegetables. They are commonly taken as supplements for their antioxidant and anti-inflammatory effects [R].

Phlebotonics are products used for hemorrhoids and other vein problems. Most of them contain flavonoids. In certain countries, they are available as over-the-counter medications [R].

How it helps

Flavonoids, found in foods like dark chocolate and berries, can help prevent stroke by improving the health of your blood vessels and lowering blood pressure. Also, they can reduce blood clotting, which is a common cause of stroke.

105

Berries

IMPACT 0 / 5

EVIDENCE 0 / 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

Berries, such as blueberries and blackberries, are rich in antioxidants and flavonoids which can help in reducing oxidative stress and inflammation, supporting vascular health.

106

Dietary Folate

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Increase your intake of folate-rich foods such as leafy green vegetables, fruits, nuts, and legumes. Aim to consume these foods daily, incorporating them into various meals throughout the day to meet the recommended dietary allowance of 400 micrograms for adults.

Description

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

- Making DNA
- Metabolism
- Energy production

Rich sources of folate include [R, R]:

- Beef liver
- Spinach
- Black-eyed peas
- Asparagus
- Citrus fruits

While folate deficiency is rare, it can happen in people who don't eat enough fruits and vegetables. Alcoholics and lactating women may also be at increased risk [R].

Adults should get **400 micrograms (mcg)** of folate per day. Pregnant or breastfeeding women should get **500-600 mcg per day**. Supplements are usually in the form of *folic acid* or L-methylfolate (5-MTHF) [R, R].

How it helps

Folate is a B vitamin essential for normal cellular function and repair, and adequate intake may help reduce the risk of stroke through its role in homocysteine metabolism.

107

Mirror Therapy

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Place a mirror between your legs or arms, positioning it so the reflection of the unaffected limb appears in place of the affected limb. Spend 5-10 minutes daily performing movements or exercises with the unaffected limb while simultaneously watching its reflection, making it appear as though the affected limb is moving. This should be done for a minimum of 4 weeks to potentially observe improvements in movement and decrease in pain or discomfort.

TYPICAL STARTING DOSE

5 minutes

Description

Mirror therapy is a rehabilitation technique used to alleviate phantom limb pain and improve motor function in individuals who have undergone limb amputations or experienced limb injuries. It involves the use of a mirror to create the illusion of the missing or impaired limb, helping the brain rewire neural pathways and reduce pain perception.

How it helps

Mirror therapy can help stroke patients by stimulating the part of the brain that controls movement. This can potentially lead to improvement in the mobility and coordination of affected limbs.

108

Polyunsaturated Fatty Acids (PUFAs)

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Incorporate foods rich in polyunsaturated fatty acids (PUFAs) into your daily diet. Examples include eating fatty fish like salmon, mackerel, or sardines two to three times a week, using plant-based oils like flaxseed, soybean, and canola oil in cooking and salads, and adding nuts and seeds such as walnuts and flaxseeds to your meals or snacks daily.

Description

Polyunsaturated fatty acids (PUFAs) are fatty acids with at least two double bonds. They are considered "healthy fats" and include **omega-3 and omega-6** fatty acids [R].

Omega-3 fatty acids help [R, R]:

- Lower inflammation and blood sugar
- Protect the heart, brain, and eyes

Omega-6 fatty acids play important roles in [R]:

- Skin health
- Energy production
- Immunity

Good sources of PUFAs include [R, R, R, R]:

- Fish and seafood
- Plant oils (e.g., flaxseed, corn, sunflower, soybean, and grapeseed oil)
- Seeds (e.g., safflower, sunflower, and pumpkin seeds)
- Walnuts
- Tofu

How it helps

Polyunsaturated Fatty Acids (PUFAs) can improve heart health by reducing cholesterol levels and inflammation in the body. Both of these changes decrease the risk of strokes by promoting better blood flow in the brain.

109

Avoid BCAA Supplements

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Do not purchase or consume branched-chain amino acid (BCAA) supplements, which are often found in the form of powders, pills, or energy bars marketed for muscle building and recovery. Check the labels of your dietary supplements and sports nutrition products to ensure they do not contain BCAAs.

Description

BCAA supplements, which are amino acids, aren't needed for most people as they're generally gotten from a balanced diet. If you rely on these for muscle build-up, they might push your body to produce less muscle-supporting hormones. Plus, too much BCAA can potentially harm the kidneys over time. For overall health, eat a variety of nutritious foods instead.

How it helps

BCAA (Branched-chain amino acids) supplements may increase the risk of developing heart disease, which is a significant risk factor for stroke. Therefore, avoiding these supplements can reduce the possibility of experiencing a stroke.

Genetically higher BCAAs levels may be associated with an increased risk of stroke [R].

Please note: *There is not enough safety data for long-term BCAA supplementation at doses above **12 g/day**. Increased BCAA intake may be linked to type 2 diabetes* [R].

110

Fruits And Vegetables

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Increase your intake of fruits and vegetables to at least five servings per day, aiming for a variety of types and colors to ensure a broad range of nutrients. Each serving size should roughly be the amount you can fit in one hand. Try to incorporate at least one serving of fruits or vegetables into every meal and snack throughout the day.

Description

A diet rich in fruits and vegetables provides essential nutrients, antioxidants, and dietary fiber. This combination supports overall health, helps maintain a healthy weight, and reduces the risk of chronic diseases such as heart disease and certain cancers.

How it helps

A diet rich in fruits and vegetables is associated with lower blood pressure and improved arterial function, which can reduce the risk of stroke.

111

Myofascial Release

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Incorporate myofascial release into your routine by using tools like foam rollers or massage balls, focusing on tense areas for about 5-20 minutes daily. You can also seek professional myofascial release therapy sessions, which typically last about 30-60 minutes, 1-2 times per week for targeted treatment.

TYPICAL STARTING DOSE

5 minutes

Description

Myofascial release is a type of massage therapy that can help to improve range of motion, reduce pain, and increase circulation. It can also help to improve posture and reduce stress.

How it helps

Myofascial Release can aid in stroke recovery by releasing tension in the tight muscles and fasciae (connective tissues), thereby improving mobility. It can help regain functional movement and reduce symptoms like muscle stiffness, pain, and fatigue.

In an uncontrolled trial of 8 stroke patients, myofascial release with a tennis ball (3x/week for 8 weeks) improved the Berg Balance Scale (BBS) and decreased the Timed 'Up & Go' [R].

112

Massage

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

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

TYPICAL STARTING DOSE

30 minutes

Description

Massage therapy involves the manipulation of soft tissues to relax muscles, reduce stress, and alleviate pain. It can improve circulation, promote relaxation, and provide relief from various physical and mental health concerns.

If you've ever had a professional massage, then you probably know how much good it can do. Massages may help with [R, R, R]:

- Anxiety
- Pain
- Fatigue

Reflexology is a type of massage. It involves applying pressure to specific parts of your feet or hands. In theory, by pressing on these areas, you can relieve tension from other parts of the body [R].

Acupressure is a similar technique, in which pressure points are used to help with stress and pain [R, R].

How it helps

Massage therapy can help stroke patients by improving their physical as well as mental well-being. It aids in enhancing the blood circulation, reducing muscle tension, promoting relaxation, and uplifting mood which can speed up the recovery process.

113

Balance And Mobility Training

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Incorporate balance and mobility exercises into your routine three to four times per week. Each session should last approximately 30 minutes and include activities such as standing on one foot, walking heel to toe, and tai chi or yoga. Start with simple exercises and gradually increase difficulty as your balance improves.

TYPICAL STARTING DOSE

30 minutes

Description

Balance and mobility training exercises, such as yoga or tai chi, can improve stability and reduce the risk of falls, particularly among older adults. These exercises enhance overall physical function.

How it helps

Balance and mobility training can help restore coordination and walking capacity in individuals who have suffered a stroke.

114

Transcranial Direct Current Stimulation (tDCS)

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Use a tDCS device for 20 to 30 minutes per session, targeting specific brain areas depending on the desired outcome. Sessions can be daily or a few times a week, under the guidance of a medical professional or trained specialist to ensure safety and effectiveness.

TYPICAL STARTING DOSE

30 minutes

Description

Transcranial Direct Current Stimulation (tDCS) is a non-invasive brain stimulation technique that uses a low electrical current to modulate neural activity. It has been investigated for its potential in cognitive enhancement, mood regulation, and pain management.

How it helps

Transcranial Direct Current Stimulation (tDCS) aids stroke recovery by targeting and stimulating specific areas of the brain to improve function and promote healing. It encourages growth of new neural connections, improving communication in the brain that can improve motor and cognitive functions affected by stroke.

115

Avoid Dietary Vitamin K1 Supplements

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Do not take vitamin K1 supplements in pill or liquid form. If you are currently taking them, consult your healthcare provider to safely discontinue their use.

Description

Avoiding excessive vitamin K1 supplements can help maintain a healthy balance of this essential nutrient in the body, as excessive intake can interfere with certain medications and lead to unwanted health effects.

How it helps

Genetically-predicted circulating vitamin K1 levels have been associated with large artery atherosclerotic stroke [R].

116

Avoid Leucine Supplements

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Do not purchase or consume any supplements that list leucine as an ingredient. Check the labels of your dietary supplements to ensure they do not contain leucine.

Description

Avoiding excessive leucine supplements is recommended, as very high intake may have potential side effects. Leucine can be obtained naturally from protein-rich foods without the risk of overconsumption.

How it helps

Leucine supplements might increase the levels of certain amino acids in the body, potentially causing an imbalance that exacerbates conditions like stroke. By avoiding these supplements, you help maintain balance and potentially reduce the risk of stroke complications.

Genetically higher dietary leucine intake may be causally associated with stroke [R].

117

Aquatic Exercise

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Participate in aquatic exercise sessions, such as swimming or water aerobics, for 60 minutes, 3 to 5 times per week. Ensure the exercise intensity is moderate, allowing you to talk but not sing during the activity. Consistency over time is key, so aim to incorporate this into your weekly routine for at least 3 to 6 months to observe benefits.

TYPICAL STARTING DOSE

1 hour

Description

Aquatic exercise involves physical activity performed in water, such as swimming, water aerobics, or aquatic therapy. It is gentle on the joints, making it suitable for individuals with mobility issues, and can help improve cardiovascular fitness and muscle strength.

Aquatic exercise is any type of low-impact physical activity performed in a pool. In this type of cardio exercise, water helps the body float, which reduces gravity and makes the practice more comfortable and tolerable [R, R].

Compared to land-based exercise, aquatic exercise may be better by [R]:

- Reducing the stress and impact on joints
- Lowering fracture risk

Hence, it is usually **recommended for the elderly**. Aquatic exercise is also suitable for people who don't know how to swim [R].

How it helps

Aquatic exercise enhances physical conditioning, which supports recovery processes in stroke survivors by improving strength and mobility.

118

Kinesio Taping

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Apply kinesio tape directly to the skin over the affected muscle or joint area. The tape should be stretched slightly to create tension after being applied over the pre-cleaned skin. Typically, kinesio tape can be worn for 3 to 5 days, including during showering, before it needs to be replaced.

Description

Kinesio taping involves the application of special tape to support injured muscles and joints. It can help reduce pain, improve circulation, and enhance overall mobility when used correctly.

Kinesio Taping is a physical therapy technique that uses special tapes to help support muscles and tendons. People use Kinesio Taping to help with [R, R]:

- **Musculoskeletal injuries**
- Swelling due to lymph fluid buildup (lymphedema)
- Muscle stiffness

How it helps

Kinesio Taping can aid stroke survivors by offering support to weakened muscles and aiding movement, which can boost confidence in performing daily activities. However, it may not directly contribute to healing stroke-damaged brain tissues.

119

Chiropractic Adjustment

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Schedule and attend chiropractic sessions 1-2 times per week for a period of 4-6 weeks initially, depending on the severity of your condition. Your chiropractor may adjust the frequency based on your progress.

TYPICAL STARTING DOSE

30 minutes

Description

Chiropractic adjustments are manual manipulation techniques used by chiropractors to improve musculoskeletal function, relieve pain, and enhance overall mobility. They are often used as part of a holistic approach to address various health concerns, primarily those related to the spine and joints.

Chiropractic adjustment involves applying pressure to different parts of the spine. It tends to help with pain and headaches [R, R].

Only a trained specialist should perform this procedure [R].

How it helps

Chiropractic adjustments won't directly treat a stroke, as stroke is a critical condition often caused by blood clots or haemorrhage in the brain that requires medical intervention. However, regular chiropractic care may aid in maintaining overall wellness, improving circulation, and boosting the immune system which can indirectly support overall health.

120

Exercise Therapy

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Begin by consulting with a physical therapist to assess your condition and create a personalized exercise plan. Follow the prescribed exercises consistently, focusing on areas needing improvement, such as strength, flexibility, or mobility. Start with gentle exercises, gradually increasing the intensity as you build strength. Ensure you perform the exercises correctly to avoid injury. Regularly check in with your therapist to adjust the plan based on your progress and feedback. Stay committed to the routine for the best results.

TYPICAL STARTING DOSE

1 hour

Description

Exercise therapy is a tailored approach to physical activity designed to improve mobility, strength, and overall health. It is often used to rehabilitate injuries, manage chronic conditions, and promote cardiovascular fitness.

How it helps

Performing physician-approved exercise strengthens the cardiovascular system and enhances neuroplasticity, aiding in stroke rehabilitation.

121

Alpha-Linolenic Acid (ALA)

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Incorporate foods high in alpha-linolenic acid (ALA) into your daily diet. This means eating about a tablespoon (14 grams) of flaxseeds or chia seeds, a quarter cup (30 grams) of walnuts, or using one tablespoon of flaxseed oil every day.

Description

Alpha-linolenic acid (ALA) is a type of omega-3 fatty acid found in plant-based sources like flaxseeds, chia seeds, and walnuts. It is essential for maintaining heart and brain health and is considered a healthy dietary fat.

How it helps

Alpha-Linolenic Acid (ALA) aids in preventing strokes by reducing the buildup of plaque within arteries, facilitating smoother blood flow to the brain. It's an essential omega-3 fatty acid which the body cannot produce, decreasing inflammation, and preserving brain health.

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.*

Genetically higher levels of ALA may be associated with a reduced risk for (MR):

- Stroke [R, R].

Genetic predisposition to higher plasma α-linolenic, linoleic, and oleic acid levels was associated with lower odds of large-artery stroke and venous thromboembolism, whereas higher arachidonic and stearic acid levels were associated with higher odds of these two CVDs.

Per SD increases in serum α-linolenic acid (ALA) were associated with lower IS risk, with odd ratio (OR) of 0.867(0.782,0.961), arachidonic acid (AA) were associated with higher IS risk (OR: 1.053(1.014,1.094)).

122

Dietary Polyphenols

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Incorporate foods rich in dietary polyphenols into your daily diet. This can include consuming a variety of fruits like berries, apples, and grapes; vegetables such as onions and broccoli; nuts and seeds; as well as beverages like green tea and coffee. Aim for at least five servings of fruits and vegetables per day to achieve a beneficial intake of polyphenols.

Description

Polyphenols are antioxidants found in foods like fruits, vegetables, and tea, which may offer various health benefits, including reduced inflammation and improved heart health.

Polyphenols are plant components with antioxidant properties. They help reduce oxidative stress [R].

High levels of oxidative stress can damage our cells. Oxidative stress plays a role in many health conditions, including [R]:

- High blood sugar
- Type 2 diabetes
- Heart disease

You can get most polyphenols and other antioxidants from fresh fruits and vegetables [R, R].

How it helps

Polyphenols have been shown to have neuroprotective effects and are present in a variety of foods including certain fruits, vegetables, tea, and coffee.

Next Steps

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

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

Your lab results

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

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

TSH	2.76 mcIU/mL	0.4 – 1.5 – 2.5 – 4.5	9 Nov 2025
Cystatin C	0.57 mg/L	0.5 – 0.72 – 1.16	9 Nov 2025
SHBG	39.3 nmol/L	15 – 30 – 45 – 64	9 Nov 2025
RDW	13.8 %	11.5 – 13 – 15	9 Nov 2025
LDL Cholesterol	103 mg/dL	0 – 100 – 130 – 189	9 Nov 2025
Glucose, Fasting	97 mg/dL	55 – 65 – 80 – 95 – 100 – 126	9 Nov 2025
Platelet Count	215 x10^3/mm3	30 – 150 – 200 – 270 – 450 – 999	9 Nov 2025
Uric Acid	4.4 mg/dL	2 – 3.7 – 4 – 6 – 9	9 Nov 2025
Sodium	137 mmol/L	125 – 135 – 136 – 142 – 145 – 155	9 Nov 2025

Magnesium	2.17 mg/dL	1.2 · 1.5 · 2 · 2.6 · 4.9	9 Nov 2025
Neutrophils (Absolute)	4.8 x10^9/L	0.5 · 1.5 · 4.2 · 8	9 Nov 2025
RBC	6.05 x10^6/mm3	4.2 · 5.8	9 Nov 2025
Homocysteine	12.84 umol/L	5 · 9 · 15 · 100	9 Nov 2025
Estradiol	101.46 pg/mL	10 · 25 · 50	9 Nov 2025
Lipoprotein(a)	85.6 mg/dL	0 · 30 · 50	9 Nov 2025
Insulin, Fasting	9.08 uU/mL	1 · 6 · 19.6 · 25	9 Nov 2025
Potassium, Serum	5.2 mmol/L	2.5 · 3.5 · 4 · 4.75 · 5.3 · 5.5	9 Nov 2025
hs-CRP	1.6 mg/L	0 · 0.5 · 3 · 100 · 500	9 Nov 2025
Testosterone, Total	1500 ng/dL	150 · 300 · 916 · 1000	9 Nov 2025
Calcium	9.2 mg/dL	6.5 · 8.5 · 8.8 · 9.8 · 10.5 · 13	9 Nov 2025
Cholesterol, Total	182 mg/dL	0 · 200 · 240	9 Nov 2025
ApoB	108 mg/dL	40 · 80 · 120	9 Nov 2025
Albumin, Urine	87.6 ug/mL	0 · 20 · 200	9 Nov 2025