

Oxidative Stress

Biohacker Report

REPORT CATEGORIES —



DETOX



LONGEVITY

Sample Client

Report date: 15 January 2026

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DISCLAIMER

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

Personal information

NAME

Sample Client

SEX AT BIRTH

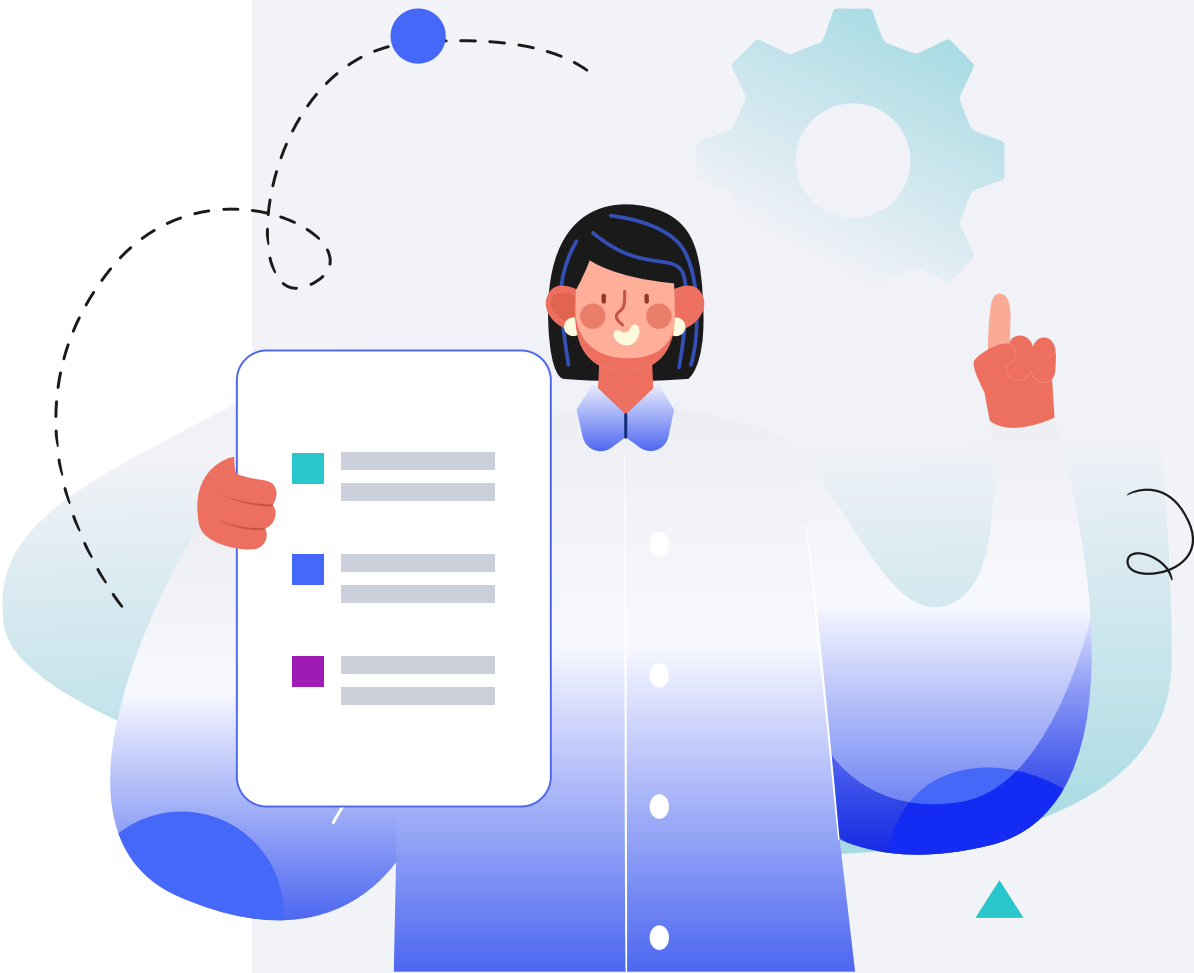
Male

HEIGHT

5ft 5" 165cm

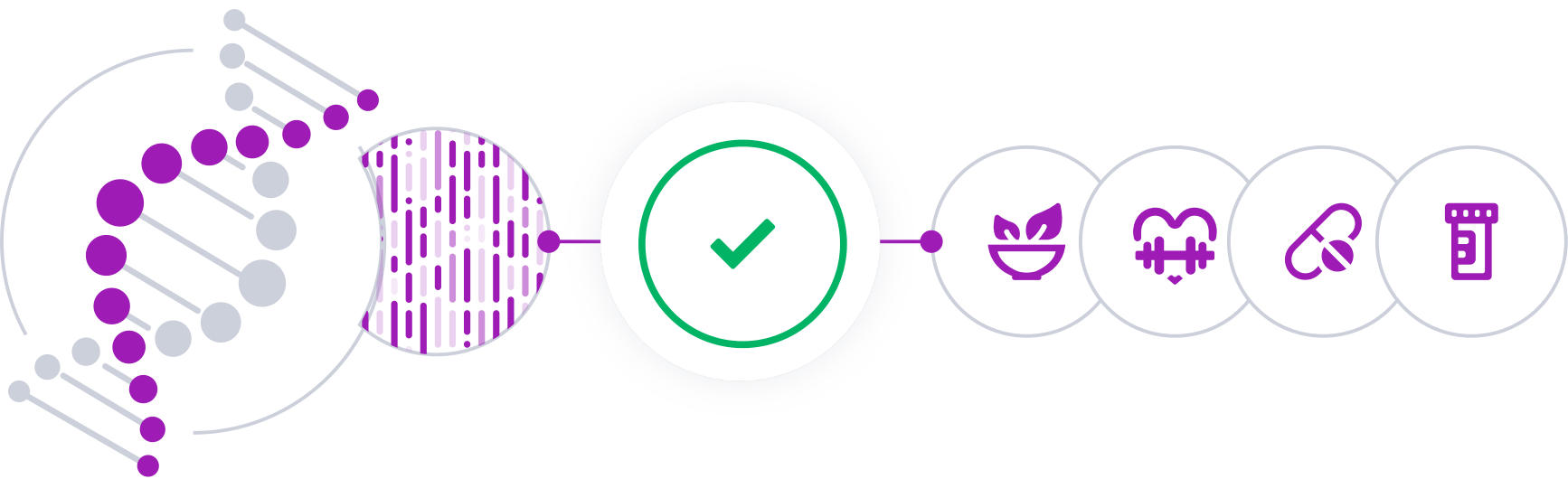
WEIGHT

137lb 62kg



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.

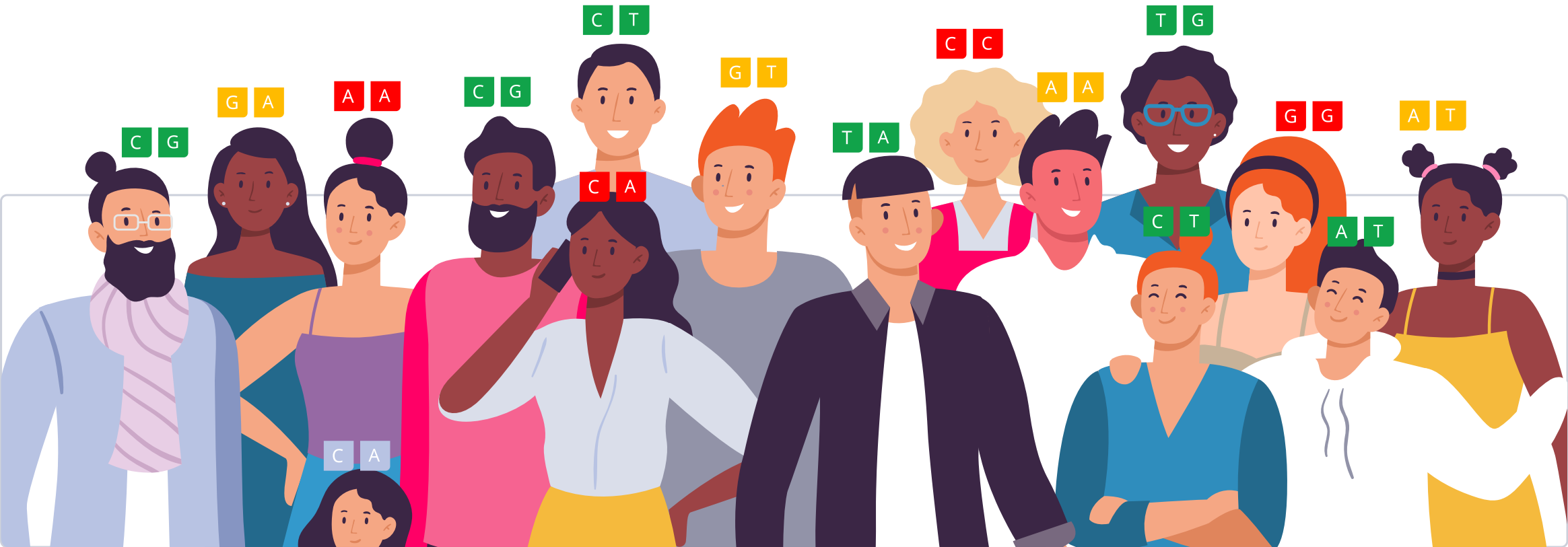


Similarly, our Trait Reports look at how your DNA influences your traits.



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.

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

When we give a risk score, the risk icon tells you if you are at a higher or lower risk compared to other people:



Genotype color info:

AA

You don't have any risk alleles

AA

You have 1 risk allele

AA

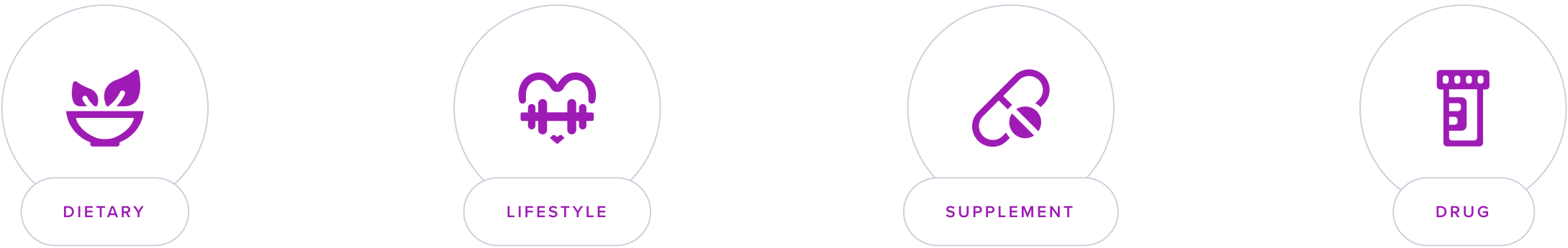
You have 2 risk alleles

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, a few large clinical trials, or a meta-analysis).
-
- Medium-quality
- Direct evidence that a recommendation helps more in people with your gene variant (a few clinical trials or one large clinical trial).
-
- Low-quality
- Direct evidence that a recommendation helps more in people with your gene variant (a single clinical trial or more trials with inconsistent results).
-
- Indirect
- A recommendation may help more in people with your gene variant because it targets a specific gene or protein affected by your variant (e.g., MTHFR, dopamine).
-
- In theory
- A recommendation may help more in people with your gene variant because it targets a specific mechanism affected by your variant (e.g., inflammation, oxidative stress).

Some things to keep in mind:

- 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

Oxidative stress is a condition characterized by an imbalance between the production of free radicals and the body's ability to counteract their harmful effects through neutralization by antioxidants. Free radicals are oxygen-containing molecules with an uneven number of electrons, allowing them to easily react with other molecules. These reactions can lead to cellular damage, which contributes to aging and various diseases.

Oxidative stress is established when there is a disproportion, with either excess production of free radicals or a deficiency in antioxidant defenses, or both. As a result, the excess free radicals can damage DNA, proteins, and cell membranes, leading to a range of pathological conditions.

Causes of Oxidative Stress

The causes of oxidative stress can be multifaceted, including environmental factors such as pollution, radiation, and toxins, as well as lifestyle factors like dietary choices, smoking, alcohol consumption, and chronic stress. The body's metabolism also naturally produces free radicals as byproducts. Oxidative stress is implicated in the pathogenesis of numerous diseases, including neurodegenerative diseases like Alzheimer's and Parkinson's, cardiovascular diseases, diabetes, and inflammatory conditions.

It is also involved in the aging process itself. Therefore, maintaining a balance between oxidative stress and antioxidants is critical for health, and enhancing antioxidant defenses through diet and lifestyle changes is often suggested as a preventive strategy.



TYPICAL

Likely typical oxidative stress based on 60 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
SOD2	rs4880	GG
SOD3	rs2536512	AA
CAT	rs769217	CC
FOXO3	rs12212067	TT
FOXO3	rs4946936	CC
PON1	rs662	TT
NOS3	rs1799983	TT
FOXO3	rs12202234	CC
FOXO3	rs17069665	AA
FOXO3	rs9398171	TT
FOXO3	rs3800230	TT
FOXO3	rs9400239	CC
FOXO3	rs479744	GG
SIRT1	rs7895833	AA
CAT	rs7943316	TA
GPX4	rs713041	CT
CAT	rs1001179	TC
APEX1	rs1130409	GG
NOS3	rs2070744	TC
GCLC	rs1555903	CT
UGT1A6	rs1105879	AA
NOS1	rs1879417	CT
SIRT1	rs12778366	TC
GSTO2	rs156697	GA
UCP2	rs659366	CT
TFAM	rs1937	GC
PPARGC1A	rs8192678	TC
CDKN2A	rs10811661	TT
UCP1	rs1800592	TC
HNRNPA3	rs13001694	GG
GPX1	rs1050450	GG
MVD	rs9932581	CT

GENE	SNP	GENOTYPE
SOD1	rs2234694	AA
NQO1	rs1800566	GG
GSTP1	rs1695	AA
PON1	rs854560	AT
ARMC2	rs6911407	AA
MRPS31	rs4581585	CC
GCLM	rs41303970	GG
FOXO3	rs2802292	GG
MPO	rs2333227	CC
TOM1	rs2071746	AA
OGG1	rs1052133	CC
ARMC2	rs768023	GG
ALDH2	rs671	GG
APOE	rs429358	TT
SLC23A1	rs33972313	CC
FOXO3	rs2802288	AA
NOS2	rs2297518	GG
FOXO3	rs2253310	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		DOSAGE	
1	Glutathione supplements	2	Extra Virgin Olive Oil (EVOO)
3	Aerobic Exercise (Cardio)	4	Garlic Supplement
5	Astaxanthin	6	Avoid Lead Exposure
7	Ginger	8	Goji Berries
9	Black Seed (Black Cumin)	10	Taurine
11	Cranberry	12	Cherries
13	Selenium Supplements	14	N-acetylcysteine (NAC)
15	Curcumin	16	Omega-3 (Fish Oil)
17	Reishi	18	Brussels Sprouts
19	Black Chokeberry	20	Brazil Nuts
21	Hydroxytyrosol	22	Tart Cherries
23	Purple Sweet Potato	24	Pistachios
25	Papaya	26	Almonds
27	CLA (Conjugated Linoleic Acid)	28	Cinnamon
29	Chlorella	30	Blueberries
31	Yoga	32	Blackberries

33	Strawberries		34	Zinc	15 mg
35	Spinach		36	Avoid PBDE	
37	Broccoli		38	Probiotics	30 billion CFU
39	Blueberry Juice		40	Pomegranate	
41	Mustard		42	Copper	2 mg
43	Persimmon		44	Vitamin E	200 iu
45	Methylsulfonylmethane (MSM)	1 g	46	Kelp	500 mg
47	Grape Seed Extract	100 mg	48	Resveratrol	150 mg
49	Lactobacillus Casei	10 billion CFU	50	R-Alpha-Lipoic Acid	100 mg
51	Brown Seaweed	500 mg	52	Chromium	200 mcg
53	Cumin	500 mg	54	Avoid Acrylamide	
55	Shilajit	500 mg	56	Yerba Mate	1 g
57	Hibiscus	250 mg	58	Tocotrienols	100 mg
59	Shiitake Mushroom	500 mg	60	Mangosteen	500 mg
61	Diaphragmatic Breathing	10 minutes	62	Rhodiola	500 mg
63	Boswellia	350 mg	64	Rooibos	3 g
65	Oats		66	Ubiquinol	100 mg
67	Honey		68	Glycine	3 g
69	Parsley		70	Carnosine	1000 mg
71	Salvia Miltiorrhiza		72	Coenzyme Q10 (CoQ10)	100 mg

73	Pycnogenol	100 mg	74	Artichoke
75	Avoid Phthalate Exposure		76	Collard Greens
77	Yacon		78	Prunes
79	Clove	500 mg	80	Quercetin250 mg
81	Lactobacillus Fermentum	10 billion CFU	82	Hazelnuts
83	Krill Oil	1 g	84	Passion Fruit Peel Extract150 mg
85	Amaranth		86	Lettuce
87	Citrus Bioflavonoids	500 mg	88	Plasmalogens
89	Choline Supplements	425 mg	90	Plum Juice
91	Avocado		92	Apple Cider Vinegar
93	Grapes		94	Broccoli Sprouts2 tbsp
95	Pecans		96	Apples
97	Amla		98	Cocoa
99	Watermelon		100	Black Raspberries
101	Mitoquinone Mesylate (MitoQ)		102	Black Walnut Hull
103	Alpha-Ketoglutarate (AKG)	1 g	104	Sleep for 7+ Hours
105	Fruits And Vegetables		106	Vegetables
107	Berries		108	Avoid Exposure To Organic Solvents
109	Alpha-Lipoic Acid	600 mg	110	Topical Vitamin C
111	Exercise At Least One Hour a Day	1 hour	112	Topical Alpha-Lipoic Acid

113	Topical Green Tea		114	Vitamin C	2000 mg
115	Turmeric		116	Tea	
117	Green Tea	400 mg	118	Pomegranate Juice	
119	Dietary Selenium		120	Reduce EMF Exposure	
121	Spirulina	500 mg	122	Dietary Polyphenols	
123	Dietary Antioxidants		124	Leafy Green Vegetables	
125	Antioxidant Supplements		126	Green Tea Extract	250 mg
127	Topical Curcumin		128	Red Grape Juice	

Glutathione supplements

IMPACT

5 / 5

EVIDENCE

4 / 5

How to implement

Take glutathione supplements orally, usually in pill or powder form, with a recommended dose ranging from 500mg to 1000mg daily, divided into two doses. It's best taken on an empty stomach or as directed by a healthcare professional. Continuous use is advised for sustained benefits, but consulting with a healthcare provider for personalized advice and duration is important.

Description

Glutathione (GSH) is your body's strongest antioxidant. It has an enormous capacity to combat [oxidative stress](#) and neutralize harmful free radicals. Chemically speaking, glutathione is a tripeptide made up of 3 amino acids [\[R\]](#):

- Glutamate
- **Cysteine**
- Glycine

Low glutathione levels have been linked to cognitive decline, age-related disease, and general mortality among the elderly [R, R].

People take glutathione supplements to help with:

- Oxidative stress and detox
- Immune system support
- Skin aging and damage
- Exercise recovery
- Chronic diseases such as type 2 diabetes, Alzheimer's disease, Parkinson's disease, or COPD

How it helps

Glutathione reduces reactive oxygen species ([ROS](#)) and oxidative stress in the body, which would otherwise damage cells and DNA. This benefit underlies all the other ones, since oxidative stress is associated with cancer, inflammation, brain damage, and a range of other health problems [[R](#), [R](#), [R](#)].

Glutathione is equally important for the regeneration of other antioxidants your body needs, such as vitamin C and vitamin E. It increases your overall antioxidant defense, a task that can never be accomplished just with one substance [\[R\]](#).

Daily consumption of glutathione supplements was effective at increasing body compartment stores of glutathione, reducing oxidative stress, and decreasing the oxidized to reduced glutathione ratio in whole blood after 6 months in a placebo-controlled trial of 16 healthy men [R].

Similarly, both oral and transdermal glutathione increased blood glutathione levels in a non-placebo-controlled trial of 26 children with autism spectrum disorder. A case series also found this benefit of glutathione in autism spectrum disorder [R, R].

2



Extra Virgin Olive Oil (EVOO)

IMPACT4 / 5

EVIDENCE4 / 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

Numerous studies demonstrate the cardiovascular benefits of olive oil phenolic compounds by reducing oxidative stress biomarkers. Meta-analyses reveal decreased ox-LDL and MDA levels with high-phenol olive oil consumption. Additionally, interventions with extra virgin olive oil show reductions in postprandial oxidative stress and improvements in antioxidant capacity. Furthermore, consuming olive oil rich in phenols correlates with lower oxidative DNA damage. Substituting saturated fats with olive oil may enhance fat oxidation rates, potentially aiding weight management, particularly in individuals with higher waist circumferences [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

However, in a study with 25 participants who consumed extra virgin olive oil with varying phenol content over three-week periods, no significant difference in antioxidant markers was found between low and high phenol diets in smokers [\[R\]](#).

3



Aerobic Exercise (Cardio)

IMPACT4 / 5

EVIDENCE3 / 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

Aerobic exercise may increase antioxidant indicators while reducing those associated with oxidative stress. High-intensity interval training may be more effective than continuous training [\[R\]](#), [\[R\]](#).

Aerobic exercise may also lower oxidative stress markers in people with CKD or heart failure [\[R\]](#), [\[R\]](#).

4



Garlic Supplement

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Take a garlic supplement, such as a garlic extract or aged garlic supplement, in a dosage of 600-1,200 mg per day, divided into separate doses. This should be taken with meals to minimize digestive issues. Continue daily for at least 8-12 weeks to evaluate its effects on health markers like blood pressure or cholesterol.

TYPICAL STARTING DOSE

200 mg

Description

Garlic is a pungent herb known for its potential health benefits, including cardiovascular support and immune system enhancement. It contains bioactive compounds that may help reduce the risk of chronic diseases and support overall well-being.

[Garlic](#) is a delicious aromatic herb that adds flavor to your food. But did you know that garlic has been a part of traditional medicine for thousands of years? **From ancient Egypt and Rome to China, people have praised garlic for its many health benefits.** Today, we can trace many of those benefits to sulfur-rich compounds found in garlic. People take garlic to help control their blood pressure and cholesterol [\[R\]](#).

Please note: *Garlic can interact with blood thinners (like aspirin, Plavix, Coumadin). If you are on blood thinners, consult your doctor before supplementing with garlic [\[R\]](#).*

How it helps

Supplementation with garlic may improve total antioxidant capacity (by 11.03 mmol/L) while decreasing malondialdehyde levels (by 1.88 mmol/L) [\[R\]](#).

Please note: *Garlic can interact with blood thinners (like aspirin, Plavix, Coumadin). If you are on blood thinners, consult your doctor before supplementing with garlic [\[R\]](#).*

5

Astaxanthin

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

Take an astaxanthin supplement daily, with a typical dosage ranging from 4 to 12 mg. It is best taken with a fat-containing meal to enhance absorption.

TYPICAL STARTING DOSE
12 mg

Description

Astaxanthin is a powerful antioxidant found in certain microalgae and seafood. It is known for its potential benefits in reducing oxidative stress, supporting skin health, and promoting eye health.

[Astaxanthin](#) is a naturally-occurring orange-red pigment carotenoid found in algae, shrimp, lobster, crab, and salmon [\[R\]](#).
As an antioxidant, astaxanthin is **10 times stronger than zeaxanthin, lutein and [beta-carotene](#), and 100 times stronger than [vitamin E](#)** [\[R\]](#).
People take astaxanthin to:

- Support skin health [\[R, R\]](#)
- Reduce exercise fatigue [\[R, R\]](#)
- Prevent heart disease [\[R, R, R\]](#)

How it helps

In 2 placebo-controlled trials of 72 soccer players, supplementation with astaxanthin for 45-90 days increased SH (free thiol) groups, improved PON1 activity, and reduced free radical production and non-enzymatic antioxidant depletion [\[R, R\]](#).

However, in a placebo-controlled trial of 14 active men, supplementation with astaxanthin (6 mg/day) for 4 weeks increased glutathione by 7% but did not affect oxidative stress markers or substrate utilization during exercise [\[R\]](#).

Astaxanthin supplementation shows promise in reducing oxidative stress markers in various conditions. It increases total antioxidant capacity (TAC) and superoxide dismutase (SOD) while decreasing malondialdehyde (MDA) levels in type 2 diabetes, PCOS, endometriosis, and smokers [\[R, R, R, R, R, R\]](#).

6



Avoid Lead Exposure

IMPACT3 / 5

EVIDENCE3 / 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 94 male coal miners from Velenje Coal mine found that miners working for three consecutive days had elevated blood lead levels and increased oxidative stress (8-isoprostane) compared to a control group [\[R\]](#).

Subacute lead exposure increased blood lead levels significantly in 36 male workers. Oxidative stress (LPH) rose, while MDA remained unchanged [\[R\]](#).

In a study of 65 healthy males (auto technicians and controls), increased oxidative stress, elevated blood lead levels, and urinary lead/cadmium were observed in auto technicians, particularly in panel beaters [\[R\]](#).

Another study found elevated lead and cadmium levels in blood and urine among subjects near a discharge site, leading to oxidative stress and potential early signs of kidney dysfunction [\[R\]](#).

7



Ginger

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Take a 500 mg ginger supplement daily, preferably with a meal to enhance absorption and minimize potential stomach discomfort.

TYPICAL STARTING DOSE

500 mg

Description

Ginger is a versatile spice known for its potential anti-inflammatory and digestive benefits. It may help alleviate nausea, reduce muscle soreness, and support gastrointestinal comfort when consumed as part of a balanced diet.

[Ginger root](#) is a cooking spice and a traditional remedy. People mostly use it to relieve [\[R\]](#):

- Nausea
- Menstrual cramps
- Joint pain

How it helps

A systematic review and meta-analysis of 12 trials found ginger intake significantly increased glutathione peroxidase activity and total antioxidant capacity while decreasing malondialdehyde levels, indicating its efficacy in improving oxidative stress levels. This suggests ginger supplementation could offer clinical benefits in managing chronic diseases [\[R\]](#).

In a meta-analysis of 11 RCTs, ginger supplementation significantly increased glutathione peroxidase (GPx) levels and decreased malondialdehyde (MDA) levels, but did not significantly change total antioxidant capacity (TAC). Subgroup analysis revealed greater MDA reduction with lower ginger doses, shorter duration, older participants, smaller sample sizes, and mixed genders. Higher doses of ginger and longer durations increased TAC, especially in older participants and larger sample sizes, including both genders and females specifically [\[R\]](#).

A meta-analysis found ginger supplementation significantly reduces serum CRP, TNF-α, IL-6, TAC, and MDA levels, with marginal effect on PGE2. Subgroup analysis supports these findings [\[R\]](#).

8



Goji Berries

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Incorporate goji berries into your daily diet by adding a handful (about 1 ounce or 28 grams) to your morning cereal, yogurt, or smoothie. You can also snack on dried goji berries throughout the day. Aim to include them in your diet consistently for at least a month to observe potential health benefits.

Description

Goji berries are a nutritious fruit known for their high antioxidant content. They may support immune health, provide essential nutrients, and be incorporated into a healthy diet as a snack or ingredient.

How it helps

A meta-analysis of 10 studies showed that consuming wolfberry significantly reduces blood triglycerides, increases HDL cholesterol, and lowers oxidative stress, particularly when consumed as whole fruits, suggesting benefits for cardiovascular health [\[R\]](#).

In an 8-week double-blind study with 53 participants, wolfberry fruit extract (WBE) significantly improved antioxidant and anti-inflammatory responses in mildly hypercholesterolemic and overweight subjects by reducing DNA damage and altering mRNA expression related to oxidative and inflammatory stress [\[R\]](#).

In a 90-day randomized, placebo-controlled trial with elderly subjects, goji berry supplementation stabilized macular pigmentation and soft drusen, significantly increased plasma zeaxanthin by 26%, and total antioxidant capacity by 57%, suggesting protective ocular and systemic effects [\[R\]](#).

Goji-based GoChi significantly enhanced antioxidant markers in a 30-day study, suggesting its potential to boost human antioxidant capacities and prevent oxidative stress-related conditions [\[R\]](#).

9



Black Seed (Black Cumin)

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Take 1000 mg of black seed (black cumin) supplement daily, preferably split into two doses of 500 mg each, one in the morning and one in the evening.

TYPICAL STARTING DOSE

1000 mg

Description

Black seed, also known as black cumin or *Nigella sativa*, has been used for its potential health benefits in traditional medicine. It is believed to have anti-inflammatory, antioxidant, and immune-boosting properties.

[Black seed](#) (black cumin) and its oil are used in cooking and traditional medicine [\[R\]](#).

People use black seed for [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Asthma
- Allergies
- High blood sugar
- High blood pressure
- Joint pain

How it helps

Nigella sativa supplementation shows significant reductions in cholesterol, triglycerides, and glucose levels, along with improvements in antioxidant capacity across various studies. However, the impact on inflammatory markers like CRP and TNF-α varies. While some trials report significant reductions, others show insignificant changes. Overall, it suggests potential benefits for cardiovascular health and antioxidant status, but further research is needed to clarify its effects on inflammation [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

10



Taurine

IMPACT

3 / 5

EVIDENCE

3 / 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

A meta-analysis based on PRISMA guidelines assessed Tau's impact on inflammatory and oxidative stress biomarkers. Tau supplementation decreases malondialdehyde (MDA) and C-reactive protein (CRP), but not tumor necrosis factor-alpha (TNF-α) or interleukin-6 (IL-6). More pronounced effects were observed after eight weeks [\[R\]](#).

Double-blind study with 24 women (61.4 ± 4.2 y) assigned to taurine (GTAU) or placebo (GC) groups for 16 weeks. Taurine supplementation increased plasma taurine and superoxide dismutase (SOD), suggesting its potential in controlling oxidative stress [\[R\]](#).

A randomized double-blind placebo-controlled study with 16 obese and 8 normal-weight women. Obese subjects received either a placebo or taurine (3 g/day) for 8 weeks. Taurine supplementation increased plasma taurine and adiponectin, and decreased hs-CRP and TBARS, suggesting anti-inflammatory and antioxidant effects [\[R\]](#).

Double-blind randomized placebo-controlled trial on elderly hip fracture patients. Taurine supplementation didn't improve in-hospital morbidity, comorbidities, or mortality during the first year. However, it reduced postoperative oxidative stress [\[R\]](#).

11



Cranberry

IMPACT

3 / 5

EVIDENCE

2 / 5

How to implement

Consume one to two 8-ounce servings of unsweetened cranberry juice daily, or take 500 mg of cranberry supplements twice daily. Continue this practice consistently for at least several weeks to potentially observe benefits.

Description

Cranberries are known for their high antioxidant content and potential to promote urinary tract health by preventing bacterial adhesion. Consuming cranberries or cranberry products may help reduce the risk of urinary tract infections and provide antioxidant benefits.

Cranberries are fruits rich in vitamins, minerals, and antioxidants. They are available in different forms, including [\[R\]](#):

- Dried fruits
- Juice
- Powder
- Pills

How it helps

In an 8-week double-blind study, low-calorie cranberry juice significantly enhanced plasma antioxidant capacity and reduced lipid oxidation in women with metabolic syndrome. While it lowered oxidized LDL and malondialdehyde levels, it did not significantly impact blood pressure, glucose levels, lipid profiles, or inflammation markers like C-reactive protein and interleukin-6 [\[R\]](#).

Cranberry juice significantly enhanced plasma antioxidant capacity and vitamin C levels in a study where volunteers consumed 500 ml after fasting overnight. These effects peaked between 60-120 minutes post-consumption. In contrast, blueberry juice, despite its high phenolic content but lower vitamin C levels, did not show similar antioxidant improvements, indicating the pivotal role of vitamin C in boosting plasma antioxidant capacity [\[R\]](#).

In a double-blind study, 16 Polish rowers received either 1200 mg of cranberry extract or a placebo for 6 weeks. Cranberry supplementation significantly enhanced antioxidant levels but not other exercise-related biomarkers [\[R\]](#).

12



Cherries

IMPACT

3 / 5

EVIDENCE

2 / 5

How to implement

Incorporate a serving of cherries, which is about 1 cup or 21 cherries, into your daily diet. You can eat them fresh, frozen, dried, or in juice form. If opting for juice, ensure it's 100% cherry juice without added sugars.

Description

Cherries are a stone fruit that comes in numerous varieties. They are a natural source of antioxidants and anti-inflammatory compounds. They may help reduce inflammation, promote better sleep, and support overall health.

A cherry is a stone fruit with numerous varieties. Cherries are native to parts of Europe and Asia [\[R\]](#), [\[R\]](#).

People consume sweet cherries (*Prunus avium*) and tart cherries (*Prunus cerasus*) to help with [\[R\]](#):

- Gout
- Exercise recovery
- Blood sugar control
- Blood pressure

How it helps

A study suggests that daily consumption of tart cherry juice for 12 weeks can enhance DNA repair activity and reduce inflammation markers like CRP and oxidative stress markers like MDA in older adults, potentially aiding in the management of cardiovascular risk factors [\[R\]](#).

MCC supplementation enhanced muscle recovery and strength retention post-exercise, upregulated antioxidant gene and protein expression, and increased phenolic acid levels in plasma, highlighting its potential benefits in reducing exercise-induced oxidative stress and improving muscle function [\[R\]](#).

Another study demonstrated that tart cherry juice, rich in anthocyanins, enhances the ability of older adults to resist oxidative damage, evidenced by reduced plasma F2-isoprostane levels and lower oxidative damage to nucleic acids during acute stress [\[R\]](#).

Consuming Jerte Valley cherry cultivars enhanced sleep quality and increased urinary levels of 6-sulfatoxymelatonin and total antioxidant capacity in middle-aged and elderly participants [\[R\]](#).

13



Selenium Supplements

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Take 50 mcg of selenium supplements once daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

50 mcg

Description

Selenium is a trace mineral found in Brazil nuts and many other foods as well as supplements. It is an essential nutrient that plays a crucial role in maintaining the body's antioxidant defenses and supporting thyroid function.

[Selenium](#) supports [\[R\]](#):

- Reproduction
- Thyroid function
- DNA production
- Immune response

Adults should be getting **55 micrograms** of selenium per day. Selenium supplements are available for people who can't meet their needs with a balanced diet [\[R\]](#).

How it helps

A meta-analysis of 13 studies found that selenium supplementation had positive effects on reducing oxidative stress. It helps by [\[R\]](#):

- Increasing total antioxidant capacity
- Increasing glutathione peroxidase levels
- Decreasing malonaldehyde levels

14



N-acetylcysteine (NAC)

IMPACT2 / 5

EVIDENCE3 / 5

How to implement

Take 600 mg of N-Acetylcysteine (NAC) supplement daily with water. It can be taken at any time of the day, but try to take it at the same time each day for best results.

TYPICAL STARTING DOSE
1200 mg

Description

NAC is a supplement that contains a form of the amino acid cysteine, a protein building block that your body uses to make the antioxidant glutathione. It is used for its potential antioxidant properties and its ability to support lung, gut, and mental health.

[N-acetylcysteine](#) (NAC) is converted to cysteine in the body. Cysteine is a protein building block (amino acid) that helps make the antioxidant glutathione [\[R\]](#).

People take NAC to potentially support [\[R\]](#), [\[R\]](#):

- Mental health
- Ovarian health and pregnancy outcomes
- Lung health
- Gut health

How it helps

A meta-analysis of 28 studies concluded that supplementation with NAC lowers homocysteine (by 1.45 pg/mL), IL-8 (by 2.56 pg/mL), and MDA (by 1.44 μmol/L), and TNF-α and IL-6 after sensitivity analysis [\[R\]](#).

NAC helps replenish glutathione, one of the body's most potent antioxidants.

15



Curcumin

IMPACT2 / 5

EVIDENCE3 / 5

How to implement

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

TYPICAL STARTING DOSE
500 mg

Description

Curcumin is a compound found in turmeric known for its anti-inflammatory and antioxidant properties. It has been studied for its potential to reduce inflammation, support joint health, and contribute to overall well-being.

[Turmeric](#) is a yellow spice from India. It may reduce inflammation and [oxidative stress](#) [\[R\]](#).

The most important active compound in turmeric is **curcumin**. People use curcumin for [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Joint pain
- Hay fever
- Mood
- High blood sugar
- Gut health
- Liver health

How it helps

Curcumin, the active component found in turmeric, has strong antioxidant properties. It can decrease inflammation and oxidative stress by neutralizing free radicals and stimulating the body's own antioxidant defenses.

Curcumin supplementation (at least 600 mg/day for at least 4 weeks) may help with oxidative stress by [\[R\]](#):

- Reducing malondialdehyde (MDA) levels, a marker of oxidative damage
- Increasing the activity of superoxide dismutase (SOD), an antioxidant enzyme

The benefits may be greater when combined with piperine, a compound in black pepper.

Please note: curcumin may interfere with iron absorption due to its iron-chelating properties, potentially exacerbating anemia or making it harder to manage. If you have anemia, consult your healthcare provider before using curcumin or turmeric supplements [\[R\]](#), [\[R\]](#), [\[R\]](#).

16



Omega-3 (Fish Oil)

IMPACT

2 / 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

A meta-analysis of 39 trials (2,875 participants) assessed omega-3 fatty acid (omega-3 FAs) supplementation's impact on oxidative stress. Omega-3 FAs increased serum total antioxidant capacity (TAC) and glutathione peroxidase (GPx) activity while reducing malondialdehyde (MDA). No significant effects were observed on nitric oxide (NO), reduced glutathione (GSH), superoxide dismutase (SOD), and catalase (CAT). Omega-3 FAs enhanced antioxidant defenses against reactive oxygen species (ROS) [\[R\]](#).

We conducted a meta-analysis of nine randomized controlled trials (RCTs) exploring the impact of omega-3 fatty acids (omega-3 FAs) combined with vitamin E on oxidative stress (OS) parameters. The combination significantly improved total antioxidant capacity (TAC) and nitric oxide (NO) levels while reducing malondialdehyde (MDA). However, there were no significant differences in glutathione (GSH), superoxide dismutase (SOD) activity, and catalase (CAT) activity between the groups [\[R\]](#).

17



Reishi

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take a reishi mushroom supplement, ranging from 500mg to 1500mg once daily. It is best consumed with water and can be taken with or without food. Continue consistently for at least 2 to 3 months to observe potential benefits.

Description

Reishi (*Ganoderma lucidum*) is a type of medicinal mushroom consumed in various forms, including teas, extracts, and capsules. Native to Asia, reishi has been used for centuries in traditional Chinese medicine for its potential to boost the immune system, promote relaxation, and support overall well-being. Reishi contains various compounds, including triterpenes and polysaccharides.

How it helps

In a [placebo-controlled trial of 10 healthy volunteers](#), taking a single 1.1- or 3.3-g reishi mushroom dose **increased TAC (by 23 mmol/L at 90 min) and urinary antioxidant capacity (by 29% at 3 hours)**. Supplementing with 0.72 g/day for 10 days **increased urinary antioxidant capacity** [\[R\]](#).

Supplementation with reishi mushroom (1.44 g/day, equivalent to 13.2 g fresh mushroom) for 4 weeks also **increased urinary antioxidant capacity** in a [placebo-controlled trial of 18 healthy volunteers](#) [\[R\]](#).

In a [placebo-controlled trial of 42 healthy volunteers](#), supplementation with reishi mushroom (225 mg/day) for 6 months **improved TAC, total thiols, and glutathione** content and reverted mild fatty liver to normal condition [\[R\]](#).

In a [placebo-controlled trial of 37 high-risk and 34 stable angina patients](#), supplementation with reishi polysaccharide (750 mg/day) for 90 days **increased SOD while decreasing MDA, CEC, and EPC count** [\[R\]](#).

18



Brussels Sprouts

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Incorporate brussels sprouts into your diet by eating them 2-3 times per week. They can be steamed, roasted, or sautéed and seasoned to taste, forming part of a balanced meal. Each serving should be about 1 cup, which roughly equals 5-6 medium-sized brussels sprouts.

Description

Brussels sprouts are a cruciferous vegetable packed with vitamins, fiber, and antioxidants. They are a nutritious addition to a balanced diet and may support immune health and overall well-being.

Brussels sprouts are good sources of vitamin C, vitamin K, fiber, as well as small amounts of other vitamins and minerals. A ½ cup serving provides 48 mg of vitamin C or 53%DV.

How it helps

Three studies demonstrated that Brussels sprouts consumption can reduce oxidative DNA damage and may provide protective effects against specific types of DNA damage related to cancer-causing agents [\[R\]](#), [\[R\]](#), [\[R\]](#).

19



Black Chokeberry

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Incorporate black chokeberry (*Aronia melanocarpa*) in your diet by consuming 100-200 grams of fresh berries daily. If using a concentrated form like juice or extracts, follow the manufacturer's instructions, usually around 100 ml of juice or 500 mg of extract per day, for at least 8-10 weeks to observe potential health benefits.

Description

Black chokeberry is a fruit known for its high content of antioxidants and potential health benefits. It may support cardiovascular health and provide immune system support when incorporated into a balanced diet.

How it helps

Research on *Aronia melanocarpa* extract across different demographics indicates its potential as a supportive therapy for various health conditions. It improved redox balance in hemodialysis patients and enhanced blood pressure, endothelial function, and lipid profiles in those with metabolic syndrome, thanks to its anthocyanins and flavonoids. However, its effects on inflammation and antioxidant capacity in athletes were limited. Supplementation in children, adolescents, and middle-aged adults showed improvements in lipid profiles, oxidative stress, and enzyme activity. Moreover, anthocyanin supplementation reduced oxidative stress in pregnant women with intrauterine growth restriction, suggesting benefits in managing prenatal oxidative stress [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

20



Brazil Nuts

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Consume 1-2 Brazil nuts daily to meet your selenium needs and potentially improve heart health and thyroid function. Do not exceed this amount to avoid selenium toxicity.

Description

Brazil nuts are a nutritious snack rich in selenium, a mineral essential for various bodily functions, including thyroid health and immune support.

Brazil nuts have an enormous amount of selenium along with other minerals like magnesium, phosphorus, and copper, and vitamins E and B1. A 1-ounce (6–8 nuts) serving provides 544 mcg of selenium or 989%DV.

How it helps

In a study with 31 MS patients, daily supplementation of BNO for 30 days reduced lipid peroxidation, while SO increased cholesterol levels, with no impact on anthropometric or blood pressure measures [\[R\]](#).

A study with 37 morbidly obese women found that consuming one Brazil nut daily for 8 weeks improved selenium levels and GPx activity. Genotype didn't affect the results [\[R\]](#).

A pilot study explored SNPs in GPX1 and SEPP genes in response to selenium from Brazil nuts. GPX1 Pro198Leu rs1050450 may impact selenium status and GPx activity. SEPP gene SNPs and GPX1 rs1050450 can affect gene expression. Larger investigations needed for chronic conditions like MCI and AD [\[R\]](#).

In a study with 31 older adults with mild cognitive impairment (MCI), daily Brazil nut consumption for 6 months increased selenium levels and improved verbal fluency and constructional praxis, indicating potential cognitive benefits [\[R\]](#).



PERSONALIZED TO YOUR GENES

Consuming Brazil nuts may reduce oxidative damage to DNA more in people with your [GPX1](#) gene variant [\[R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
GPX1	rs1050450	GG	2 / 5

21



Hydroxytyrosol

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take a hydroxytyrosol supplement at a dose of 5 to 10 mg per day, with or without food. This supplement should be taken daily for at least 8 to 12 weeks to observe potential health benefits.

TYPICAL STARTING DOSE

5 mg

Description

Hydroxytyrosol is a natural phenolic compound found in extra virgin olive oil. It is known for its antioxidant properties and may contribute to the health benefits associated with the Mediterranean diet.

How it helps

An analysis of 76 articles (67 trials) found that hydroxytyrosol, oleic acid, and olive oil had no significant effect on metabolic syndrome. However, they showed beneficial effects on antioxidant capacity related to its components [\[R\]](#).

A study investigated the effects of 15 mg/day of hydroxytyrosol on healthy volunteers over 3 weeks. Results showed increased antioxidant markers, reduced oxidation biomarkers, and improved body composition [\[R\]](#).

22



Tart Cherries

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Consume about 200 grams (7 ounces) of tart cherries or drink 240 ml (8 ounces) of tart cherry juice daily. This can be done at any time of the day but consuming it in the evening might improve sleep quality. It is recommended to continue daily consumption for at least 4 weeks to observe benefits such as reduced muscle pain, improved sleep, and potential reduction in inflammation.

Description

Tart cherries, often available in the form of juice or supplements, has vitamin C, as well as anthocyanins and melatonin, known for their potential to reduce inflammation and improve sleep quality. They are rich in antioxidants and may aid in recovery from exercise-induced muscle soreness.

Cherries are stone fruits with numerous species. Tart or “sour” cherries (*Prunus cerasus*) are native to parts of Europe and Asia [\[R\]](#), [\[R\]](#).

They are close to regular, sweet cherries (*Prunus avium*) but more acidic. Hence, people do not eat them fresh but dried or in syrups, salads, pies, or liqueurs.

People consume tart cherries to help with [\[R\]](#):

- Gout
- Exercise recovery
- Blood sugar control
- Blood pressure

How it helps

This study examined the impact of tart cherry juice on inflammation and oxidative stress in 37 individuals aged 65~80. After 12 weeks, it increased DNA repair activity and lowered CRP levels compared to a control group, indicating potential anti-inflammatory and antioxidative benefits [\[R\]](#).

This double-blind, crossover study with 12 older adults found that consuming tart cherry juice rich in anthocyanins improved resistance to oxidative damage during stress. It reduced F2-isoprostane levels and basal urinary excretion of oxidized nucleic acids, indicating enhanced antioxidant defenses [\[R\]](#).

In a study with 12 young men, consuming Montmorency tart cherry (MC) with a high-fat meal or combining MC with prior exercise led to significantly higher post-meal antioxidant capacity and lower post-meal triglyceride levels compared to a placebo or exercise with placebo [\[R\]](#).

In a six-week study with 47 healthy adults (30-50 years), tart cherry juice concentrate (Cherry Active) had no significant effect on arterial stiffness, c-reactive protein, blood pressure, cholesterol levels, or HDL cholesterol. However, it did increase plasma antioxidant capacity [\[R\]](#).

23



Purple Sweet Potato

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Incorporate 100-150 grams of purple sweet potato into your diet 3-4 times a week. This can be achieved by baking, boiling, or including it in smoothies.

Description

Purple sweet potatoes are a colorful and nutritious variety of sweet potatoes that originated in southeast Asia. They are packed with antioxidants, fiber, and vitamins, especially vitamin A and C, which supports eye health and overall immunity.

How it helps

Purple sweet potatoes are high in antioxidants, particularly anthocyanins, which help lower oxidative stress and may reduce the risk of chronic diseases.

In a crossover study, consuming purple sweet potato leaves (PSPL) increased plasma polyphenols and antioxidant power while decreasing oxidative damage markers and IL-6 levels in young men after exercise. PSPL intake modulated antioxidative status and reduced exercise-induced oxidative damage and inflammation [R].

In a crossover clinical trial, 200 g/d of purple sweet potato leaves (PSPL) containing 902 mg polyphenols enhanced urinary phenol excretion by 24.5% and improved antioxidant markers (LDL lag time, erythrocyte glutathione) while reducing oxidative stress (urinary 8-OHdG) in healthy adults [R].

A seven-week study involving PSPLs diet (200g/day), followed by a washout and control diet phase. PSPLs consumption increased plasma polyphenols, vitamin E/C, prolonged LDL lag time, and decreased urinary 8-OHdG, without significant changes in GSH, TAS, or MDA levels [R].

24



Pistachios

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate a handful of pistachios (about 1-2 ounces) into your daily diet. You can add them to your breakfast cereals, salads, or simply snack on them throughout the day. Do this regularly for ongoing heart health benefits and to aid in maintaining a balanced diet.

Description

Pistachios are a type of nut native to Asia but grown extensively in the Mediterranean. They are packed with healthy fats, fiber, protein, and various vitamins and minerals, like vitamins C, B6, and E, as well as potassium, copper, and iron. They are also rich in antioxidant and anti-inflammatory compounds, which can help lower cholesterol levels and support weight management.

The pistachio (*Pistacia vera L*), known as **the “green nut”**, is a nut native to Asia but widely cultivated in the Mediterranean. Pistachios have **low fat content** and high levels of [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Unsaturated fats
- Vitamins (C, B6, E, K, thiamin)
- Minerals (Potassium, copper, iron, and magnesium)

Pistachios also have a high **antioxidant and anti-inflammatory** effect [\[R\]](#).

How it helps

In a study, adults with high cholesterol showed improved antioxidant levels and reduced oxidized LDL after consuming diets enriched with one or two daily servings of pistachios [\[R\]](#).

In a clinical trial, prediabetic subjects on a pistachio-supplemented diet showed reduced DNA oxidative damage and increased expression of telomere-related genes, potentially enhancing health span and mitigating prediabetes effects [\[R\]](#).

25



Papaya

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 500 mg of papaya extract daily for at least one month to observe potential health benefits. If using powdered form, it can be mixed with water or juice for easier consumption.

TYPICAL STARTING DOSE
500 mg

Description

Papaya is a tropical fruit native to Central America and Mexico that is rich in vitamins A and C, folate, and dietary fiber. It has a long history in traditional medicines as a digestive aid and promoting skin health. Papaya's extract, papain, is used as a dietary supplement for digestive support.

Papaya is a tropical orange fruit. It originates from Central America, but today it's most widely grown in India.

People enjoy the great taste of papaya. It's also rich in healthy nutrients that may support the immune system.

How it helps

Consuming fermented papaya preparations (6-9 g/day for 1-3 months) may improve antioxidant protection and reduce oxidative damage to the DNA, red blood cells, and stomach lining. Fermented papaya may also improve antioxidant status in people with conditions such as beta-thalassemia and hereditary spherocytosis [R, R, R, R, R, R, R].

Papaya may help by increasing the expression of antioxidant genes [R].

26



Almonds

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate a handful of almonds (about 23 kernels) into your daily diet. You can eat them as a snack, add them to your breakfast cereals or yogurt, or include them in salads and other dishes. Do this consistently for ongoing health benefits.

Description

Almonds are a good source of omega-6s, protein and vitamins, making for a great snack food. A 1-ounce serving provides 3700 mg of omega-6.

Almonds are nutritious tree nuts that originate from the Prunus dulcis tree. They are packed with essential nutrients, including healthy fats, fiber, vitamin E, and magnesium, which collectively contribute to heart health, support weight management, and may help regulate blood sugar levels.

How it helps

A meta-analysis of seven RCTs involving 424 participants indicates that almond intake significantly decreases malondialdehyde (MDA) levels, reflecting improved antioxidant defense and reduced oxidative stress in adults. No significant effect on oxidized low-density lipoprotein (Ox-LDL) was observed [R].

27



CLA (Conjugated Linoleic Acid)

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 3 to 4 grams of CLA (conjugated linoleic acid) supplements daily, divided into two doses, preferably with meals to enhance absorption. Continue this regimen daily for at least 6 months to potentially see beneficial results.

TYPICAL STARTING DOSE

3 g

Description

CLA is a fatty acid found in meat and dairy products and is often used as a dietary supplement. Some studies suggest that CLA may have potential benefits for weight management and body composition by promoting fat loss and muscle preservation.

[Conjugated linoleic acids](#) (CLA) are **polyunsaturated fats** (PUFAs). They’re mainly found in meat and dairy. People also take them as supplements [\[R\]](#), [\[R\]](#).

CLA supplements are often marketed as weight loss aids [\[R\]](#).

How it helps

CLA supplementation may reduce malondialdehyde (MDA) levels. This indicates a drop in oxidative stress [\[R\]](#), [\[R\]](#).

However, not all studies found the same benefits [\[R\]](#).

28



Cinnamon

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take a 1 g cinnamon supplement once daily, ideally with a meal to aid absorption. This can be in the form of a capsule or tablet. Continue this regimen as long as it aligns with your health goals and under the guidance of a healthcare provider.

TYPICAL STARTING DOSE

1 g

Description

Cinnamon is a popular spice that may have various health benefits, including improving blood sugar control, reducing inflammation, and providing antioxidants. It's commonly used in both culinary and herbal applications.

[Cinnamon](#) is a spice made from the bark of *Cinnamomum* trees. Cinnamon can [\[R\]](#):

- Decrease inflammation
- Fight [oxidative stress](#)
- Kill microbes

Cinnamon is mainly used in cooking and fragrances. **As a natural remedy, people use cinnamon to reduce blood sugar** [\[R\]](#).

There are two main types of cinnamon [\[R\]](#):

- Ceylon or ‘true’ cinnamon (*Cinnamomum verum*)
- Chinese or Cassia cinnamon (*Cinnamomum cassia*)

How it helps

A [meta-analysis and systematic review of 12 studies](#) found that cinnamon supplementation (1.5 to 4 g/day) improved biomarkers of inflammation and oxidative stress. For example, it **reduced CRP (WMD: -2.22 mg/L), malondialdehyde (WMD: -0.79 mmol/L), and slightly IL-6 (WMD: -1.48 pg/mL)**. Moreover, it increased **total antioxidant capacity (TAC) (WMD: 0.34 mmol/L)** without changing intercellular adhesion molecule-1 (ICAM-1) (WMD: 1.53 ng/mL) [\[R\]](#).

29



Chlorella

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 3 to 5 grams of chlorella in tablet or powder form daily, ideally before meals to improve digestion. Continue this supplementation for at least 2 to 3 months to observe benefits.

TYPICAL STARTING DOSE
3 g

Description

Chlorella is a microalga from freshwater. People consume chlorella in rice, pancakes, or tea. It can also be found as a supplement [\[R\]](#), [\[R\]](#).

Chlorella is **rich in protein** and several micronutrients. It may be useful to [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Reduce blood sugar
- Lower cholesterol
- Reduce blood pressure
- Improve immunity

How it helps

In a placebo-controlled trial of 44 healthy volunteers, consuming chlorella water extract (27 mL) for 90 days improved antioxidant status (TEAC, SOD, CAT, and DHEAs) while reducing oxidative stress markers (TBARS and 8-OHdG) [\[R\]](#).

Chlorella extract (6 g/day) taken for 4 weeks increased TAC while reducing MDA in a placebo-controlled trial of 27 healthy men [\[R\]](#).

Chlorella (8 g/day taken for 2 months) also improved red blood cell antioxidant status and lowered phospholipid hydroperoxide concentration in a placebo-controlled trial of 12 older adults [\[R\]](#).

In 2 placebo-controlled trials of 90 smokers, supplementation with chlorella extract (3600-6300 mg/day) for 6 weeks reduced MDA while increasing vitamin C (by 44.4%), vitamin E (alpha-tocopherol, by 15.7%), and glutathione levels, and SOD, CAT, and GPx activities [\[R\]](#), [\[R\]](#).

30



Blueberries

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate a half to one cup of fresh or frozen blueberries into your daily diet. You can add them to your breakfast cereal, smoothies, or enjoy them as a snack on their own.

Description

Blueberries are a nutritious fruit packed with antioxidants, vitamins, and fiber. They are known for their potential to support brain health, reduce the risk of chronic diseases, and promote overall well-being.

[Blueberries](#) are enjoyed all around the world for their sweet taste and nutritional benefits. They may support [\[R\]](#):

- Heart health
- Cognitive function
- Normal blood sugar levels

How it helps

Consuming one portion of blueberries significantly reduces DNA damage induced by oxidative stress in human subjects, although no changes were observed in vascular function or nitric oxide levels, suggesting the need for further research [\[R\]](#).

Consuming wild blueberries significantly enhances serum antioxidant status after a high-fat meal, potentially lowering the risk of chronic diseases. This increase, measured by improved results in oxygen radical absorbance and total antioxidant status assays, was evident within hours of consumption [\[R\]](#).

Consumption of a wild blueberry drink for six weeks significantly reduced DNA damage from oxidation in male volunteers, although it did not affect endothelial function markers. Further research is needed to explore the potential benefits on vascular health [\[R\]](#).

Consuming blueberry/apple juice increased plasma antioxidants and reduced oxidative DNA damage in a study of 168 volunteers, though it also raised levels of a specific DNA adduct. Genetic differences influenced individual responses, suggesting tailored antioxidant interventions based on genetic makeup could optimize benefits [\[R\]](#).

However, consuming cranberry juice significantly boosts plasma antioxidant capacity, mainly due to increased vitamin C levels, unlike blueberry juice which lacks this effect due to lower vitamin C content despite its richness in phenolics [\[R\]](#).

31



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

Yoga may help decrease indicators of oxidative stress such as MDA in various populations, including those with chronic diseases such as diabetes and cardiovascular conditions [\[R\]](#).

32



Blackberries

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Incorporate a serving of blackberries into your daily diet, which is about 1/2 to 1 cup. You can add them to your morning cereal, blend them into a smoothie, or eat them as a snack.

Description

Blackberries are a delicious and antioxidant-rich fruit packed with vitamins and fiber. They can promote immune health, support digestive regularity, and contribute to overall well-being.

How it helps

Consumption of blackberry juices increased plasma ascorbic acid and catalase but not urate or alpha-tocopherol levels in a study. Antioxidant capacity improved, correlating positively with ascorbic acid and negatively with urate, suggesting further research on polyphenols' health benefits is needed [\[R\]](#).

33



Strawberries

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Incorporate a serving of strawberries, which is approximately eight medium-sized strawberries (about 1 cup or 150 grams), into your daily diet. You can enjoy them as a snack, add them to your breakfast cereal or oatmeal, blend them into smoothies, or use them as a topping for salads and desserts.

Description

Strawberries are a delicious fruit rich in vitamin C, antioxidants, and dietary fiber. They provide essential nutrients and are associated with various health benefits, including improved immune function and heart health.

Strawberries (*Fragaria ananassa*) are one of the most consumed berries, both fresh and processed in juices, jams, yogurts, and desserts [R].

Strawberries have a high content of antioxidants and vitamins, such as [R, R]:

- Vitamin C
- Folate
- Flavonoids

How it helps

Daily consumption of strawberries for 3 weeks increased antioxidant capacity, as indicated by a 20% increase in lipid peroxidation lag time, suggesting potential health benefits despite challenges in measuring changes in antioxidant status in healthy individuals [R].

Strawberries are rich in vitamin C and other antioxidants, helping to reduce oxidative stress and inflammation.

34



Zinc

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Take a 15 mg zinc supplement daily, ideally with a meal to enhance absorption.

TYPICAL STARTING DOSE

15 mg

Description

Zinc is an essential mineral found in various foods, including meat, dairy, and nuts. It is crucial for immune function, wound healing, DNA synthesis, and maintaining healthy skin and nails. Zinc supplements are sometimes used to support immune health and manage zinc deficiencies.

[Zinc](#) is an essential mineral. Your body needs it to [\[R\]](#), [\[R\]](#):

- Defend against disease
- Protect DNA from damage
- Heal wounds
- Control blood sugar

Some of the best sources of zinc include **shellfish, pork, beef, and beans**. It is also available as a supplement [\[R\]](#).

Adults should get **8-11 mg of zinc** per day [\[R\]](#).

How it helps

A study found that zinc significantly reduced malondialdehyde levels and increased total antioxidant capacity and glutathione levels, but not nitric oxide levels, suggesting benefits in oxidative stress-related diseases [\[R\]](#).

A meta-analysis shows that zinc supplementation is linked to a decrease in serum markers of inflammation and oxidative stress in adults, highlighting its potential therapeutic benefits [\[R\]](#).

35



Spinach

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Incorporate one cup of fresh spinach or half a cup of cooked spinach into your daily diet. You can add spinach to salads, smoothies, omelets, or pastas to easily increase your intake.

Description

Spinach is a leafy green vegetable packed with essential nutrients, including vitamins A and K, iron, and folate. Incorporating spinach into the diet supports eye health, bone health, and overall nutrition.

Spinach is a good source of molybdenum, folate, calcium, and iron, as well as vitamins A, C, and K1. A ½ cup serving provides 8 mcg of molybdenum or 18%DV.

How it helps

Consuming spinach or perilla for 10 days increases plasma lutein and moderately increases beta-carotene, reducing lipid peroxidation markers but not affecting total antioxidative capacity in healthy volunteers [\[R\]](#).

Spinach supplementation in well-trained men for 14 days before a half-marathon significantly reduces oxidative stress markers and muscle damage compared to placebo, suggesting protective effects against exercise-induced oxidative stress [\[R\]](#).

Consuming 225 g of spinach daily for 16 days significantly reduced oxidative DNA damage and altered folate and homocysteine levels in blood, indicating protective effects against cellular damage in humans [\[R\]](#).

36



Avoid PBDE

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

To avoid PBDEs, replace old furniture that might contain these chemicals, vacuum and dust your home regularly to reduce dust particles that might contain PBDEs, and use products labeled as PBDE-free. Ensure you check labels on electronics, furnishings, and textiles for mention of being PBDE-free.

Description

Polybrominated Diphenyl Ethers (PBDEs) are commonly found in flame retardants used in household items. These chemicals are linked to health issues like hormone disruption and neurodevelopmental problems. Opt for PBDE-free products, improve ventilation, and frequently clean to minimize dust, which can contain PBDE particles, promoting a healthier living environment.

How it helps

The study examined various environmental pollutants (OCPs, PCBs, PFAS, PBDEs) and found associations between OCPs and oxidative stress markers, suggesting OCPs may increase oxidative stress [\[R\]](#).

37



Broccoli

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Incorporate at least one cup of chopped broccoli, either steamed or raw, into your daily diet. This can be as part of a meal or snack. Continue this practice daily for ongoing health benefits.

Description

Broccoli and broccoli sprouts are nutrient-dense vegetables packed with vitamins, minerals, and antioxidants. They are known for their potential to support a healthy immune system, protect against chronic diseases, and promote overall nutritional wellness.

Broccoli is high in vitamin K and C, as well as a number of other vitamins and minerals, and antioxidants like quercetin. A ½ cup serving provides 110 mcg of vitamin K or 92%DV.

How it helps

In a crossover study, 27 young healthy smokers consumed 250 g/day of steamed broccoli or a control diet for 10 days each. Broccoli intake reduced oxidized DNA lesions by 41% and increased resistance to H2O2-induced DNA strand breaks by 23%. Protection was higher in GST M1-null genotype individuals, suggesting improved antioxidant status from broccoli intake [\[R\]](#).

In a study with ten healthy subjects, consuming a single portion of steamed broccoli (250 g) with pasta led to significant increases in plasma vitamin C and folate levels at 3 hours, and β-carotene at 6 hours. Broccoli also modulated plasma GST activity and reduced H2O2-induced DNA damage in blood mononuclear cells 24 hours post-consumption, particularly in GSTM1 positive individuals [\[R\]](#).

How to implement

TYPICAL STARTING DOSE

30 billion CFU

Description

Probiotics are live beneficial bacteria and yeasts that can support gut health and digestive function when consumed as supplements or found in fermented foods like yogurt and sauerkraut. They may be beneficial to gut health, immune function, blood sugar, and mood.

- Maintaining gut health
- Supporting a healthy immune system
- Improving your mood
- Helping to maintain healthy blood sugar

Prebiotics are certain types of fiber and other complex carbs that serve as food for gut bacteria. **They support gut health by helping boost the activity and growth of “good” bacteria** [R, R].

- Oligo-fructose
- Oligo-galactose
- Inulin

Mixtures of probiotics and prebiotics are known as **synbiotics** [R].

How it helps

L. casei LTL1879, obtained from long-lived elderly volunteers increased total antioxidant capacity while decreasing MDA in a placebo-controlled trial of 20 healthy volunteers [R].

A combination of *L. casei* (4×10^8 cfu/day) and inulin (400 mg/day) increased catalase, superoxide dismutase, and glutathione peroxidase activity, as well as the ferric-reducing ability of plasma in a placebo-controlled trial of 32 healthy volunteers [R].

39



Blueberry Juice

IMPACT1 / 5

EVIDENCE2 / 5

How to implement

Drink 8 to 12 ounces of blueberry juice, preferably made from 100% pure blueberries without added sugars, once daily, ideally in the morning or during breakfast for best absorption and benefits.

Description

Blueberry juice offers similar health benefits to whole blueberries, providing a concentrated source of antioxidants and vitamins.

Made from the juice of blueberries. [Blueberries](#) are enjoyed all around the world for their sweet taste and nutritional benefits. They may support [\[R\]](#):

- Heart health
- Cognitive function
- Normal blood sugar levels

How it helps

Consumption of a wild blueberry drink for six weeks significantly reduced DNA damage from oxidation in male volunteers, although it did not affect endothelial function markers. Further research is needed to explore the potential benefits on vascular health [\[R\]](#).

Consuming blueberry/apple juice increased plasma antioxidants and reduced oxidative DNA damage in a study of 168 volunteers, though it also raised levels of a specific DNA adduct. Genetic differences influenced individual responses, suggesting tailored antioxidant interventions based on genetic makeup could optimize benefits [\[R\]](#).

However, consuming cranberry juice significantly boosts plasma antioxidant capacity, mainly due to increased vitamin C levels, unlike blueberry juice which lacks this effect due to lower vitamin C content despite its richness in phenolics [\[R\]](#).

40



Pomegranate

IMPACT1 / 5

EVIDENCE2 / 5

How to implement

Incorporate pomegranate into your diet by consuming fresh pomegranate seeds, drinking pure pomegranate juice, or adding pomegranate extract to smoothies or yogurts. Aim for at least one serving per day, which could be about half a cup of seeds or a glass (8 ounces) of juice, to gain its health benefits.

Description

Pomegranate is a fruit native to regions of the Middle East and Mediterranean. It is rich in antioxidants and nutrients such as vitamin C, vitamin K, and dietary fiber. It contains punicalagins, anthocyanins, and ellagic acid, which give it anti-inflammatory effects and potential heart health benefits.

[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

Pomegranates are packed with antioxidants, including punicalagins and anthocyanins, which help lower oxidative stress and support overall health.

A systematic review of pomegranate extract's impact on oxidative stress found mixed results. While it didn't significantly decrease biomarkers like ox-LDL and POX 1, it notably increased GPX and TAC levels, showing promise, especially in Eastern countries [\[R\]](#).

A comprehensive search across multiple databases yielded 21 studies for analysis. Pomegranate consumption significantly increased TAC and SOD levels while decreasing MDA levels. However, no significant effects were found on FRAP, GSH, GSH-Px, ox-LDL, and PON1. More robust RCTs are needed for validation [\[R\]](#).

A search across major databases yielded 575 references, with 11 RCTs (484 participants) included. The meta-analysis didn't support the significant effects of pomegranate intake on TAC, GPx, paraoxonase, or MDA levels. Future well-designed trials are required for conclusive claims on pomegranate's impact on oxidative stress parameters [\[R\]](#).

How to implement

Description

How it helps

However, a crossover study with 46 adults tested the effects of allylisothiocyanate (AITC) and AITC-rich vegetables on DNA integrity, and despite a temporary increase in DNA strand breaks three hours post-consumption, no long-term DNA damage or significant changes in DNA repair were observed, indicating that the immediate genotoxic effects of AITC and related vegetables are transient and do not result in lasting harm [R].

42



Copper

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a copper supplement of 2 milligrams (mg) per day with water, preferably with a meal to reduce the risk of stomach upset. This dosage is for general maintenance of copper levels in adults and should not exceed the recommended amount without consulting a healthcare provider.

TYPICAL STARTING DOSE

2 mg

Description

Copper is an essential trace mineral that plays a vital role in various bodily functions, including the formation of red blood cells and the maintenance of healthy connective tissues.

A **copper supplement** of up to 900 micrograms per day can be taken to meet needs not achieved through diet.

Please note: only people who can't maintain healthy copper levels through their diets may need a supplement. Consult your doctor before supplementing.

How it helps

The FoodCue study demonstrated that high dietary copper intake, up to 7 mg/day, protects red blood cells from oxidation in middle-aged volunteers [\[R\]](#).

43



Persimmon

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a dried persimmon supplement of 100-200mg daily, with water, preferably in the morning after breakfast. Continue this routine for at least 4-8 weeks to observe potential health benefits.

Description

Persimmon is a tropical fruit that comes from a variety of Diospyros trees . It has been used traditionally in Asian countries for centuries. Persimmons are a good source of nutrients, including vitamin A, vitamin C, dietary fiber, and various antioxidants like beta-carotene and flavonoids, which may support immune function and healthy skin.

How it helps

A study found that persimmon consumption significantly boosts antioxidant power and reduces oxidative stress in the body, with variations in response based on season and gender [\[R\]](#).

44



Vitamin E

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 200 IU of Vitamin E daily as a supplement, preferably with a meal that contains fat to enhance absorption.

TYPICAL STARTING DOSE

200 iu

Description

Vitamin E is a fat-soluble antioxidant found in various foods, such as nuts and seeds. It is known for its ability to protect cells from oxidative damage, support immune function, and may play a role in skin health. Vitamin E supplements are used to bolster antioxidant defenses and may be beneficial for conditions related to oxidative stress.

[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

Vitamin E is a fat-soluble antioxidant that helps protect cell membranes from damage caused by free radicals. By doing so, it reduces oxidative stress and supports overall cellular health.

Meta-analysis of nine studies found omega-3 FAs and vitamin E supplementation increased total antioxidant capacity and nitric oxide, and reduced malondialdehyde levels, but showed no significant effect on glutathione, catalase, and superoxide dismutase activities [\[R\]](#).

45



Methylsulfonylmethane (MSM)

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take 1 to 3 grams of Methylsulfonylmethane (MSM) per day, divided into three doses. This can be in the form of capsules or powder that is mixed with water. It is recommended to start with a lower dose to assess tolerance, then gradually increase to the desired dose over a period of 1 to 2 weeks.

TYPICAL STARTING DOSE

1 g

Description

MSM is a naturally occurring sulfur compound found in foods and used in dietary supplements. It has anti-inflammatory properties and may be used to support joint health and reduce exercise-related muscle soreness.

A molecule of MSM is broken down in the body into a sulfate (sulfur) group and two methyl groups.

The following may increase people’s needs for sulfur and methyl groups: physical activity, recovery from injuries, inflammation, infections/sickness, toxins, etc.

People also need more sulfur when taking hormones (DHEA, pregnenolone, etc.), drugs (Aspirin, Tylenol, NSAIDs, birth control, etc.) or supplements (flavonoids & polyphenols - resveratrol, quercetin, curcumin, etc.) that undergo sulfation.

How it helps

MSM may help in reducing oxidative stress by increasing the levels of [\[R, R, R\]](#):

- [Glutathione](#), a potent antioxidant produced by the body
- Amino acids (e.g., methionine, cysteine, and [taurine](#))

This can protect cells from the damage caused by free radicals, which are unstable molecules that can contribute to inflammation and tissue damage.

Moreover, in a small clinical trial in people with knee osteoarthritis, the levels of urine MDA, a marker of oxidative stress, dropped in people taking MSM [\[R\]](#).

46



Kelp

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a kelp supplement daily, ensuring the dosage aligns with the product's label, typically ranging from 600 to 1000 micrograms of iodine. It's important to not exceed the recommended dosage to avoid potential thyroid issues. Use for ongoing nutritional support, especially if your diet lacks iodine.

TYPICAL STARTING DOSE

500 mg

Description

Kelp is a type of seaweed rich in iodine and other minerals. Incorporating kelp into the diet may help support thyroid function and provide essential nutrients.

Kelp is a source of iodine, vitamins K, A, C, E, and B-vitamins, along with some thiamin, riboflavin, and niacin. The highest type is kombu kelp, which contains 2,984 mcg of iodine per seaweed sheet (1 gram).

How it helps

A study found fermented sea tangle (FST) reduced γ -glutamyltransferase (γ -GT) and malondialdehyde (MDA) levels while enhancing superoxide dismutase (SOD) and catalase (CAT) activities, suggesting potential as an antioxidant functional food [\[R\]](#).

47



Grape Seed Extract

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 100-300 mg of grape seed extract daily, preferably with a meal to enhance absorption. This can be done either through a single dose or split into multiple doses throughout the day. Continue this regimen for at least 3 months to observe potential benefits.

TYPICAL STARTING DOSE
100 mg

Description

Grape seed extract is rich in antioxidants called polyphenols, which may help protect against oxidative stress and support cardiovascular health. It's also believed to have potential benefits for skin health and overall well-being.

[Grape seed extract](#) is made from the seeds of wine grapes. It contains antioxidant compounds that may help support [\[R\]](#), [\[R\]](#):

- Blood circulation
- Heart health
- Blood sugar control
- Healthy weight

How it helps

Grape Seed Extract is rich in antioxidants, including procyanidins, which help to neutralize free radicals in the body. This can reduce oxidative stress and protect cells from damage.

A flavanol-rich supplement reduced platelet reactivity in male smokers, lowering the risk for vascular disease. Plasma antioxidant defense remained unchanged. This suggests potential health benefits for smokers from flavanol-rich supplements, highlighting their importance in diet [\[R\]](#).

48



Resveratrol

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 150-500 mg of resveratrol as a supplement daily, preferably with meals to enhance absorption. This dosage range is based on studies for various health benefits, and it's advised to not exceed 500 mg per day without medical supervision.

TYPICAL STARTING DOSE

150 mg

Description

Resveratrol is a natural compound found in red grapes, red wine, and some berries. It is known for its potential antioxidant properties and its role in promoting heart health.

[Resveratrol](#) is an antioxidant found mainly in [\[R\]](#):

- Berries
- Red grapes
- Red wine
- Peanuts

It’s purported to have anti-inflammatory and antioxidant effects [\[R, R, R\]](#).

How it helps

Scientists believe resveratrol may have dual antioxidant activity: as a direct antioxidant and as a compound that may increase other antioxidant enzymes, genes, and pathways.

Resveratrol supplementation has shown mixed results in reducing oxidative stress markers.

Some studies indicate significant increases in total antioxidant capacity (TAC) and improvements of markers like GPx, SOD, CAT), and MDA levels, while other studies didn’t confirm these benefits [\[R, R, R, R\]](#).

It seems to have antioxidant benefits for people with diabetic kidney disease but not for people with metabolic disorders [\[R, R\]](#).

49



Lactobacillus Casei

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take a supplement containing Lactobacillus casei daily, with a dosage recommended by the product's manufacturer or a healthcare professional. The specific amount can vary, but it is commonly found in doses around 10 billion colony-forming units (CFUs). Continue this regimen for at least 4 weeks to observe potential health benefits.

TYPICAL STARTING DOSE
10 billion CFU

Description

Lactobacillus casei is a probiotic bacterium known for its potential to support gut health and immune function. It contributes to a balanced gut microbiome and may help alleviate digestive issues like diarrhea.

[Lactobacillus casei](#) is a [probiotic](#) bacterium found in fermented foods (e.g., cheese), as well as in the reproductive and gastrointestinal tracts of humans and other animals [\[R\]](#), [\[R\]](#).

People mainly take *L. casei* to support a healthy gut microbiota [\[R\]](#).

How it helps

L. casei LTL1879, obtained from long-lived elderly volunteers increased total antioxidant capacity while decreasing MDA in a placebo-controlled trial of 20 healthy volunteers [\[R\]](#).

The combination of *L. casei* (4 x 10^8 cfu/day) and inulin (400 mg/day) increased catalase, superoxide dismutase, and glutathione peroxidase activity, as well as the ferric reducing ability of plasma in a placebo-controlled trial of 32 healthy volunteers [\[R\]](#).

50



R-Alpha-Lipoic Acid

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take R-Alpha-Lipoic Acid as directed on the supplement label or by your healthcare provider. It is recommended to take 100-300 mg daily, with meals to enhance absorption and minimize gastrointestinal discomfort. Drink plenty of water, and consult your healthcare provider before starting if you have any underlying health conditions or are taking other medications.

TYPICAL STARTING DOSE

100 mg

Description

R-alpha-lipoic acid (R-ALA) is an antioxidant supplement, a biologically active form of alpha-lipoic acid. Unlike standard alpha-lipoic acid, which may contain a mix of its R and S forms, R-ALA is the naturally occurring form, potentially offering enhanced bioavailability. Alpha-lipoic acid supports energy metabolism, combats oxidative stress, and may help manage weight and inflammation.

How it helps

In one study, R-ALA improved antioxidant gene expression and reduced inflammation markers over 24 weeks [R].

In people with age-related macular degeneration, R-ALA increased superoxide dismutase (SOD) levels but didn’t reduce malondialdehyde (MDA) [R].

It enhanced mitochondrial function and reduced oxidative damage in animal aging models and reduced oxidative eye damage caused by high blood sugar (diabetic retinopathy) [R, R, R].

51



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

In a placebo-controlled trial of 80 healthy volunteers, supplementation with brown seaweed (*Ascophyllum nodosum*) extract (100 mg/day) for 8 weeks modestly decreased DNA damage in those who were obese [R].

52



Chromium

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a 200 mcg chromium supplement daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

200 mcg

Description

Chromium is a trace mineral that plays a role in insulin sensitivity and glucose metabolism. Adequate chromium intake through diet or supplements may help support blood sugar control and overall metabolic health.

[Chromium](#) (Cr) is a trace element. It helps regulate carb, fat, and protein breakdown [\[R\]](#).

Women need 20-25 micrograms (mcg) of chromium per day, while men need 30-35 mcg [\[R\]](#).

It’s easy to get chromium from your diet. Good sources include [\[R\]](#):

- Grape and orange juice
- Ham
- Beef
- Lettuce

You can also get chromium from supplements [\[R\]](#).

How it helps

This meta-analysis found that chromium supplementation increased glutathione levels but had no significant impact on most other oxidative stress biomarkers in randomized clinical trials [\[R\]](#).

Chromium supplementation may enhance total antioxidant capacity and reduce malondialdehyde levels, but its effects on other oxidative stress markers are unclear. Interpret results cautiously due to study heterogeneity; more large-scale RCTs are needed [\[R\]](#).

53



Cumin

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

To implement this supplement recommendation, take 500 mg of cumin in capsule form daily, preferably with a meal to enhance absorption. It's often recommended to continue this regimen for at least 8 weeks to observe potential health benefits.

TYPICAL STARTING DOSE

500 mg

Description

Cumin is a spice used in cooking and traditional medicine. It contains compounds that may have antioxidant and anti-inflammatory effects.

Cumin (*Cuminum cyminum* L.) is a flowering herb cultivated in the Middle East, India, China, and the Mediterranean area [R].

Cumin seeds are used as a spice and, in traditional medicine, for [R, R, R]:

- Diarrhea
- Stomachache
- High cholesterol
- Diabetes

How it helps

A clinical trial investigated the effects of Cuminum cyminum L. essential oil (CuEO) on oxidative and inflammatory markers in 56 metabolic syndrome patients. CuEO supplementation significantly improved antioxidant levels and reduced oxidative stress, suggesting therapeutic potential for metabolic syndrome management [R].

54



Avoid Acrylamide

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Reduce your intake of fried, baked, or roasted high-carbohydrate foods, such as potato chips, fries, and toast, to minimal levels. Opt for boiling, steaming, or microwaving these foods instead. When cooking at high temperatures, aim to keep the temperature below 248 degrees Fahrenheit (120 degrees Celsius) to prevent the formation of acrylamide.

Description

Avoiding acrylamide involves minimizing exposure to this chemical compound, which can form in certain foods when cooked at high temperatures. Reducing acrylamide intake may lower the risk of potential health concerns associated with its consumption.

How it helps

Exposure to acrylamide in adults correlated with elevated FPG (fasting plasma glucose), oxidative DNA damage, and lipid peroxidation. Lipid peroxidation mediated a significant portion of FPG increase [\[R\]](#).

55



Shilajit

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a pea-sized portion (approximately 500mg) of purified shilajit resin and dissolve it in warm water, tea, or milk. Consume this once daily, ideally in the morning on an empty stomach for best absorption. Continue this routine daily for 6 to 8 weeks to observe benefits.

TYPICAL STARTING DOSE

500 mg

Description

[Shilajit](#), also known as shilaras or bitumen, is a tar-like substance that oozes from sedimentary rocks worldwide, especially in the Himalayas. It is made of rock humus, minerals, and organic substances (e.g., marine organisms) decomposed by microbes and compressed by layers of rock [\[R\]](#).

Shilajit is called a rasayana (rejuvenator) and a maharasa (super-vitalizer) in Ayurveda (indigenous Indian medicine). It is traditionally used to [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Boost energy levels
- Improve memory and focus
- Fight stress
- Manage male reproductive disorders

Shilajit is sold as capsules or powder [\[R\]](#).

How it helps

In a [placebo-controlled trial of 30 medical students](#), supplementation with shilajit (2 g) for 45 days **raised SOD levels (by 40.2 mg/dL)** [\[R\]](#).

56



Yerba Mate

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take yerba mate as a supplement by consuming 1 to 3 grams of the dried leaves in capsule form daily, or by drinking 1 to 3 cups of yerba mate tea. Do this consistently for at least 4 to 8 weeks to observe potential benefits.

TYPICAL STARTING DOSE

1 g

Description

Yerba mate is a South American herbal tea known for its caffeine content and antioxidant properties. It provides a boost in alertness and mental clarity and is used for its potential to enhance focus and energy.

Yerba mate is a traditional South American beverage made from the dried leaves of the yerba mate plant (*Ilex paraguariensis*). It is commonly consumed in countries like Argentina, Uruguay, Paraguay, and Brazil, and has a long history of cultural significance and social bonding.

Yerba mate is traditionally sipped through a *bombilla*, a special metal straw, from a gourd-shaped container. This results in a flavorful and stimulating drink often shared among friends and family.

How it helps

In a trial with 74 dyslipidemic volunteers, three groups received mate tea, dietary intervention, or both. Mate tea consumption increased antioxidant protection in plasma and blood, while dietary changes reduced fat intake and increased antioxidant-rich nutrients. This suggests mate tea independently boosts antioxidant defenses in dyslipidemia [R].

In a study with nine men, drinking soluble mate tea (SMT) for 8 days reduced leukocyte NADPH oxidase protein p47phox expression and circulating levels of inflammatory cytokines TNF-α and IL-6. SMT also increased plasma phenolic compounds and improved antioxidant status, potentially mitigating oxidative stress and inflammation [R].

57



Hibiscus

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take 250 mg of hibiscus supplement daily, either in the form of a capsule or powder. It can be taken at any time of day, with or without food.

TYPICAL STARTING DOSE
250 mg

Description

Hibiscus is a flower known for its potential to lower blood pressure, boost antioxidant levels, and support heart health. Consuming hibiscus tea or incorporating hibiscus into your diet may provide these health benefits.

[Hibiscus](#) (*Hibiscus sabdariffa*), also known as roselle or sorrel, is a flowering plant. It is traditionally brewed as a tea of a distinctive, bright pink color [\[R\]](#), [\[R\]](#).

For hundreds of years, people from all over the world have taken hibiscus for its potential health benefits [\[R\]](#), [\[R\]](#), [\[R\]](#).

Please note: *Hibiscus can interact with "water pills" (diuretics) like hydrochlorothiazide. If you are using "water pills", consult your doctor before taking hibiscus.*

How it helps

A study investigated Hibiscus sabdariffa L. extract (HSE) on systemic antioxidant potential (AOP) in 8 healthy volunteers. HSE increased plasma AUC of FRAP, ascorbic acid, and hippuric acid, while reducing malondialdehyde excretion, suggesting enhanced AOP and reduced oxidative stress in humans [\[R\]](#).

In a randomized, double-blind controlled trial with 54 male soccer players, participants received either green tea extract (GTE), sour tea extract (STE), or maltodextrin (placebo) for six weeks. GTE and STE supplementation significantly reduced malondialdehyde (MDA) levels, indicating decreased oxidative stress, compared to placebo. STE supplementation also increased total antioxidant capacity (TAC). However, neither GTE nor STE affected muscle damage indices [\[R\]](#).

58



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

This study compared tocotrienol-rich fraction (TRF) and α -tocopherol (α -TF) supplementation in older adults. TRF reduced MDA in both genders at 3 months and DNA damage in females at 6 months. Both supplements increased vitamin D levels, with TRF having a greater effect in females [\[R\]](#).

In postmenopausal osteopenic women, 12-week supplementation with annatto-extracted tocotrienols (TT) reduced bone resorption and improved bone turnover by suppressing bone remodeling regulators and inhibiting oxidative stress, without significant differences between low and high TT doses [\[R\]](#).

In a randomized, double-blind, placebo-controlled trial, δ -tocotrienol supplementation significantly improved biochemical markers and reduced hepatic steatosis in patients with non-alcoholic fatty liver disease (NAFLD). No adverse events were reported, suggesting δ -tocotrienol as a potential therapeutic option for NAFLD management [\[R\]](#).

59



Shiitake Mushroom

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take shiitake mushroom in supplement form, typically ranging from 500 to 1,000 mg per day, divided into two or three doses. It can be consumed with or without food. Continue this regimen daily for at least one to two months to observe potential health benefits.

TYPICAL STARTING DOSE
500 mg

Description

Shiitake mushrooms are edible fungi native to east Asia. They contain compounds like lentinan, which may have immune-boosting properties.They are also rich in vitamins, minerals, and compounds like beta-glucans, which are believed to support immune health and overall well-being.

How it helps

The study investigated shiitake extract's antioxidant and anti-inflammatory effects on exercise-induced muscle damage. While it didn't affect inflammation markers, it increased thiol redox status and nitric oxide concentration, indicating antioxidant activity [\[R\]](#).

60



Mangosteen

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 500-1000 mg of mangosteen extract daily, in capsule form, with meals. It is typically advised to start at the lower end of the dosage range and adjust based on tolerance and effect. Continue this regimen for at least 3-6 months to evaluate its benefits.

TYPICAL STARTING DOSE

500 mg

Description

Mangosteen is a tropical fruit rich in antioxidants and phytonutrients, potentially offering various health benefits, including anti-inflammatory and immune-supporting properties. It is commonly consumed for its potential to promote overall well-being.

How it helps

The study examined the absorption and antioxidant effects of a xanthone-rich mangosteen liquid in healthy volunteers. Alpha-mangostin and vitamins B(2) and B(5) were bioavailable, peaking around 1 hour post-consumption. The liquid increased antioxidant capacity by 18% after 2 hours, sustaining for at least 4 hours [\[R\]](#).

61



Diaphragmatic Breathing

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

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

TYPICAL STARTING DOSE

10 minutes

Description

Diaphragmatic breathing, also known as deep breathing, can help reduce stress and anxiety by activating the body's relaxation response. It promotes better oxygen exchange, reduces muscle tension, and supports overall mental and physical well-being.

How it helps

A study evaluated diaphragmatic breathing's impact on 132 type 2 diabetes patients alongside standard care. Diaphragmatic breathing led to significant improvements in anthropometry, glycemic control, and oxidative stress markers, supporting its potential as an adjunct therapy for diabetes management [\[R\]](#).

In another study with 16 male cyclists, acute hyperglycemia led to increased free-radical production and reduced antioxidant levels. Diaphragmatic breathing significantly lowered heart rates, increased insulin, decreased glycemia, and reduced free-radical production, possibly by activating the parasympathetic nervous system [\[R\]](#).

62



Rhodiola

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

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

TYPICAL STARTING DOSE

500 mg

Description

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

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

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

- Fatigue
- Burnout
- Low mood

How it helps

In a placebo-controlled trial of 22 professional rowers, supplementation with rhodiola (100 mg, 2x/day) for 4 weeks increased plasma TAC and red blood cell SOD but had no effect on exercise-induced oxidative damage [\[R\]](#).

63



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

The study involved 47 healthy male athletes divided into two groups: one receiving a Mediterranean diet (MD) and the other MD plus curcumin and BSE. Both groups showed reductions in sRAGE, NEFA, and MDA, with only the supplemented group displaying a significant decline in total AGE. This suggests a potential benefit of curcumin and BSE supplementation on glycoxidation and lipid peroxidation in active master athletes [\[R\]](#).

64



Rooibos

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take rooibos as a tea by steeping 1.5 to 2 teaspoons (2.5-5 grams) of loose leaf rooibos or one tea bag in about 8 ounces of boiling water for 10 minutes. Drink 1 to 2 cups daily. This can be enjoyed hot or cold, according to personal preference.

TYPICAL STARTING DOSE
3 g

Description

Rooibos, also known as red bush tea, is a plant native to South Africa. Traditionally, its leaves are harvested, fermented, and brewed into a caffeine-free herbal tea. It's rich in antioxidants, such as aspalathin and quercetin, and is valued for its low tannin levels and high content of nutrients like vitamin C and minerals like manganese and potassium.

How it helps

In the study, 40 volunteers consumed six cups of fermented rooibos daily for 6 weeks, followed by a control period after a 2-week washout. Results indicated improved lipid profile and redox status, increased polyphenols, reduced lipid peroxidation, and enhanced antioxidant capacity [R].

65



Oats

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate oats into your diet daily by having them for breakfast as oatmeal, or adding them to smoothies, baking recipes, or overnight oats. Aim for at least a half-cup (40 grams) of dry oats to reap the health benefits.

Description

Oats are a whole grain known for their high fiber content and nutritional value, like zinc, iron, and manganese. Including oats in one's diet can promote heart health, stabilize blood sugar levels, and provide sustained energy.

Oats are a good source for manganese, zinc, iron, magnesium, and vitamins B1 and B5. A ½ cup serving provides 0.7 mg of manganese or 30%DV.

How it helps

Daily consumption of oat porridge for 4 weeks significantly reduced inflammatory markers (hsCRP, IL-6, IL-8, TNF-α) and increased antioxidant capacity (ORAC, FRAP) in hypercholesterolemic adults, suggesting it is a beneficial dietary option for managing inflammation and oxidation [R].

66



Ubiquinol

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 100 to 200 mg of ubiquinol daily, preferably with a fatty meal to enhance absorption. This dosage can be adjusted based on individual health needs and under the guidance of a healthcare professional. Continue this supplementation daily for ongoing support of heart health and energy levels.

TYPICAL STARTING DOSE
100 mg

Description

Ubiquinol is the reduced form of coenzyme Q10 (CoQ10), a compound that plays a crucial role in energy production within cells. It is used as a supplement to support heart health, improve energy levels, and combat oxidative stress.

How it helps

In a double-blind crossover study, 21 young male athletes were supplemented with ubiquinol or placebo before intense exercise. Ubiquinol prevented CoQ depletion and increased antioxidant levels but didn't improve physical performance or muscle damage markers [R].

In a study on 100 healthy, well-trained individuals, Ubiquinol supplementation (200 mg/day for 2 weeks) before strenuous exercise reduced oxidative stress markers (lactate, isoprostanes, DNA damage, hydroperoxides), increased antioxidants, CAT activity, and maintained NO levels, potentially aiding muscle recovery and endothelial function [R].

However, in a double-blind, crossover study, exercise-trained individuals received CoQ10 supplementation (300 mg/day) or placebo for four weeks, and CoQ10 increased blood levels but didn't enhance exercise performance or reduce oxidative stress, except in select cases [R].

67



Honey

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Consume 1-2 tablespoons of raw honey daily, either directly or by mixing it into warm water, tea, or yogurt. Continue this practice regularly to observe benefits.

Description

Honey is a natural sweetener known for its antimicrobial properties and potential benefits for wound healing. It contains antioxidants and may have soothing effects on sore throats and coughs.

[Honey](#) is a thick, sweet substance. It’s made by honeybees from the nectar of flowering plants. There are many different types of honey. Besides sugar, honey also contains amino acids (protein building blocks), vitamins, and minerals [\[R\]](#).

People use honey for its anti-inflammatory and antioxidant properties. It can potentially help with [\[R\]](#):

- Heart problems
- Gut problems
- Cough
- Burns

How it helps

Consumption of high and low doses of honey in female athletes increases antioxidant activity and decreases oxidative stress, with optimal effects between 1 and 2 hours post-consumption. A lower honey dose might be less stressful, as indicated by oxidative biomarkers [\[R\]](#).

68



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

In a study on Metabolic Syndrome (MetS) patients, daily oral glycine supplementation (15 g/day) for 3 months decreased lipid peroxidation (TBARS) by 25% and correlated with increased antioxidant enzyme activity. Systolic blood pressure decreased significantly in the glycine-treated male group. Glycine may mitigate oxidative damage in MetS [\[R\]](#).

69



Parsley

IMPACT

1 / 5

EVIDENCE

1 / 5

Description

Parsley is a nutrient-rich herb with anti-inflammatory, antioxidant, and antibacterial properties. It may help to improve digestion, boost the immune system, and protect against cancer.

How it helps

In a study, 14 participants consumed a diet supplemented with parsley, rich in apigenin, which increased urinary excretion of apigenin and activities of certain antioxidants, indicating potential oxidative stress reduction [\[R\]](#).

70



Carnosine

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 500 mg of carnosine twice daily with meals. Continue this regimen for at least 2 to 4 weeks to start noticing benefits. It can be taken as a capsule or powder form mixed with water or juice.

TYPICAL STARTING DOSE

1000 mg

Description

Carnosine is a naturally occurring compound found in muscle tissues and certain foods. It is believed to have antioxidant properties and may support muscle function and overall cellular health.

[Carnosine](#) ([β-alanine](#)-[l-histidine](#)) is a compound naturally produced by the body. We also get it from eating meat and fish. Carnosine is abundant in our [\[R\]](#), [\[R\]](#):

- **Muscles**
- Heart
- Brain
- Nose

Carnosine has several important functions in the body, including [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Being an antioxidant
- Improving muscle function
- Removing toxic metals

During exercise, **carnosine may prevent muscle fatigue and boost athletic performance**. It may also help improve sugar metabolism [\[R\]](#), [\[R\]](#), [\[R\]](#).

How it helps

The placebo-controlled study investigated the effects of carnosine intake on pro-antioxidant status in highly trained athletes subjected to intense exercise. Fourteen male athletes were supplemented with 4 g/d carnosine for 14 days. Carnosine attenuated exercise-induced glutathione loss, reduced oxidation/nitration markers, and preserved redox status, suggesting its potential as an antioxidative protector for athletes [\[R\]](#).

71



Salvia Miltiorrhiza

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 200-600mg of Salvia miltiorrhiza extract in capsule or tablet form daily, divided into two or three doses. This should be taken with water, preferably 30 minutes before meals. Continue for a period of 8 to 24 weeks for noticeable effects.

Description

Salvia miltiorrhiza, also known as Danshen, is a traditional Chinese medicinal herb. It is primarily used for its potential cardiovascular benefits, including improving blood circulation and reducing the risk of heart-related conditions. It contains various compounds, including tanshinones and salvianolic acids.

How it helps

In a non-placebo-controlled trial of 36 patients on continuous hemodialysis, supplementation with *Salvia miltiorrhiza* increased SOD while decreasing MDA and AOPP levels [\[R\]](#).

Salvia miltiorrhiza also reduced oxidative damage in response to heart surgery in 2 trials of 48 patients [\[R\]](#), [\[R\]](#).

72



Coenzyme Q10 (CoQ10)

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take a 100 mg Coenzyme Q10 (CoQ10) supplement once daily with a meal that contains fat for better absorption.

TYPICAL STARTING DOSE

100 mg

Description

Coenzyme Q10 (CoQ10) is a naturally occurring antioxidant that plays a crucial role in cellular energy production. It is often taken as a supplement to support heart health, improve energy levels, and provide antioxidant protection, especially for individuals with certain medical conditions or as they age.

[Coenzyme Q10](#) (CoQ10) is a compound that helps enzymes work better. By doing so, CoQ10 helps improve [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Energy levels
- Antioxidant protection
- Heart health
- Muscle strength
- Blood sugar control

The amount of CoQ10 made by your body decreases as you get older. Luckily, you can also get it from food or supplements. Good sources of CoQ10 include [\[R\]](#), [\[R\]](#):

- Organ meats
- Fatty fish
- Whole grains

How it helps

Coenzyme Q10 (CoQ10) is a substance that cells use to produce energy and protect themselves from oxidative damage. As an antioxidant, CoQ10 helps reduce oxidative stress by fighting free radicals.

CoQ10 supplementation significantly decreases malondialdehyde (MDA) and increases total antioxidant capacity (TAC) and superoxide dismutase (SOD) activity. Nitric oxide (NO), glutathione (GSH), catalase (CAT), and glutathione peroxidase (GPx) levels show no significant change. Conclusion: CoQ10 improves antioxidant markers but not NO, GSH, or CAT activity [\[R\]](#).

73



Pycnogenol

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 100 mg of pycnogenol supplement daily. This can be taken in a single dose or divided into two doses of 50 mg each, one in the morning and one in the evening.

TYPICAL STARTING DOSE

100 mg

Description

Pycnogenol (pine bark extract) is derived from the bark of the maritime pine (Pinus pinaster). It has been used in traditional n European folk medicine for centuries, and more recently as a supplement. The extract contains a group of bioactive compounds known as proanthocyanidins, which may be beneficial in supporting cardiovascular health, promoting skin health, and aiding in the management of various conditions related to inflammation and oxidative stress.

Pycnogenol comes from the bark of pine trees that grow in the Mediterranean [\[R\]](#), [\[R\]](#).

It may improve [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Athletic performance
- Seasonal allergies
- Cognitive function
- Joint health
- Varicose veins

How it helps

A study on Pycnogenol® in elderly people found no significant impact on oxidative DNA damage or repair ability over three months. Further research in different age groups is needed [\[R\]](#).

150 mg/day Oligopin® supplementation in postmenopausal women with osteopenia for 12 weeks significantly improved antioxidant defense and bone turnover. This suggests benefits for managing postmenopausal osteopenia [\[R\]](#).

In smokers, a daily dose of 50 mg Pycnogenol® effectively lowered oxidative stress compared to a placebo [\[R\]](#).

150 mg/day Pycnogenol® for six weeks in healthy subjects increased plasma polyphenol levels and antioxidant capacity. It positively affected LDL and HDL cholesterol levels [\[R\]](#).

A study with 20 healthy male participants found that 800 mg/day pine bark extract for 14 days prior to and 2 days post-exercise significantly reduced oxidative stress compared to placebo [\[R\]](#).

74



Artichoke

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate fresh or cooked artichoke into your diet 2-3 times per week. Each serving should include approximately one medium-sized artichoke or about 120 grams if using hearts. This can be included in meals such as salads, pastas, or as a steamed side dish.

Description

Artichokes are a vegetable known for their unique flavor and potential health benefits. They are a good source of fiber, vitamins, and minerals, and may support digestion, liver health, and antioxidant protection.

How it helps

Artichoke leaf extract supplementation in competitive rowers increased plasma antioxidant capacity and lowered cholesterol but did not reduce oxidative damage to red blood cells after strenuous exercise [\[R\]](#).

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

This study examined phthalate exposure and oxidative stress in 288 college students who frequently consumed takeaway food. Phthalates were detected in their urine samples, with higher levels linked to more frequent takeaway food consumption. While phthalate exposure was associated with DNA oxidative damage, the study didn't find significant differences in oxidative damage levels among groups based on takeaway food frequency. This suggests that regular takeaway food consumption may increase phthalate exposure but may not markedly impact DNA oxidative damage levels unless other pollutants are involved [\[R\]](#).

76



Collard Greens

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate at least one cup of cooked or two cups of raw collard greens into your diet 3-4 times a week. Wash the greens thoroughly before use to remove any dirt or pesticides.

Description

Collard greens are a nutritious leafy vegetable rich in vitamins, minerals, and antioxidants. They are known for their potential to support bone health, provide essential nutrients, and contribute to a balanced diet.

Collard greens contain vitamins K, A, and C, as well as decent amounts of calcium and folate. A 1-cup (cooked) serving provides 836 mcg of vitamin K or 697%DV.

How it helps

This study highlights the total antioxidant capacity (TAC) of various foods, measured using the NX2332 test from Randox®. Foods like Brazil nuts, guaraná, coffee, and chocolate exhibited the highest TAC, followed by collard greens, beets, apples, and others. Regular consumption of these antioxidant-rich foods is recommended to potentially reduce the risk of chronic non-communicable diseases [\[R\]](#).

77



Yacon

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate yacon, which is a sweet-tasting root vegetable, into your diet by consuming 1-2 teaspoons of yacon syrup with meals daily to benefit from its prebiotic and blood sugar-lowering properties. Alternatively, yacon root can be eaten raw, baked, or made into tea. It's recommended to start with smaller amounts to assess tolerance.

Description

Yacon is a root vegetable native to South America and is used as a natural sweetener due to its high content of fructooligosaccharides. Yacon syrup or powder is often consumed for its potential prebiotic effects, promoting gut health and supporting weight management.

How it helps

In a placebo-controlled trial of 26 adults with excess body weight, consuming a breakfast drink with yacon flour (25 g) for 6 weeks increased the plasma antioxidant capacity while decreasing oxidative stress [\[R\]](#).

78



Prunes

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Eat 5-6 prunes daily, either as a snack or incorporated into meals, to help improve digestion and potentially bone health. Continue this habit consistently for at least a few weeks to observe benefits.

Description

Prunes are dried plums that are rich in dietary fiber, vitamins, and minerals, particularly potassium and vitamin K, as well as antioxidants. They are often consumed to support digestive health and may help regulate bowel movements.

Prunes are a good source of omega-6 fatty acids, vitamin A and B6, potassium, iron, magnesium, and copper. A ½ cup serving provides 635 mcg or 14%DV.

How it helps

In a study of 60 mildly hypercholesterolemic subjects, consuming prune extract for 4 weeks significantly enhanced antioxidant capacity [\[R\]](#).

79



Clove

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a clove supplement in capsule form, following the manufacturer's recommended dosage, usually ranging from 500 mg to 1000 mg daily with meals. Continue as long as needed or as directed by a healthcare provider.

TYPICAL STARTING DOSE

500 mg

Description

Clove is a spice known for its strong flavor and potential health benefits. It contains compounds like eugenol that have antioxidant and anti-inflammatory properties, making it a valuable addition to herbal remedies and culinary dishes.

How it helps

In a randomized, double-blinded crossover study with 16 male social drinkers, the clove bud polyphenol Clovinol (hard shell gelatin capsule, 250 mg/day) alleviated alcohol-related side effects. It caused faster elimination of blood acetaldehyde, reduced oxidative stress, lipid peroxidation, C-reactive protein, and interleukin-6, while increasing glutathione and superoxide dismutase. It also reduced 55.34% in hangover severity [\[R\]](#).

80



Quercetin

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 250-1000 mg of quercetin supplement daily with a glass of water, preferably with a meal to aid in its absorption.

TYPICAL STARTING DOSE

250 mg

Description

Quercetin is a natural plant flavonoid found in various foods, particularly in fruits and vegetables like apples, onions, and broccoli. It is used as a dietary supplement and is valued for its potential antioxidant and anti-inflammatory properties.

[Quercetin](#) is a **plant-based antioxidant**. It supports the immune system and helps lower inflammation [\[R\]](#), [\[R\]](#).

Good sources of quercetin include [\[R\]](#):

- Apples
- Onions
- Tea

People mainly use quercetin supplements to relieve allergies [\[R\]](#), [\[R\]](#), [\[R\]](#).

How it helps

Quercetin is a flavonoid that possesses antioxidant properties.

According to a meta-analysis, quercetin supplementation significantly increases ferric-reducing ability in adults, but has no significant effect on total antioxidant capacity or malondialdehyde levels [\[R\]](#).

In sarcoidosis patients, quercetin supplementation significantly reduced oxidative stress markers and inflammation. In athletes, quercetin combined with vitamin C was shown to reduce oxidative stress and inflammatory biomarkers after regular exercise [\[R\]](#), [\[R\]](#).

On the other hand, quercetin did not significantly alter oxidative stress markers in ultramarathon runners or in a large cohort of diverse individuals [\[R\]](#), [\[R\]](#).

Please note: *quercetin may inhibit the production of the thyroid hormone T4 (thyroxine). Individuals with thyroid disorders, particularly hypothyroidism or low T4 levels, should exercise caution when using quercetin and always consult with a healthcare provider before taking this supplement [\[R\]](#).*

Please note: *quercetin may interfere with iron absorption due to its iron-chelating properties, potentially exacerbating anemia or making it harder to manage. If you have anemia, consult your healthcare provider before using quercetin supplements [\[R\]](#).*

81



Lactobacillus Fermentum

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a supplement containing Lactobacillus fermentum, aiming for dosages around 10 billion CFU (colony forming units). Consume it daily, preferably with a meal, to ensure proper absorption. Continue this routine for at least 4 weeks to observe benefits.

TYPICAL STARTING DOSE

10 billion CFU

Description

Lactobacillus fermentum is a beneficial probiotic strain that can support digestive health and contribute to a balanced gut microbiome. It may help improve gut function, enhance nutrient absorption, and bolster the immune system, promoting overall well-being.

How it helps

L. fermentum ME-3 in fermented goat milk and capsules showed increased fecal lactobacilli and improved blood antioxidant markers in healthy volunteers [R].

82



Hazelnuts

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate a handful of hazelnuts (about 1 ounce or 28 grams) into your diet daily. You can eat them as a snack, sprinkle chopped hazelnuts over salads, or use hazelnut butter in smoothies. Ensure they are unsalted to keep your sodium intake low.

Description

Hazelnuts are a nutrient-dense nut rich in healthy fats, fiber, and essential vitamins and minerals. Incorporating hazelnuts into your diet can support heart health, provide energy, and contribute to overall nutritional wellness.

Hazelnuts are a good source of manganese, magnesium, as well as being really good for vitamin E, B6, and healthy fats. A 1-ounce serving provides 1.6 mg of manganese or 70%DV.

How it helps

In a single-blind, 8-week study with 60 children and adolescents diagnosed with primary hyperlipidemia, hazelnut interventions (with or without skin) significantly reduced endogenous DNA damage and oxidative DNA strand breaks. However, oxidized LDL levels remained unchanged. This suggests hazelnuts may improve cell DNA protection and resistance against oxidative stress in this population [\[R\]](#).

In a randomized, cross-over trial with 22 healthy volunteers, hazelnut consumption alongside a McDonald's® meal significantly reduced postprandial ox-LDL levels and the expression of inflammation and oxidative stress-related genes. Further chronic studies on larger populations are needed for conclusive findings [\[R\]](#).

In a controlled intervention study with 40 overweight and obese women, groups receiving hazelnut oil capsules alongside vegetable and legume intake showed reduced methylation levels of the ADRB3 gene. Despite no weight loss, improvements in lipid profiles and antioxidant capacity were observed, highlighting the potential benefits of hazelnut intake [\[R\]](#).

83



Krill Oil

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 1 to 3 grams of krill oil daily as a dietary supplement, preferably with a meal to enhance absorption. It's often available in soft gel form, making it easy to swallow. Continue this regimen consistently for best results, typically reviewing its effectiveness and any need for adjustments with a healthcare provider after a few months.

TYPICAL STARTING DOSE

1 g

Description

Krill oil is a source of omega-3 fatty acids, primarily in the form of phospholipids. It can promote cardiovascular health, joint comfort, and may have anti-inflammatory properties.

How it helps

In a study with 35 power training athletes, krill oil supplementation (2.5 g/day) for 12 weeks significantly increased the HS-Omega-3 Index and reduced the ARA/EPA ratio. It also led to higher choline recovery and less oxidative stress post-exercise compared to placebo, suggesting its efficacy in sports nutrition [\[R\]](#).

84



Passion Fruit Peel Extract

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 150-300 mg of passion fruit peel extract supplement daily, preferably with a meal to enhance absorption. This should be done consistently for a period of at least 4 to 8 weeks to observe potential benefits in conditions such as asthma or anxiety. Always check the supplement's label for specific dosing instructions.

TYPICAL STARTING DOSE

150 mg

Description

Passion fruit peel extract is derived from the peel of the passion fruit (*Passiflora edulis*), a fruit native to South America. It contains carotenoids, flavonoids, and polyphenols, that are utilized for skin health and boosting the immune system.

How it helps

A placebo-controlled trial of 43 adults with dyslipidemia found that a jelly drink containing polyphenol-rich roselle calyces extract and passion fruit juice with pulp concentrate (for 8 weeks) decreased LDL-C and triglycerides. It also reduced inflammation and improved oxidative stress, as demonstrated by the reduction of tumor necrosis factor- α and malondialdehyde, and the enhancement of glutathione [\[R\]](#).

85



Amaranth

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate amaranth into your diet by adding it to your daily meals. You can use amaranth grains as a substitute for rice in dishes, add them to your morning porridge, or use amaranth flour in your baking recipes. Aim to include amaranth 2-3 times per week to reap its benefits.

Description

Amaranth is a nutritious, gluten-free grain-like seed that has been a staple in the diets of various cultures for centuries. It is rich in protein, fiber, vitamins, and minerals like calcium and iron. Amaranth is used to promote heart health, support digestion, and provide sustained energy.

How it helps

In a non-placebo-controlled trial of 19 obese participants, supplementation with amaranth oil (20 mL/day) for 2 weeks decreased oxidative burst activity in neutrophils [\[R\]](#).

86



Lettuce

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate fresh lettuce into your diet by adding it to salads, sandwiches, and wraps. Aim for at least one serving (approximately one cup of chopped lettuce) daily for general health benefits.

Description

Lettuce is a low-calorie, nutrient-dense leafy green that can be a valuable addition to a balanced diet. It provides essential vitamins and minerals while contributing to hydration and supporting overall health.

Lettuce is a good source of the vitamins A, C, and K, and minerals like chromium, calcium, and potassium. A 5-ounce serving provides 1.8 mcg of chromium or 5%DV.

How it helps

Fresh lettuce consumption increased plasma antioxidant levels, but those from lettuce stored in modified-atmosphere packaging (MAP) remained unchanged. MAP storage didn't affect plasma redox status in healthy subjects, highlighting the need for improved post-harvest preservation techniques [\[R\]](#).

87



Citrus Bioflavonoids

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a daily supplement containing 500 to 1,000 mg of citrus bioflavonoids, preferably divided into two doses with meals to enhance absorption. Continue this regimen daily for at least several months to notice potential benefits.

TYPICAL STARTING DOSE

500 mg

Description

Citrus bioflavonoids are natural compounds found in citrus fruits like oranges and grapefruits. They are known for their antioxidant properties and may support overall immune health, cardiovascular function, and skin health.

How it helps

A crossover trial with 16 participants compared the effects of orange flavonoids, sugar, and ascorbic acid on postprandial oxidation. The mixture of flavonoids and orange juice showed significant increases in antioxidant capacity and lipoprotein oxidation protection, suggesting direct contributions from orange phenolic compounds [R].

88



Plasmalogens

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Follow the dosage instructions provided on the product label or as directed by your healthcare provider. Typically, these supplements come in capsule form and are taken once daily with water, ideally with a meal to enhance absorption. Consistency is key, so taking them at the same time each day is recommended. Always consult a healthcare professional before starting plasmalogen supplements, especially if you are pregnant, nursing, or have any medical conditions.

Description

Plasmalogens are a special kind of phospholipids found in cell membranes, particularly in the brain (comprising 20% of its content), heart, lungs, eyes, and kidneys. Plasmalogens help the nervous system work and prevent brain cell death by reducing inflammation and oxidative stress. Their levels decrease with age [R].

Plasmalogen supplements are being researched to improve cognitive function in both healthy subjects and those with mild cognitive impairment or Alzheimer’s disease [R, R].

How it helps

In a non-placebo-controlled trial of 22 cognitively impaired subjects, targeted therapy with an escalating dose of plasmalogens (DHA with 1-O-alkyl-2-acylglycerol, 900-3600 mg/day) for 4 months improved plasmalogen levels and antioxidant status (by decreasing MDA and increasing catalase levels) in all the subjects [R].

89



Choline Supplements

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take choline supplements at a dosage of 425 mg to 550 mg daily, depending on age and gender, with a glass of water. It is best to consume choline supplements with a meal for optimal absorption. Continue this regimen daily as part of your dietary supplement routine.

TYPICAL STARTING DOSE

425 mg

Description

Choline is an essential nutrient that plays a crucial role in various bodily functions, including brain health, liver function, and metabolism. Incorporating choline-rich foods into your diet supports cognitive function and overall nutritional well-being.

[Choline](#) is a nutrient required for optimal health. Although the body makes some, we need to get choline from our diets to avoid deficiency [\[R\]](#).

It plays key roles in supporting [\[R\]](#), [\[R\]](#):

- DNA production
- Cell structure and function
- Brain, nerve, and heart health

Eggs and beef liver are the best sources of choline. If you can’t meet your daily requirements with food, consider taking a choline supplement such as [\[R\]](#):

- [Phosphatidylcholine](#) (PC)
- [Citicoline](#) (CDP-choline)
- [Alpha-GPC](#)
- [Lecithin](#)

They all supply choline, but each one has unique health perks you may prefer. Check out our posts on different choline-containing supplements to find out which one suits you best.

How it helps

A study on 19 women found that choline and carnitine supplements reduced lipid peroxidation and preserved vitamin A and E levels, regardless of exercise, over 21 days [\[R\]](#).

90



Plum Juice

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Consume 8 ounces of plum juice daily, ideally in the morning to help improve digestion and potentially alleviate constipation. Continue this practice daily for at least 2 weeks to assess effectiveness.

Description

Plum juice, derived from the plum fruit, is rich in dietary fiber, vitamin C and K, as well as potassium and antioxidants. People drink it to support digestive health and regularity.

How it helps

Plum juice, among other fruit juices tested, showed potent antioxidant effects in human plasma, effectively suppressing reactive oxygen species shortly after consumption and maintaining this effect for up to 90 minutes. This finding suggests a role of plum juice in reducing oxidative stress-related damage [\[R\]](#).

91



Avocado

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate half to one whole avocado into your daily diet. You can add it to salads, sandwiches, or use it as a healthy fat substitute for spreads or dressings.

Description

Avocado is a nutrient-dense fruit known for its creamy texture and healthy monounsaturated fats. It is packed with vitamins, minerals, and dietary fiber, and may support heart health, skin health, and overall nutrition.

[Avocado](#) is a fruit first cultivated in Mexico in 500 BCE [\[R\]](#), [\[R\]](#).

You can eat it raw in salads, sandwiches, and dips. Avocado oil has recently become popular, but it’s much less nutritious than the whole fruit.

Avocado is rich in antioxidants, vitamins, minerals, and fiber. It may support [\[R\]](#):

- Heart health
- Healthy weight
- Healthy aging

How it helps

In a controlled trial, consuming one avocado daily significantly reduced oxidized LDL and increased lutein levels compared to lower-fat and moderate-fat diets, particularly affecting small, dense LDL particles in overweight adults [\[R\]](#).

92



Apple Cider Vinegar

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate 1-2 tablespoons of apple cider vinegar into your diet daily by diluting it in a large glass of water. Consume this mixture before meals to potentially benefit from its effects.

Description

Apple cider vinegar is a fermented liquid made from crushed apples and is known for its potential health benefits. It is rich in acetic acid and may aid in weight management, improve digestion, and help regulate blood sugar levels, often used as a natural remedy for various conditions like acid reflux and insulin resistance.

[Vinegar](#) is often used in cooking to add sour flavor and to preserve foods through pickling. Some people also use vinegar for cleaning [\[R\]](#).

Apple cider vinegar is one of the most common vinegars produced from apples. As a health food, apple cider vinegar may help [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Reduce blood sugar
- Lower cholesterol
- Fight infections

How it helps

Ten healthy, untrained females consumed 50ml of "IZUMI" daily for two months. No significant changes in weight, BMI, or nutritional intake were observed. However, "IZUMI" increased serum BAP levels gradually and reduced d-ROM and blood filtration time, suggesting antioxidant and anti-oxidative stress effects [\[R\]](#).

In an 8-week study, 70 participants with type 2 diabetes and hyperlipidemia were randomly assigned to apple vinegar or control groups. Apple vinegar significantly improved fasting blood sugar and antioxidant capacity (DPPH) compared to the control, suggesting potential benefits for glycemic control and oxidative stress in this population [\[R\]](#).

93



Grapes

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate a serving of grapes, which is about 32 seedless grapes or approximately 1 cup, into your daily diet. You can eat them as a snack, add them to salads, or blend them into smoothies. Do this consistently for a period of at least 3 months to observe potential health benefits.

Description

Grapes are a nutrient-dense fruit rich in vitamins, fiber, and antioxidants like resveratrol. Regular consumption of grapes is associated with potential benefits for heart health, skin health, and overall well-being.

How it helps

This research suggests that the intake of grape products, such as grape juice and grape seed extract, may have beneficial effects on antioxidant capacity and oxidative stress in healthy individuals. Several studies examined the impact of grape consumption on markers like Total Antioxidant Capacity (TAC), Superoxide Dismutase (SOD), and Oxygen Radical Absorbance Capacity (ORAC), indicating potential reductions in oxidative stress. However, while some studies found significant improvements in markers like C-reactive protein (CRP) levels and IL-6 levels, other markers remained unaffected. Additionally, grape products demonstrated the potential to enhance antioxidant defenses and reduce protein oxidation [\[R, R, R, R, R, R\]](#).

94



Broccoli Sprouts

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Consume 2-4 tablespoons of fresh broccoli sprouts daily. They can be added to salads, sandwiches, or smoothies to make them easier to consume. Continue this practice daily for at least 3 months to potentially see benefits.

TYPICAL STARTING DOSE

2 tbsp

Description

Broccoli and broccoli sprouts are nutrient-dense vegetables packed with vitamins, minerals, and antioxidants. They are known for their potential to support a healthy immune system, protect against chronic diseases, and promote overall nutritional wellness.

How it helps

A review of 17 randomized trials (2003-2013) on broccoli, glucoraphanin, and sulforaphane in humans found improved blood glucose, lipid profile, and oxidative stress markers. Limited evidence exists for reduced inflammation, H. pylori, and cancer protection, warranting further studies for conclusive results [\[R\]](#).

In a 4-week study with 81 type 2 diabetes patients, those who consumed 10g/d or 5g/d of BSP (Black Seed Powder) experienced reduced MDA, oxidized LDL cholesterol, OSI, and increased TAC, indicating BSP's positive impact on oxidative stress in type 2 diabetes patients [\[R\]](#).

95



Pecans

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate about a handful of pecans (roughly 1 ounce or 28 grams) into your daily diet. You can eat them as a snack, sprinkle chopped pecans over salads, or blend them into smoothies. Aim to do this regularly as part of your daily dietary habits to enjoy their health benefits.

Description

Pecans are a type of nut derived from the hickory tree, primarily native to North America. They are rich in nutrients like healthy fats, protein, dietary fiber, and various vitamins and minerals, including vitamin E, manganese, and zinc.

Pecans are a good source of fiber, along with manganese, molybdenum, copper, thiamine, and zinc. A 1-ounce serving provides 1.1 mg of manganese or 48%DV.

How it helps

A study found that daily pecan consumption for 8 weeks reduced oxidative stress and improved antioxidant levels after high-fat meals in adults at higher risk for cardiovascular disease [\[R\]](#).

Another study revealed that bioactive components of pecans, like γ -tocopherol and catechins, are absorbable in humans, enhancing postprandial antioxidant defenses and reducing oxidative markers after consumption of whole or blended pecans [\[R\]](#).

96



Apples

IMPACT

1 / 5

EVIDENCE

1 / 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

A study found no significant differences in antioxidant activity or DNA damage protection between organic and conventionally grown apples. This benefit was a statistically significant decrease in the levels of endonuclease III sensitive sites and an increased capacity to protect DNA against damage induced by iron chloride were determined 24 h after consumption [\[R\]](#).

97



Amla

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate 1-2 teaspoons (approximately 4-8 grams) of amla powder into your daily diet. You can mix it into a glass of water, blend it into a smoothie, or sprinkle it over salads or cooked meals. Do this consistently every day for best results.

Description

Amla, also known as Indian gooseberry, is a fruit known for its high vitamin C content and antioxidant properties. It is used in traditional Ayurvedic medicine for various health benefits, including immune support and skin health.

How it helps

This study aimed to assess the effects of Amla extract supplementation on oxidative stress in uremic patients. Results showed reduced plasma oxidative marker 8-iso-prostaglandin and increased total antioxidant status after 4 months of supplementation. However, no significant impact was observed on liver or renal function, diabetic indices, or atherogenic indices [\[R\]](#).

98



Cocoa

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

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

Description

[Cocoa](#) comes from the beans of the *Theobroma cacao* tree. It is found any many foods and drinks, and people have also used it as a medicine for thousands of years. The numerous active components of cocoa can help with weight control, fatigue, mood, and digestion, among others.

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

Cocoa contains many active components that likely help [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

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

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

How it helps

A systematic review of 48 studies found cocoa significantly reduces certain oxidative stress markers in adults, suggesting beneficial metabolic effects; further large-scale trials are needed for conclusive results [\[R\]](#).

Study shows dark chocolate reduces oxidative stress and hepatocyte apoptosis in NASH patients by decreasing NOX2 activity and serum isoprostanes, unlike milk chocolate [\[R\]](#).

However, another study found adding cocoa flavanols to chocolate milk did not improve oxidative stress or athletic performance in collegiate rugby players over a 7-day period [\[R\]](#).

99



Watermelon

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate fresh watermelon into your diet, aiming to consume about 1-2 cups of cubed watermelon daily, either as a snack or part of your meals. It is best consumed fresh to maximize its hydrating effects and nutritional benefits.

Description

Watermelon is a refreshing fruit known for its high water content and being a good source of vitamins A and C. It is used to help stay hydrated and may support skin health due to its antioxidant properties.

How it helps

A study on 33 overweight adults found that daily consumption of 2 cups of watermelon for 4 weeks improved satiety, reduced body weight, BMI, blood pressure, and oxidative stress, compared to isocaloric cookies, suggesting benefits for weight management and metabolic health [\[R\]](#).

100



Black Raspberries

IMPACT

0 / 5

EVIDENCE

1 / 5

How to implement

Incorporate 1 cup of fresh or frozen black raspberries into your daily diet. You can add them to smoothies, yogurt, cereal or enjoy them as a snack on their own.

Description

Black raspberries are a good source of antioxidants, which can help protect your cells from damage. They also contain anthocyanins, which have been shown to have anti-inflammatory and anti-cancer properties.

How it helps

A study evaluated the effects of Korean black raspberry (KBR) on oxidative stress and inflammation in overweight subjects. KBR consumption altered various metabolites, with urinary glycine and N-phenylacetylglycine showing predictive value for intervention response (AUC = 0.778) [\[R\]](#).

101



Mitoquinone Mesylate (MitoQ)

IMPACT

0 / 5

EVIDENCE

1 / 5

How to implement

Take MitoQ supplement by swallowing one capsule each morning with water, preferably on an empty stomach to aid in its absorption. This should be done daily for an extended period, often several months, to notice a significant benefit in conditions related to mitochondrial dysfunction or to support overall mitochondrial health.

Description

Mitoquinone mesylate is a novel antioxidant compound that targets mitochondria, the energy-producing organelles in cells. It has the potential to support cellular health and may have applications in promoting overall well-being.

How it helps

In a [placebo-controlled trial of 24 untrained men](#), supplementation with mitoQ (20 mg) 1 hour prior to exercise for 21 days **attenuated nuclear and mitochondrial DNA oxidative damage** [\[R\]](#).

However, mitoQ (20 mg/day for 10 days) had **no effect on systemic or skeletal muscle oxidative stress biomarkers** in a [placebo-controlled trial of 23 untrained men](#) [\[R\]](#).

102



Black Walnut Hull

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Black walnut hull is available in capsules, tinctures, and powders. The appropriate dosage depends on the form and intended use. For tinctures, a common recommendation is 1 to 2 teaspoons diluted in water, while capsules are often taken according to the product's instructions, typically once or twice a day. It's important to follow the dosage guidelines provided by a healthcare professional or the product label, as bioactive compounds like juglone can be toxic in large amounts. Additionally, it's advisable to consult with a healthcare provider before starting any black walnut hull supplements, particularly for individuals with underlying health conditions or those who are pregnant.

Description

Black walnut (*Juglans nigra*) is a tree native to North America, valued for both its edible nuts and its medicinal properties. The hull of its seeds contains active compounds such as juglone, tannins, flavonoids, and phenolic acids.

Studies suggest that black walnut hull may help in managing infections, promoting skin health, and even possessing anticancer potential. Its antimicrobial activity is particularly noted against bacteria like *Staphylococcus aureus*, while its antioxidant compounds help neutralize free radicals, potentially lowering the risk of chronic diseases.

How it helps

Black walnut hull contains antioxidant phenolic compounds such as quercetin and epicatechin [\[R\]](#).

103



Alpha-Ketoglutarate (AKG)

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take alpha-ketoglutarate (AKG) as a dietary supplement in a dose of approximately 1-2g per day, preferably with meals to aid in its absorption. The exact dosage may vary based on the specific product and individual health needs, so it's important to follow the label instructions or consult a healthcare provider for personalized advice. This supplementation can be ongoing, with periodic evaluations to assess its effects on your health.

TYPICAL STARTING DOSE

1 g

Description

Alpha-ketoglutarate (AKG) is a key molecule in the Krebs cycle, crucial for energy production in cells. It plays a role in amino acid synthesis and nitrogen transport. In supplement form, it's claimed to improve athletic performance and support recovery, but the scientific evidence for these benefits is limited.

How it helps

AKG is an effective free radical scavenger and a powerful antioxidant that can directly react with hydrogen peroxide (H2O2) to form succinate, water, and carbon dioxide. For example, AKG decreases the level of ROS in pig oocytes in vitro, and increases the level of glutathione (GSH), which is an important and potent intracellular antioxidant [\[R\]](#).

In other words, AKG can activate the antioxidant system in cells via enhancing GSH biosynthesis, which improves oxidative stress resistance.

104



Sleep for 7+ Hours

IMPACT

0 / 5

EVIDENCE

0 / 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

Adequate sleep is crucial for the body's recovery and can significantly lower oxidative stress levels. Proper rest helps the body repair and maintain effective antioxidant defenses.

105



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

Fruits and vegetables are rich in antioxidants, vitamins, and minerals that help combat oxidative stress.

106



Vegetables

IMPACT

0 / 5

EVIDENCE

0 / 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 sources of antioxidants, vitamins, and minerals that work together to decrease oxidative stress in the body.

107



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 are high in antioxidants, such as vitamin C, anthocyanins, and phenolic acids. These substances can neutralize free radicals, reducing oxidative stress and potentially lowering the risk of chronic diseases.

108



Avoid Exposure To Organic Solvents

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Ensure to work in well-ventilated areas and wear protective gear when handling products like paints, varnishes, and adhesives. When possible, choose solvent-free or water-based products to minimize exposure. Regularly check labels for any solvents listed and strive to limit their use in both personal and professional settings.

Description

Avoiding exposure to organic solvents, commonly found in paints, adhesives, and cleaning products, can protect against the potential health risks associated with inhalation or skin contact, such as respiratory issues and skin irritation.

Organic solvents are used in various industries and workplaces for tasks like cleaning, painting, and manufacturing.

However, their use can be hazardous to workers' health. Exposure to these solvents can lead to problems such as breathing difficulties, skin irritation, and reduced fertility [R].

How it helps

Organic solvents can produce free radicals, leading to oxidative stress. Avoiding exposure to these chemicals can reduce the risk of imbalances between free radicals and antioxidants in the body.

109



Alpha-Lipoic Acid

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take 600-1800 mg of alpha-lipoic acid daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

600 mg

Description

[Alpha-lipoic acid](#) is a natural antioxidant found in almost every cell in your body. People use alpha-lipoic acid to help with issues like skin aging, weight loss, and high blood sugar [\[R, R, R\]](#).

People use alpha-lipoic acid to help with [\[R, R, R, R\]](#):

- Complications of high blood sugar
- Skin aging
- Weight loss
- Carpal tunnel syndrome

How it helps

Alpha-Lipoic Acid acts as a powerful antioxidant that neutralizes harmful free radicals in the body. Its unique ability to be both fat and water-soluble allows it to work in various parts of cells mitigating oxidative damage and supporting cellular health.

110

Topical Vitamin C

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Apply a vitamin C serum to your face and neck once a day, preferably in the morning before applying sunscreen and makeup. It should be left on the skin, not washed off. Consistent daily use is needed for best results.

Description

Topical vitamin C, often in the form of ascorbic acid, is used for its antioxidant properties to protect the skin from environmental damage and promote collagen synthesis, benefiting overall skin health. It can be sourced from various natural plant extracts, such as citrus fruits.

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

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

Vitamin C is well-known for its antioxidant properties. Topical application can protect the skin from oxidative damage caused by the environment, including UV radiation and pollution, leading to healthier, more resilient skin.

111



Exercise At Least One Hour a Day

IMPACT

0 / 5

EVIDENCE

0 / 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

Regular physical exercise helps enhance the body's antioxidant defense system, reducing oxidative stress. It boosts the activity of antioxidant enzymes, which neutralize harmful free radicals.

112

Topical Alpha-Lipoic Acid

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Apply a thin layer of alpha-lipoic acid cream, gel, or serum to the affected area of the skin once or twice daily, after cleansing and drying the skin thoroughly. Ensure to avoid contact with eyes and mucous membranes. Use consistently for at least 1-2 months to observe potential benefits.

Description

Alpha-lipoic acid is an antioxidant compound that can be applied topically to protect the skin from oxidative stress and promote a more youthful appearance. It may help reduce signs of aging and improve skin texture.

[Alpha-lipoic acid](#) is a natural antioxidant. It’s found in almost every cell in your body [\[R, R, R\]](#).

People use alpha-lipoic acid to help with [\[R, R, R\]](#):

- Complications of high blood sugar
- Skin aging
- Weight loss

How it helps

Alpha-Lipoic Acid is a powerful antioxidant that, when applied topically, can help reduce skin damage caused by oxidative stress. It neutralizes free radicals, reducing signs of aging and improving skin texture.

113



Topical Green Tea

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Apply a green tea extract cream or lotion to the affected area of the skin once or twice daily, depending on the specific product instructions. Ensure the skin is clean and dry before application.

Description

Green tea extracts, rich in catechins and antioxidants, are used topically for their potential to protect the skin from UV damage, reduce inflammation, and address conditions like acne. Green tea is sourced from the leaves of the *Camellia sinensis* plant.

[Green tea](#) is made from the same plant as black tea (*Camellia sinensis*). However, the leaves and buds are processed differently [\[R\]](#).

Green tea contains **catechins**. These are antioxidants that help reduce [oxidative stress](#) and inflammation [\[R\]](#).

EGCG is the main catechin found in green tea. It may help reduce inflammation and support healthy skin [\[R\]](#).

How it helps

Green tea contains polyphenols, which have strong antioxidant and anti-inflammatory properties. Applying green tea topically can help mitigate oxidative stress in the skin, preventing premature aging and improving skin health.

114



Vitamin C

IMPACT

0 / 5

EVIDENCE

0 / 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

2000 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

Vitamin C is a potent antioxidant that can neutralize free radicals and reduce oxidative stress. This helps protect the body's cells and tissues from oxidative damage, supporting overall health.

115



Turmeric

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate 500-1000 mg of turmeric into your daily diet, either by adding ground turmeric spice to your food, such as in curries, soups, and smoothies, or by taking a dietary turmeric supplement. This should be done daily for at least 8 weeks to observe potential health benefits.

Description

Turmeric is a bright yellow spice derived from the root of the *Curcuma longa* plant. It contains curcumin, a potent antioxidant and anti-inflammatory compound. Turmeric is used for various health conditions, including reducing inflammation, alleviating joint pain, and supporting digestive health.

How it helps

Turmeric contains curcumin, a compound with strong antioxidant properties that can help mitigate oxidative stress and inflammation.

116



Tea

IMPACT

0 / 5

EVIDENCE

0 / 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, particularly green tea, is rich in catechins, antioxidants that can help reduce oxidative stress and improve health outcomes.

117



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 polyphenols, such as epigallocatechin gallate (EGCG), which have powerful antioxidant properties. These can help protect against oxidative stress by scavenging free radicals.

118



Pomegranate Juice

IMPACT

0 / 5

EVIDENCE

0 / 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

Pomegranate juice contains high levels of antioxidants, which can help reduce oxidative stress and inflammation.

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Dietary Selenium

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate selenium-rich foods into your daily diet, such as Brazil nuts, seafood, and organ meats. Eating 1-2 Brazil nuts a day can meet the daily selenium requirement for most adults.

Description

Selenium is a trace mineral found in various foods, including nuts, seeds, and seafood. It is an essential nutrient that plays a crucial role in maintaining the body's antioxidant defenses and supporting thyroid function.

[Selenium](#) supports [\[R\]](#):

- Reproduction
- Thyroid function
- DNA production
- Immune response

Adults should be getting **55 micrograms** of selenium per day. Good sources of selenium include [\[R\]](#):

- Brazil nuts
- Fish
- Meat
- Eggs
- Rice
- Oatmeal

How it helps

Selenium acts as a powerful antioxidant. Consuming adequate amounts of selenium can boost the body's ability to fight off oxidative stress by enhancing the antioxidant defense system.

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Reduce EMF Exposure

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

To reduce EMF (Electromagnetic Field) exposure, keep your cell phone away from your body when not in use, use speakerphone or wired headphones for calls, and turn off Wi-Fi and electronic devices at night, especially in your sleeping area. Limit the use of devices that emit strong EMFs, such as microwaves, by standing back while they are in operation. Aim to create a low-EMF environment in your home and workplace as much as possible.

Description

Reducing electromagnetic field (EMF) exposure involves minimizing exposure to electromagnetic radiation emitted by electronic devices. Limiting EMF exposure may help reduce the risk of potential health concerns associated with long-term EMF exposure, such as electromagnetic hypersensitivity.

How it helps

In a small trial of 12 healthy volunteers, acute exposure to radiofrequency fields of commercially available cellular phones increased lipid peroxide levels while reducing SOD and GSH-Px in erythrocytes [\[R\]](#).

Please note: *There is no evidence from controlled clinical trials to support this recommendation. It is included based on uncontrolled clinical trials, animal or cell studies, or non-scientific criteria. Please take this recommendation with a grain of salt until more research is available.*

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Spirulina

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take 1-8 g of spirulina supplements daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

500 mg

Description

Spirulina is a blue-green algae. It is rich in nutrients like protein, vitamins, and minerals, particularly vitamin B12 and iron, and is a source of antioxidants, chlorophyll, and phycocyanin. It can be found in powdered or tablet form as a supplement, and is often used to boost energy, support the immune system, and enhance overall nutrition. Additionally, spirulina.

[Spirulina](#) is a supplement made from blue-green algae that grows in fresh and marine water [\[R, R\]](#).

Dried spirulina is up to 70% protein. It’s also rich in vitamins, antioxidants, and healthy fats. This makes it a great source of nutrition for both people and livestock [\[R, R, R\]](#).

People use spirulina supplements to reduce [\[R, R\]](#):

- Cholesterol
- Blood pressure
- Blood sugar

How it helps

Spirulina is rich in antioxidants, including phycocyanin which has been shown to fight oxidative stress. Its high antioxidant content helps protect cells from damage by effectively scavenging harmful free radicals.

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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 are compounds that have strong antioxidant properties, which can reduce oxidative stress and improve overall health.

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Dietary Antioxidants

IMPACT

0 / 5

EVIDENCE

0 / 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

Dietary antioxidants such as vitamins C and E, polyphenols, and flavonoids help neutralize free radicals and reduce oxidative stress.

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Leafy Green Vegetables

IMPACT

0 / 5

EVIDENCE

0 / 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

Leafy green vegetables are packed with antioxidants, including beta-carotene, vitamin C, and vitamin E. These nutrients can help protect your cells from oxidative stress.

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Antioxidant Supplements

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take an antioxidant supplement daily with a meal to enhance absorption. The specific dose may vary depending on the type of antioxidant (e.g., vitamin C, vitamin E, selenium), but a common multivitamin or antioxidant blend can be used as directed on the product label. Consult with a healthcare provider for personalized advice and dosage.

Description

Antioxidant supplements are dietary supplements that provide concentrated doses of antioxidants, such as vitamins C and E or coenzyme Q10, to help combat oxidative stress and reduce the risk of chronic diseases.

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 [\[R\]](#).

Some common antioxidants include [vitamin C](#) and [vitamin E](#). You can get most antioxidants from fresh fruits and vegetables. **Antioxidants are also available as supplements** [\[R\]](#), [\[R\]](#).

How it helps

Antioxidant Supplements can help lower oxidative stress by scavenging free radicals and supporting overall cellular protection.

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Green Tea Extract

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take a green tea extract supplement containing 250-500 mg of EGCG (the active compound in green tea) daily, preferably with a meal to enhance absorption. This dosage is typically split into two separate doses, taken in the morning and later in the day. Continue this regimen for at least three months to observe potential health benefits.

TYPICAL STARTING DOSE

250 mg

Description

Green tea extract is a concentrated form of the beneficial compounds found in green tea, such as catechins. It is used in dietary supplements for its potential to enhance metabolism, aid in weight management, and provide antioxidant protection.

[Green tea](#) is made from the same plant as black tea (*Camellia sinensis*). However, the leaves and buds are processed differently [\[R\]](#).

Green tea contains **catechins**. These are antioxidants that help prevent [oxidative stress](#) [\[R\]](#).

EGCG is the main catechin found in green tea. It may help reduce inflammation and support weight loss [\[R\]](#).

How it helps

Green Tea Extract contains catechins, a type of antioxidant that can help reduce oxidative stress by scavenging free radicals. This can enhance the body's ability to protect itself against cellular damage.

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Topical Curcumin

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Apply a cream or gel containing curcumin directly to the affected area of the skin. This should be done 2-3 times daily. It's best to continue this application for as long as the condition persists or according to the product's specific instructions.

Description

Curcumin is a compound found in turmeric, a plant-derived topical application used for its anti-inflammatory and antioxidant properties. It is applied to the skin to reduce inflammation and soothe conditions like arthritis and skin irritations.

[Turmeric](#) is a yellow spice from India. It may reduce inflammation and [oxidative stress](#) [R].

The most important active compound in turmeric is **curcumin**. People use curcumin for [R, R, R, R, R]:

- Joint pain
- Hay fever
- Mood
- High blood sugar
- Gut health

How it helps

Curcumin, the active compound in turmeric, has potent antioxidant properties. When applied topically, it can help reduce oxidative stress and inflammation, promoting wound healing and skin repair.

128



Red Grape Juice

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Consume 8-12 ounces of red grape juice daily, preferably unsweetened or with no added sugars, with a meal to enhance absorption and reduce the risk of digestive upset. Continue this practice regularly as part of your daily diet.

Description

Red grape juice, made from crushed red grapes, is rich in vitamin C, manganese, and antioxidants like resveratrol, which may contribute to heart health and overall well-being when consumed in moderation.

How it helps

Red grape juice contains resveratrol and other antioxidants that help counteract oxidative stress and may improve heart health.

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.