

Exercise Recovery

DNA Health Report

REPORT CATEGORY —



Sample Client

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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

Exercise puts stress on the body. Our bodies need time to recover after each bout. After exercise, it is common to feel tired and sore.

Adequate rest, nutrition, and hydration facilitate muscle repair and help your body recover. We need protein to repair and build new muscle, and carbs to restore our depleted energy stores [\[R\]](#), [\[R\]](#), [\[R\]](#).

Antioxidants and polyphenols may also help the muscles recover after exercise [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Other popular methods to speed up exercise recovery include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)

- Light stretching
- Massage
- Applying heat or cold to the muscles
- Compression

Massage may be the best way to prevent the muscles from getting sore [\[R\]](#).

Massage and cold application may be the best ways to reduce swelling in muscles and joints [\[R\]](#).

Genetics of Exercise Recovery

PERSONALIZED TO GENES

Based on the gene variants we looked at, your exercise recovery is likely typical.

Using methods like massage and cold application may help speed up recovery.

It is common to feel tired and sore after exercise. Exercise puts stress on our bodies, and we need time to recover after each bout.

Some people may recover from exercise more quickly and easily than others. Part of the reason for this may be genetic. For example, **variants in the ACTN3 gene**, important for the function of fast-twitch muscle fibers, **may make the muscles more susceptible to exercise-induced damage** [R, R, R].

Other factors that affect muscle recovery, include [R, R]:

- Intensity and type of exercise
- Nutrition and hydration
- Sleep quality
- Stress
- Aging

Light stretching, massage, and cold exposure can help improve recovery after exercise. For example, a cold bath for 10-15 minutes can decrease soreness and speed up muscle recovery [R, R, R, R, R, R].



TYPICAL

Predisposed to typical recovery after exercise based on 16 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
FTO	rs9939609	TT
IGF2	rs7924316	GG
HGF	rs5745697	GG
HGF	rs5745678	GG
IL6R	rs4129267	TT
MYLK	rs28497577	TT
IL6R	rs2228145	CC
ACTN3	rs1815739	TC
CCR2	rs1799865	TT
SLC30A8	rs13266634	CC
CRP	rs1205	CC
IL1B	rs1143634	GG
GPX1	rs1050450	GG
IGF2	rs680	CT
IL1A	rs4848306	GA
CYBA	rs4673	GA
IGF2	rs3213221	GC
CD28	rs3116496	CT
CCL8	rs2857656	CG
COL2A1	rs2070739	TC
IL1B	rs16944	AG
COL5A1	rs12722	TC
CAT	rs1001179	TC
SLC16A1	rs1049434	TT
SLC16A1	rs7169	AA
SOD2	rs4880	GG
IGF2	rs4244808	GG
CCR2	rs3918358	AA
CCL2	rs3917878	CC
C11ORF21	rs3842748	GG
SPP1	rs28357094	TT
MYLK	rs2700352	GG

GENE	SNP	GENOTYPE
IL6	rs1800795	GG
TNF	rs1800629	GG
NOS3	rs1799983	TT
EEF1AKMT3	rs11613457	GG

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

Your Recommendations

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

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

		DOSAGE			DOSAGE
1	Physical Therapy	30 minutes	2	Cold Applications	15 minutes
3	Low-Level Laser Therapy (LLLT)	30 seconds	4	BCAAs (Branched-Chain Amino Acids)	5 g
5	Contrast Water Therapy		6	Cherries	
7	Dietary Polyphenols		8	Infrared Light Therapy	
9	Massage	30 minutes	10	Hot Applications	20 minutes
11	Carbohydrates		12	Whole-Body Vibration	15 minutes
13	Curcumin	500 mg	14	Milk	
15	Tomato		16	Hydroxymethylbutyrate (HMB)	3 g
17	Vitamin E	200 iu	18	Tart Cherries	
19	Red Light Therapy	20 minutes	20	Drink at Least 8 Glasses of Water a Day	
21	Beetroot		22	Compression Therapy	
23	Cold Exposure	1 minutesute	24	Leucine	2 g
25	Stretching	15 minutes	26	Turmeric	
27	Blackcurrants		28	L-Carnitine	500 mg
29	Beetroot Juice		30	Berries	
31	Whey Protein	25 g	32	Bananas	

33	Creatine	2 g	34	L-Citrulline	3 g
35	Spinach		36	Greek Yogurt	
37	Dietary Protein		38	Protein Supplement	20 g
39	Green Tea Extract	250 mg	40	Coenzyme Q10 (CoQ10)	100 mg
41	Quercetin	200 mg	42	Carnosine	1000 mg
43	Brazilian Green Propolis	70 mg	44	Blueberries	
45	Lemon Verbena		46	Cocoa Extracts	500 mg
47	Bromelain		48	Mangiferin and Quercetin	150 mg
49	L-Ornithine L-Aspartate and BCAAs	3 g	50	Purple Sweet Potato	
51	CBD	10 mg	52	Boswellia	350 mg
53	Cold Showers	30 seconds	54	D-Ribose	15 g
55	Whole-Body Cryotherapy	2 minutes	56	Ashwagandha	120 mg
57	Olive Polyphenols	250 mg	58	Colostrum	20 g
59	Tribulus	250 mg	60	Melon	
61	Coconut Water		62	Pycnogenol	100 mg
63	Alpha-Lipoic Acid	100 mg	64	Pomegranate Juice	
65	Almonds		66	Yoga	30 minutes
67	Rhodiola	500 mg	68	Eggs	
69	Leucine-Enriched Essential Amino Acids	2 g	70	Progressive Muscle Relaxation	10 minutes
71	Ashwagandha Sensoril	125 mg	72	Flexibility Training	20 minutes

73	Hydrogen Water		74	Avocado	
75	Mangiferin	150 mg	76	Ginger	500 mg
77	Pomegranate Extract	250 mg	78	Methylsulfonylmethane (MSM)	1 g
79	Flotation	1 hour	80	Saffron	20 mg
81	Omega-3 (Fish Oil)	2000 mg	82	Sensory Deprivation	40 minutes
83	Streptococcus Thermophilus & Bifidobacterium Breve	10 billion CFU	84	Date Seeds	
85	Collagen Peptides	10 g	86	Music Therapy	30 minutes
87	Magnesium	350 mg	88	Garlic Supplement	200 mg
89	Glutamine	5 g	90	Lactobacillus Plantarum	10 billion CFU
91	Boswellia And Curcumin	600 mg	92	Hydroxytyrosol	5 mg
93	Streptococcus Thermophilus	10 billion CFU	94	Bifidobacterium Breve	10 billion CFU

1

Physical Therapy

IMPACT

4 / 5

EVIDENCE

4 / 5

How to implement

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

TYPICAL STARTING DOSE

30 minutes

Description

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

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

Physical therapy can involve [\[R\]](#):

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

People mainly use physical therapy to help with [\[R\]](#), [\[R\]](#):

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

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

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

How it helps

The following types of physical therapy may improve exercise recovery:

- **Low-level laser therapy (LLLT)** [\[R\]](#), [\[R\]](#), [\[R\]](#)
- **Massage** [\[R\]](#), [\[R\]](#)
- Compression therapy [\[R\]](#), [\[R\]](#), [\[R\]](#)
- Kinesio Taping [\[R\]](#)
- Vibration therapy [\[R\]](#), [\[R\]](#), [\[R\]](#)

They may help by:

- Reducing muscle soreness, swelling, and damage
- Improving muscle performance

However, some studies didn't confirm the above benefits and some were of low quality [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

2



Cold Applications

IMPACT4 / 5

EVIDENCE4 / 5

How to implement

Apply a cold pack or a bag of frozen peas wrapped in a towel to the affected area for 15-20 minutes, every 2-3 hours during the first 48 hours of experiencing pain or swelling.

TYPICAL STARTING DOSE

15 minutes

Description

Cold applications, such as ice packs, can help reduce inflammation, alleviate pain, and promote muscle recovery after injuries or intense physical activity. Applying cold can provide temporary relief from discomfort and support the body's natural healing processes.

People use cold applications to relieve pain, reduce inflammation, and more [\[R, R\]](#).

Types of cold applications include [\[R, R\]](#):

- Ice packs
- Ice baths
- Cryotherapy

How it helps

Cooling down with a dip in cold water or a session in a cryogenic chamber may boost exercise recovery by improving [\[R, R, R, R, R, R, R\]](#):

- Perceived exertion
- Muscle soreness
- Muscle function
- Endurance and sprint performance
- Flexibility

It may provide greater benefits than rest, active recovery, contrast water therapy (alternating hot and cold water), and warm water immersion. However, some studies found **contrast water therapy** equally beneficial [\[R, R, R, R\]](#).

Consider the following tips [\[R, R, R, R, R\]](#):

- Cooling down for **11-15 minutes at 11-15°C** may be most effective.
- **Whole-body** cold exposure may be better than local application.
- This approach may be especially beneficial after **endurance workouts**.

3



Low-Level Laser Therapy (LLLT)

IMPACT4 / 5

EVIDENCE3 / 5

How to implement

Use a low-level laser therapy device, as directed by its manual or a healthcare professional, on the affected area. Generally, treatment involves applying the laser for a specified duration, often between 30 seconds to several minutes, per treatment area. Sessions can be conducted 2-3 times per week for a period of 4-12 weeks, depending on the condition being treated and the device used.

TYPICAL STARTING DOSE

30 seconds

Description

Low-level laser therapy (LLLT), also known as photobiomodulation, is a type of light therapy that uses low-intensity lasers to promote healing. It has been shown to be effective in treating a variety of conditions, including pain, inflammation, and wound healing.

How it helps

Low-level laser therapy (LLLT) before exercise may [\[R\]](#), [\[R\]](#):

- Enhance workout performance
- Reduce muscle soreness and damage

Some studies found LLLT more effective than cold therapy at improving muscle strength and reducing soreness after high-intensity exercise [\[R\]](#).

4



BCAAs (Branched-Chain Amino Acids)

IMPACT

3 / 5

EVIDENCE

4 / 5

How to implement

Take a BCAA supplement that provides about 5-10 grams of branched-chain amino acids, divided into 2-3 doses per day, preferably around your workout times or between meals. This regimen can be followed daily, especially on training days for muscle support and recovery.

TYPICAL STARTING DOSE

5 g

Description

BCAAs, or **branched-chain amino acids**, are a group of three essential amino acids: **leucine**, **isoleucine**, and **valine**. They are found in dietary protein sources, especially meat, dairy, and legumes.

BCAAs, or **branched-chain amino acids**, are a group of three essential amino acids: **leucine**, **isoleucine**, and **valine**. They are found in dietary protein sources, especially meat, dairy, and legumes [R].

BCAAs play a vital role in protein synthesis, muscle growth, and energy production. People use BCAA supplements to support exercise and muscle performance, liver health, and more [R, R].

How it helps

BCAA supplementation (6-20 g/day for 3-11 days) may improve muscle soreness and damage after exercise. However, it may not improve muscle performance after exercise [R, R, R, R, R].

It may be most effective **at doses below 255 mg/kg/day and in trained individuals** [R, R, R, R, R].

BCAA may help by building and repairing muscle tissue [R, R].

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

5



Contrast Water Therapy

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

To perform contrast water therapy, alternate between hot and cold water during your shower. Start with hot water for about 3-4 minutes, then switch to cold water for about 1 minute. Repeat this cycle 3-5 times, always ending with cold water. Do this daily or after intense physical activity for the best results.

Description

Contrast water therapy involves alternating between hot and cold water treatments, which may help reduce muscle soreness and promote recovery after intense physical activity. This therapy can support musculoskeletal health and improve circulation, contributing to overall physical well-being.

How it helps

Contrast water therapy (alternating between cold and hot water) may improve muscle soreness at 6-96 h better than passive recovery according to the analysis of 18 studies. It may offer similar benefits as other recovery methods such as cold water immersion or compression therapy [\[R\]](#).

6



Cherries

IMPACT

3 / 5

EVIDENCE

3 / 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

Montmorency cherry juice has been shown to reduce muscle damage caused by intensive exercise, likely through its antioxidant properties. It significantly speeds up the recovery of muscle strength, potentially due to reduced oxidative damage to muscles [\[R\]](#).

Studies have found that tart cherry juice can facilitate the recovery of muscle strength and reduce inflammation, contributing to improved performance in subsequent exercises. It appears that tart cherries help in quicker recovery of isometric muscle strength and reduce exercise-induced inflammation [\[R\]](#).

Consumption of cherry extract may reduce late-onset muscle pain, a common symptom following intense physical activities, making it a beneficial supplement for recovery [\[R\]](#).

The comprehensive anti-inflammatory and antioxidative properties of cherries not only aid in faster recovery by reducing pain and muscle damage but also enhance overall physical recovery, making cherries a potent recovery aid after strenuous activities [\[R\]](#).

7



Dietary Polyphenols

IMPACT3 / 5

EVIDENCE3 / 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

Consuming polyphenol-rich foods may support exercise recovery by improving [R, R, R]:

- Post-exercise muscle strength
- Muscle soreness

The effects may be largest **48-72 h** after exercise.

Good dietary sources of polyphenols include [R]:

- Fresh fruits and vegetables (especially berries and cherries)
- Tea and coffee
- Cocoa
- Nuts

Green and black tea extracts rich in polyphenols may improve exercise recovery. However, the evidence is mixed and of low quality [R, R, R, R, R].

8



Infrared Light Therapy

IMPACT

3 / 5

EVIDENCE

3 / 5

Description

Infrared light therapy is a type of light therapy that uses infrared light to improve circulation, reduce pain, and promote healing. It has been shown to be effective in treating a variety of conditions, including arthritis, chronic pain, and wound healing.

How it helps

A meta-analysis of 13 trials found that light therapy applied before exercise increases time and number of repetitions until exhaustion. Red and infrared light were found most effective [R].

9



Massage

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

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

TYPICAL STARTING DOSE

30 minutes

Description

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

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

- Anxiety
- Pain
- Fatigue

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

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

How it helps

Massage may reduce muscle soreness and support performance recovery. **Short massages (5-12 minutes)** may be most effective [R, R, R].

10



Hot Applications

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

Apply a hot pack, heating pad, or a warm towel to the affected area for 15-20 minutes at a time. Do this several times a day, especially before activities that increase pain.

TYPICAL STARTING DOSE

20 minutes

Description

The use of hot applications, such as heating pads or warm compresses, can help relieve muscle tension, reduce pain, and improve blood flow to affected areas. It is a common approach for managing muscular discomfort and promoting relaxation.

People use hot applications to relieve pain, improve blood flow, and help muscles relax [\[R, R\]](#).

Types of hot applications include [\[R, R\]](#):

- Heating pads
- Hot baths
- Saunas

How it helps

Hot pack application may reduce muscle pain and soreness after exercise [\[R\]](#).

However, cold applications and contrast water therapy (alternating hot and cold water) may be more effective [\[R, R, R, R\]](#).

11



Carbohydrates

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Incorporate a variety of carbohydrates into your daily meals, aiming for at least 130 grams per day, which is the recommended daily amount for the average adult. Focus on whole grains, fruits, vegetables, and legumes, spreading intake evenly throughout the day to maintain energy levels and support bodily functions.

Description

Carbohydrates are a primary source of energy in the diet and are essential for brain function and physical activity. Choosing complex carbohydrates like whole grains and vegetables can provide sustained energy and support overall nutritional well-being.

How it helps

Consuming carbs between or after exercise sessions may boost exercise performance and muscle recovery [\[R\]](#), [\[R\]](#).

The combination of carbs and protein may also help, but some studies found no benefits of added protein [\[R\]](#), [\[R\]](#).

Sugars and other simple carbs are preferred during and after exercise because your body can digest them quickly. **However, your overall diet should still be low in sugar** [\[R\]](#), [\[R\]](#).

12



Whole-Body Vibration

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

Stand, sit, or lie on a machine with a vibrating platform for about 15 minutes a day, three times a week. Make sure to start with a lower intensity and gradually increase as you get more accustomed to the vibrations.

TYPICAL STARTING DOSE

15 minutes

Description

Whole-body vibration involves standing, sitting, or lying on a vibrating platform to stimulate muscle contractions. It's used in fitness routines and rehabilitation for improving muscle strength, circulation, and balance, and may benefit conditions like osteoporosis. No specific chemical compound or nutrient is associated with whole-body vibration.

Whole-body vibration is a form of exercise and treatment utilizing a vibrating platform upon which a person stands or performs various exercises. It creates vertical, oscillating vibrations with frequencies and amplitudes that can be controlled by the user [\[R\]](#).

Whole-body vibration is used for a variety of purposes, including [\[R\]](#):

- Weight loss
- Boosting strength
- Improving balance/coordination
- Boosting mood

How it helps

Vibration therapy may improve delayed-onset muscle soreness at 24-72 h post-exercise, and pain tolerance 72 h post-exercise. Pre-exercise vibration therapy may also improve delayed-onset muscle soreness (at 24-48 h post-exercise) and pressure pain threshold (at 24 h) [\[R\]](#), [\[R\]](#), [\[R\]](#).

13



Curcumin

IMPACT

3 / 5

EVIDENCE

3 / 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

Supplementation with curcumin (150-400 mg/day for up to 2 months) may [R, R]:

- Reduce muscle damage, soreness, and inflammation
- Increase muscle strength and joint flexibility

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

***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].*

14



Milk

IMPACT

3 / 5

EVIDENCE

2 / 5

How to implement

Incorporate milk into your daily diet by drinking 1-2 glasses (around 8-16 ounces) each day, either as a beverage, mixed with cereal or coffee, or used in cooking and baking recipes. Choose a type of milk that suits your nutritional needs and dietary preferences, such as whole, skim, lactose-free, or plant-based alternatives.

Description

Milk is a nutrient-rich beverage that provides essential calcium, protein, and vitamins like vitamin D. It supports bone health, helps build and repair tissues, and can be a valuable part of a balanced diet.

How it helps

Studies indicate that milk consumption after exercise MAY attenuate muscle damage. It helps in maintaining peak torque and muscle function, particularly in activities involving repeated sprinting and jumping. This support extends to female athletes as well, where milk was shown to mitigate losses in muscle function following physically demanding protocols [\[R\]](#).

Drinking milk after exercise not only supports physical recovery but also influences subsequent appetite, leading to a reduction in energy intake compared to control drinks like orange juice. This could be beneficial for weight management in recreational exercisers [\[R\]](#).

Milk enhances recovery by improving protein synthesis and reducing muscle soreness and inflammation. This effect is likely due to its nutrient composition, which includes a good balance of carbohydrates and proteins [\[R\]](#).

Milk is effective in rehydration post-exercise, outperforming traditional sports drinks in some studies. It promotes better fluid retention, which is crucial for recovery, especially after extensive or intense physical activities [\[R\]](#).

15



Tomato

IMPACT

3 / 5

EVIDENCE

2 / 5

How to implement

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

Description

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

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

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

Tomato is traditionally used for [\[R\]](#), [\[R\]](#):

- High cholesterol
- High blood pressure

How it helps

Eating tomatoes can aid in exercise recovery as they're high in water content and essential nutrients like potassium, which are important for replenishing bodily functions post workout. Tomatoes also contain lycopene, an antioxidant that can minimize exercise-induced oxidative stress.

In [5 placebo-controlled trials of 15 untrained subjects and 85 athletes](#), consuming tomato juice or powder (providing 15-30 mg/day lycopene) for 1-8 weeks **reduced exercise-induced markers of oxidative stress (8-oxodG, MDA, and 8-isoprostane), inflammation (CRP), and muscle damage (myoglobin, creatine phosphokinase, and lactate dehydrogenase) while increasing total antioxidant capacity** [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

16



Hydroxymethylbutyrate (HMB)

IMPACT2 / 5

EVIDENCE3 / 5

How to implement

Take hydroxymethylbutyrate (HMB) as a supplement in a dose of 3 grams per day. This can be split into three 1-gram servings taken with meals throughout the day to help with muscle strength and body composition. Continuation typically ranges from weeks to months, depending on fitness goals and personal response.

TYPICAL STARTING DOSE

3 g

Description

HMB is a metabolite of the amino acid leucine. It is often used as a dietary supplement to support muscle recovery and reduce muscle breakdown during intense physical training.

HMB, or beta-hydroxy-beta-methylbutyrate, is a compound naturally produced in the body and available as a supplement. It helps build muscle tissue.

Athletes use HMB to support muscle growth, reduce muscle damage, and enhance recovery.

How it helps

Supplementation with HMB (3 g/day for 6-12 weeks) may reduce muscle damage after exercise. HMB may help by building muscle tissue [\[R\]](#).

17



Vitamin E

IMPACT2 / 5

EVIDENCE3 / 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

Supplementing with vitamin E (up to 500 IU/day for up to 2 months) may reduce muscle damage after exercise. Vitamin E may help by combating oxidative stress [\[R\]](#).

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

18



Tart Cherries

IMPACT

2 / 5

EVIDENCE

3 / 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

Eating tart cherries after strenuous exercise may [\[R\]](#):

- Slightly improve muscle soreness and inflammation
- Moderately improve muscle performance recovery

However, one small study found no benefits of tart cherry juice for exercise recovery in men [\[R\]](#).

19



Red Light Therapy

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Position yourself or the specific area of your body that needs treatment about 6 inches away from a red light therapy device. Use the device for 10 to 20 minutes daily. It is recommended to continue this daily regimen for at least several weeks to notice benefits.

TYPICAL STARTING DOSE

20 minutes

Description

Red light therapy involves exposure to low-level red or near-infrared light, which may promote skin rejuvenation, reduce inflammation, and improve circulation when used for therapeutic purposes in skin care and wellness treatments.

How it helps

In a placebo-controlled trial of 40 healthy untrained men undergoing intensive exercise, those receiving red light therapy had **significantly improved performance, decreased soreness, and reduced indicators of muscle damage**. Red light therapy also significantly **improved recovery after high-intensity exercise** in a placebo-controlled trial of 40 volunteers [\[R\]](#), [\[R\]](#).

20



Drink at Least 8 Glasses of Water a Day

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

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

Description

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

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

Water helps maintain [\[R\]](#):

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

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

How it helps

Effective rehydration is vital after exercise to recover fluid balance, reduce fatigue, and maintain performance. Both oral and intravenous rehydration have been shown to restore hydration status efficiently, with oral rehydration recommended as the primary method for fluid replacement [\[R\]](#).

The type of fluid consumed can influence hydration effectiveness. Studies have compared different beverages, including sports drinks and water, finding that some sports beverages might enhance hydration more effectively due to their electrolyte content [\[R\]](#).

Maintaining hydration is linked with sustaining performance levels and physiological functions such as thermoregulation, cardiovascular function, and muscle recovery. Dehydration can impair performance, particularly in high-intensity or prolonged exercise scenarios [\[R\]](#).

21



Beetroot

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate beetroot into your diet by eating it raw in salads or drinking beetroot juice. Aim for a serving of about one small beetroot or 200-250 ml of beetroot juice daily. You can maintain this dietary practice consistently as part of your regular diet.

Description

Beetroot is a vegetable rich in dietary nitrates, which may help improve cardiovascular health and exercise performance.

How it helps

Beetroot is high in dietary nitrates, which your body can convert into nitric oxide. Nitric oxide boosts blood flow, allowing more oxygen to reach your muscles, speeding up recovery after workouts.

Consuming beetroot juice may support exercise recovery by [\[R\]](#):

- Improving strength recovery (after 72h)
- Improving muscle performance (after 24-72h)
- Reducing muscle pain (after 48-72h)

Beetroot juice is rich in nitrates, which help promote blood flow [\[R\]](#).

22



Compression Therapy

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Wear compression stockings or sleeves daily, especially during long periods of standing or sitting. Choose a compression level appropriate for your condition (mild, moderate, or high), as advised by a healthcare professional. Start wearing them in the morning before swelling occurs and keep them on until bedtime.

Description

Compression therapy involves wearing specialized garments that apply pressure to the limbs, promoting better circulation and reducing swelling. It is commonly used to manage conditions like venous disorders and can help alleviate symptoms, improve vascular health, and enhance overall well-being.

In compression therapy, different methods are used to apply pressure to the legs. These methods include [\[R\]](#):

- Bandages
- Wraps
- Compression stockings
- Pneumatic pressure devices

Compression therapy supports blood flow. It may help [\[R, R, R\]](#):

- Prevent blood clots and deep vein thrombosis (DVT)
- Reduce some kinds of swelling
- Reduce symptoms of restless legs syndrome

How it helps

Wearing compression garments during or after exercise may reduce lactate muscle swelling while increasing muscle power, strength recovery, and next-day athletic performance. However, not all studies found these benefits [\[R, R, R, R\]](#).

23



Cold Exposure

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Gradually expose yourself to cold temperatures for short periods, starting with 1-2 minutes and increasing up to 5-10 minutes. This can be achieved through cold showers, outdoor exposure in cold weather, or ice baths. Aim to do this 2-3 times per week.

TYPICAL STARTING DOSE

1 minutesute

Description

Cold exposure, when done safely and gradually, can have potential health benefits like increased calorie burn, improved circulation, and enhanced resilience to cold temperatures. Cold exposure techniques, such as cold showers or outdoor winter activities, may help boost metabolism and promote overall well-being when practiced mindfully.

Please note: rapid instead of gradual cold exposure causes dangerous, and even fatal, changes in the breath and heart rates, known as the cold shock response. Be cautious with any form of sudden temperature change in your environment, especially if you have heart disease or other chronic conditions [\[R\]](#).

How it helps

Four trials in physically active young adults found very low-quality evidence regarding whole-body cryotherapy (WBC). WBC seemed to reduce muscle soreness at 1 hour post-exercise but yielded inconclusive results at 24, 48, and 72 hours. One small trial suggested less soreness than infrared therapy at 1 hour but no difference at 24 or 48 hours [\[R\]](#).

Another study found that cold water immersion significantly reduced delayed-onset muscle soreness (DOMS) and ratings of perceived exertion (RPE) symptoms after 24 hours but had no impact on objective recovery variables during a 96-hour recovery period [\[R\]](#).

In a crossover study with 24 subjects, cycling followed by recovery in ice-cold water (ICW) reduced blood plasma lipid peroxidation (TBARSpl) 40 minutes post-exercise compared to room temperature recovery (RT). ICW also lowered TBARSpl compared to baseline. Short-term ICW baths decreased post-exercise lipid peroxidation [\[R\]](#).

However, other studies found cryotherapy ineffective and another found that low-level laser therapy may be a more effective option for muscle recovery [\[R, R, R\]](#).

Cold exposure decreases the blood flow to the muscle tissue, reducing inflammation and swelling that can cause pain following exercise. It can also slow down metabolic activity, limiting the damage and speeding up the recovery process.

Please note: *Rapid cold exposure can cause life-threatening changes to your breathing and heart rate. This is called the cold-shock response. Be cautious of any form of sudden temperature change to your environment, especially if you have heart disease or other health conditions* [\[R\]](#).

24



Leucine

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 2 to 3 grams of leucine supplement per day, with meals to enhance its absorption, particularly after resistance exercise to stimulate muscle protein synthesis. Consistency is important, so continue daily for at least several months to gauge effectiveness.

TYPICAL STARTING DOSE

2 g

Description

Leucine is an essential, branched-chain amino acid found in protein-rich foods that plays a key role in muscle protein synthesis and overall muscle health. It is commonly used by athletes and fitness enthusiasts to support muscle recovery and growth.

[Leucine](#) is a branched-chain amino acid (BCAA). It's essential, which means we can't produce it and must get it from food. Leucine is found in all protein-rich foods, such as [\[R\]](#):

- Red meat and poultry
- Fish
- Dairy products
- Eggs
- Legumes (e.g., beans and peas)
- Nuts (e.g., pistachios, almonds, and cashews)
- Cereals (e.g., corn, millet, semolina, and spelt)

How it helps

Leucine supplementation can enhance skeletal muscle recovery following exercise by stimulating muscle protein synthesis, independent of increased plasma insulin levels. This effect is attributed to leucine's ability to activate key enzymes in protein synthesis pathways [\[R\]](#).

While some studies suggest that leucine supplementation does not significantly improve muscle recovery after resistance training in young adults, other research shows a moderate attenuation of muscle damage with leucine-enriched amino acid supplementation [\[R\]](#).

Another study found that leucine-enriched essential amino acids could enhance recovery from post-exercise muscle damage in young men [\[R\]](#).

25



Stretching

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Incorporate stretching exercises into your daily routine, dedicating at least 10-15 minutes each day. Focus on major muscle groups such as the neck, shoulders, chest, back, hips, and legs. For best results, stretch both before and after other physical activities, holding each stretch for 15-30 seconds without bouncing.

TYPICAL STARTING DOSE

15 minutes

Description

Stretching involves gently elongating the muscles to improve flexibility, reduce muscle tension, and enhance joint mobility. Regular stretching can help prevent injuries, promote better posture, and increase overall physical comfort.

Stretching is a form of physical exercise that involves moving a muscle or group of muscles to their maximum range of motion. The most common types are **dynamic** (involving movement) and **static** stretching.

Stretching can help **improve flexibility, range of motion, and posture**. It may also relieve stress, reduce muscle soreness and tension, increase blood flow, and reduce the risk of injuries.

To get the most out of stretching, try to do it regularly, breathe deeply, and ease into the stretches.

How it helps

Stretching can positively influence muscle recovery and function after exercise. It has been shown to help maintain muscle function and reduce muscle soreness after workouts, making it a beneficial part of recovery protocols [\[R\]](#).

Stretching has been associated with a decrease in perceived muscle soreness after exercise. While it does not completely prevent muscle soreness, it can alleviate its intensity, thereby aiding in a more comfortable recovery phase [\[R\]](#).

Regular stretching, especially post-exercise, can improve flexibility and range of motion. This not only aids in the immediate recovery process but also contributes to better long-term physical performance and decreased risk of injuries [\[R\]](#).

26



Turmeric

IMPACT

2 / 5

EVIDENCE

2 / 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

Curcumin, the primary active component in turmeric, has demonstrated the ability to reduce exercise-induced inflammation and muscle soreness. This helps in enhancing recovery in athletes and physically active individuals. A review highlights these benefits, noting that curcumin can help manage exercise-induced inflammation and muscle soreness, thus enhancing recovery and subsequent performance [\[R\]](#).

A pilot study involving elite male footballers showed that turmeric supplementation could improve subjective and physiological markers of recovery. Specifically, the study found that turmeric may attenuate a biomarker of inflammation (C-reactive protein) and soreness post-exercise [\[R\]](#).

Another review detailed how curcumin's antioxidant properties help reduce oxidative stress and inflammation, potentially decreasing muscle damage and pain. This could improve exercise performance and quicker recovery times [\[R\]](#).

27



Blackcurrants

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate about 1/2 cup of fresh or frozen blackcurrants into your daily diet. You can add them to your morning yogurt, oatmeal, or smoothies. For those who prefer, blackcurrant juice or preserves can also be consumed, but be mindful of added sugars in processed forms.

Description

Blackcurrants are small, nutrient-dense berries packed with vitamins, minerals, and antioxidants. They are known for their potential to promote heart health, improve cognitive function, and provide essential nutrients for overall vitality.

How it helps

Consumption of black currant nectar has been shown to reduce markers of muscle damage and inflammation following high-intensity eccentric contractions. This effect is evident in reduced creatine kinase, a marker of muscle damage, and interleukin-6, a pro-inflammatory cytokine [\[R\]](#).

New Zealand blackcurrant extract may improve high-intensity intermittent running performance and post-running lactate responses. This indicates an enhanced ability to handle high-intensity exercise and potentially quicker recovery [\[R\]](#).

Another study reported that consumption of New Zealand blackcurrant extract improved recovery from exercise-induced muscle damage in non-resistance-trained individuals, highlighting its role in faster recovery of muscle function and reduced muscle soreness [\[R\]](#).

28



L-Carnitine

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 500 mg of L-carnitine supplement daily with a glass of water, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

500 mg

Description

L-carnitine is an amino acid-like compound that plays a role in energy metabolism and helps prevent toxic substances from building up in cells. It is often used in dietary supplements for its potential to support muscle recovery, reduce fatigue, and enhance athletic performance.

[L-carnitine](#) is a compound that helps you burn fat. It also prevents toxic substances from building up in cells [\[R\]](#).

Your body can usually make enough carnitine to meet its needs. You can also get it from **meat and dairy products** [\[R\]](#).

People use L-carnitine for [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Heart problems
- Overactive thyroid
- Fertility problems
- Blood sugar control
- Weight control

How it helps

Supplementation with L-carnitine (1-3 g/day for 1-4 weeks) may improve muscle soreness and damage up to **5 days** after exercise [\[R\]](#).

Please note: *Supplementing with L-carnitine at approximately 3 g/day may cause nausea, vomiting, abdominal cramps, diarrhea, and a "fishy" body smell* [\[R\]](#).

29



Beetroot Juice

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Consume 200-250ml of beetroot juice daily, at least 1-2 hours before engaging in physical activity or as part of your breakfast routine. This regimen should be maintained consistently for at least 2 weeks to start noticing benefits in terms of increased stamina and blood pressure regulation.

Description

Beetroot juice is a concentrated source of dietary nitrates, known for their potential to enhance athletic performance and improve blood pressure regulation. It is often consumed by athletes to enhance stamina and aid in recovery.

Beetroot (*Beta vulgaris*) contains iron, nitrates, sodium, potassium, and betalaine [\[R\]](#).

Beets are an inexpensive and mineral-rich vegetable that are widely used in Western cooking. Compared to other vegetables with high iron content, beets have a low price and are easy to store [\[R\]](#).

How it helps

Consuming beetroot juice may support exercise recovery by [\[R\]](#):

- Improving strength recovery (after 72h)
- Improving muscle performance (after 24-72h)
- Reducing muscle pain (after 48-72h)

Beetroot juice is rich in nitrates, which help promote blood flow [\[R\]](#).

30



Berries

IMPACT

2 / 5

EVIDENCE

2 / 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

Blueberry consumption has been associated with accelerated recovery of muscle isometric strength after exercise due to its high antioxidant capacity, which may help manage oxidative stress and inflammation observed after strenuous activities [\[R\]](#).

Fruits like cherries and blueberries rich in antioxidants have been shown to reduce oxidative stress and muscle damage after high-intensity exercise. These fruits promote quicker recovery and reduce inflammation, potentially due to their polyphenolic content [\[R\]](#).

Certain berries like blueberries have been specifically noted to lower blood lactate response to running, though they did not significantly change performance outcomes, suggesting benefits in recovery phases rather than during exercise performance [\[R\]](#).

31



Whey Protein

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Mix one scoop (approximately 25-30 grams) of whey protein powder with 8-12 ounces of water, milk, or your preferred beverage. Consume this drink 1-2 times per day, ideally post-workout or as a meal replacement.

TYPICAL STARTING DOSE

25 g

Description

Whey protein is a complete protein derived from milk during cheese production. It is rich in essential amino acids and is used to support muscle recovery, promote muscle growth, and provide a convenient protein source for athletes and fitness enthusiasts.

Whey is the liquid that separates from milk when cheese is made. [Whey protein](#) is full of amino acids (protein building blocks) that the body needs [\[R\]](#), [\[R\]](#).

Whey protein usually comes in the form of a powder that can be added to soft foods and drinks. People often use it to help with [\[R\]](#), [\[R\]](#):

- Athletic performance
- Nutritional deficiencies

How it helps

Supplementation with whey protein (20-98 g) may moderately improve muscle function within **1-4 days** after exercise [\[R\]](#).

Please note: *There is not enough safety data for long-term whey protein supplementation at doses above **30 g/day**.*

32



Bananas

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate 1-2 bananas into your daily diet. Bananas can be eaten as a standalone snack, added to cereal, oatmeal, or smoothies, or used as an ingredient in baking. Aim to include them regularly for ongoing dietary benefits.

Description

Bananas are a nutrient-rich fruit packed with potassium, fiber, and essential vitamins. They are a convenient and healthy snack option that can help support heart health, digestive regularity, and overall well-being.

Bananas are a good source of vitamins B6 and C, as well as numerous minerals, including potassium, copper, and magnesium. A single banana provides 0.4 mg of vitamin B6 or 25%DV.

How it helps

Bananas, when consumed during prolonged cycling, may improve 75-km cycling performance and recovery. Bananas may provide carbohydrates that enhance performance, reduce inflammation, and elevate antioxidant capacity [\[R\]](#).

The ingestion of bananas has been linked with beneficial shifts in metabolites that promote energy efficiency and recovery. The study demonstrated that bananas reduce lipid oxidation, augment antioxidant capacity, and manage metabolic profiles effectively during and after intense physical exertion [\[R\]](#).

Consumption of bananas has also been associated with an increase in the endurance of lower extremity muscles, which suggests that bananas can be beneficial not just for energy replenishment but also for sustaining muscle performance during prolonged exercise [\[R\]](#).

33



Creatine

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 4 grams of creatine supplement daily, ideally mixed with water or juice. This dosage can be maintained consistently without needing specific periods of cycling on or off.

TYPICAL STARTING DOSE

2 g

Description

Creatine is a popular dietary supplement among athletes and bodybuilders, known to enhance muscle performance during short bursts of high-intensity activities. It may help improve exercise performance and support muscle growth when used as directed.

[Creatine](#) is a compound naturally produced by the body. It’s stored in the muscles and brain [\[R\]](#).

During exercise, creatine is released to boost performance and help build muscles. For this reason, it’s a popular supplement among athletes [\[R\]](#), [\[R\]](#).

Sources of creatine include [\[R\]](#):

- Red meat
- Seafood
- Supplements

How it helps

soreness, exercise-induced muscle damage markers, and oxidative markers as an acute training response. However, creatine may increase them as a chronic training response [\[R\]](#), [\[R\]](#), [\[R\]](#).

Creatine may help by increasing muscle creatine and phosphocreatine levels, leading to higher energy production [\[R\]](#).

34



L-Citrulline

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 1.5 to 5 grams of L-citrulline supplements per day, orally, with or without food. This dosage can be taken all at once or divided into two to three smaller doses throughout the day. It's generally recommended to start at the lower end of the dosage range and adjust based on your body's response.

TYPICAL STARTING DOSE

3 g

Description

L-citrulline is an amino acid that may help improve blood flow and reduce muscle soreness, making it a popular supplement for athletes and individuals with certain cardiovascular conditions. Its potential to enhance nitric oxide production supports vascular health and overall circulation.

[Citrulline](#) is an amino acid (protein building block). Citrulline can be found in foods like [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Watermelon
- Pumpkins
- Cucumber
- Bitter melon

The body uses L-citrulline to produce nitric oxide, a compound that helps widen blood vessels. It is important for heart and sexual health [\[R\]](#), [\[R\]](#), [\[R\]](#).

L-citrulline is commonly used as supplement to support [\[R\]](#):

- Blood vessel health
- Muscle health
- Metabolic health
- Sexual health

How it helps

Supplementation with a single dose of L-citrulline (8 g, up to 2 h before exercise) may reduce perceived effort and muscle soreness after exercise. However, the effects may not last longer than 2 days [\[R\]](#).

Please note: *There is not enough safety data for long-term L-citrulline supplementation at doses above 6 g/day.*

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

Chronic daily supplementation of spinach significantly elevated Total Antioxidant Capacity (TAC) and maintained lower levels of oxidative stress markers such as malondialdehyde (MDA) and protein carbonyl, following a half-marathon. This indicates an alleviating effect on oxidative stress induced by exercise [R].

The same study also showed that spinach supplementation kept markers of muscle damage, like creatine kinase (CK), at lower levels after exercise compared to placebo, suggesting protective effects against muscle damage [R].

36



Greek Yogurt

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Incorporate Greek yogurt into your diet by eating at least one serving (about 6 ounces or 170 grams) daily. You can enjoy it as a breakfast item, a healthy snack, mixed with fruits and nuts, or as a substitute for sour cream in recipes.

Description

Greek yogurt is a protein-rich dairy product that provides essential nutrients like calcium and probiotics for gut health. It's a nutritious addition to the diet that can support digestion and overall nutritional well-being.

How it helps

In a study involving adolescent female athletes, Greek yogurt consumption did not significantly enhance performance recovery compared to an isoenergetic carbohydrate control. However, it did increase anti-inflammatory cytokine levels, which might be beneficial in managing inflammation induced by intense training [R].

Greek yogurt consumption (fat-free, plain yogurt, 20 g protein/portion, 3 times on training days and 2 times on non-training days for 12 weeks) in combination with resistance training (RT/plyometric training, 3 days/week for 12 weeks) improved muscle thickness, strength, and body composition in untrained males compared to a placebo, highlighting its role in promoting muscle hypertrophy and strength gains [R].

How to implement

Description

- Eggs
- Nuts
- Beef
- Chicken
- Fish
- Yogurt
- Tofu
- Pork
- Cottage cheese

How it helps

Another study demonstrated that consuming dietary protein before sleep may increase muscle mass and strength gains during resistance exercise training, reinforcing the importance of protein timing in relation to workout schedules for optimal gains [R].

Protein ingestion before sleep has been found to improve post-exercise overnight recovery by increasing muscle protein synthesis rates during sleep, which is crucial for effective recovery and readiness for subsequent training sessions [R].

39



Green Tea Extract

IMPACT

1 / 5

EVIDENCE

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

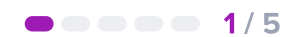
How it helps

Supplementation with green tea extract (450-2,000 mg/day for 2-13 weeks) failed to reduce the sensation of delayed onset muscle soreness but did reduce markers of muscle damage and oxidative stress after exercise [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

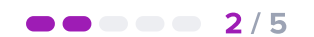
However, one study did not find these benefits [\[R\]](#).

Please note: polyphenols from green tea may bind to iron and form insoluble complexes, which reduces iron absorption in the gut. If you have anemia, consult your healthcare provider before using green tea [\[R\]](#).

IMPACT



EVIDENCE



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

TYPICAL STARTING DOSE

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.

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

- Organ meats
- Fatty fish
- Whole grains

Coenzyme Q10 (CoQ10) supports exercise recovery by enhancing energy production in your cells, reducing muscle inflammation and fatigue. So, it boosts your performance and accelerates muscle repair after workouts.

In research involving Finnish cross-country skiers, Coenzyme Q10 (CoQ10) supplementation at 90 mg/day significantly improved physical performance indexes (AET, ANT, and VO2Max). 94% of athletes reported performance and recovery benefits compared to 33% on a placebo [R].

Elite Japanese kendo athletes in another study, taking 300 mg/day of CoQ10, showed lower serum creatine kinase (CK), myoglobin (Mb), and lipid peroxide levels compared to the placebo group after intense kendo practice [R].

During a pre-swimming competition phase, no significant differences were observed among biomarker levels. However, post-competition, CoQ10 supplementation showed better results in preventing myocardial damage and oxidative stress [R].

In a study involving sedentary men, CoQ10 supplementation at 100 mg/day reduced malondialdehyde levels after exercise and partially prevented lipid peroxidation increase during repeated short-term supramaximal exercise [R].

However, 2 studies found that coenzyme Q10 does not prevent exercise-induced muscle damage and oxidative stress in sedentary men or with recommended dosages [R, R].

41



Quercetin

IMPACT

1 / 5

EVIDENCE

2 / 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

200 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

Supplementation with quercetin (1000 mg/day) for 14 days improved muscle recovery, increased the levels of the anabolic markers, and reduced muscle weakness after exercise in 3 studies of 40 participants [\[R\]](#), [\[R\]](#), [\[R\]](#).

However, quercetin (1 g/day for 1-21 days) did not affect blood markers of muscle damage and inflammation after exercise in 3 studies of 103 participants [\[R\]](#), [\[R\]](#), [\[R\]](#).

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

42



Carnosine

IMPACT1 / 5

EVIDENCE1 / 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

Carnosine helps with exercise recovery by buffering the muscle acidity produced during high-intensity exercise, which can reduce fatigue. It also may enhance muscle contraction abilities, which can improve exercise performance and recovery time.

Fourteen male athletes from the Polish national kayak and canoe teams took part in a placebo-controlled study, taking 4 g/d of carnosine for 14 days. Carnosine didn't affect RO/NS generation but protected against exercise-induced glutathione loss and reduced oxidation/nitration markers and SOD activity [\[R\]](#).

In a study involving twelve healthy participants, ingesting Carn-BA (L-carnosine and β-alanine) before exercise improved MVC and CMJ performance after fatiguing activity. It also reduced perceived effort and increased muscle pain 24 hours later [\[R\]](#).

43



Brazilian Green Propolis

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 70-200 mg of Brazilian green propolis extract daily, preferably divided into two doses. It can be taken with or without food. Continue this regimen for up to three months to assess its effectiveness for your needs.

TYPICAL STARTING DOSE

70 mg

Description

Brazilian green propolis is a resinous substance that bees collect from the leaves and buds of certain trees. It is rich in antioxidants and has been shown to have a variety of health benefits, including reducing inflammation, fighting infection, and improving gut health.

How it helps

Propolis, a substance produced by bees, has anti-inflammatory properties that may aid in muscle recovery post-exercise. It also contains antioxidants, which can protect your cells from damage and speed up the healing process.

In a study, 18 young men consumed a formulation with high Brazilian green propolis dose (H-BGP), a formulation with low Brazilian green propolis dose, or a placebo, for 1 week before performing the fatigue task. The results suggest that oral administration of propolis promotes muscle fatigue recovery by reducing central fatigue [\[R\]](#).

44



Blueberries

IMPACT

1 / 5

EVIDENCE

1 / 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

In a study of 10 women, consuming a blueberry smoothie 5 and 10 hours before and then 12 and 36 hours after performing 300 strenuous eccentric contractions of the quadriceps accelerated the recovery of muscle peak isometric strength [\[R\]](#).

45



Lemon Verbena

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take lemon verbena as a supplement in capsule or liquid extract form. For general use, consume 500mg to 1500mg daily, usually split into two or three doses throughout the day. It's advisable to follow the specific dosage instructions on the product's label or consult a healthcare provider.

Description

Lemon verbena is an herbal remedy often used to alleviate digestive discomfort and reduce inflammation. It may also have antioxidant properties that support overall health.

[Lemon verbena](#) is a citrusy herb used for cooking and in cosmetics [\[R\]](#).

It may help with [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Inflammation and pain
- Muscle damage
- Obesity
- Insomnia

How it helps

Supplementation with lemon verbena extract (400 mg/day for 15 days) may support exercise recovery by [\[R\]](#), [\[R\]](#):

- Reducing muscle pain and damage
- Reducing oxidative stress and inflammation
- Improving strength recovery

46



Cocoa Extracts

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 500 to 1000 mg of cocoa extract daily, in supplement form, preferably with meals to enhance absorption. This dosage can be adjusted based on the concentration of the active compounds within the extract, and should be continued regularly for at least two to four weeks to observe benefits.

TYPICAL STARTING DOSE

500 mg

Description

Cocoa extracts and cocoa flavanols, derived from cocoa beans, have shown promise in supporting heart health by helping to reduce blood pressure and improve endothelial function, although further research is needed to fully understand their potential benefits.

How it helps

Cocoa flavonol intake may improve blood vessel function, reduce oxidative stress after exercise, and improve exercise recovery. However, the evidence is mixed and more studies are needed to confirm these benefits [\[R\]](#), [\[R\]](#).

47



Bromelain

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 500mg of bromelain supplement two to three times daily, preferably with food to reduce the risk of gastrointestinal discomfort. It is recommended to use for short-term relief, typically not exceeding several months, unless supervised by a healthcare provider.

Description

Bromelain is an enzyme found in pineapple that may have anti-inflammatory and digestive benefits. It's often used as a dietary supplement to aid digestion and reduce swelling associated with injuries or surgery.

[Bromelain](#) is an extract from pineapples. It's rich in enzymes that break down proteins [\[R\]](#).

Bromelain may have some health benefits. People use it to [\[R\]](#):

- Maintain joint health
- Help with burns
- Support heart health

How it helps

Bromelain supplementation was found to reduce markers of muscle damage such as creatine kinase and myoglobin and maintain higher testosterone levels, which can be beneficial for recovery, especially after consecutive days of competitive cycling [\[R\]](#).

48



Mangiferin and Quercetin

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

To implement this recommendation, take a supplement containing mangiferin and quercetin daily. The typical dose is 150-300 mg of mangiferin and 500-1000 mg of quercetin, preferably with meals to enhance absorption. It's advisable to start with the lower dose and adjust based on tolerance and effectiveness. Continue this regimen consistently for at least 4-6 weeks to evaluate its benefits.

TYPICAL STARTING DOSE

150 mg

Description

Mangiferin is a natural compound found in mangoes and several other plants.

Researchers are interested in its potential benefits for blood sugar control, liver health, heart health, and more. However, the available evidence to support its use as a supplement is limited [\[R\]](#).

[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

Contrast water therapy (alternating between cold and hot water) may improve muscle soreness at 6-96 h better than passive recovery according to the analysis of 18 studies. It may offer similar benefits as other recovery methods such as cold water immersion or compression therapy [\[R\]](#).

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

49



L-Ornithine L-Aspartate and BCAAs

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

For adults, take an oral supplement containing L-ornithine L-aspartate in doses of 3 to 6 grams per day, divided into two to three doses, along with branched-chain amino acids (BCAAs) in a dose of approximately 5 to 20 grams per day, also divided into two to three doses. This regimen should be followed daily for a period of time as advised by a healthcare provider, usually several weeks to months, depending on individual health goals and conditions.

TYPICAL STARTING DOSE

3 g

Description

L-ornithine is an amino acid often used to reduce exercise-related fatigue and support muscle recovery. It is also studied for its role in promoting detoxification processes in the body. L-aspartate is an amino acid used in dietary supplements to support liver function, improve exercise performance, as well as playing a role in energy metabolism. BCAAs, including leucine, isoleucine, and valine, are amino acids that support muscle protein synthesis, reduce exercise-induced muscle damage, and may enhance physical performance.

How it helps

In a placebo-controlled trial of 11 endurance-trained men, supplementation with L-ornithine L-aspartate (12 g) plus branched-chain amino acids (16 g) improved multiple-choice reaction time during high-intensity exercise and sped up plasma ammonia elimination during recovery [R].

L-ornithine L-aspartate and BCAAs support faster muscle recovery after workouts by reducing muscle breakdown and aiding in protein synthesis.

50



Purple Sweet Potato

IMPACT

1 / 5

EVIDENCE

1 / 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

In a non-placebo-controlled trial of 15 healthy men, consuming purple sweet potato leaves for 7 days **decreased oxidative damage and IL-6 after performing 1 h of treadmill running** [R].

Purple sweet potatoes are packed with antioxidants. These may aid in exercise recovery by reducing inflammation and oxidative stress caused by intense workouts. The carbohydrates in them replenish glycogen stores, which is energy for muscles.

51



CBD

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a CBD supplement in a dosage ranging from 10 to 40 milligrams per day. Start with the lowest dose and gradually increase it based on your body's response. This can be taken orally in the form of capsules, edibles, or oil drops under the tongue. For ongoing issues, such as anxiety or chronic pain, it may be used daily, while for acute issues, it might be used as needed.

TYPICAL STARTING DOSE

10 mg

Description

CBD is a non-psychoactive compound found in cannabis plants and is used in various forms, including oils and creams. It may have potential benefits for pain relief, anxiety reduction, and overall relaxation, although more research is needed to fully understand its effects.

[Cannabidiol](#) (CBD) is a compound found in cannabis. Unlike its cousin THC, CBD is not psychoactive and can’t get you “high” [\[R\]](#).

People use CBD to:

- Reduce anxiety [\[R, R\]](#)
- Relieve pain [\[R, R, R\]](#)
- Prevent seizures [\[R\]](#)
- Improve sleep [\[R\]](#)

How it helps

CBD supplements may support exercise recovery by reducing inflammation and easing pain, allowing muscles to heal and regenerate more efficiently. They may also reduce anxiety and promote better sleep, leading to optimal exercise recovery.

In a placebo-controlled trial of 16 well-trained participants, drinking 60 mg CBD in 250 mL water after resistance training led to small but significant beneficial effects on muscle damage and recovery of squat performance after 72 h. However, supplementation with CBD (150 mg) after exercise had no beneficial effects on noninvasive markers of muscle damage in the upper extremity in a placebo-controlled trial of 13 untrained men [\[R, R\]](#).

Please note: *CBD can interact with medications and raise the levels of liver enzymes. It may not be safe for pregnant women. Never use CBD without consulting your doctor. Also, make sure to verify the legality of CBD in your country or state* [\[R, R, R, R, R\]](#).

52



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

Boswellia, a plant extract, acts as an anti-inflammatory and painkiller which can help to speed up recovery after exercise by reducing inflammation and pain in your muscles and joints. It supports the body's natural healing processes, making it easier for you to bounce back from strenuous workout sessions.

In a study involving 232 participants with moderate-to-severe exercise-induced musculoskeletal pain, they were randomized to receive either a single 1000 mg dose of TBF (turmeric and boswellia extracts) or a placebo. TBF showed a significant reduction in pain intensity, with a 97.85% improvement in cumulative responder analysis compared to 2.46% in the placebo group. Pain relief onset was rapid, with 99% of TBF group participants experiencing perceptible relief at 68.5 minutes and 96% experiencing meaningful relief at 191.6 minutes, in contrast to the placebo group [\[R\]](#).

53



Cold Showers

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Start your shower with warm water and gradually decrease the temperature until it is cold. Do this for the last 30 seconds to 2 minutes of your shower. Practice this daily for the best results.

TYPICAL STARTING DOSE

30 seconds

Description

Cold showers can help to boost your mood, improve your skin and hair health, and enhance your immune response. They act like a source of natural energy, waking you up and making you feel more alert. By reducing muscle soreness after workouts, they also aid in physical recovery. It's a quick habit that has potential to improve your overall health.

How it helps

A 15-minute, 15°C cold water soak did not reduce body temperature or salivary cortisol after exercise in the heat, but it improved thermal comfort and accelerated heart rate recovery after 30 minutes compared to passive recovery in 9 participants [\[R\]](#).

Among 17 participants, the cooling rate was faster during a cooling strategy (CS) compared to control (CON), with greater heart rate changes and reduced thermal sensation in CS, indicating its effectiveness [\[R\]](#).

However, it may not be effective for muscle soreness/damage when applied pre-exercise [\[R\]](#).

Cold showers after exercise help reduce inflammation and speed up muscle recovery by causing your blood vessels to tighten. This quickens the removal of lactic acid from your muscles, which can reduce soreness and improve your recovery time.

54



D-Ribose

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take 5 grams of D-Ribose powder mixed with water or juice, three times a day. Start with this dosage for at least 3 weeks to help improve energy levels and heart function, then adjust as needed.

TYPICAL STARTING DOSE

15 g

Description

D-ribose is a sugar molecule that plays a role in energy production in cells. It is sometimes used as a supplement to support muscle recovery, reduce fatigue, and improve exercise performance.

[D-ribose](#) is a sugar involved in the production of energy in the body. It is also the structural basis of DNA and RNA [\[R\]](#).

People use it as a supplement to help with heart disease and [chronic fatigue syndrome](#) [\[R, R, R\]](#).

How it helps

D-ribose is a sugar molecule that is involved in the production of ATP, the body's primary energy source. Taking D-ribose can potentially help improve cellular energy production, which in turn may support faster recovery following intense exercise sessions.

In a placebo-controlled trial of 21 untrained male college students, supplementation with D-ribose (15 g) after a lower-limb plyometric exercise session reduced muscle soreness, improved recovery of muscle damage, and inhibited the formation of lipid peroxides. In another placebo-controlled trial (26 healthy subjects) supplementation with D-ribose (10 g/day) for 5 days maintained exercise performance while reducing rates of perceived exertion and serum creatine kinase levels in participants with low VO2max but not in those with high VO2max [\[R, R\]](#).

However, D-ribose (3-16 g/day) had no effects on exercise recovery or metabolic markers of muscle damage in 4 placebo-controlled trials of 81 participants [\[R, R, R, R\]](#).

Please note: *The long-term safety of D-ribose in daily doses above 36 mg/kg (2.5 g for a 70-kg person) is not unknown. Consult your doctor before supplementing* [\[R\]](#).

55



Whole-Body Cryotherapy

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Participate in whole-body cryotherapy sessions by entering a cryotherapy chamber for 2-3 minutes, where temperatures drop to between -100°C to -140°C (-148°F to -220°F). These sessions should be performed 2-3 times a week for optimal benefits.

TYPICAL STARTING DOSE

2 minutes

Description

Whole-body cryotherapy involves brief exposure to extreme cold temperatures in a controlled chamber. It is used to reduce inflammation, alleviate muscle soreness, and promote recovery in athletes and individuals seeking pain relief.

How it helps

Four trials in physically active young adults found very low-quality evidence regarding whole-body cryotherapy. It seemed to reduce muscle soreness at 1 hour post-exercise but yielded inconclusive results at 24, 48, and 72 hours. One small trial suggested less soreness than infrared therapy at 1 hour but no difference at 24 or 48 hours [\[R\]](#).

Another study found that cold water immersion significantly reduced delayed-onset muscle soreness and ratings of perceived exertion symptoms after 24 hours but had no impact on objective recovery variables during a 96-hour recovery period [\[R\]](#).

In a crossover study of 24 subjects, cycling followed by recovery in ice-cold water reduced blood plasma lipid peroxidation 40 minutes post-exercise compared to room temperature recovery and to baseline [\[R\]](#).

However, other studies found cryotherapy ineffective and another one found that low-level laser therapy may be a more effective option for muscle recovery [\[R\]](#), [\[R\]](#), [\[R\]](#).

Whole-body cryotherapy may help by reducing inflammation and promoting blood flow. It speeds up muscle repair and reduces pain and swelling, enhancing overall body function post-exercise.

Please note: *Rapid cold exposure can cause life-threatening changes to your breathing and heart rate. This is called the cold-shock response. Be cautious of any form of sudden temperature change to your environment, especially if you have heart disease or other health conditions* [\[R\]](#).

56



Ashwagandha

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

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

TYPICAL STARTING DOSE

120 mg

Description

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

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

How it helps

In a placebo-controlled trial of 50 healthy athletic adults, supplementation with ashwagandha (300 mg, 2x/day) for 8 weeks improved exercise fatigue recovery and VO2 max [\[R\]](#).

In a placebo-controlled trial of 57 young men, supplementation with ashwagandha (300 mg, 2x/day) for 8 weeks reduced exercise-induced muscle damage as indicated by the stabilization of serum creatine kinase (by 157 U/L) [\[R\]](#).

In a placebo-controlled trial of 38 recreationally active men, supplementation with ashwagandha (500 mg/day) for 12 weeks improved perceived recovery scores [\[R\]](#).

Ashwagandha may help by reducing inflammation and muscle damage, crucial for recovery. The herb's stress-lowering properties can also enhance the body's capacity to adapt to exercise-induced physical strain.

57



Olive Polyphenols

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take olive polyphenol supplements with a meal, ideally containing fats to enhance absorption. Dosages typically range from 250 to 1000 mg daily, based on the product's concentration and purity. It is advised to follow the specific dosage recommended on the supplement's label or by a healthcare professional. For ongoing benefit, incorporate it into your daily routine.

TYPICAL STARTING DOSE

250 mg

Description

Olive polyphenols are plant compounds found in olives and olive products. They have been associated with a reduced risk of chronic diseases, including heart disease, by supporting healthy blood vessels and reducing oxidative stress.

How it helps

Olive polyphenols may help by reducing inflammation and oxidative stress, two factors that contribute to muscle soreness and fatigue. They may also enhance the body's immune response to aid in faster tissue repair post-exercise.

In a placebo-controlled trial of 29 recreationally active participants, supplementation with an olive fruit water phytocomplex (28 mL, 2x/day) for 16 days improved endurance performance and acute recovery while reducing exercise-induced oxidative stress [\[R\]](#), [\[R\]](#).

The study examined the effects of OliPhenolia® supplementation, rich in hydroxytyrosol, on exercise performance and recovery in 29 recreationally active individuals over 16 days. OliPhenolia® may enhance aerobic exercise performance and acute recovery due to its phenolic compounds, including hydroxytyrosol [\[R\]](#).

The study evaluated the bioavailability of hydroxytyrosol (HT) from OliPhenolia® in 15 healthy volunteers and its short-term impact on oxidative stress markers in 29 recreationally active participants. OliPhenolia® consumption reduced exercise-induced oxidative stress [\[R\]](#).

58



Colostrum

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take colostrum supplements orally, typically 20 to 60 grams daily, split into two to three doses. It is recommended to start with a lower dose and gradually increase as needed. This supplement can be taken for varying durations, from a few weeks to several months, depending on the health goals and responses observed.

TYPICAL STARTING DOSE

20 g

Description

Colostrum is the first milk produced by mammals, including humans, after giving birth. It is rich in nutrients and antibodies and is believed to support newborns' immune systems and overall health.

Colostrum, or “first milk,” is the very first type of milk produced right after a mammal gives birth. It supports the newborn’s immune system and provides a rich source of nutrients and growth factors [R].

People take colostrum to boost immunity and exercise performance [R].

How it helps

Colostrum, often called "first milk," aids in exercise recovery by reducing inflammation caused by intense activity and enhancing muscle repair thanks to its growth factors. It also supports immune function, helping to protect your body against post-exercise infections and illnesses.

In a study of 30 physically active males, those who consumed 60 g/day of intact powder during 8 weeks of running training did not show increased plasma IGF-I levels or improved performance in an initial running test. However, a 5.2% improvement in performance during a second bout of exercise after supplementation suggests potential recovery enhancement [R].

In a double-blind, randomized, placebo-controlled study, soccer players who received 3.2 g/day of whey protein (WP) or bovine colostrum (BC) showed potential benefits. BC administration post-exercise may reduce muscle injury and better maintain performance after LIST (low-intensity steady-state training) in soccer players [R].

59



Tribulus

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 250-1500 mg of Tribulus terrestris extract daily, divided into one to three doses, with meals. Start with the lower dose to assess tolerance and gradually increase as needed. This regimen can be followed for up to 90 days, after which a break or reassessment is recommended.

TYPICAL STARTING DOSE

250 mg

Description

Tribulus is an herb commonly used in traditional medicine for its potential to enhance athletic performance and libido. It is believed to contain active compounds like protodioscin, which may contribute to its aphrodisiac and adaptogenic effects.

[Tribulus](#) (*Tribulus terrestris*) grows in parts of Europe, Asia, and Africa. It’s been used in traditional Chinese and Indian medicine for centuries [\[R\]](#), [\[R\]](#).

Today, people use tribulus to potentially help with [\[R\]](#), [\[R\]](#):

- High blood pressure
- Sexual dysfunction and infertility

How it helps

Taking Tribulus as a supplement may support exercise recovery by potentially improving muscle strength and performance. However, research on its direct effects on exercise recovery remains limited and inconclusive.

In [2 placebo-controlled trials of 60 CrossFit-trained men](#), supplementation with Tribulus (770 mg/day) for 6 weeks **failed to improve exercise performance or body composition but improved exercise recovery and testosterone levels while decreasing exercise-induced oxidative stress, muscle damage, and inflammation** [\[R\]](#), [\[R\]](#).

In a [placebo-controlled trial of 18 healthy non-athlete men](#), supplementation with Tribulus (500 mg/day) **reduced the muscle damage enzymes CPK and LDH following high-intensity circuit resistance exercise** [\[R\]](#).

60



Melon

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate 1-2 cups of fresh melon, such as cantaloupe or watermelon, into your daily diet. This can be consumed as part of a meal, snack, or a refreshing smoothie.

Description

Melon is a hydrating and nutrient-rich fruit that provides essential vitamins, minerals, and antioxidants. Its consumption can promote skin health, aid in digestion, and support overall hydration and well-being.

How it helps

Melons are rich in water and essential nutrients like potassium that help replenish body fluids and electrolytes lost during exercise, promoting faster recovery. The fruit also contains natural sugars which can replenish energy stores and reduce fatigue post-workout.

In a randomized, double-blind, placebo-controlled trial with 38 healthy subjects, melon concentrate and regular standardized physical training **decreased oxidative stress and CRP** plasma levels. It also **increased magnesium plasma levels**. The melon concentrate may allow a better adaptation to effort linked to PGC-1α activation: a regulator of energy metabolism. Its antioxidant properties and ability to mobilize magnesium may induce a better resistance to fatigue and recovery during regular physical activity [\[R\]](#).

Please note: Melon allergy is rare. However, *some people may have an allergic reaction after eating melon, especially if they suffer from allergic rhinitis and/or asthma* [\[R\]](#).

61



Coconut Water

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Drink fresh coconut water twice a day, each serving being approximately 8-10 ounces, for hydration and electrolyte replenishment. This practice can be especially beneficial during periods of high heat or after physical activities. Continue as long as hydration is a concern or for general wellness.

Description

Coconut water is a natural electrolyte-rich beverage that can help with hydration and replenishing essential minerals, making it a good choice for staying hydrated, especially after exercise.

How it helps

Coconut water has high electrolyte content-- like potassium and sodium-- which are necessary for proper muscle function and hydration after exercise. It can replace fluids lost through sweat, and help in faster recovery post-workout.

After exercise, eight male volunteers drank different fluids to rehydrate. Coconut water (CW) and coconut water with added electrolytes (CEB) resulted in higher plasma glucose levels than plain water (PW). CW was sweeter, caused less discomfort, and was easier to consume, suggesting it may be suitable for rehydration after exercise [\[R\]](#).

62



Pycnogenol

IMPACT1 / 5

EVIDENCE1 / 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

Pycnogenol provides potent antioxidants that can lessen muscle damage and soreness following intense exercise, promoting quicker recovery. It also promotes better blood circulation, thus helping to supply the nutrients required for muscle repair faster.

In a study of 20 healthy men, supplementation with pine bark extract (800 mg/day) for 14 days before exercise and 2 days post-exercise reduced oxidative stress postexercise [\[R\]](#).

In a study of 145 volunteers, supplementation with pycnogenol (100 mg/day for 8 weeks) during a training program decreased oxidative stress. In another placebo-controlled trial of 54 athletes training for a triathlon from the same study, supplementation with pycnogenol (150 mg/day for 4 weeks) decreased post-triathlon cramps, pain, and oxidative stress, while speeding up recovery [\[R\]](#).

63



Alpha-Lipoic Acid

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

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

TYPICAL STARTING DOSE

100 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 (ALA) helps with exercise recovery by reducing inflammation and oxidative stress that occur during intense exercise. It also improves immune function, promoting faster recovery and readiness for the next exercise session.

In a study with 13 trained and 20 untrained men, alpha-lipoic acid (ALA) supplementation (600 mg/day for 8 days) reduced oxidative damage. ALA didn't eliminate differences in the glutathione antioxidant system but influenced the response to muscle-damaging exercise in trained individuals [\[R\]](#).

In a double-blind, randomized, controlled crossover trial with 17 male athletes, alpha-lipoic acid (ALA) showed a moderate reduction in muscle damage and inflammation during a high-intensity training week. ALA preserved back squat performance, but no significant antioxidant effects were observed [\[R\]](#).

64



Pomegranate Juice

IMPACT

1 / 5

EVIDENCE

1 / 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

Drinking pomegranate juice (250 mL, 2-3x/day) may help with exercise recovery. It may [\[R, R, R, R\]](#):

- Reduce muscle soreness, weakness, and damage after resistance training
- Enhance recovery from high-intensity workouts
- Fight exercise-induced oxidative stress

However, the evidence is mixed and of low quality [\[R, R\]](#).

65



Almonds

IMPACT

1 / 5

EVIDENCE

1 / 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

Almond supplementation, compared to a calorie-matched common snack like cereal bars, has been shown to significantly lower serum muscle damage biomarkers such as creatine kinase and myoglobin immediately after exercise and during the recovery phase. This suggests that almonds might help in reducing muscle damage and improving recovery times after strenuous exercise [\[R\]](#).

The antioxidant properties of almonds have been shown to ameliorate oxidative stress and inflammation markers post-exercise. This can be crucial in quicker recovery and improved performance over time [\[R\]](#).

66



Yoga

IMPACT

1 / 5

EVIDENCE

1 / 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 helps improve flexibility, balance, and strength, which are crucial for recovery after physical exertion. A study found that yoga was as effective as stretching and strengthening exercises in improving these physical fitness outcomes, suggesting that yoga can be a valuable part of an exercise recovery regimen [\[R\]](#).

67



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 14 trained male athletes, supplementation with rhodiola for 4 weeks reduced blood lactate and plasma creatine kinase levels after a cardio-pulmonary exhaustion test [\[R\]](#).

68



Eggs

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate eggs into your diet 3-4 times a week, preferably for breakfast or as part of a balanced meal. They can be boiled, scrambled, or made into omelets, ensuring they are cooked thoroughly.

Description

Eggs are a nutrient-dense food rich in protein, vitamins, and minerals. They support various aspects of health, including muscle development, brain function, and eye health.

Eggs are great nutrition sources, with protein, healthy fats, arachidonic acid, and numerous vitamins and minerals.

How it helps

The consumption of whole eggs after resistance exercise has been found to promote greater stimulation of muscle protein synthesis than the consumption of isonitrogenous amounts of egg whites. This enhanced response is attributed to the nutrient-dense matrix of whole eggs, which may interact synergistically to support muscle recovery and growth [\[R\]](#).

69



Leucine-Enriched Essential Amino Acids

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a supplement containing leucine-enriched essential amino acids daily, aiming for a dose between 2 to 3 grams of leucine per serving. It is best taken immediately after exercise to optimize muscle recovery and growth.

TYPICAL STARTING DOSE

2 g

Description

Leucine-enriched amino acids are dietary supplements or formulations that contain a higher concentration of the essential amino acid leucine compared to other amino acids. Leucine is one of the nine essential amino acids, meaning that the body cannot produce it on its own and must obtain it through the diet.

How it helps

In a randomized, double-blind, placebo-controlled, parallel-group design, twenty recreationally active males consuming a controlled diet were supplemented thrice daily with 4 g of leucine-enriched essential amino acids (LEAAs, containing 1.6 g leucine) or isocaloric placebo for four days following an acute bout of lower-body resistance exercise (RE). LEAAs moderately attenuated muscle damage [\[R\]](#).

Essential amino acids may help by aiding in repairing muscle tissue damage incurred during intensive workouts. They also stimulate protein synthesis, which can promote muscle growth and alleviate fatigue.

70



Progressive Muscle Relaxation

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Set aside at least 10-15 minutes daily in a quiet, comfortable spot where you won't be disturbed. Start by tensing the muscles in your feet for 5 seconds, then relax for 30 seconds, and progressively work your way up through the major muscle groups of your body, tensing then relaxing each for 5 and 30 seconds respectively.

TYPICAL STARTING DOSE

10 minutes

Description

Progressive Muscle Relaxation is a relaxation technique involving the systematic tensing and releasing of muscle groups to reduce muscle tension, stress, and anxiety. Regular practice can lead to improved physical and mental relaxation.

Progressive muscle relaxation is a relaxation technique focused on releasing muscle tension. In this technique, you focus on tensing and relaxing different parts of your body, one after the other, to relieve stress [R](#), [R](#)].

It is common to start with the toes and slowly work your way up to the neck and head. Try to focus on a single muscle group at a time (for example, the calf muscles). Tense these muscles for 5-10 seconds, then relax for 20-30 seconds before moving on to the next muscle group [R](#), [R](#)].

How it helps

Progressive muscle relaxation helps with exercise recovery by reducing muscle tension and promoting relaxation, which can speed up recovery after a workout. These exercises also improve blood circulation to the muscles which aids in the elimination of lactic acid, a substance responsible for muscle soreness post exercise.

In a non-placebo-controlled trial of 26 soccer players, progressive muscle relaxation (12 sessions of 7 and 16 muscle groups) reduced heart rate, and perceived exertion while improving reaction time [R](#)].

71



Ashwagandha Sensoril

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 125 to 250 mg of ashwagandha Sensoril, in capsule form, once or twice daily. It is best taken with meals or a glass of water to improve absorption. Continue for at least one month to observe effects on stress and anxiety reduction.

TYPICAL STARTING DOSE

125 mg

Description

Sensoril is a specific standardized extract of the herb ashwagandha. It is used as a dietary supplement and is associated with potential benefits for stress reduction, mood improvement, and overall vitality.

How it helps

In a placebo-controlled trial of 38 recreationally active men, supplementation with ashwagandha Sensoril (500 mg/day) for 12 weeks increased perceived recovery scores [R].

Ashwagandha Sensoril may help by reducing the level of cortisol. This reduced stress response can help your body recover faster from exertion, decrease muscle soreness, and improve endurance for your next workout.

72



Flexibility Training

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate flexibility training exercises, such as yoga or static stretching, into your routine for at least 20-30 minutes a day, three to five times a week. Focus on stretching all major muscle groups, holding each stretch for 10-30 seconds without bouncing, and breathing deeply to maximize benefits.

TYPICAL STARTING DOSE

20 minutes

Description

Flexibility training, such as yoga and stretching exercises, can improve joint range of motion, reduce the risk of injury, and promote better posture. Incorporating flexibility exercises into a fitness routine supports physical comfort and overall mobility.

How it helps

In a non-placebo-controlled trial of 25 healthy volunteers, performing flexibility training (30 min/day, 3x/week) for 4 weeks reduced soreness at 48 h after eccentric training (by 47% after the 1st bout and by 10% after the 4th bout), and isometric strength loss (by 9%). It was more effective than a single session of eccentric exercise [R].

Flexibility training may help by releasing muscle tension, improving circulation, and increasing your joint range of motion.

73



Hydrogen Water

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Drink 1.5 to 2 liters of hydrogen-rich water daily, spread out over the course of the day. It is best to start with a lower volume and gradually increase it to allow your body to adjust. This practice should be continued daily as a part of your lifestyle to maintain its potential benefits.

Description

Drinking hydrogen-rich water is believed to have antioxidant properties and may help combat oxidative stress in the body. Some studies suggest it could potentially support overall health and well-being.

How it helps

Hydrogen-rich water helps expedite exercise recovery by reducing inflammation and muscle fatigue caused by intense physical activity. It acts as an antioxidant, neutralizing harmful free radicals and thereby enhancing your body's ability to recover.

In a placebo-controlled trial of 12 healthy men, drinking hydrogen-rich water (1260 mL) before resistance training improved muscle function reduced the lactate response, and alleviated delayed-onset muscle soreness. In another trial (12 healthy men), drinking hydrogen-rich water (600 mL) 30 min before a 10 min warm-up lowered blood lactate (by 1.1 mmol/L) and ventilatory equivalents for oxygen and RPE (by 2.7 and 0.7 points, respectively). However, neither lactate concentrations nor ratings of perceived exertion were significantly different after pre-exercise supplementation with hydrogen-rich water in a placebo-controlled trial of 16 male soccer players [\[R\]](#), [\[R\]](#), [\[R\]](#).

74



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

Avocados can aid in exercise recovery by replenishing essential nutrients and reducing inflammation. They're high in potassium and magnesium, which help prevent muscle cramping, as well as healthy fats and antioxidants, which can reduce inflammation and speed up recovery time.

In a [placebo-controlled trial of 16 healthy women](#), supplementation with avocado pulp (600 mg) before running on a treadmill at a submaximal level **sped up the recovery of HR, systolic blood pressure, HRV, and skin conductance** [\[R\]](#).

75



Mangiferin

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a mangiferin supplement of approximately 150-300 mg daily, ideally with a meal to enhance absorption. The duration of use depends on the specific health concern being addressed and recommendations from a healthcare provider.

TYPICAL STARTING DOSE

150 mg

Description

Mangiferin, a natural compound found in mangoes and other plants, is known for its antioxidant and anti-inflammatory properties. It has the potential to protect cells from oxidative stress and inflammation, promoting overall well-being.

Mangiferin is a natural compound found in mangoes and several other plants.

Researchers are interested in its potential benefits for blood sugar control, liver health, heart health, and more. However, the available evidence to support its use as a supplement is limited [\[R\]](#).

How it helps

The combination of quercetin (140 mg) and mangiferin taken 1 hour before a 10-km running competition and every 8 h thereafter for 24 h reduced muscle pain and damage and accelerated the recovery of muscle performance in a study of 57 participants [\[R\]](#).

76



Ginger

IMPACT

1 / 5

EVIDENCE

1 / 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

Consuming ginger root (1.5-4 g/day for 5 days) may **reduce muscle soreness and improve strength recovery**. However, it **may not improve muscle damage** [\[R\]](#), [\[R\]](#).

77



Pomegranate Extract

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 250 to 500 mg of pomegranate extract once daily, preferably with a meal to enhance absorption. This should be continued consistently for at least 4 weeks to observe potential health benefits.

TYPICAL STARTING DOSE
250 mg

Description

Pomegranate extract is derived from the fruit of the pomegranate tree, a plant that has been used traditionally for thousands of years, from the Mediterranean to Asia. Pomegranate extract is often used today in supplements due to its high levels of antioxidants like punicalagins and anthocyanins, which may support heart health and reduce inflammation.

[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

Supplementation with pomegranate extract (750-1300 mg/day for 9-15 days) may [\[R, R\]](#):

- Boost exercise performance
- Support muscle recovery

78



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

Methylsulfonylmethane (MSM) is potentially beneficial for muscle damage and exercise recovery through several mechanisms. Its anti-inflammatory properties may reduce inflammation resulting from intense physical activity, aiding in muscle recovery and reducing pain and stiffness.

MSM's antioxidant effects can neutralize exercise-induced free radicals, thus reducing oxidative stress and muscle damage. It has been shown to alleviate muscle pain and soreness post-exercise, which can help maintain a consistent exercise routine.

MSM may support immune function, which is important during heavy training periods when the immune system can be suppressed. It is thought to boost glutathione levels, a crucial antioxidant for reducing oxidative stress and aiding in cellular repair and recovery post-exercise.

In a double-blind, placebo-controlled study, participants were divided into two groups: MSM (M) (N=9) and placebo (P) (N=9). They consumed either a placebo (200 mL water) or an MSM supplement (50 mg/kg MSM in 200 mL water) daily for 10 days. The results suggest that 10-day MSM supplementation may reduce muscle damage by enhancing antioxidant capacity [R](#).

MSM supplementation was not associated with a decrease from pre-training levels of oxidative stress or muscle damage associated with an acute bout of exercise. MSM supplementation attenuated post-exercise muscle and joint pain at clinically, but not statistically significant levels [R](#).

A study in 18 men showed that taking 50 mg of MSM powder per kg of body weight for 10 days significantly reduced exercise-induced muscle damage and increased antioxidant activity following an 8.7 mile (14 km) run [R](#).

In one study, 22 healthy women received 3 grams of MSM or a placebo per day for three weeks leading up to a half marathon. The MSM group reported less muscle soreness and joint pain than the placebo group [R](#).

Another study found that athletic men taking 3 grams of MSM daily for two weeks had lower levels of IL-6 and less muscle pain after intense resistance exercise [R](#).

79



Flotation

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate a flotation therapy session into your schedule 1-2 times per week, each session lasting for about an hour. Find a local spa or facility that offers sensory deprivation tanks or flotation tanks, and book your sessions in advance to ensure availability.

TYPICAL STARTING DOSE

1 hour

Description

Flotation therapy, involving relaxation in a sensory deprivation tank filled with buoyant saltwater, is believed to reduce stress, ease muscle tension, and promote mental relaxation. It can provide a calming and rejuvenating experience, potentially benefiting mental and physical well-being.

How it helps

In a non-placebo-controlled trial of 24 untrained men, completing a 1-hour flotation REST session before isometric muscle strength testing reduced perceived pain and blood lactate levels after the exercise [\[R\]](#).

Flotation therapy may help by relieving muscle tension and reducing lactic acid build-up in the body.

80



Saffron

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

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

TYPICAL STARTING DOSE

20 mg

Description

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

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

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

- Gut conditions
- Heart health
- Mental health

How it helps

Saffron contains antioxidants that can reduce oxidative stress and inflammation, which are the usual outcomes of intense workouts. These properties can speed up recovery from exercise, ease muscle pain and repair muscle tissue damage.

In a study with nonactive male university students, 10-day saffron supplementation (300 mg/day) significantly reduced creatine kinase (CK) and lactate dehydrogenase (LDH) levels. Saffron prevented a decline in muscle forces and pain after eccentric exercise, suggesting a preventive effect on delayed-onset muscle soreness (DOMS) [\[R\]](#).

81



Omega-3 (Fish Oil)

IMPACT1 / 5

EVIDENCE1 / 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 study on professional rugby players found that omega-3 fatty acid supplementation combined with a protein-based supplement reduced muscle soreness and better maintained explosive power during pre-season training [\[R\]](#).

82



Sensory Deprivation

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Engage in sensory deprivation by spending 20 to 40 minutes in a quiet, dark room, free from distractions such as your phone or background noise, at least once a week. Alternatively, for a more immersive experience, consider using a sensory deprivation tank once a month, where you float in saltwater in a dark, soundproof tank.

TYPICAL STARTING DOSE

40 minutes

Description

Sensory deprivation involves isolating an individual from sensory input to induce deep relaxation and altered states of consciousness. It is used for relaxation, meditation, and potential mental health benefits.

How it helps

In a non-placebo-controlled trial of 24 untrained men, completing a 1-hour flotation REST session before isometric muscle strength testing reduced perceived pain and blood lactate levels after the exercise [R].

Sensory deprivation may help by providing deep relaxation, reducing stress hormones, and promoting relief from muscle aches. It can also improve sleep quality, further enhancing recovery and performance.

83



Streptococcus Thermophilus & Bifidobacterium Breve

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Consume a probiotic supplement containing Streptococcus thermophilus and Bifidobacterium breve once daily, preferably in the morning on an empty stomach or as directed by the product label. Continue this routine daily for at least one month to assess improvements.

TYPICAL STARTING DOSE

10 billion CFU

Description

Streptococcus thermophilus is a probiotic bacterium used in the fermentation of dairy products like yogurt. It contributes to improved gut health by aiding in the digestion of lactose and promoting the growth of beneficial gut bacteria. Bifidobacterium breve is another probiotic strain that can contribute to digestive health and support a balanced gut microbiome. People use *B. breve* as a supplement to improve skin health and combat allergies and infection.

How it helps

A study found that *Streptococcus thermophilus* FP4 and *Bifidobacterium breve* BR03 attenuated performance decrements and muscle tension in the days following muscle-damaging exercise, reducing inflammation, and likely enhancing isometric peak torque production during the recovery period. Additionally, they reduced muscle stiffness and soreness [R].

84



Date Seeds

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Grind dried date seeds into a fine powder and take half to one teaspoon of this powder mixed with water or added to your smoothie once daily. Continue this practice daily for at least a month to evaluate its benefits.

Description

Date seeds, often discarded, contain potential health benefits, including antioxidants and fiber. They can be ground into a powder and used in various culinary applications or herbal remedies.

How it helps

Date seed supplements are rich in antioxidants and dietary fiber, which help to reduce inflammation and ease digestion, enhancing your body's recovery after exercise. Additionally, they promote muscle relaxation and sleep, indispensable for good recovery.

Thirty-six recreational runners were randomly assigned to consume 26 g/day of DSP or wheat bran powder during HIIT workouts for 14 days. During the 2 weeks of the HIIT protocol, the consumption of date seed powder by participants who had engaged in moderate or high physical activity alleviated inflammation and muscle damage [\[R\]](#).

85



Collagen Peptides

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 10-20 grams of collagen peptides daily, mixing the powder into a glass of water, juice, or a smoothie. It is recommended to consume this supplement on an empty stomach to improve absorption, ideally first thing in the morning or right before bedtime for a period of at least 8-12 weeks to observe beneficial effects.

TYPICAL STARTING DOSE

10 g

Description

Collagen peptides are a form of collagen that is broken down into smaller, more easily absorbed molecules. They are commonly used in supplements and skincare products for their potential to promote skin elasticity, hair strength, and nail health.

[Collagen](#) is a protein that helps build skin, bones, and joints [\[R\]](#), [\[R\]](#).

People use collagen supplements for [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Joint pain
- Skin health
- Hair growth

How it helps

Collagen peptides supplement recommendation supports exercise recovery by helping in the repair and regeneration of muscles and connective tissues damaged during workout. They also foster collagen production which improves skin health and elasticity that can diminish with excessive physical strain.

In resistance-trained males, taking 15g/day of CP (collagen peptides) after exercise led to better maintenance of jump height 24 hours post-exercise compared to the placebo group. CP didn't significantly affect muscle soreness or collagen biomarkers [\[R\]](#).

86

Music Therapy

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

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

TYPICAL STARTING DOSE
30 minutes

Description

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

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

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

How it helps

In a non-placebo-controlled trial of 30 healthy male college students, listening to relaxing music after exercising on a cycle ergometer until exhaustion reduced ratings of perceived exertion [\[R\]](#).

Music therapy can enhance mood and reduce stress, ultimately improving the healing process. The calming effects of music can also help ease muscle tension, promoting quicker recovery.

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Magnesium

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take up to 350 mg of magnesium daily as a supplement, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

350 mg

Description

Magnesium is an essential mineral involved in various bodily functions, including muscle contractions, nerve signaling, and bone health. Maintaining adequate magnesium levels through diet or supplements can support overall well-being and reduce the risk of magnesium deficiency-related health issues.

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

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

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

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

How it helps

Magnesium supplementation may enhance glucose availability in the brain, muscles, and blood, reduce lactate accumulation in muscles, and improve exercise performance, especially in activities that require endurance and strength [\[R\]](#).

Studies indicate that magnesium supplementation may reduce muscle soreness and inflammation post-exercise, which may facilitate quicker recovery. It may also help maintain higher post-exercise glucose levels, which is beneficial for recovery [\[R\]](#).

However, not all studies agree on the performance-enhancement benefits of magnesium. Some research suggests that the effects might be more pronounced in populations with low magnesium status, rather than well-nourished athletes [\[R\]](#).

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Garlic Supplement

IMPACT1 / 5

EVIDENCE1 / 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 extract (1000 mg/day for 4 weeks) may support exercise recovery by reducing [\[R, R\]](#):

- Oxidative stress and inflammation
- Muscle soreness and damage

Please note: *Garlic can interact with blood thinners (such as aspirin, Plavix, and Coumadin). In addition, garlic can irritate the stomach in some people. Talk to your doctor before taking garlic extract [\[R, R\]](#).*

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Glutamine

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 5 to 10 grams of glutamine powder, mixed with water or another beverage, daily. It can be divided into two servings, one in the morning and the other in the evening. This supplementation is generally considered safe for long-term use, but it's best to consult with a healthcare provider for personalized advice.

TYPICAL STARTING DOSE

5 g

Description

Glutamine is an amino acid that plays a role in various bodily functions, including immune support and gut health. It may help with muscle recovery and overall well-being, particularly for individuals engaging in strenuous exercise.

L-glutamine is an amino acid produced by the body. Its levels may decrease during periods of stress or illness. It is important for protein and energy production, and helps control kidney pH balance [\[R\]](#).

Some people take L-glutamine as a supplement to help with [\[R\]](#):

- Gut health
- Immunity
- Exercise recovery and muscle performance
- Brain health

How it helps

According to a single study, L-glutamine supplementation (0.3 g/kg/day for 3 days) may support muscle recovery after exercise. It may help by providing muscles with energy [\[R\]](#).

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Lactobacillus Plantarum

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a probiotic supplement containing *Lactobacillus plantarum* 299V daily. The typical dosage is 10 billion colony-forming units (CFUs). Continue for at least 4 weeks to assess benefits on digestive health.

TYPICAL STARTING DOSE
10 billion CFU

Description

Lactobacillus plantarum is a [probiotic](#) bacterium found in many fermented plant products such as sauerkraut, pickles, brined olives, and Korean kimchi [\[R\]](#).

People take *L. plantarum* supplements to improve [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Diarrhea
- Skin appearance
- IBD
- High cholesterol

How it helps

In a [placebo-controlled trial of 8 recreational runners](#), supplementation with L. plantarum PS128 (6 × 10¹⁰ CFU/day) for 4 weeks **reduced muscle damage (myoglobin, creatine phosphokinase) and kidney damage (BUN) markers while increasing SOD after a half-marathon** [\[R\]](#).

Boswellia And Curcumin

1 / 5

0 / 5

Take a supplement that combines boswellia and curcumin, consuming between 300 to 500 mg of each ingredient, twice daily with meals. Continue this regimen for at least 8 to 12 weeks to evaluate its effectiveness.

600 mg

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. Curcumin is a compound found in turmeric with well-documented anti-inflammatory and antioxidant properties.

Boswellia and curcumin supplements have anti-inflammatory properties that can help alleviate muscle soreness and enhance recovery after exercise. These substances can help reduce inflammation and speed up muscle recovery by inhibiting certain enzymes and molecules known to promote inflammation.

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].

Hydroxytyrosol

0 / 5

0 / 5

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.

5 mg

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.

A study investigating the chronic effects of supplementation with a hydroxytyrosol-rich, olive-derived phytocomplex demonstrated modest improvements in acute recovery based on respiratory markers and reduced time to achieve 50% of the end-of-exercise oxygen consumption values. Participants also reported reduced perceived exertion during exercise, suggesting an enhancement in aerobic exercise capacity and recovery efficiency [R].

In a placebo-controlled trial of 29 recreationally active participants, supplementation with an olive fruit water phytocomplex (28 mL, 2x/day) for 16 days improved endurance performance and acute recovery while reducing exercise-induced oxidative stress [R, R].

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Streptococcus Thermophilus

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take a supplement containing Streptococcus thermophilus according to the product's label, typically once or twice daily with a glass of water. It is commonly found in probiotic supplements and the exact dosage can vary, so following the manufacturer's guidelines is essential. Continue use as part of your daily routine or as directed by a health professional.

TYPICAL STARTING DOSE
10 billion CFU

Description

Streptococcus thermophilus is a probiotic bacterium used in the fermentation of dairy products like yogurt. It contributes to improved gut health by aiding in the digestion of lactose and promoting the growth of beneficial gut bacteria.

How it helps

A study found that *Streptococcus thermophilus* FP4 and *Bifidobacterium breve* BR03 attenuated performance decrements and muscle tension in the days following muscle-damaging exercise, reducing inflammation, and likely enhancing isometric peak torque production during the recovery period. Additionally, they reduced muscle stiffness and soreness [R].

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Bifidobacterium Breve

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take a Bifidobacterium breve supplement according to the product's specific instructions, usually 1-2 capsules daily with water, ideally before meals for better absorption. This regimen should be followed for at least 2-4 weeks to start observing benefits.

TYPICAL STARTING DOSE
10 billion CFU

Description

Bifidobacterium breve is another probiotic strain that can contribute to digestive health and support a balanced gut microbiome. People use *B. breve* as a supplement to improve skin health and combat allergies and infection.

[Bifidobacterium breve](#) is a probiotic species found in human breast milk and the gastrointestinal tracts of infant and adult humans. As an individual ages, the total population of B. breve within their gut decreases [R].

People use *B. breve* as a supplement to improve skin health and combat allergies and infections [R, R, R].

How it helps

A study found that Streptococcus thermophilus FP4 and Bifidobacterium breve BR03 attenuated performance decrements and muscle tension in the days following muscle-damaging exercise, reducing inflammation, and likely enhancing isometric peak torque production during the recovery period. Additionally, it reduced muscle stiffness and soreness [R].

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.

	ALT	26 IU/L		9 Nov 2025
	AST	17 IU/L		9 Nov 2025
	DHEA Sulfate	303 mcg/dL		9 Nov 2025
	Zinc	17.12 umol/L		9 Nov 2025
	Vitamin D, 25-Hydroxy, Total	58.59 ng/mL		9 Nov 2025
	Homocysteine	12.84 umol/L		9 Nov 2025
	Creatine Kinase	173 IU/L		9 Nov 2025
	hs-CRP	1.6 mg/L		9 Nov 2025