

# Carpal Tunnel Syndrome

DNA Health Report

REPORT CATEGORIES —



JOINT & TENDON  
HEALTH



INJURIES



NERVE HEALTH

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

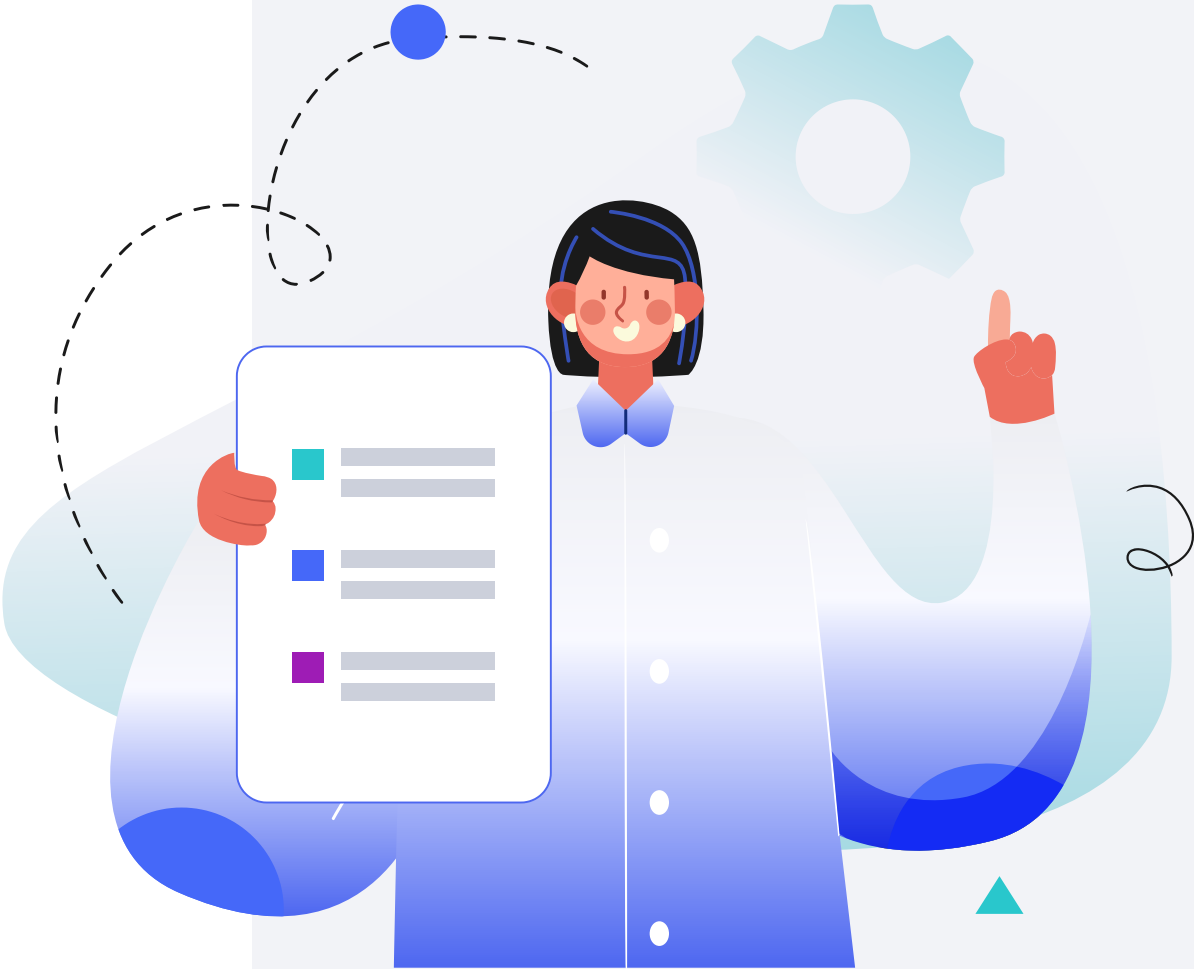
Male

HEIGHT

5ft 5" 165cm

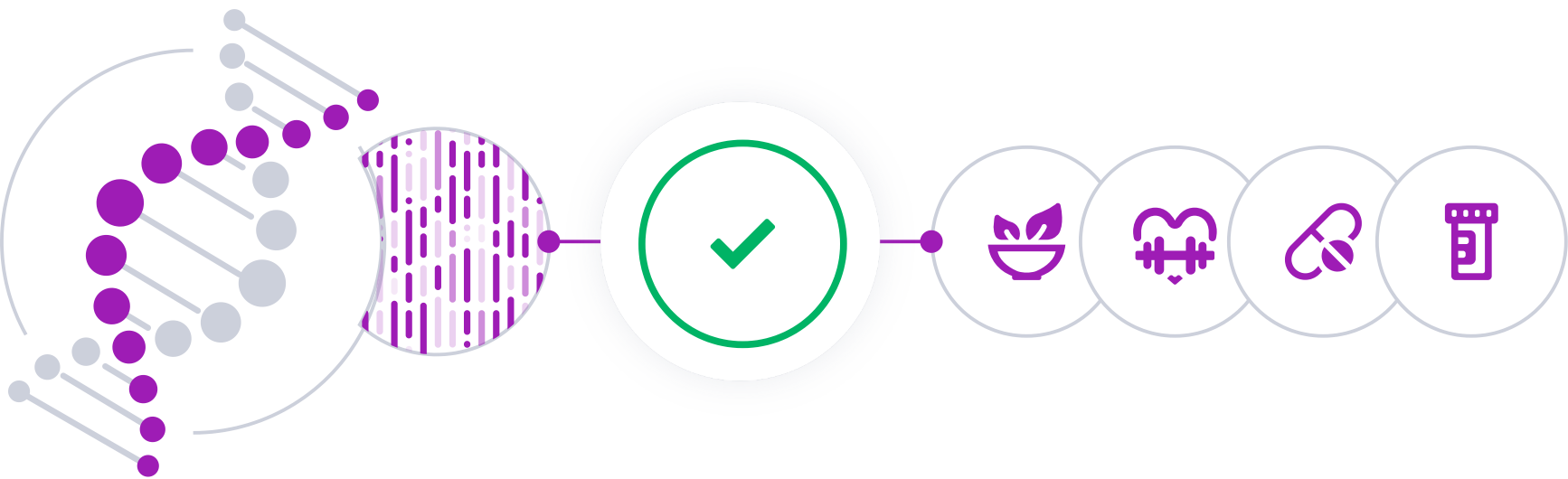
WEIGHT

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.

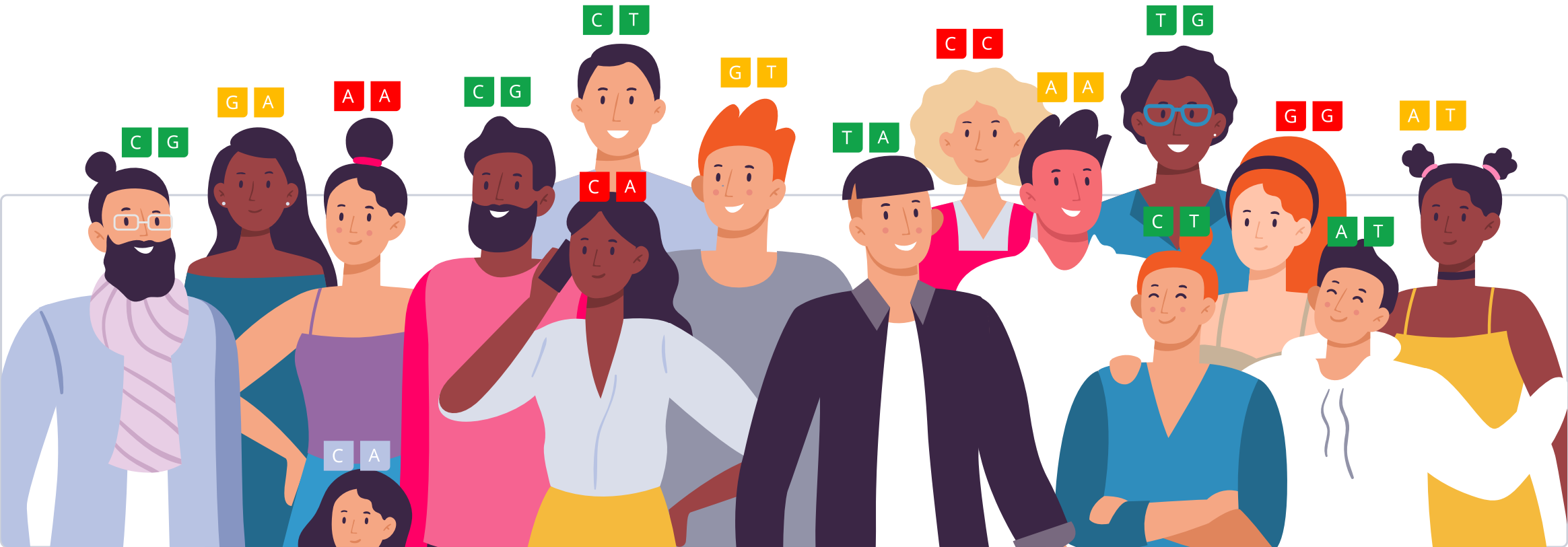


Similarly, our Trait Reports look at how your DNA influences your traits.



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

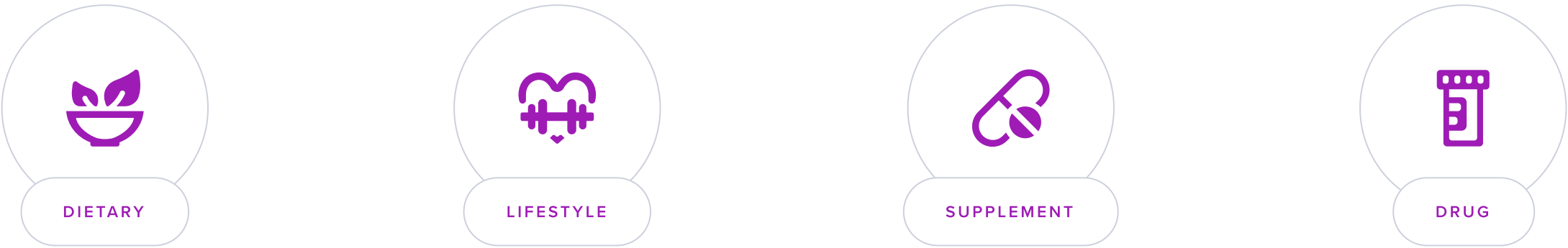
You have 2 risk alleles

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

Hands are awesome, and much of their function depends on your genes. Scientists think that up to 40 genes influence whether you’re left- or right-handed [R].

We use our hands a lot on an average day. And a lot of the things we do with our hands are repetitive. Driving to work, typing out a letter, or even just waving to a neighbor.

But have you ever considered that these simple tasks could be putting your health at risk?

It’s natural to take your hands for granted; after all, they’re always there. But any repetitive task performed using your hands may increase your chance of developing *carpal tunnel syndrome* [R].

Whether you’re left- or right-handed, you are more likely to develop carpal tunnel syndrome in your dominant hand. This is not surprising, given that this hand does a lot of the heavy lifting [R]!

While your handedness may not influence your risk of carpal tunnel syndrome, your genetics just might.

For example, take the [ADAMTS17](#) gene. People who carry a particular variant of this gene may be more prone to carpal tunnel syndrome. We don’t know for sure why, but it may be because this variant potentially affects nerve function [R, R].

The good news is that you can take steps to potentially lower the genetic risk. In this instance, taking alpha-lipoic acid supplements may help by protecting nerves from damage [R].

Let your genes give a helping hand in potentially lowering your risk of carpal tunnel syndrome.

Read on to find out more about:

- How your genetics play a role in carpal tunnel syndrome
- Your genetic risk score based on over 4,500 genetic variants
- Personalized recommendations based on your genetics



# About Carpal Tunnel Syndrome

## Key Takeaways:

- Up to 45% of differences in people's chances of having carpal tunnel syndrome may be due to genetics.
- Risk factors include being female, repetitive wrist movement, obesity, diabetes, pregnancy, and rheumatoid arthritis.
- If you have a high genetic risk, you may reduce overall risk by taking action on your risk factors. If you are experiencing symptoms you may want to consult with your doctor.
- Click the **next steps** tab for relevant labs and lifestyle factors.

*Carpal tunnel syndrome* is a painful condition caused by pressure on the median nerve [\[R\]](#).

This nerve runs on the underside of the wrist and into the palm. It supports sensation and movement in parts of the hand. At the wrist, it runs through a passageway made of ligaments and bones called the *carpal tunnel*. Injuries and swelling can squeeze the nerve, causing carpal tunnel syndrome [\[R\]](#).

Up to 8% of working Americans may develop carpal tunnel syndrome at some point in their lives. **Women are three times more likely than men to develop it** [\[R\]](#), [\[R\]](#), [\[R\]](#).

Besides being female, other risk factors include [\[R\]](#), [\[R\]](#):

- Repetitive wrist movement
- Obesity
- Diabetes
- Pregnancy
- Rheumatoid arthritis
- **Genetics**

The first symptom of carpal tunnel syndrome is usually numbness or tingling in the thumb and fingers at night.



TYPICAL LIKELIHOOD

Typical likelihood of carpal tunnel syndrome based on 4,444 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

| GENE     | SNP         | GENOTYPE |
|----------|-------------|----------|
| SERPINA1 | rs112635299 | GG       |
| TNP1     | rs10221933  | GG       |
| /        | rs1025128   | CC       |
| UMPS     | rs4678145   | GG       |
| LNPK     | rs847139    | CC       |
| EFEMP1   | rs3791679   | AG       |
| COL11A1  | rs12406439  | TT       |
| ADAMTS14 | rs747141    | GA       |
| TBX18    | rs62422907  | AG       |
| TNP1     | rs1863190   | TA       |
| AEBP1    | rs55841377  | CG       |
| HLA-C    | rs3828889   | CT       |
| SMAD6    | rs1866745   | AG       |
| AOC1     | rs6977081   | TG       |
| LTBP1    | rs12104955  | TC       |
| ATP12A   | rs139232303 | CT       |
| DOCK8    | rs76532765  | GG       |
| PID1     | rs111883254 | TT       |
| ADAMTS10 | rs62621197  | CC       |
| TTLL5    | rs72725608  | TT       |
| ADAMTS17 | rs72755233  | GG       |
| HLA-DQA1 | rs9273364   | TT       |
| CRPPA    | rs13221870  | GG       |
| RAB28    | rs6843953   | CC       |



Many people feel the need to "shake out" their hands during this phase [R, R].

Later, symptoms may include [R]:

- Tingling during the day
- Hand weakness
- Muscle wasting

In very severe cases, people may not be able to feel hot or cold in their fingers. Because of this, it's important to treat carpal tunnel syndrome as early as possible [R].

Mild cases of carpal tunnel syndrome may be treated with wrist splinting and physical therapy [R, R].

If symptoms continue to worsen, treatment options include [R, R]:

- Medication
- Steroid injections
- Surgery

**Up to 46% of differences in people's chances of developing carpal tunnel syndrome may be attributed to genetics.** Genes involved in carpal tunnel syndrome may influence [R, R]:

- Nerve function ([ADAMTS17](#))
- Connective tissue function ([COL11A1](#), [ADAMTS10](#), [EFEMP1](#))

| GENE     | SNP         | GENOTYPE |
|----------|-------------|----------|
| SCUBE3   | rs185269684 | CC       |
| PCNX3    | rs117143392 | GG       |
| /        | rs76139623  | TT       |
| CHRM2    | rs11978687  | GG       |
| NRXN1    | rs147424316 | GG       |
| EFEMP1   | rs143258134 | GG       |
| KCNH5    | rs112094174 | TT       |
| RBFOX1   | rs73488670  | AA       |
| CCDC59   | rs192443477 | GG       |
| DPT      | rs142843695 | GG       |
| FGFR1    | rs74610247  | GG       |
| SLC25A21 | rs117331437 | TT       |
| WNT5B    | rs79336502  | GG       |
| NYAP1    | rs78690606  | CC       |
| SH3PXD2A | rs146447081 | AA       |
| CCNG2    | rs142757949 | TT       |

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

# Your Recommendations

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

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

| DOSAGE |                             | DOSAGE |                                          |
|--------|-----------------------------|--------|------------------------------------------|
| 1      | Reduce Wrist Strain         | 2      | Physical Therapy30 minutes               |
| 3      | Wrist Splints               | 4      | Low-Level Laser Therapy (LLLT)30 seconds |
| 5      | Shock Wave Therapy          | 6      | Acupuncture1 hour                        |
| 7      | Yoga30 minutes              | 8      | Maintain Optimal Vitamin D Levels1000 iu |
| 9      | Alpha-Lipoic Acid100 mg     | 10     | Flaxseed Oil15 g                         |
| 11     | Cupping Therapy15 minutes   | 12     | Flaxseed2 tbsp                           |
| 13     | Palmitoylethanolamide (PEA) | 14     | Serrapeptase                             |
| 15     | Stretching15 minutes        | 16     | Acupressure1 minute                      |
| 17     | Uridine150 mg               | 18     | Limit Copper Intake                      |
| 19     | Massage30 minutes           |        |                                          |

1



Reduce Wrist Strain

IMPACT3 / 5

EVIDENCE5 / 5

## How to implement

Take regular breaks, ideally every 30 minutes, to stretch and rest your wrists when using a computer or engaging in activities that require repetitive motion. Ensure your workspace is ergonomically set up with the keyboard at elbow height and wrists in a neutral position. Use wrist supports if necessary.

## Description

Wrist strain occurs when tendons or ligaments in the wrist get stretched or torn. It can happen suddenly or develop over time. Reducing wrist strain means implementing ergonomic practices and exercises to alleviate tension and discomfort in the wrist area, which can help prevent conditions like carpal tunnel syndrome and promote better hand and wrist health.

Wrist strain occurs when tendons or ligaments in the wrist get stretched or torn. It can happen suddenly or develop over time as a result of [\[R\]](#), [\[R\]](#):

- Repetitive tasks
- Sudden force to the hands or fingers
- Temperatures that are too hot or cold
- Poor wrist posture

Activities that strain the wrist can cause pain and swelling. They may also contribute to carpal tunnel syndrome [\[R\]](#), [\[R\]](#).

## How it helps

**Repetitive or forceful movements of the wrist may increase the risk of carpal tunnel syndrome.** Contributing factors may include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Using tools that vibrate
- Assembly line work
- Driving or holding a phone for a long time
- Gardening

Spending too much time at the computer, and especially using a mouse, is also linked to carpal tunnel syndrome [\[R\]](#), [\[R\]](#), [\[R\]](#).

Making some ergonomic changes may help reduce wrist strain. These include [\[R\]](#):

- Taking frequent breaks from repetitive tasks
- Relaxing your grip and keeping your wrist in a neutral position
- Keeping your hands and wrists warm
- Using a keyboard and mouse that don’t strain the wrist

However, it is unclear if these changes would improve symptoms in people who already have carpal tunnel syndrome [\[R\]](#).

2



Physical Therapy

IMPACT3 / 5

EVIDENCE4 / 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

In people with carpal tunnel syndrome, physical therapy may help improve symptoms and mobility. Helpful techniques include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Massage therapy
- Ultrasound
- Exercise-based therapies



3



Wrist Splints

IMPACT

3 / 5

EVIDENCE

4 / 5

## How to implement

Wear wrist splints during the night while sleeping and during activities that aggravate your wrist pain, such as typing or driving. It is recommended to continuously use these splints for several weeks to notice improvement in symptoms.

## Description

Wrist splints are orthopedic devices worn on the wrist to support and immobilize it. They are used for conditions like carpal tunnel syndrome to reduce pain and inflammation by limiting wrist movement.

A wrist splint or brace is a type of soft cast used to hold the hand and wrist in a neutral position. It is used to promote healing and prevent further injury [\[R\]](#).

## How it helps

**Experts recommend wearing a wrist splint to help improve mild or moderate carpal tunnel syndrome** [\[R, R, R\]](#).

Splints are typically worn at night for 6-12 weeks. They may help alone or when combined with other treatments. However, one study did not find a benefit [\[R, R, R\]](#).

Wearing a splint may help by [\[R, R, R\]](#):

- Maintaining good wrist position
- Reducing swelling in the carpal tunnel
- Improving hand mobility

4



Low-Level Laser Therapy (LLLT)

IMPACT3 / 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) is beneficial for Carpal Tunnel Syndrome as it helps to reduce inflammation and pain, improving hand function. Its light beams can penetrate the tissues, stimulating cell repair and promoting healing in the carpal tunnel area.

Some experts say that laser therapy may help with carpal tunnel syndrome [\[R\]](#).

Low-level laser therapy may improve hand grip, pain, and symptom severity. It may work best when combined with a wrist splint. However, some studies found mixed results for certain outcomes and the effects may only last short term [\[R, R, R, R, R, R\]](#).

A review of 8 RCTs (473 patients/631 wrists) on LLLT for mild-to-moderate carpal tunnel syndrome showed mixed results. LLLT improved grip strength but didn't significantly affect pain, functional status, or sensory nerve action potential. High-quality, longer-term trials are needed for a clearer understanding [\[R\]](#).

A review of 18 studies with 1462 adult patients found that LLLT reduced pain in musculoskeletal disorders (MD: -0.85). Higher effectiveness was observed when adhering to WALT guidelines for dosage recommendations [\[R\]](#).

5



Shock Wave Therapy

IMPACT

3 / 5

EVIDENCE

3 / 5

## How to implement

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

## Description

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

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

## How it helps

Extracorporeal shockwave therapy may help improve the severity of carpal tunnel syndrome. It may also improve wrist function and pain. However, the effectiveness of different types of extracorporeal shockwave therapies is mixed [\[R, R, R, R\]](#).

Extracorporeal shockwave therapy may help by improving nerve conduction [\[R, R, R\]](#).

6



Acupuncture

IMPACT

2 / 5

EVIDENCE

3 / 5

## How to implement

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

TYPICAL STARTING DOSE

1 hour

## Description

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

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

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

## How it helps

Acupuncture may help with symptoms and mobility in people with carpal tunnel syndrome. Electrical acupuncture may help those who are wearing a wrist splint. However, the overall evidence is of low quality. One review did not find any clear benefit of acupuncture [\[R, R, R, R\]](#).

Acupuncture may help by improving nerve signaling [\[R, R\]](#).



7



Yoga

IMPACT

2 / 5

EVIDENCE

3 / 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

Stress is linked to a higher risk of carpal tunnel syndrome [\[R\]](#), [\[R\]](#).

Yoga may help reduce stress. It may also stretch and relieve compression in the carpal tunnel [\[R\]](#), [\[R\]](#).

As a result, yoga may help improve [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Pain
- Mobility
- Grip strength

 PERSONALIZED TO YOUR GENES

People with your [EFEMP1](#) gene variant may be more prone to carpal tunnel syndrome. This variant may affect connective tissue. Yoga may help stretch connective tissue and relieve compression [\[R\]](#), [\[R\]](#).

| YOUR GENETIC VARIANTS |           |          |                                                                    |
|-----------------------|-----------|----------|--------------------------------------------------------------------|
| GENE                  | SNP       | GENOTYPE | EVIDENCE                                                           |
| EFEMP1                | rs3791679 | AG       | <div><div></div><div></div><div></div><div></div><div></div></div> |



8



Maintain Optimal Vitamin D Levels

IMPACT

2 / 5

EVIDENCE

2 / 5

## How to implement

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

TYPICAL STARTING DOSE

1000 iu

## Description

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

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

- Mood
- Immunity
- Heart health
- Blood sugar control

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

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

## How it helps

People with painful carpal tunnel syndrome may have lower levels of vitamin D [\[R\]](#).

In line with this, **vitamin D supplements (7,000-28,000 IU/week for 12 weeks)** may help improve pain and wrist function. Vitamin D may help by improving nerve function [\[R\]](#).

**Please note:** *Experts recommend getting 600-800 IU of vitamin D per day. Medical bodies recommend against taking more than 4,000 IU per day* [\[R\]](#).

9



Alpha-Lipoic Acid

IMPACT

2 / 5

EVIDENCE

2 / 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 supplements (600-800 mg/day for 1-3 months)** may help with carpal tunnel syndrome. They may improve pain and surgery results [\[R, R, R\]](#).

They may improve symptoms and mobility when combined with gamma-linolenic acid [\[R, R\]](#).

Alpha-lipoic acid may help by protecting nerves from damage [\[R, R\]](#).

10



Flaxseed Oil

IMPACT

1 / 5

EVIDENCE

1 / 5

## How to implement

Take 1 to 2 tablespoons (15-30 g) of flaxseed oil daily. It can be taken with or without food. For best results, use consistently for at least 2 months.

TYPICAL STARTING DOSE

15 g

## Description

Flaxseed oil is a source of healthy fats, particularly alpha-linolenic acid (ALA), an omega-3 fatty acid. It can help support cardiovascular health and may have anti-inflammatory properties when used as part of a well-rounded diet.

[Flaxseed](#) is a common ingredient in bakery products. Some people also use it as a health food to support digestion [\[R\]](#).

Flaxseed is rich in many compounds, including [\[R\]](#):

- Vitamins and minerals
- Protein
- Fiber
- Omega-3 fatty acids ([ALA](#))

## How it helps

In a [placebo-controlled trial of 100 patients with carpal tunnel syndrome](#), applying topical flaxseed oil for 4 weeks **improved symptom severity and nerve conduction velocity (by 2.38 m/s)** [\[R\]](#).

In a [non-placebo-controlled trial of 49 patients with carpal tunnel syndrome](#), applying a topical gel with 10% flaxseed oil 2x/day for 3 weeks **improved the symptoms and function more effectively than wearing a splint** [\[R\]](#).

11



Cupping Therapy

IMPACT

1 / 5

EVIDENCE

1 / 5

## How to implement

To practice cupping therapy as part of your lifestyle, schedule sessions with a qualified therapist once or twice a month to address specific concerns or for general wellness. Each session usually lasts between 5 to 15 minutes. Consistent treatment over several months may yield the best results.

TYPICAL STARTING DOSE

15 minutes

## Description

Cupping therapy is an alternative therapy that involves placing cups on the skin to create suction. Some believe it may help with pain relief and muscle tension.

## How it helps

Cupping therapy can help improve circulation and reduce inflammation in the affected area, potentially easing the symptoms of carpal tunnel syndrome. By creating suction on the skin, it encourages the flow of fresh blood to the area, promoting healing.

In 3 non-placebo-controlled trials of 142 patients with carpal tunnel syndrome, cupping reduced symptom severity, neck pain, and functional disability, while improving physical quality of life. Cupping was at least as effective as physiotherapy and further improved its effects [\[R\]](#), [\[R\]](#), [\[R\]](#).



12



Flaxseed

IMPACT1 / 5

EVIDENCE1 / 5

## How to implement

Consume 2 tablespoons of ground flaxseed daily. You can add it to your breakfast cereal, smoothies, or salads.

TYPICAL STARTING DOSE

2 tbsp

## Description

Flaxseed is a nutrient-dense food that's high in fiber and omega-3 fatty acids. It may contribute to heart health, promote digestive regularity, and help manage cholesterol levels when included in a balanced diet.

[Flaxseed](#) is a common ingredient in bakery products. Some people also use it as a health food to support digestion [\[R\]](#).

Flaxseed is rich in many compounds, including [\[R\]](#):

- Vitamins and minerals
- Protein
- Fiber
- Omega-3 fatty acids ([ALA](#))

## How it helps

Flaxseed oil, rich in Omega-3 fatty acids, works as an anti-inflammatory agent which can help reduce swelling and inflammation associated with Carpal Tunnel Syndrome. The decreased inflammation can ease the pressure on your median nerve, relieving pain and improving the movement of your hand and wrist.

In a [placebo-controlled trial of 100 patients with carpal tunnel syndrome](#), applying topical flaxseed oil for 4 weeks **improved symptom severity and nerve conduction velocity (by 2.38 m/s)** [\[R\]](#).

In a [non-placebo-controlled trial of 49 patients with carpal tunnel syndrome](#), applying a topical gel with 10% flaxseed oil 2x/day for 3 weeks **improved the symptoms and function more effectively than wearing a splint** [\[R\]](#).

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Palmitoylethanolamide (PEA)

IMPACT1 / 5

EVIDENCE1 / 5

## How to implement

For managing pain and inflammation, take 300mg to 1,200mg of palmitoylethanolamide (PEA) in divided doses throughout the day, preferably with meals to enhance absorption. This regimen should be followed for at least 6 weeks to evaluate its effectiveness.

## Description

Palmitoylethanolamide (PEA) is a naturally occurring fatty acid amide. It is a compound found in various tissues of animals, including humans. PEA has been a supplement for the past couple of decades, and is utilized for its potential anti-inflammatory and pain-relieving properties.

[Palmitoylethanolamide](#) (PEA) is a compound naturally made by the body to help combat inflammation [\[R\]](#).

It’s also made by plants and other animals. Good sources of PEA include [\[R\]](#):

- Soy lecithin
- Soybeans
- Egg yolk
- Peanuts

## How it helps

In a non-placebo-controlled trial of 42 patients with carpal tunnel syndrome and sleep disorders, supplementation with PEA (600 mg, 2x/day) during the pre- and postsurgery periods improved sleep quality and continuous sleep time while reducing pain and sleep latency and disturbances. However, PEA (600 mg/day for 60 days) failed to improve carpal tunnel syndrome in a placebo-controlled trial of 61 patients [\[R\]](#), [\[R\]](#).

PEA may help by reducing inflammation surrounding the nerves in your wrist.



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Serrapeptase

IMPACT

0 / 5

EVIDENCE

1 / 5

## How to implement

Take serrapeptase on an empty stomach, which means at least 2 hours after eating and 30 minutes before eating. The typical dosage ranges from 10,000 to 60,000 units per day, depending on the specific health condition being addressed. It is often recommended to start with a lower dose to assess tolerance and then gradually increase as needed. This supplement is usually taken in capsule form once daily.

## Description

Serrapeptase is an enzyme derived from the silkworm and is used today as a dietary supplement for its potential anti-inflammatory properties, supporting joint health and reducing inflammation.

Serrapeptase is an enzyme that helps the body break down some types of protein. This might help **decrease inflammation and mucus**.

People use serrapeptase for conditions like back pain, joint pain, and other conditions involving pain and inflammation. It may also relieve cough by breaking down mucus. However, there is weak evidence to support these uses.

## How it helps

Serrapeptase is an enzyme that tends to reduce inflammation, which can ease the symptoms of carpal tunnel syndrome. As it works by breaking down non-living tissues in the body, this may support the healing of swollen, painful tissues in the wrist.

In an uncontrolled trial of 20 patients with carpal tunnel syndrome, supplementation with serratiopeptidase (10 mg, 2x/day) for 6 weeks improved 75% of the cases [\[R\]](#).

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Stretching

IMPACT

0 / 5

EVIDENCE

0 / 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

Regularly stretching the hands and wrists can prevent stiffness and improve flexibility, potentially reducing the symptoms associated with carpal tunnel syndrome.

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Acupressure

IMPACT

0 / 5

EVIDENCE

0 / 5

## How to implement

Apply firm pressure on specific acupoints related to your condition using your fingers or a blunt object for 1-3 minutes. Repeat this process 2-3 times a day for several weeks to potentially observe improvements.

TYPICAL STARTING DOSE

1 minute

## Description

Acupressure is a traditional Chinese healing technique that involves applying pressure to specific points on the body to promote relaxation, alleviate pain, and improve overall well-being.

## How it helps

Acupressure can help relieve the symptoms of carpal tunnel syndrome by reducing pain and improving hand function. It involves applying pressure to specific points along the body's meridian lines to release tension and enhance circulation.

17



Uridine

IMPACT

0 / 5

EVIDENCE

0 / 5

## How to implement

Take uridine as a supplement in the form of uridine monophosphate (UMP) capsules. The usual dosage is 150-250 mg, taken orally once or twice daily, preferably with food to enhance absorption. This supplement regimen can be continued indefinitely, but it's recommended to evaluate its effects periodically, every 3-6 months, with your healthcare provider.

TYPICAL STARTING DOSE

150 mg

## Description

Uridine is a nucleotide that plays a role in RNA synthesis and is found in various foods. It is used as a dietary supplement to support cognitive function, enhance memory, and promote overall brain health.

## How it helps

In an observational study of 48 participants with carpal tunnel syndrome, uridine monophosphate combined with folic acid and vitamin B12 (1 capsule/day for 60 days) reduced the use of pain and inflammation medications in 77.4% of the patients [R].

Uridine is believed to help regenerate and repair nerve cells, which could potentially alleviate symptoms of carpal tunnel syndrome.

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Limit Copper Intake

IMPACT

0 / 5

EVIDENCE

0 / 5

## How to implement

Do not include copper supplements in your daily vitamin or supplement routine. Check the labels of any multivitamins or dietary supplements you are currently taking to ensure they do not contain copper. Ideally, you should also check copper levels in your tap water. If they are excessive, consider using a reliable water filter or drinking spring water.

## Description

Taking too many copper supplements can cause a copper overdose in your body. This can be harmful, leading to issues like stomach pain, nausea, and even heart problems. For healthy individuals, the amount of copper obtained through a balanced diet is usually enough without needing supplementation. It's vital to maintain the natural balance of minerals in the body for good health.

Contaminated tap water can also be a source of excess copper.

## How it helps

Copper has no proven effect on improving carpal tunnel syndrome symptoms or its underlying causes. So avoiding copper supplements won't hurt nor help your condition.

Genetically higher levels of copper may be associated with an increased risk of carpal tunnel syndrome [R].

## Message

0 / 5

0 / 5

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.

30 minutes

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.

- Anxiety
- Pain
- Fatigue

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

Massage therapy can increase blood circulation and reduce inflammation in the carpal tunnel area. It may also alleviate pain and improve hand and wrist function.



# 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.