

Dry Eyes

DNA Health Report

REPORT CATEGORY —



Sample Client

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Table of Contents

03 How this works

- 04 Impact
- 05 Evidence
- 06 Some things to keep in mind

07 Introduction

08 Your genetics

09 Your recommendations

47 Next Steps

- 47 Your Lab Results

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

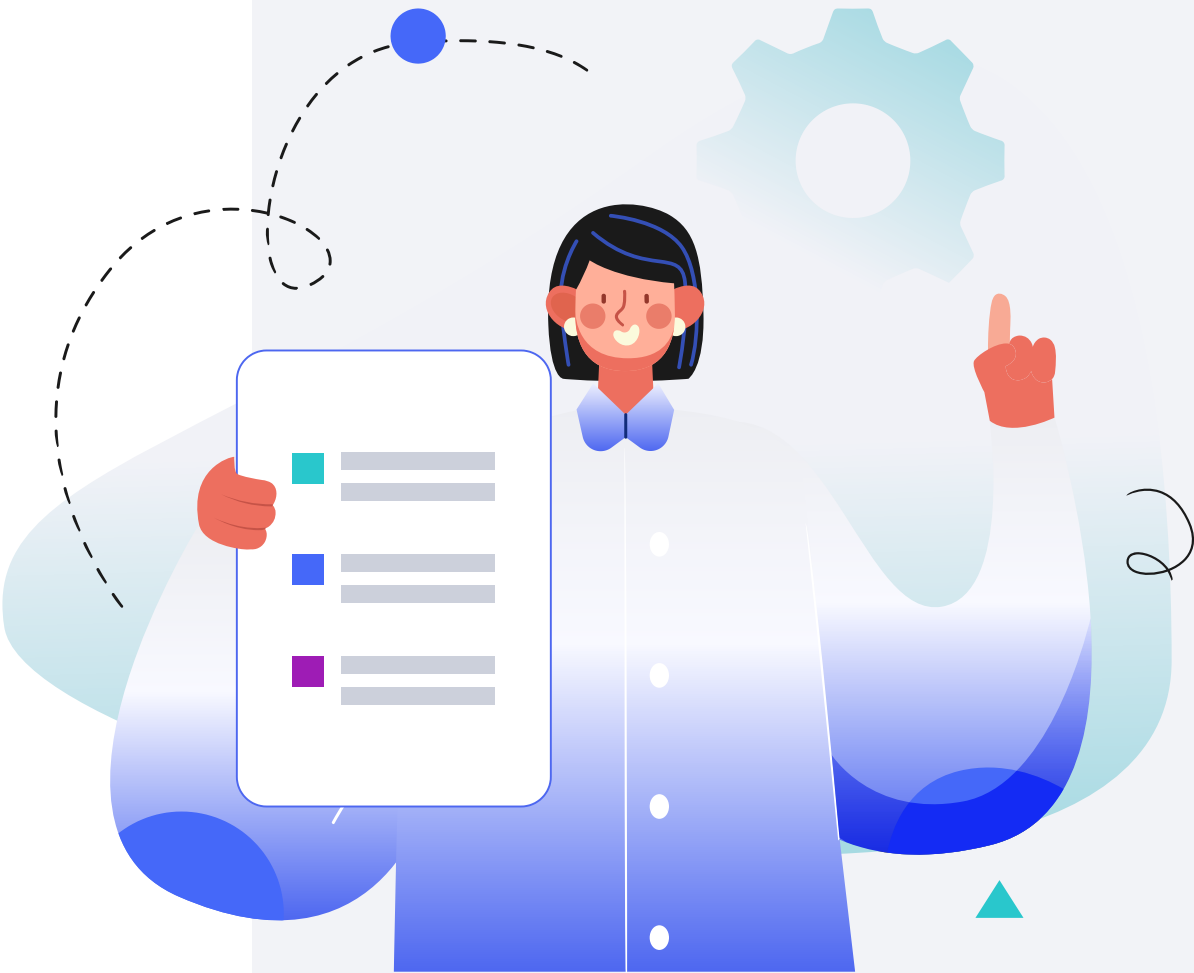
Male

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

Dry eye disease occurs when your tears don’t provide adequate lubrication for your eyes. You may have dry eyes if you don't produce enough tears or if you produce poor-quality tears.

Poor tear production leads to inflammation and can damage the surface of the eye. Symptoms usually affect both eyes and may include [\[R\]](#):

- A stinging, burning, or scratchy sensation in your eyes
- Stringy mucus in or around your eyes
- Sensitivity to light
- Eye redness
- A sensation of having something in your eyes
- Difficulty wearing contact lenses
- Difficulty with nighttime driving
- Blurred vision or eye fatigue

Doctors usually recommend using **artificial tears** for mild cases. More severe cases may require using medication.

Risk Factors and Genetics

About **30-40%** of the differences in people’s chances of developing dry eyes may be due to genetics. Involved genes may affect eye cell function and inflammation [R, R].

Other risk factors for dry eye disease include [R]:

- Older age (over 50)
- Female sex
- Use of contact lenses
- Certain medications
- Vitamin A deficiency
- Sedentary lifestyle

The following conditions may contribute to dry eyes [R]:

- Connective tissue diseases (such as Sjögren syndrome)
- Metabolic syndrome
- Anxiety
- Depression



TYPICAL LIKELIHOOD

Typical likelihood of having dry eyes based on 7 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
IL6R	rs2228145	CC
IL6	rs1800795	GG
VDR	rs731236	AG
BDNF	rs6265	TC
CACUL1	rs147844992	AA
IL1B	rs1143634	GG
VDR	rs7975232	AA

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	Artificial Tears	1 drop	2	Maintain Eye Moisture	
3	Omega-3 (Fish Oil)	500 mg	4	Intense Pulsed Light (IPL) Therapy	30 minutes
5	Hyaluronic Acid Eye Drops	1 drop	6	Gamma-Linolenic Acid (GLA) And Linoleic Acid	360 mg
7	Rehmannia	250 mg	8	Guar Gum Eye Drops	1 drop
9	DHA (Omega-3)	200 mg	10	Maintain Optimal Vitamin D Levels	1000 iu
11	Heated Eye Mask	10 minutes	12	Aerobic Exercise (Cardio)	1 hour
13	Trehalose	1000 mg	14	Castor Oil Eye Drops	1 drop
15	Honey		16	Goji and Rehmannia	
17	Tamarind Polysaccharide Eye Drops	1 drop	18	Acupuncture	1 hour
19	Tea Tree Oil	2 drops	20	Flaxseed	2 tbsp
21	Hyaluronic Acid And Chondroitin	100 mg	22	Chondroitin	800 mg
23	Avoid Contact With Dust		24	Dietary Omega-3 Fatty Acids	
25	Low-Level Laser Therapy (LLLT)	30 seconds	26	Avoid Air Pollution	
27	Pantothenic Acid (Vitamin B5)	5 mg	28	Topical Palmitoylethanolamide (PEA)	
29	Cordyceps	500 mg	30	Royal Jelly	300 mg

31	Uridine	150 mg	32	Krill Oil	1 g
33	Maqui Berry		34	Lactoferrin	100 mg
35	Sea Buckthorn Oil	1000 mg	36	Ginkgo And Hyaluronic Acid Eye Drops	1 drop
37	Drink at Least 8 Glasses of Water a Day		38	Topical Green Tea	
39	Astaxanthin	12 mg	40	Psyllium Eye Drops	1 drop
41	Leafy Green Vegetables		42	Evening Primrose Oil	
43	Ginkgo Eye Drops	1 drop			

1



Artificial Tears

IMPACT

5 / 5

EVIDENCE

5 / 5

How to implement

Apply 1-2 drops of artificial tears into the affected eye(s) as needed for relief. Use them throughout the day whenever you experience dryness or irritation. There is no maximum duration; they can be used as long as they provide relief.

TYPICAL STARTING DOSE

1 drop

Description

Artificial tears help lubricate the eyes and maintain their moisture in people with dry eyes. They normally come in liquid form (eye drops), but gels and ointments are also available. There are two types of artificial tears: **preserved and non-preserved**.

Artificial tears help lubricate the eyes and maintain their moisture in people with dry eyes. They normally come in liquid form (eye drops), but gels and ointments are also available [\[R\]](#).

There are two types of artificial tears: **preserved and non-preserved** [\[R\]](#), [\[R\]](#).

How it helps

Experts recommend regularly using artificial tears for dry eyes, even when the eyes feel fine [\[R\]](#), [\[R\]](#).

There are two types of artificial tears [\[R\]](#), [\[R\]](#):

- **Preserved:** they last longer because they contain preservatives. They can irritate the eyes if used too frequently (more than 4x/day).
- **Non-preserved:** they have a short shelf life because they don’t contain preservatives. They typically come in single-dose vials that must be discarded after use.

Ointments have longer effects than eye drops but can cloud your vision because they are thicker. For this reason, they are best used before bedtime [\[R\]](#).

Most available types of OTC artificial tears may be safe and effective at improving dry eye syndrome [\[R\]](#).

2



Maintain Eye Moisture

IMPACT4 / 5

EVIDENCE5 / 5

How to implement

Blink regularly especially while using digital devices, take frequent screen breaks every 20 minutes to look at something 20 feet away for 20 seconds, and use a humidifier in dry environments to help maintain eye moisture.

Description

Maintaining eye moisture through methods such as using lubricating eye drops can help prevent dry eye syndrome and maintain ocular comfort. Adequate eye moisture supports visual clarity and reduces the risk of eye discomfort and irritation.

The eyes have a very high water content and a unique system of water regulation. Imbalances in this system may cause dry eyes and blurry vision [\[R\]](#).

Causes of decreased eye moisture include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Exposure to dry air
- Wearing contact lenses
- Not blinking enough, especially while working on a computer or reading
- Certain health conditions and surgical procedures
- Dehydration

How it helps

A dry environment may reduce eye moisture and cause dry eye symptoms. Examples include:

- Rooms with indoor heating
- Deserts
- Areas at high altitude
- Airplanes

The following measures may help reduce the effects of dry air on the eyes [\[R\]](#), [\[R\]](#):

- Avoiding air from hair dryers, car heaters, or fans blowing directly in your eyes
- Using a humidifier to add moisture to indoor air
- Wearing protective eyewear such as wraparound glasses
- Blinking repeatedly for a few seconds or closing your eyes for a few minutes

People with high screen time at work are at an increased risk of dry eyes. Experts recommend scheduling regular breaks during long tasks and positioning the computer below eye level to decrease eye opening [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

3



Omega-3 (Fish Oil)

IMPACT3 / 5

EVIDENCE4 / 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

500 mg

Description

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

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

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

Fatty fish are rich in EPA and DHA. They include [\[R\]](#):

- Salmon
- Tuna
- Herring
- Sardines

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

How it helps

Supplementation with [omega-3 fatty acids](#) (1,000-2,400 mg/day) may improve dry eye symptoms and tear production [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Omega-3s may also help with dry eyes when the eye glands don't produce sufficient oils (*meibomian gland dysfunction*) [\[R\]](#).

Omega-3s may help by reducing inflammation in the eyes and lubricating them [\[R\]](#).

4



Intense Pulsed Light (IPL) Therapy

IMPACT3 / 5

EVIDENCE4 / 5

How to implement

Book an appointment with a dermatologist or a licensed practitioner experienced in intense pulsed light (IPL) therapy. The treatment usually requires multiple sessions, typically 3 to 6, spaced about one month apart to allow the skin to heal properly. Each session may last about 20 to 30 minutes, depending on the area being treated.

TYPICAL STARTING DOSE

30 minutes

Description

Intense pulsed light therapy is a non-invasive cosmetic procedure used to improve skin texture and reduce the appearance of various skin issues, such as sun damage and hyperpigmentation. It can enhance skin's appearance and boost self-confidence.

How it helps

Light therapy may help dry eyes by increasing tear production, which alleviates the symptoms of dryness and irritation. More specifically, it promotes the secretion of oils from the glands around the eyes, preventing the tears from evaporating too quickly.

According to some experts, IPL therapy followed by massage of the eyelids may help people with severe dry eyes [\[R\]](#).

Six meta-analyses (the largest one with 15 trials and 1,142 patients) concluded that intense pulsed light improves TBUT, OSDI, standard evaluation of eye dryness, and CFS in people with meibomian gland dysfunction. Its combination with meibomian gland expression (MGX) is safer and more effective in the long term (3-6 months) [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

5



Hyaluronic Acid Eye Drops

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

Place 1-2 drops of hyaluronic acid eye drops into each eye, three times a day. Blink several times after application to ensure the solution covers the entire surface of the eye. Continue this routine daily for relief of dry eye symptoms.

TYPICAL STARTING DOSE

1 drop

Description

Hyaluronic acid eye drops are used to relieve dry eyes and maintain eye moisture. They provide lubrication and may help reduce discomfort associated with dry eye syndrome.

How it helps

Hyaluronic acid eye drops may improve tear production and the tear film on the eye better than saline eye drops. It may also improve dry eye associated with cataracts 33% better than conventional treatments [\[R\]](#), [\[R\]](#).

6



Gamma-Linolenic Acid (GLA) And Linoleic Acid

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Take a supplement that contains both gamma-linolenic acid (GLA) and linoleic acid daily. The typical dosage for gamma-linolenic acid is between 360 to 2,800 mg per day and for linoleic acid is usually part of the supplement blend. This should be taken with food to enhance absorption and continued for as long as recommended based on your specific health condition or until directed by a healthcare provider.

TYPICAL STARTING DOSE
360 mg

Description

GLA is an omega-6 fatty acid found in certain plant oils, such as evening primrose oil and borage oil. It may have anti-inflammatory properties and can potentially benefit skin health, hormonal balance, and overall well-being. Linoleic acid is an essential omega-6 fatty acid important for maintaining healthy skin, promoting proper brain function, and supporting overall health. It's obtained through the diet and plays a vital role in various bodily processes.

How it helps

A study on linoleic and gamma-linolenic acid therapy demonstrated improvements in symptoms and ocular surface inflammation for people with keratoconjunctivitis sicca, a type of dry eye syndrome, after taking linoleic acid (28.5 mg, 2x/day) and gamma-linolenic acid (15 mg, 2x/day) for 45 days [\[R\]](#).

GLA (an omega-6 fatty acid) with omega-3 fatty acids (for 6 months) has shown benefits for dry eye conditions. This combination helps by decreasing inflammation, which is often a component of dry eye syndrome [\[R\]](#).

Another study also found that oral linoleic and gamma-linolenic acid tablets combined with eyelid hygiene may improve symptoms and reduce eyelid margin inflammation in meibomian gland dysfunction better than either treatment alone [\[R\]](#).

7



Rehmannia

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Take rehmannia in capsule form, with the usual dose being between 250 to 500 mg daily. It's best consumed with water, after meals to minimize digestive discomfort. Consult with a healthcare professional for personalized advice, especially if you have pre-existing conditions or are on other medications.

TYPICAL STARTING DOSE

250 mg

Description

Rehmannia (*Rehmannia glutinosa*) is a medicinal plant native to East Asia and the root of the plant has been used traditionally for centuries in China and Korea for various health purposes. Rehmannia contains various compounds, including iridoid glycosides and catalpol, which may provide benefits for kidney and gland health.

How it helps

An analysis of 15 studies including 1,222 people, found that Lycium-rehmannia pills combined with Western medicine eye drops were superior to Western medicine alone in terms of dry eye symptom improvement. This combination improved the stability of eye tear film and reduced eye surface inflammation [R].

8



Guar Gum Eye Drops

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Use guar gum eye drops by applying 1-2 drops in each eye, usually up to 4 times a day. Make sure to follow the instructions on the product label or as prescribed by a healthcare provider.

TYPICAL STARTING DOSE

1 drop

Description

Guar gum eyedrops are used to lubricate and relieve dry eyes. They provide temporary relief from eye discomfort and can help maintain ocular moisture.

Guar gum is a fiber made from the seeds of the Indian cluster bean (*Cyamopsis tetragonolobus*). It is used in food products to help bind and thicken them [R].

Guar gum may be used as a thickening agent in eye drops, skincare, makeup, and hair care products [R].

How it helps

Eye drops using guar gum as a thickener may reduce dry eye symptoms [R, R, R, R, R, R, R, R].

Guar gum eye drops may help by improving eye lubrication [R].

9



DHA (Omega-3)

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

Take an omega-3 supplement containing DHA at a dosage of 200-500 mg daily, preferable with a meal to improve absorption. It's recommended to continue this supplementation as part of your daily regimen to support heart, brain, and joint health.

TYPICAL STARTING DOSE

200 mg

Description

DHA is an omega-3 fatty acid found in fatty fish and algae-based supplements. It is essential for brain health and has been associated with cognitive function, cardiovascular health, and reducing inflammation in the body.

An **EPA/DHA supplement** can be taken to help meet omega-3 fatty acid needs not achieved through diet. Supplement amounts are generally 250-500mg/d though there are no current official recommendations other than for ALA.

How it helps

A study investigated the protective role of dietary DHA in immune-driven dry eye disease. The study found that dietary DHA enhanced the production of pro-resolving mediators in lymph nodes and ocular tissues, which was protective against dry eye disease, suggesting a novel mechanism through which DHA supports eye health [R].

Another study evaluated the clinical efficacy of high-dose DHA supplementation in people with dry eye associated with meibomian gland dysfunction. It found improvements in tear break-up time and meibomian gland dysfunction scores after 8 weeks of supplementation, indicating effective stabilization of the tear film [R].

A systematic review assessed the effects of omega-3 fatty acids, including DHA, on dry eye symptoms and signs. The review concluded that there is moderate certainty evidence suggesting that long-chain omega-3 fatty acids may increase aqueous tear production, though the effect on dry eye symptoms was less certain [R].

10

Maintain Optimal Vitamin D Levels

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

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

TYPICAL STARTING DOSE
1000 iu

Description

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

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

- Mood
- Immunity
- Heart health
- Blood sugar control

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

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

How it helps

People with dry eye syndrome tend to have lower levels of vitamin D [\[R\]](#), [\[R\]](#), [\[R\]](#).

In line with this, [vitamin D](#) supplements (2,000 IU/day for 12 weeks) may help improve dry eye symptoms [\[R\]](#), [\[R\]](#).

Vitamin D may help by reducing inflammation in the eyes [\[R\]](#).

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

11



Heated Eye Mask

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Place a heated eye mask in the microwave for the duration specified by the product instructions, typically around 15-30 seconds. Once heated, place the mask over your closed eyelids for 10-20 minutes. Perform this routine daily, ideally in the evening to help alleviate dry eyes or meibomian gland dysfunction.

TYPICAL STARTING DOSE

10 minutes

Description

How it helps

Heated eye masks are a beneficial tool for managing dry eye syndrome, a condition marked by insufficient tear production or rapid tear evaporation. By delivering consistent warmth, these masks stimulate tear production and improve the function of oil glands in the eyelids, alleviating symptoms like dryness and irritation. There are various types, including microwaveable masks filled with heat-retaining materials like silica beads, and electric masks that offer adjustable temperatures for sustained warmth [\[R, R, R, R, R, R, R, R, R\]](#).

The typical regimen for heated eye mask usage involves applying the mask to closed eyes for about 10 to 20 minutes, once or twice daily. Regular use is important for effective symptom relief, and following the manufacturer's guidelines on temperature and duration is crucial. These masks offer several advantages, such as increased comfort, potential reduction in the use of eye drops, and stress relief, which can indirectly benefit dry eye symptoms. They are particularly helpful in managing conditions like meibomian gland dysfunction [\[R, R, R, R, R, R, R, R, R\]](#).

However, heated eye masks may not be suitable for everyone, especially those with certain eye conditions or sensitivities. Consulting with an eye care professional before starting this treatment is advised. While they provide symptomatic relief, these masks are best used as part of a broader eye care strategy, as they may not address all underlying causes of dry eye.

12



Aerobic Exercise (Cardio)

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

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

TYPICAL STARTING DOSE

1 hour

Description

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

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

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

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

How it helps

People who are physically active may have a lower risk of dry eyes [\[R\]](#).

A single bout of cardio may improve dry eye symptoms and tear production in healthy people and those with dry eyes [\[R, R, R\]](#).

Exercise programs with cardio may reduce dry eye disease rates and symptoms in office workers [\[R\]](#).

13



Trehalose

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take 500 mg to 1000 mg of trehalose orally, twice daily, with or without food. This supplement regimen can be followed regularly, adjusting dosage as per individual tolerance and according to healthcare provider's advice.

TYPICAL STARTING DOSE

1000 mg

Description

Trehalose is a natural sugar found in various organisms, including some plants and microorganisms. It has gained attention for its potential to support cellular health and protect against certain diseases, although further research is needed to fully understand its health benefits and specific conditions it may be used for.

How it helps

Trehalose supplement can help with dry eyes condition as it has hydrating properties that provide moisture to the eyes, preventing dryness. Additionally, Trehalose protects the cells on the eye surface from damage due to a dry environment.

In a non-placebo-controlled trial of 34 patients with moderate to severe dry eye syndrome, applying trehalose (100-200 mM) 6x/day for 4 weeks improved fluorescein and rose bengal staining scores of the ocular surface (with both doses) and increased tear film breakup time (only with 100 mM) [R].

In a non-placebo-controlled trial of 36 patients with moderate-to-severe dry eye syndrome, trehalose eyedrops applied for 4 weeks were more effective than commercial eyedrops containing hyaluronan or hydroxyethylcellulose at improving fluorescein and rose bengal staining scores of the ocular surface and tear film breakup time [R].

A combination of trehalose and hyaluronic acid eye drops was more effective in reducing dry eye symptoms, tear film thickness, and satisfaction among 270 patients compared to hyaluronic acid-only drops. Additionally, trehalose and hyaluronate increased tear film thickness as effectively as hyaluronate alone in 196 patients. Applying trehalose/sodium hyaluronate eye drops twice daily improved dry eye symptoms and tear film stability in 233 patients post-cataract surgery [R, R, R, R, R, R, R, R].

In a placebo-controlled trial of 114 patients with dry eyes, applying eyedrops with the combination of trehalose (3%) and cyclosporin A (0.01-0.02%) for 12 weeks reduced the corneal staining score [R].

14



Castor Oil Eye Drops

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Apply 1-2 drops of pure, hexane-free castor oil into each eye once a day before bedtime. Continue this practice daily for a duration recommended by your healthcare provider, typically ranging from several weeks to a few months, depending on the condition being treated.

TYPICAL STARTING DOSE

1 drop

Description

Castor oil eyedrops are used to relieve dry eyes and promote ocular comfort. They provide lubrication to the eye's surface and may help reduce irritation and improve overall eye health.

[Castor oil](#) is a pale yellow vegetable oil derived from the castor bean plant (*Ricinus communis*). The bean of the plant is most commonly used as a traditional remedy [\[R\]](#).

Castor bean oil was used by the ancient Egyptians as an ointment for wounds, and by the Greeks and Romans as a laxative. In South India, people use castor oil and [coconut oil](#) to nourish the skin and promote hair growth [\[R\]](#), [\[R\]](#).

How it helps

Eye drops with [castor oil](#) (1.25-5%) may reduce dry eye symptoms [\[R\]](#), [\[R\]](#), [\[R\]](#).

Castor oil may also help as part of multi-ingredient eye drops [\[R\]](#), [\[R\]](#).

It may help by reducing tear evaporation [\[R\]](#).

Please note: *Castor plant seeds contain a substance called ricin, which is **extremely toxic**. Topical castor seed oil may cause contact dermatitis in sensitive people* [\[R\]](#).

15



Honey

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

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

Description

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

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

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

- Heart problems
- Gut problems
- Cough
- Burns

How it helps

Honey possesses natural anti-inflammatory properties that can help soothe dry eyes and reduce irritation by moisturizing the eye surface. Its natural antibacterial properties can also reduce the risk of eye infections that can occur due to excessive dryness.

A [meta-analysis of 5 studies and 288 participants](#) concluded that treatment with manuka honey **improves Ocular Surface Disease Index, Standard Patient Evaluation of Eye Dryness, tear evaporation rate, negative conversion rate of matrix metalloproteinase-9 levels, ocular surface staining, and daily use frequency of lubricants** [\[R\]](#).

16



Goji and Rehmannia

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take a supplement that combines goji berries and rehmannia. Consume it once daily, preferably in the morning with a glass of water. Follow this regimen for at least 3 to 6 months to observe potential health benefits.

Description

Goji-rehmannia pills, also known as Gouqizi Renshen Wan or Gou Qi Zi Wan in traditional Chinese medicine, are a type of herbal remedy. They are made from a combination of two key ingredients: goji berries (Gouqizi) and rehmannia root (Renshen), and are utilized for a variety of health problems.

How it helps

A meta-analysis of 15 trials and 1222 patients concluded that supplementation with goji-Rehmannia pills as an add-on to conventional medicine is more effective than conventional medicine alone at improving dry eye syndrome. However, the authors warned about the low quality and controversial results of the included studies [\[R\]](#).

17



Tamarind Polysaccharide Eye Drops

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Apply 1-2 drops of tamarind polysaccharide eye drops into each eye, three times daily. Use the drops for as long as symptoms persist, or as recommended by an eye care professional.

TYPICAL STARTING DOSE

1 drop

Description

Tamarind polysaccharide eye drops are formulated to provide relief from dry and irritated eyes. They contain a natural compound derived from tamarind seeds that can help soothe dryness and improve eye comfort.

[Tamarind](#) (*Tamarindus indica*) is a large evergreen tree in the legume family (*Fabaceae*). It is widely found in Africa and southern Asia and grows in most tropical regions throughout the world. Every part of the plant is used as food and medicine, in addition to a wide variety of other applications [\[R\]](#).

The seeds produce a complex sugar (polysaccharide) that can be added to improve the texture and consistency of processed foods and used as a vehicle for delivering drugs [\[R\]](#).

How it helps

Eye drops with [tamarind](#) polysaccharide may improve dry eye symptoms such as trouble blinking, eye burning, and foreign body sensation [\[R\]](#), [\[R\]](#).

Combining tamarind polysaccharide and hyaluronic acid may be more effective [\[R\]](#).

Tamarind polysaccharide may help by increasing eye lubrication [\[R\]](#).

18



Acupuncture

IMPACT

2 / 5

EVIDENCE

2 / 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](#) (2-3 sessions/week for 3-5 weeks) may help reduce dry eye symptoms. It may be more effective when combined with artificial tears [\[R\]](#).

Acupuncture may help by promoting tear secretion, reducing inflammation, and increasing blood flow in the eyes [\[R\]](#).

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

19



Tea Tree Oil

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Apply a few drops of tea tree oil mixed with a carrier oil, such as coconut or olive oil, directly to the affected area. Use this mixture once or twice a day until symptoms improve. Do not ingest tea tree oil.

TYPICAL STARTING DOSE

2 drops

Description

Tea tree oil is an essential oil derived from the leaves of the tea tree (*Melaleuca alternifolia*), native to Australia. It is known for its antimicrobial properties and is used in skincare and hair care products to address issues like acne and dandruff.

[Tea tree oil](#) is made from the leaves of *Melaleuca alternifolia*, a tree native to Australia [\[R\]](#).

People use it to treat a number of conditions, such as [\[R\]](#):

- Acne
- Dandruff
- Nail fungus
- Lice
- Athlete's foot

How it helps

In a study of 62 people who underwent cataract surgery, applying eye shampoos with tea tree oil combined with topical anti-inflammatories and artificial tears (for 1 month) decreased the number of Demodex mites and eye dryness more than topical anti-inflammatories and artificial tears alone [\[R\]](#).

In another study of 40 people with meibomian gland dysfunction, tea tree oil eyelid shampoo (used for 3 months) improved dry eye more than regular eyelid shampoo. However, it caused eye surface irritation more frequently [\[R\]](#).

20



Flaxseed

IMPACT2 / 5

EVIDENCE2 / 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 may help prevent dry eye after surgery, likely due to its anti-inflammatory and lipid-modifying properties [\[R\]](#).

Oral flaxseed oil may reduce ocular surface inflammation and improve symptoms of keratoconjunctivitis sicca in people with Sjögren's syndrome. improvements were noted in dry-eye symptom scores and other clinical measurements [\[R\]](#).

Flaxseed supplementation has been compared with omega-3 fatty acid capsules for treating dry eye, showing that flaxseed is comparable in effectiveness. Both supplements improved dry eye symptoms and clinical measures like tear break-up time and ocular surface disease index scores [\[R\]](#).

An artificial tear solution containing flaxseed oil may improve dry eye symptoms and ocular surface staining compared to a control solution. This study underscores the efficacy of flaxseed oil in managing dry eye disease [\[R\]](#).

21



Hyaluronic Acid And Chondroitin

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take a combination supplement containing 100-200 mg of hyaluronic acid and 800-1200 mg of chondroitin daily, preferably with meals to enhance absorption. This regimen should be followed for at least two to three months to evaluate its effectiveness in improving joint health.

TYPICAL STARTING DOSE
100 mg

Description

Hyaluronic acid is a natural substance that plays a key role in joint and skin health. As a supplement or topical application, it may help support joint mobility and skin hydration. Chondroitin is a component of cartilage in the body, and supplements containing chondroitin are often used to support joint health and reduce symptoms of osteoarthritis.

How it helps

In 2 studies of 344 people with dry eyes, the combination of sodium hyaluronate and chondroitin sulfate improved tear production and the quality of the tear film on the eye surface [\[R\]](#), [\[R\]](#).

22



Chondroitin

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 400 mg of chondroitin sulfate orally, three times a day or 800 mg once daily. This supplement regimen is typically followed for up to 6 months to support joint health.

TYPICAL STARTING DOSE

800 mg

Description

Chondroitin is often used as a supplement to support joint health and reduce the symptoms of osteoarthritis. It may help improve joint mobility and reduce discomfort in individuals with joint-related issues.

Chondroitin is a major component of cartilage. It helps keep cartilage healthy, and it provides the building blocks for the body to produce new cartilage.

People often combine chondroitin with glucosamine as supplements for joint health [\[R\]](#), [\[R\]](#).

How it helps

In a non-placebo-controlled trial of 20 patients with keratoconjunctivitis sicca, topical eye drops with chondroitin sulfate applied for 2 weeks improved the severity of itching, burning, and foreign body sensation. In 2 non-placebo-controlled trials of 148 patients with dry eye disease, applying an ophthalmic solution with chondroitin sulfate (0.1 %) and xanthan gum (0.09 %) 4x/day for 60 days improved OSDI score, TBUT, and Schirmer test scores as effectively as PEG/PG [\[R\]](#), [\[R\]](#).

In 2 non-placebo-controlled trials of 326 patients with dry eye disease, applying eye drops with chondroitin sulfate and sodium hyaluronate for 90 days improved goblet cell density, TBUT, OSDI, and Schirmer test scores as effectively as PEG/PG or PEG/PG-PF. This combination also improved the symptoms, especially in more severe cases, in a non-placebo-controlled trial of 28 patients with keratoconjunctivitis sicca [\[R\]](#), [\[R\]](#).

Chondroitin may act as a lubricant, providing relief from dryness.

23



Avoid Contact With Dust

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

To avoid contact with dust, clean surfaces with a damp cloth at least twice a week, use a vacuum cleaner with a HEPA filter regularly on carpets and upholstery, and avoid using feather dusters that disperse dust into the air. Additionally, consider using air purifiers in rooms where you spend the most time and keep windows closed on windy days to prevent outdoor dust from coming in.

Description

Avoiding exposure to dust can help alleviate allergy symptoms such as sneezing, runny nose, and itchy eyes, promoting respiratory comfort and overall well-being, particularly for individuals with allergies or allergic conditions.

How it helps

A study conducted on humans exposed to airborne non-industrial office dust for three hours in a climate chamber reported a decrease in tear film break-up time and an increase in sensory irritation symptoms such as dry nose and throat irritation, which correlate with dry eye symptoms [\[R\]](#).

Another study aimed to determine if fine dust affects the tear fluid components and conjunctival cells. Fine dust in various environments, such as urban areas or homes with cigarette smoke, suggested that these particles may contribute to dry eye by affecting tear fluid composition and inducing cell damage [\[R\]](#).

24



Dietary Omega-3 Fatty Acids

IMPACT

1 / 5

EVIDENCE

2 / 5

How to implement

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

Description

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

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

Fatty fish are rich in EPA and DHA. They include [\[R\]](#):

- Salmon
- Tuna
- Herring
- Sardines

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

How it helps

Eating a diet rich in [omega-3s](#) may halve the risk of dry eye disease. In contrast, a high dietary omega-6 to omega-3 ratio may increase the risk 2.5 times [\[R\]](#), [\[R\]](#).

Omega-3s may help by reducing inflammation in the eyes and lubricating them [\[R\]](#).

25



Low-Level Laser Therapy (LLLT)

IMPACT1 / 5

EVIDENCE2 / 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) for dry eyes works by stimulating the cells responsible for tear production, promoting recovery and reducing inflammation in the ocular areas. By doing this, LLLT can help improve tear production, alleviate symptoms, and enhance overall eye comfort for those with dry eyes.

A study involving 40 patients showed that low-level light therapy (LLLT) using near-infrared LEDs improved dry eye and meibomian gland dysfunction (MGD) with significant improvements in certain measures, indicating its safety and effectiveness.[\[R\]](#).

In a study of 40 patients with meibomian gland dysfunction (MGD), both low-level light therapy (LLLT) and intense pulsed light (IPL) were safe and improved dry eye symptoms. LLLT showed greater improvement in symptoms and tear volume. [\[R\]](#).

In a 2023 study with 100 participants having meibomian gland dysfunction (MGD) and evaporative dry eye (EDE), combined therapy of intense pulsed light (IPL) and low-level light therapy (LLLT) showed improved OSDI scores and tear breakup time (TBUT) compared to the control group. Repeated sessions had cumulative benefits in treating MGD with EDE [\[R\]](#).

26



Avoid Air Pollution

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

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

Description

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

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

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

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

How it helps

Research indicates that air pollutants like ozone, PM2.5, and PM10 may exacerbate dry eye disease, suggesting that reducing these pollutants may alleviate dry eye symptoms. A study found that reducing exposure to these pollutants may decrease the severity of symptoms, although the mechanisms are not fully understood [\[R\]](#).

27



Pantothenic Acid (Vitamin B5)

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

For adults, take a pantothenic acid (Vitamin B5) supplement of 5 to 10 milligrams daily with water and a meal. This can be continued indefinitely as part of a daily vitamin regimen to support overall health.

TYPICAL STARTING DOSE

5 mg

Description

Vitamin B5, or pantothenic acid, is found in a wide range of foods such as meat, eggs, and whole grains. It is vital for energy metabolism and the synthesis of fatty acids, supporting healthy skin, digestion, and nerve function.

[Vitamin B5](#) (pantothenic acid) is a water-soluble vitamin required for making [\[R\]](#):

- Energy from food
- Cholesterol, sex, and stress hormones
- Hemoglobin
- Neurotransmitters (acetylcholine and melatonin)

Adults should get **5 mg of vitamin B5 per day** [\[R\]](#).

Vitamin B5 deficiency is extremely rare because this vitamin is present in nearly all foods, especially in meat, dairy products, eggs, avocado, sweet potato, and sunflower seeds. However, **pregnant and lactating women may benefit from slightly increased amounts of this vitamin (6-7 mg/day)** [\[R\]](#).

How it helps

Pantothenic Acid (Vitamin B5) helps dry eyes by promoting healthy tear production and aiding in the lubrication of your eyes. This supplement also supports overall eye health by strengthening the corneal layer of the eye, reducing dryness and irritation.

In a non-placebo-controlled trial of 50 patients with dry eyes, applying eye drops with dexpanthenol 5x/day for 6 weeks improved disturbances of corneal epithelium permeability better than conventional eye drops [\[R\]](#).

28



Topical Palmitoylethanolamide (PEA)

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Apply a cream or gel containing palmitoylethanolamide (PEA) to the affected area of your skin 2-3 times daily. Gently massage it into the skin until fully absorbed. Continue this application daily for a period of at least 4-6 weeks to assess its effects on reducing pain and inflammation.

Description

PEA, a fatty acid compound, is used topically for its anti-inflammatory and analgesic effects. It may help relieve skin conditions associated with inflammation and itching.

How it helps

In a study of 30 people with glaucoma, topical PEA (for 30 days) made the tear film on the eyes more stable and reduced eye surface inflammation [R].

29



Cordyceps

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 500-1000 mg of Cordyceps extract in supplement form once daily, preferably with a meal to enhance absorption. This dosage is commonly recommended for general wellness and should be continued on a long-term basis, as effects accumulate over time.

TYPICAL STARTING DOSE

500 mg

Description

Cordyceps is a type of medicinal mushroom known for its potential to boost endurance and enhance respiratory function. It's used in traditional medicine and dietary supplements to support physical performance and overall vitality.

[Cordyceps](#) are a group of fungi (mushrooms) that grow on insects. Some species, like *O. sinensis* and *C. militaris*, are used in supplements [R].

O. sinensis grows on a moth caterpillar. Extracts and teas made from the fungus-caterpillar combination are often used in traditional Chinese medicine. They are thought to boost sex drive, reduce fatigue, and support kidney health [R, R, R].

How it helps

Cordyceps can increase tear production by stimulating the lacrimal glands, helping to combat dry eyes. It also has anti-inflammatory effects that may soothe irritated eyes.

In a [placebo-controlled trial of 70 healthy individuals](#), supplementation with Cordyceps cicadae mycelium powder (1050 mg/day) for 90 days increased **TBUT** and **decreased tear osmolarity (including Na+ and Cl- ions)** [R].

30

Royal Jelly

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a royal jelly supplement daily, starting with a dose of approximately 300 mg to 500 mg. It can be consumed either in capsule form or directly, depending on your preference, for a period ranging from 3 to 6 months to observe the potential health benefits.

TYPICAL STARTING DOSE

300 mg

Description

Royal jelly is a nutrient-rich substance secreted by worker bees to feed bee larvae and the queen bee. Royal jelly contains protein B-vitamins, calcium and iron. It is taken as a supplement for it's potential energy-boosting and immune-supporting properties.

How it helps

Royal jelly contains essential fatty acids that can boost tear production, potentially relieving dry eye symptoms.

In a [placebo-controlled trial of 43 patients with subjective dry eye symptoms](#), taking royal jelly tablets (1200 mg, 6x/day) for 8 weeks **increased tear volume** [\[R\]](#).

31

Uridine

IMPACT

1 / 5

EVIDENCE

1 / 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 a 3-month trial of 27 dry eye patients, oral uridine decreased corneal fluorescein stain scores, increased the Schirmer wetting scores, and reduced the Ocular Surface Disease Index (OSDI) scores at both 1 and 3 months [\[R\]](#).

Uridine may boost natural compounds that protect and moisturize the ocular surface. It can reduce irritation and discomfort associated with dry eyes by promoting tear production.

32



Krill Oil

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

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

TYPICAL STARTING DOSE

1 g

Description

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

How it helps

In a placebo-controlled trial of 54 patients with mild to moderate dry eye disease, supplementation with krill oil (945 mg/day EPA + 510 mg/day DHA) for 90 days reduced tear osmolarity and increased tear stability as effectively as fish oil, and was more effective at improving the Ocular Surface Disease Index and lowering IL-17A levels [R].

Krill oil is rich in omega-3 fatty acids, which may help with dry eyes by contributing to the oil layer's production in tears.

33



Maqui Berry

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a maqui berry supplement in the form of capsules or powder. If you are using powder, mix one teaspoon with water, juice, or into a smoothie, once daily. For capsules, follow the manufacturer's recommended dosage, usually one to two capsules daily with water.

Description

Maqui berries are a rich source of antioxidants and anthocyanins, which may offer potential health benefits, including anti-inflammatory and immune-supporting effects. They are used in dietary supplements and superfood blends to promote overall well-being.

How it helps

In a study of 13 healthy volunteers with moderately dry eyes, supplementation with maqui berry extract (30-60 mg/day for 8 weeks) increased tear volume and decreased the symptoms [R].

34



Lactoferrin

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 100-200 mg of lactoferrin supplement per day, preferably on an empty stomach to enhance its absorption. Continue this regimen daily for 8 to 12 weeks to observe beneficial effects.

TYPICAL STARTING DOSE

100 mg

Description

Lactoferrin is a protein found in milk and other bodily fluids that has been studied for its potential health benefits, including immune system support and antimicrobial properties. It plays a role in promoting gut health.

Lactoferrin is a protein found in milk. It can bind to iron and travel all around the body [R].

Lactoferrin may help support [R, R]:

- Immunity
- Iron status

How it helps

Lactoferrin, a protein found in tears and mother's milk, plays a significant role in maintaining a healthy eye surface by hydrating the eyes and reducing inflammation. By taking Lactoferrin supplements, you can help boost your body's natural defense, improving dry eye condition and potentially preventing it.

In a crossover-design prospective trial with 10 Sjögren's syndrome patients with dry eyes, oral enteric lactoferrin capsules (270 mg/day for 1 month) **improved tear stability and ocular surface epithelium in dry eye** patients [R].

Supplementation effectively mitigated reduced tear production in rats and significantly improved clinical symptoms in confirmed dry eye patients at weeks 4 and 8. No adverse events were reported, suggesting a beneficial effect on both objective and subjective dry eye symptoms [R].

35

Sea Buckthorn Oil

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 500 mg of sea buckthorn oil capsules twice daily with meals for up to 8 weeks. Ensure to check the label for pure sea buckthorn oil without added ingredients.

TYPICAL STARTING DOSE

1000 mg

Description

Sea buckthorn oil is derived from the sea buckthorn plant, a thorny shrub native to Europe and Asia. It is rich in vitamins, caretenoids, antioxidants, and fatty acids, and has been used in traditional medicines for centuries for heart and skin health.

[Sea buckthorn](#) (*Hippophae rhamnoides*) is a berry-filled bush from Europe and Central Asia. It is rich in vitamins, antioxidants, and fatty acids [\[R\]](#), [\[R\]](#), [\[R\]](#).

People have long used sea buckthorn in traditional medicine to prevent aging, promote heart health, and clear the skin.

How it helps

Supplementation with sea buckthorn oil (2 g/day for 3 months) may reduce symptoms such as redness and burning in people with dry eyes [\[R\]](#), [\[R\]](#).

Sea buckthorn is rich in anti-inflammatory omega-3 fatty acids [\[R\]](#).

36

Ginkgo And Hyaluronic Acid Eye Drops

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Instill 1-2 drops of a solution containing ginkgo and hyaluronic acid into each eye, three times a day. Continue this regimen daily for at least three months to observe potential benefits.

TYPICAL STARTING DOSE

1 drop

Description

Ginkgo eye drops, which often contain ginkgo biloba extract, are used to promote eye health and may provide relief from conditions like dry eyes or age-related eye issues. Hyaluronic acid eye drops are used to lubricate the eyes and relieve dryness. They can provide relief for individuals with dry eye syndrome and promote ocular comfort.

How it helps

In a study of 40 people undergoing cataract surgery, applying eyedrops with ginkgo and hyaluronic acid (for 4 weeks) reduced dry eye disease symptoms [\[R\]](#).

37



Drink at Least 8 Glasses of Water a Day

IMPACT

1 / 5

EVIDENCE

1 / 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

Drinking sufficient water may indirectly help with dry eye symptoms by improving overall body hydration, which may influence tear production and ocular health. A study specifically investigating this found that people with dry eyes had higher plasma osmolality, suggesting suboptimal hydration compared to those without dry eyes [\[R\]](#).

38



Topical Green Tea

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

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

Description

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

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

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

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

How it helps

Applying [green tea](#) extract (3x/day for 1 month) may improve dry eye symptoms in people with insufficient oil production (*meibomian gland dysfunction*) according to a single study [\[R\]](#).

Topical green tea may help by reducing inflammation and [oxidative stress](#) [\[R\]](#).

39



Astaxanthin

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

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

TYPICAL STARTING DOSE

12 mg

Description

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

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

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

How it helps

Astaxanthin, a potent antioxidant, can help improve dry eyes by reducing inflammation and protecting your eyes from damage caused by oxidative stress. It enhances tear production and quality, aiding in overall eye moisture and comfort.

A study showed that oral administration of astaxanthin improved symptoms and signs in middle-aged and elderly patients with mild-to-moderate dry eye disease. This was evident through improvements in ocular surface disease index (OSDI) score, non-invasive tear break-up time (NIBUT), and other measures after treatment compared to before treatment [\[R\]](#).

40



Psyllium Eye Drops

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Place 1-2 drops into each eye, three times a day. Blink several times after application to ensure the solution covers the entire surface of the eye. Continue this routine daily for relief of symptoms.

TYPICAL STARTING DOSE

1 drop

Description

Psyllium (*Plantago ovata*) eye drops utilize mucilage from the plant as a lubricant to help moisturize eyes and help with conditions like dry eye disease.

[Psyllium](#) (*Plantago ovata*) is an herb that grows around the world. Its “husk,” the outer coating of the psyllium seed, is full of fiber. The health benefits of psyllium husk are due to this fiber.

People mainly take psyllium husk to improve gut health and heart health.

How it helps

According to a single study, [psyllium](#) eye drops (applied 4x/day for 6 weeks) may improve the symptoms in people with dry eyes [\[R\]](#).

Psyllium eye drops may help by lubricating the eyes and reducing inflammation and oxidative stress [\[R\]](#).

41



Leafy Green Vegetables

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

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

Description

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

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

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

How it helps

A study highlighted the importance of vitamin A in preventing conditions like dry eyes, which is prevalent in areas with vitamin A deficiency. Vegetables may help due to their high content of provitamin A carotenoids, which are essential for maintaining healthy vision and ocular surface integrity. Vegetables that may help include [\[R\]](#):

- Kale
- Radish
- Spinach

42



Evening Primrose Oil

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take 500mg to 1000mg of evening primrose oil, in capsule form, once daily with a meal to ensure optimal absorption. This regimen is typically recommended for several months to evaluate its effectiveness for the specific condition being addressed.

Description

Evening primrose is a plant known for its seeds, which are a source of gamma-linolenic acid (GLA), an essential fatty acid. Some studies suggest that evening primrose oil, derived from these seeds, may help alleviate symptoms of conditions like premenstrual syndrome (PMS) and eczema, as well as support overall skin health.

Evening primrose (*Oenothera biennis*) is a flowering plant. Its name comes from the fact that its flowers close during the day and open when the sun sets [R].

[Evening primrose oil](#) comes from the plant’s seeds. It is rich in omega-6 fatty acids like [GLA](#). People use this oil to help with high triglycerides [R, R].

How it helps

According to a single study, supplementation with [evening primrose oil](#) (providing 50 mg/day GLA for 6 months) may improve eye dryness and lens comfort in contact lens wearers [R].

Evening primrose oil may help by reducing inflammation in the eyes [R].

Please note: *Evening primrose oil may interfere with medications. Check with your doctor before taking evening primrose oil* [R, R].

43



Ginkgo Eye Drops

IMPACT0 / 5

EVIDENCE0 / 5

How to implement

Place 1-2 drops of ginkgo biloba eye drops in each eye, twice daily, preferably in the morning and before bedtime. Continue this regimen daily for at least one month to notice potential benefits.

TYPICAL STARTING DOSE

1 drop

Description

Ginkgo eye drops, which often contain ginkgo biloba extract, are used to promote eye health and may provide relief from conditions like dry eyes or age-related eye issues.

How it helps

In a study of 40 people undergoing cataract surgery, applying eyedrops with ginkgo and hyaluronic acid (for 4 weeks) reduced dry eye disease symptoms [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.

