SelfDecode™

Bulging Eyes

DNA Health Report

REPORT CATEGORY

EYE HEALTH

Sample Client

Report date: 15 January 2026

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Personal information

NAME

Sample Client

SEX AT BIRTH

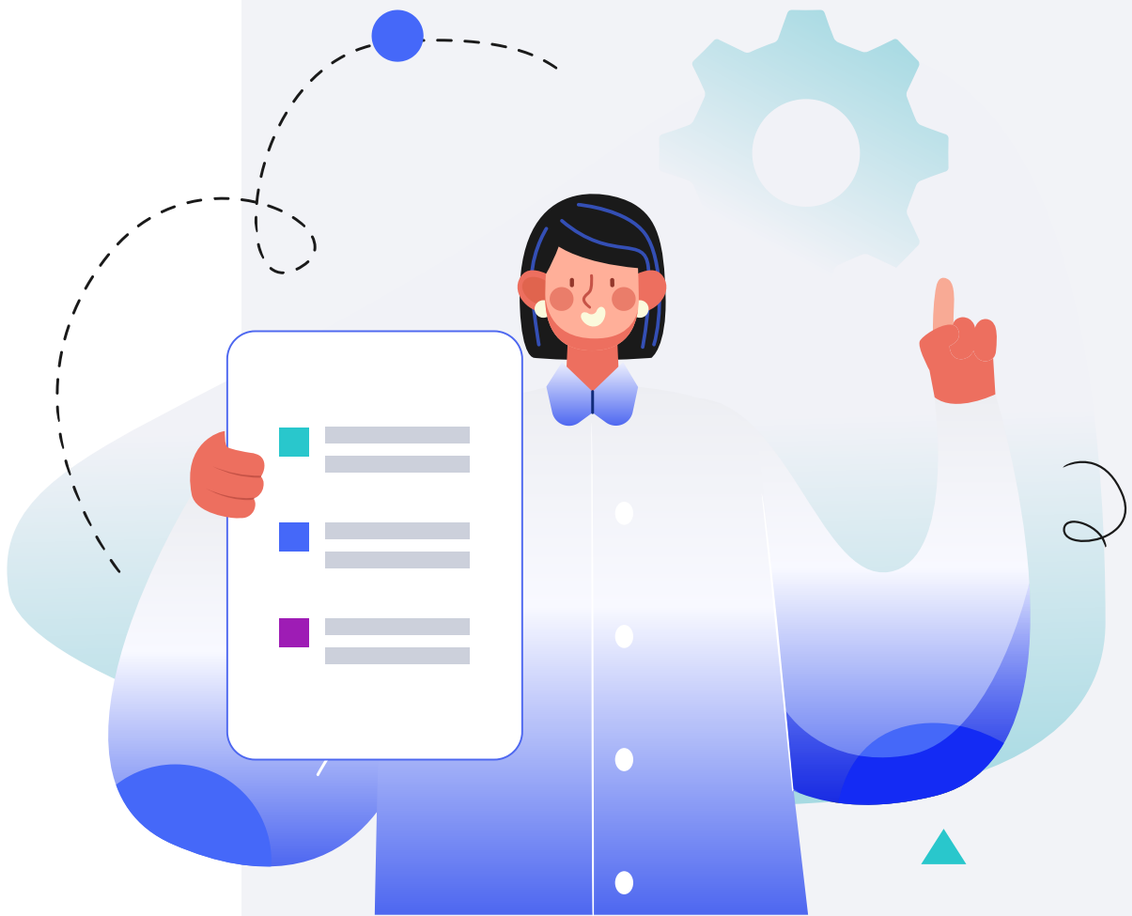
Male

HEIGHT

5ft 5" 165cm

WEIGHT

137lb 62kg

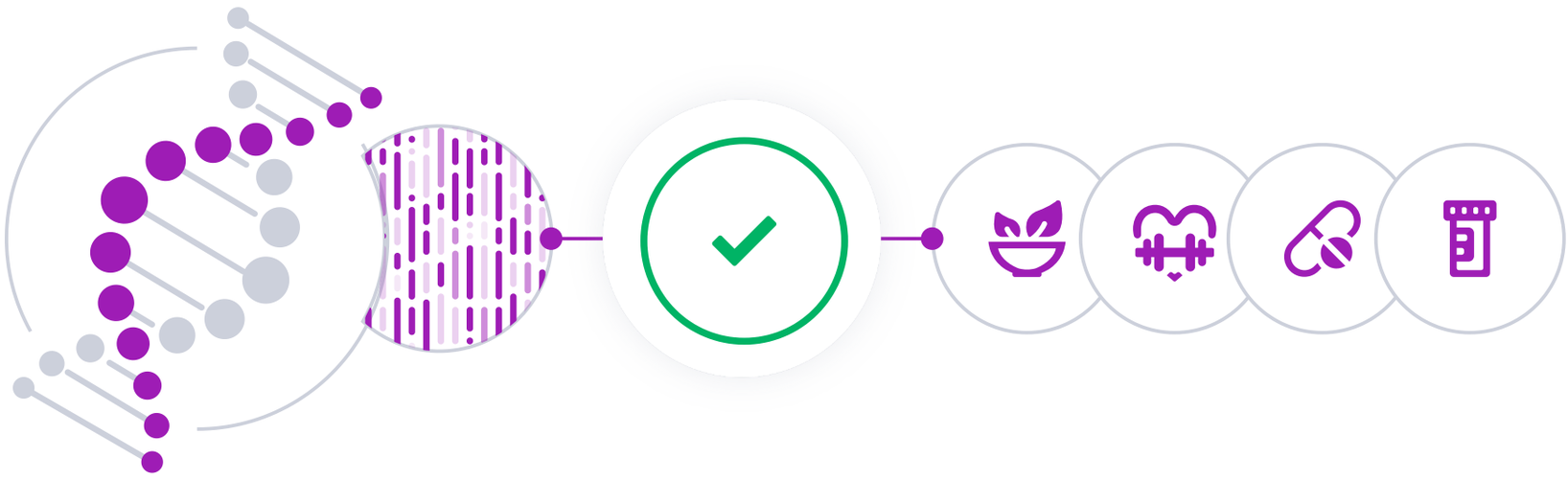


DISCLAIMER

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

How this works

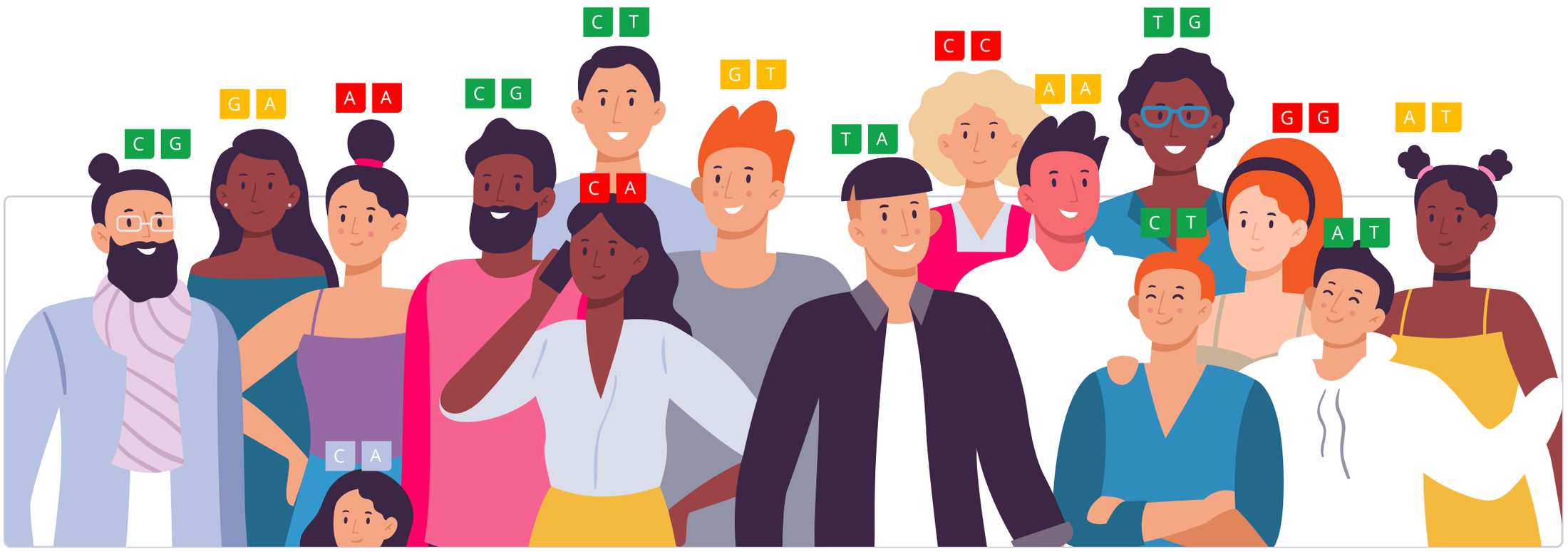
Our Wellness Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.



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

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

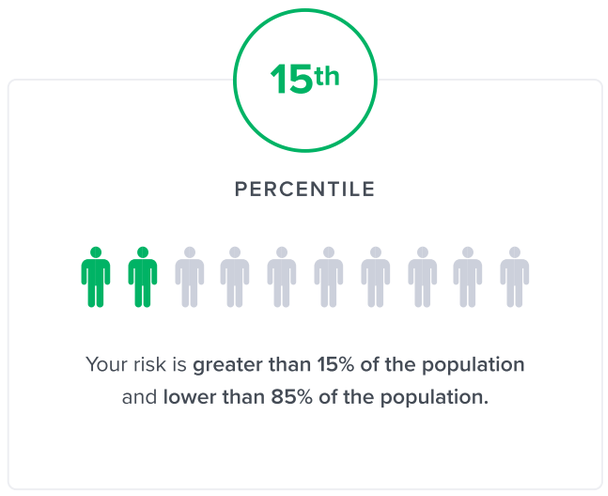
Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.



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

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

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



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

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

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

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

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

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

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

Impact

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

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

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

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

Recommendation Evidence

5 / 5

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

4 / 5

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

3 / 5

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

2 / 5

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

1 / 5

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

0 / 5

No evidence in humans.

Genotype-specific Evidence

High-quality

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

Medium-quality

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

Low-quality

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

Indirect

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

In theory

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

Some things to keep in mind:

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

Introduction

Exophthalmos, also known as proptosis, is a medical condition characterized by a noticeable bulging or protrusion of one or both eyes out of the orbit. This condition can be quite alarming and is often a visible sign indicating an underlying medical issue.

The most common cause of exophthalmos is Graves' disease, an autoimmune disorder that leads to the overactivity of the thyroid gland (hyperthyroidism). The eye protrusion in exophthalmos occurs due to inflammation and swelling of the muscles and tissues around the eyes, which can create pressure and push the eyeball forward.

Symptoms and Management

The symptoms accompanying exophthalmos can include eye discomfort or pain, increased tearing or dryness, difficulty closing the eyes completely, and increased sensitivity to light. As the condition progresses, it may lead to complications such as corneal abrasions due to the inability to close the eyes, or even vision changes and loss due to optic nerve compression.

The management of exophthalmos depends on the underlying cause and the severity of the symptoms, with treatments ranging from corticosteroids to reduce inflammation to surgical options in severe cases to reposition the eyes and relieve pressure.

MORE LIKELY

More likely to have exophthalmos based on 14,451 genetic variants we looked at

81st

PERCENTILE

Your risk is **greater than 81% of the population** and **lower than 19% of the population.**

Your Recommendations

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

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

		DOSAGE
1	Thyroid Extract	
2	Balance Iodine Intake	
3	Low-Goitrogenic Diet	
4	Heated Eye Mask	10 minutes
5	Hyaluronic Acid Eye Drops	1 drop
6	Maintain Eye Moisture	
7	Iodine	150 mcg
8	Guar Gum Eye Drops	1 drop
9	Artificial Tears	1 drop
10	Selenium Supplements	50 mcg

1

Thyroid Extract

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Thyroid extract, a drug prescribed for hypothyroidism, is typically taken orally once daily, preferably on an empty stomach, 30 minutes to 1 hour before breakfast. Your healthcare provider will determine the exact dosage based on your condition and response to treatment. It's important to take this medication consistently at the same time each day.

Description

hyroid extract is a medication derived from the thyroid glands of animals, primarily used to treat thyroid hormone deficiencies. It provides essential thyroid hormones like T3 and T4, helping regulate metabolism, energy production, and overall body function.

How it helps

Using thyroid extract can help restore normal thyroid hormone levels, which is crucial in managing hyperthyroidism-related conditions that lead to bulging eyes. By optimizing thyroid function, it alleviates symptoms and prevents further ocular complications.

2

Balance Iodine Intake

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

To balance iodine intake, consume foods rich in iodine such as fish, dairy, and eggs, aiming for about 150 micrograms per day for adults. Consider using iodized salt in cooking, but be mindful not to exceed the daily limit. Regularly assess iodine levels, especially if you are pregnant, lactating, or have thyroid issues.

Description

Iodine intake is essential for thyroid function and is obtained through iodized salt and foods like seafood and dairy products. Balanced iodine intake is necessary to prevent thyroid disorders.

Iodine is an element that helps make thyroid hormones. It's important for [R, R, R, R]:

- Thyroid function
- Healthy pregnancy
- Cognitive function

Iodine can be found in foods like [R]:

- Seaweed
- Enriched bread
- Fish (cod)
- Dairy
- Iodized salt

Adults should be getting **150 micrograms** of iodine per day. People who are deficient can take iodine as a supplement. However, most people in the US and other developed countries don't need to take extra iodine. Excess iodine can be harmful [R, R].

How it helps

Maintaining balanced iodine intake supports optimal thyroid function, which is crucial for regulating hormonal levels that can influence the development of bulging eyes. Ensuring sufficient iodine helps prevent thyroid disorders, thereby alleviating symptoms associated with this condition.

3

Low-Goitrogenic Diet

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Consume fewer goitrogenic foods, such as broccoli, Brussels sprouts, cabbage, and cauliflower, particularly in their raw form. If these are to be included in your diet, prefer cooking them as it reduces their goitrogenic effect. Aim for a balanced intake of non-goitrogenic fruits and vegetables daily.

Description

A low-goitrogenic diet may be recommended for individuals with thyroid conditions to minimize the impact of goitrogens on thyroid function, supporting better thyroid health and hormone regulation.

How it helps

A low-goitrogenic diet helps manage bulging eyes by supporting optimal thyroid function, as it reduces the intake of substances that can inhibit thyroid hormone production. Improved thyroid health directly contributes to the regulation of eye-related symptoms in hyperthyroid conditions.

4

Heated Eye Mask

IMPACT 1 / 5

EVIDENCE 1 / 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

Using a heated eye mask can promote increased blood circulation and relaxation of the orbital muscles, which may help reduce discomfort and swelling associated with bulging eyes. This soothing therapy can also alleviate dryness and irritation, enhancing overall eye comfort.

5

Hyaluronic Acid Eye Drops

IMPACT 1 / 5

EVIDENCE 1 / 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 enhance ocular lubrication, providing crucial moisture that alleviates dryness and discomfort in bulging eyes. This added lubrication supports overall eye health and comfort, reducing symptoms associated with dryness and eye strain.

6

Maintain Eye Moisture

IMPACT 1 / 5

EVIDENCE 1 / 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

Maintaining eye moisture through lubricating drops alleviates discomfort associated with bulging eyes by countering inflammation and preventing dry eye syndrome. This practice promotes ocular comfort, enhances visual clarity, and reduces irritation risk.

7 Iodine

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take a 150 mcg iodine supplement daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

150 mcg

Description

Iodine is an essential mineral necessary for thyroid function and overall metabolic health. Ensuring adequate iodine intake through diet or supplementation can help prevent thyroid disorders and promote overall well-being.

Adults should be getting **150 micrograms** of iodine per day. People who are deficient can take iodine as a supplement. However, most people in the US and other developed countries don't need to take extra iodine.

Please note: *Iodine supplementation can be harmful and may make hypothyroidism (underactive thyroid) worse. Supplement only if deficient and instructed by your doctor.*

How it helps

Supplementing with iodine supports optimal thyroid function, which is crucial in managing Graves' disease, the primary cause of bulging eyes. Adequate iodine levels can help regulate hormone production and alleviate symptoms associated with this condition.

8 Guar Gum Eye Drops

IMPACT 1 / 5

EVIDENCE 1 / 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

Guar gum eye drops enhance ocular comfort by providing long-lasting lubrication, which is particularly beneficial for individuals with bulging eyes who often experience dryness and irritation. This increased moisture retention helps alleviate discomfort and supports overall eye health.

9

Artificial Tears

IMPACT 1 / 5

EVIDENCE 1 / 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 [R].

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

How it helps

Artificial tears provide essential lubrication to the ocular surface, helping to alleviate discomfort caused by dryness in bulging eyes. This moisture retention is crucial in reducing irritation and maintaining overall eye health in affected individuals.

10

Selenium Supplements

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

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

TYPICAL STARTING DOSE

50 mcg

Description

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

Selenium supports [R]:

- Reproduction
- Thyroid function
- DNA production
- Immune response

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

How it helps

Selenium supplements have been found to help people with mild Graves' orbitopathy, a condition leading to exophthalmos. Selenium is an antioxidant that can reduce inflammation and improve quality of life, eye appearance, and eye health in affected patients.

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.

T4 Free (FT4)	1.26 ng/dL	0.8 – 1.6	9 Nov 2025
TSH	2.76 mcIU/mL	0.4 – 1.5 – 2.5 – 4.5	9 Nov 2025
T3, Free (FT3)	3.34 pg/mL	2.3 – 3 – 4.7	9 Nov 2025