

Nearsightedness

DNA Health Report

REPORT CATEGORY —



Sample Client

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DISCLAIMER

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

Personal information

NAME

Sample Client

SEX AT BIRTH

Male

HEIGHT

5ft 5" 165cm

WEIGHT

137lb 62kg



How this works

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



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



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

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



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

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

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



Genotype color info:

AA

You don't have any risk alleles

AA

You have 1 risk allele

AA

You have 2 risk alleles

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

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

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

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



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

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



Impact

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

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

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

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

Recommendation Evidence

- 5 / 5
- Recommendations that are considered effective and generally recommended by experts and medical bodies.
-
- 4 / 5
- Recommendations that are considered likely effective and that have multiple independent meta-analyses and a great many studies supporting them.
-
- 3 / 5
- Recommendations that are considered possibly effective and have many studies supporting them
-
- 2 / 5
- Recommendations that have insufficient evidence, with two or several clinical trials supporting them, or many studies but with ambiguous results.
-
- 1 / 5
- Recommendations that have insufficient evidence, with a single clinical trial, or with many studies most of which didn't find support for the recommendation.
-
- 0 / 5
- No evidence in humans.

Genotype-specific Evidence

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

Some things to keep in mind:

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

Introduction

It’s a bird, it’s a plane, it’s... ***Squinting*** too blurry to make out.

Doesn’t have quite the same ring to it, right? Unfortunately, we aren’t all blessed with supervision. A lot of us have **myopia**, the medical term for being **nearsighted**.

Your eyes go through several growth spurts until you’re in your late 20s [R]. Nearsightedness occurs when your eyeballs grow slightly too long or too curved [R].

There are a few factors that can influence the development of your eye. For example, people may be less likely to develop myopia if they spend a lot of time outside, especially in childhood. Bright light may help stimulate eye cells and adjust the shape of the eye [R, R].

Of course, if you already have myopia, you’ll need to wear corrective lenses or undergo laser eye surgery if you want to see distant objects more clearly. But, how else can you protect your super eyesight?

The answer may lie in your genetic sidekick!

People with a particular variant of the **DRD1** gene are more likely to be nearsighted. This gene supports the beneficial effects of light on vision. By taking guidance from this genetic variant, you can make sure to get enough outdoor light, and hopefully boost your vision [R, R].

Don’t let nearsightedness be your kryptonite.

Read on to find out more about:

- **How your genetics play a role in nearsightedness**
- **Your genetic risk score based on over one million genetic variants**
- **Personalized recommendations based on your genetics**

About Nearsightedness

Key Takeaways:

- Up to **90%** of differences in people's chances of being nearsighted may be due to genetics.
- Risk factors include not being outside enough and your genetics.
- If you are at high genetic risk and young, you may benefit from spending more time outdoors.
- If you are nearsighted, seek an eyecare professional for treatment.
- About **42%** of Americans are nearsighted today.
- Click the **Recommendations** tab for potential lifestyle changes.

Myopia is the scientific term for being nearsighted. This is an inability to see far-off objects clearly [R](#), [R](#), [R](#)].

It's usually caused by a stretched eyeball or a steep curve in the surface of the eye [R](#), [R](#)].

About 42% of Americans are nearsighted today, up from 25% in 1971 [R](#)!

Most people who are nearsighted know it. They will report symptoms like [R](#):

- Blurry vision when trying to see at a distance
- Squinting
- Headaches due to eye strain
- Difficulty driving at night

Nearsightedness tends to be diagnosed in childhood or adolescence. Nearsighted children may blink more often, rub at their eyes, and sit closer to teachers or TV screens [R](#)].

People with myopia will need glasses or contacts to see distant objects. Prescription eye drops or surgery may also be options [R](#)].

Myopia may progress to eye conditions linked to vision loss [R](#)].



TYPICAL LIKELIHOOD

Typical likelihood of nearsightedness based on **1,084,332 genetic variants we looked at**

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
L3MBTL3	rs12193446	AA
ZMAT4	rs72644322	AA
PRSS56	rs1550094	GG
SLC14A2	rs12455102	AA
PIK3C3	rs10502769	GG
PCCA	rs1347190	GG
GJD2	rs524952	TA
PRKG2	rs2166181	GG
TOX	rs72621438	GC
KCNA4	rs34335372	INS(A)G
SUPT4H1	rs11658873	GC
TSPAN10	rs7405453	AG
BICC1	rs67362351	CA
CD1A	rs34536198	GA
WNT7B	rs73175081	GA
LRRC4C	rs11602008	AA
GNB3	rs5442	GG
RDH5	rs56108400	TT
RBFOX1	rs7184522	AA
COL10A1	rs2228547	CC
NRIP1	rs17274750	AA
KCNMA1	rs12358397	AA
EFEMP1	rs11899888	AA
RASGRF1	rs3851677	CC
FRMPD2	rs1367023	GG
MYO1D	rs2346037	AA
CD55	rs28738985	INS(AA)INS(AA)
ACAA2	rs12965607	TT
PDE11A	rs2217839	CC
VIPR2	rs62485858	GG
TCP11L2	rs17218455	CC
NFIA	rs6650097	GG

Risk factors for nearsightedness include [R](#):

- Not enough time spent outdoors
- **Genetics**

Up to 90% of differences in people's chances of developing nearsightedness may be attributed to genetics. Genes involved in nearsightedness may influence [R](#), [R](#), [R](#):

- Eye function ([GJD2](#), [RASGRF1](#))
- Eyeball shape ([LAMA2](#), [RBP3](#), [PDGFRA](#), [MTOR](#))

GENE	SNP	GENOTYPE
ZC3H11B	rs12028838	GG
GRIA4	rs12363110	CC
GRIN2B	rs35028277	TT
/	rs9602629	GG
CTNNB1	rs6781242	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	Spend Time in Nature	2 hours	2	Reduce Eye Strain	
3	Bilberry Extract		4	Choose Healthy Fats	
5	Reduce Mobile Phone Use	2 hours	6	Vitamin A	700 mcg
7	Blue-Blocking Glasses		8	Lutein	
9	Reduce Artificial Light at Night		10	Avoid Contact Lenses	
11	Maintain Eye Moisture		12	Sleep for 7+ Hours	
13	Dietary Vitamin A		14	Artificial Tears	1 drop

1



Spend Time in Nature

IMPACT

4 / 5

EVIDENCE

5 / 5

How to implement

Aim to spend at least 120 minutes per week in natural environments, such as parks, forests, or beaches. This can be divided into short durations throughout the week, for example, 17 minutes per day or longer sessions on weekends.

TYPICAL STARTING DOSE

2 hours

Description

Spending time in nature, also known as ecotherapy or forest bathing, is a wellness practice that involves immersing oneself in natural environments. It offers mental and physical health benefits, including reduced stress, improved mood and eye health, healthier weight, and blood sugar control.

Spending over 2 hours in nature every week is linked to better health and well-being [R].

Spending more time in nature or in urban green areas may help support [R, R, R, R, R]:

- Healthy weight
- Blood sugar control
- Heart health
- Mental health
- Eye health

To get in touch with nature, you can [R, R]:

- Go on a walk
- Go biking or camping
- Garden
- Visit a park

How it helps

Experts agree that spending less time outdoors may increase the risk of nearsightedness [R, R].

Lower vitamin D levels are also associated with the condition. Sunlight is our main source of vitamin D, so low levels of this vitamin may imply less time spent outdoors [R, R].

Spending more time outdoors is linked to a reduced risk of nearsightedness. However, its effects on the progression of the condition are mixed [R, R, R, R, R, R, R, R, R, R].

Spending time outdoors may help by supporting a normal eyeball shape [R].



PERSONALIZED TO YOUR GENES

People with your [DRD1](#) gene variant are more likely to be nearsighted. This gene supports the beneficial effects of light on vision. Make sure to get enough outdoor light by spending more time in nature [\[R\]](#), [\[R\]](#).
People with your [MMS22L](#) gene variant tend to spend less time outdoors [\[R\]](#). Try spending more time in nature to improve your eye health.

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
DRD1	rs7449443	TT	
GENE	SNP	GENOTYPE	EVIDENCE
/	rs6906737	TA	

2



Reduce Eye Strain

IMPACT3 / 5

EVIDENCE4 / 5

How to implement

Every 20 minutes, take a 20-second break to look at something 20 feet away. Adjust the brightness and contrast of your screen to be in harmony with your surrounding lighting. Make sure your computer screen is about an arm's length away and the top of the screen is at or slightly below eye level.

Description

Reducing eye strain (tired eyes) involves taking regular breaks from screens, using proper lighting, and maintaining good screen ergonomics. These practices can help prevent digital eye strain, which can cause discomfort and blurry vision.

Eye strain is a term for tired eyes. The eyes can become strained after intense use or overuse. Some typical causes include [\[R\]](#), [\[R\]](#):

- Prolonged driving, reading, or screen time
- Detail work (e.g., sewing, writing)
- Completing tasks in poor lighting

How it helps

Continuous (more than 30-45 minutes long) **near** (less than 8-12 inches/20-30 cm away) work may be linked to nearsightedness. One example is reading [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

In line with this, the use of **smartphones and other devices** may also be linked to nearsightedness. However, some studies didn’t find a link between nearsightedness and total screen time [\[R\]](#), [\[R\]](#), [\[R\]](#).

Experts recommend limiting eye strain by [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Taking breaks from near work often
- Reading or looking at screens from an appropriate distance
- Looking away from near work for 20 seconds, every 20 minutes, at something 20 feet away (the “20-20-20” rule)
- Working under bright light

 PERSONALIZED TO YOUR GENES

Your **SHISA6** gene variant is linked to nearsightedness. It may have a stronger effect on people who read or write a lot [\[R\]](#), [\[R\]](#). Take special care to reduce eye strain caused by near work, such as reading.

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
SHISA6	rs2969180	GA	

3



Bilberry Extract

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take 160mg of bilberry extract twice daily with water, preferably with meals. Continue this regimen for at least 3 months to observe potential benefits.

Description

Bilberry extract is a concentrated form of bilberry, containing higher levels of its beneficial compounds. It's used in supplements and herbal remedies for its potential to promote eye health and circulation.

[Bilberry](#) (*Vaccinium myrtillus*) is a bush native to parts of Europe, Asia, and North America. Its fruit looks like the blueberry, which is likely why it is sometimes called the European blueberry. However, it is higher in antioxidants and has darker flesh than blueberries [\[R, R, R\]](#).

People use bilberries to support eye and blood vessel health [\[R, R\]](#).

How it helps

Bilberry extract (100-400 mg/day) may improve nearsightedness and slow its progression [\[R, R\]](#).

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

Please note: *Bilberries may interact with some medications. It may be unsafe to consume high doses of bilberry leaves or to consume them for an extended time. Talk to your doctor before taking bilberries in any form* [\[R\]](#).

 PERSONALIZED TO YOUR GENES

Your [HGF](#) gene variant may be linked to myopia. This gene plays a role in antioxidant protection. Bilberries may help by reducing oxidative stress [\[R, R, R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
HGF	rs3735520	GA	

4



Choose Healthy Fats

IMPACT1 / 5

EVIDENCE2 / 5

How to implement

Incorporate sources of unsaturated fats such as olive oil, avocados, nuts, seeds, and fatty fish into your daily diet. Aim for at least two servings of fatty fish per week and use olive oil for cooking and salad dressings. Replace saturated fats found in red meat, butter, and processed foods with these healthier options whenever possible.

Description

Choosing healthy fats, such as those found in avocados, nuts, and fatty fish, can support cardiovascular health, reduce inflammation, and promote overall well-being. A diet balanced in healthy fats can help manage cholesterol levels and reduce the risk of heart disease.

Based on their structure, the fats in our diet can be broadly divided into *saturated* and *unsaturated* fat. Trans fat is a type of unsaturated fat [\[R, R, R\]](#).

In large amounts, trans fat and saturated fat may have a negative impact on your heart and reproductive health. Processed foods and animal products like red meat and dairy are rich in these fats [\[R, R, R, R, R\]](#).

Some types of unsaturated fat can protect your heart and support fertility. **Experts say you should add more unsaturated fats to your diet.** Some good sources include [\[R, R, R\]](#):

- Nuts
- Seeds
- Fish

Unsaturated fats include polyunsaturated fats or PUFAs (omega-3 and omega-6) and monounsaturated fats or MUFAs [\[R, R\]](#).

How it helps

Eating a lot of foods rich in saturated fat and cholesterol may worsen eyeball shape [\[R\]](#).

On the other hand, getting more omega-3s from foods or supplements may support eye health. Omega-3s may increase blood flow to parts of the eye and support recovery after eye surgery [\[R, R, R, R\]](#).

Please note: *Omega-3s can interact with blood thinners (like aspirin, Plavix, Coumadin). Consult your doctor before taking omega-3s* [\[R\]](#).

5



Reduce Mobile Phone Use

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Limit your mobile phone use to less than 2 hours per day for non-work-related activities. Avoid using your phone during meal times and at least 1 hour before bedtime to improve sleep quality and reduce eye strain.

TYPICAL STARTING DOSE

2 hours

Description

Reducing mobile phone use involves limiting the time spent on smartphones and other electronic devices, which can help alleviate digital eye strain, improve sleep quality, and reduce the potential for distraction-related accidents.

Mobile devices like smartphones and tablets have become indispensable for:

- Communication
- Information searching
- Video gaming
- Social media participation

However, their excessive use may increase the risk of health conditions, such as [\[R\]](#), [\[R\]](#):

- Neck problems
- Carpal tunnel syndrome
- Sleep problems
- Mood disorders

How it helps

Reducing mobile phone use helps decrease digital eye strain by minimizing prolonged exposure to screens, thereby reducing discomfort and fatigue in the eyes. This can lead to improved visual comfort and potentially mitigate the progression of nearsightedness.

6



Vitamin A

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take a vitamin A supplement daily with a fat-containing meal to enhance absorption. The recommended daily allowance (RDA) for most adults is 700-900 micrograms (mcg) for men and women, respectively. Ensure not to exceed the upper intake level (UL) of 3000 mcg per day to avoid toxicity.

TYPICAL STARTING DOSE

700 mcg

Description

Vitamin A is a fat-soluble vitamin essential for various bodily functions, including vision, immune system support, and skin health. It is found in foods like carrots, sweet potatoes, and spinach and is important for maintaining overall health.

Vitamin A is a nutrient important for [\[R\]](#), [\[R\]](#):

- Vision
- Immunity
- Gut health
- Skin health

Foods rich in vitamin A include [\[R\]](#):

- Beef liver
- Sweet potato
- Spinach
- Carrots
- Cheese

Vitamin A is also available in supplement form.

Women should be getting 700 micrograms of vitamin A per day, while men should be getting 900 micrograms [\[R\]](#).

How it helps

Vitamin A plays a critical role in the formation of rhodopsin, a pigment essential for vision in low light, thereby improving retinal function. Supplementing with Vitamin A may enhance visual clarity and support eye health in individuals with nearsightedness.

7



Blue-Blocking Glasses

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Wear blue-blocking glasses starting two to three hours before bedtime every night to help improve sleep quality by reducing blue light exposure from screens and indoor lighting.

Description

Blue-blocking sunglasses help reduce exposure to blue light emitted by screens and artificial lighting, potentially improving sleep quality and reducing eye strain. Wearing them in the evening can promote better circadian rhythm regulation and overall eye comfort.

How it helps

Blue-blocking glasses mitigate the harmful effects of blue light from screens, which can exacerbate eye strain in individuals with nearsightedness. By reducing glare and improving visual comfort, these glasses enhance overall eye health and support better focus.

8



Lutein

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Increase your intake of lutein by eating more dark, leafy greens such as spinach and kale, as well as other foods like corn, peas, and egg yolks. Aim to include these in your daily diet, consuming at least one serving of lutein-rich foods per meal. It can also be taken as a supplement.

Description

Lutein is an antioxidant pigment found in the eye, and may support eye health. It is commonly found in leafy green vegetables.

Lutein is an antioxidant pigment found in the eye. Many plants contain lutein, including [\[R\]](#), [\[R\]](#):

- Leafy greens (kale, spinach, leeks, lettuce)
- Cantaloupe
- Corn
- Peas
- Peppers
- Herbs (basil, parsley)

Lutein may help support eye health [\[R\]](#), [\[R\]](#).

How it helps

High blood levels of lutein are linked to a reduced risk of nearsightedness [\[R\]](#).

However, supplementing with lutein may not improve the condition. Thus, it may be best to eat foods rich in lutein [\[R\]](#), [\[R\]](#).

Lutein may support eye health by [\[R\]](#):

- Regulating the immune response
- Decreasing oxidative stress and inflammation

 PERSONALIZED TO YOUR GENES

Your **HGF** gene variant may be linked to myopia. This gene plays a role in antioxidant protection. Lutein may help by reducing oxidative stress [\[R\]](#), [\[R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
HGF	rs3735520	GA	

9



Reduce Artificial Light at Night

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Starting at least two hours before your usual bedtime, avoid using electronic devices such as smartphones, tablets, and computers. Also, consider using dim red lights for night lights, as red light has the least power to shift circadian rhythm and suppress melatonin. Try to make your sleeping environment as dark as possible by using blackout curtains or a sleep mask.

Description

Reducing artificial light exposure at night involves minimizing exposure to artificial lighting sources, which can disrupt circadian rhythms and sleep patterns. Doing so supports better sleep quality and overall well-being.

[Sunlight](#) or bright light during the day can benefit your body and mind. It may improve your mood, performance, and sleep quality [\[R, R, R\]](#).

However, **exposure to artificial light at night**, for example through the use of phones, tablets, and computers may be harmful [\[R, R, R\]](#).

It may reduce [melatonin](#) production and throw off your [circadian rhythm](#). People with high exposure to artificial light at night like night-shift workers may have an increased risk of [\[R, R, R\]](#):

- Mood disorders (e.g., depression)
- Sleep problems
- Obesity
- Diabetes
- Cancer

How it helps

Reducing artificial light exposure at night may help alleviate eye strain and fatigue, which can exacerbate nearsightedness. Improved sleep quality from minimizing light distractions can further enhance visual acuity and overall eye health.

10



Avoid Contact Lenses

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Switch to using glasses for your vision correction needs. If you must use contact lenses, such as for specific activities where glasses are not feasible, limit their use to those occasions only. Prioritize wearing glasses on a daily basis.

Description

Avoiding the use or extended use of contact lenses can reduce the risk of eye infections and improve ocular comfort by allowing the eyes to breathe and maintain their natural tear film.

Contact lenses are **small, artificial devices placed on the front surface of the eye**. They were first proposed in the **1500s** by Leonardo da Vinci and became popular in the **1940s** [\[R\]](#).

There are **different types of contact lenses** based on their [\[R\]](#):

- Material (soft, hard, rigid gas permeable)
- Wear time (daily, extended, disposable)
- Water content (low, medium, high)
- Design (single or lenticular cut)

People mainly use contact lenses to help **correct vision problems** [\[R\]](#).

How it helps

Avoiding contact lenses in individuals with nearsightedness can minimize the risk of ocular infections and enhance comfort by promoting natural tear film stability and allowing better oxygen permeability to the cornea.

11



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 is crucial for nearsighted individuals as it alleviates dryness-related discomfort and enhances visual clarity. Proper lubrication helps prevent irritation, ensuring optimal eye health and comfort during activities that require sharp vision.

12



Sleep for 7+ Hours

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Ensure you allocate enough time in your schedule to achieve a minimum of 7 hours of sleep each night. This might involve going to bed earlier or adjusting your evening routine to promote relaxation and make it easier to fall asleep.

Description

Optimizing sleep involves adopting healthy sleep habits and creating a sleep-conducive environment to ensure restorative and sufficient sleep duration. It supports cognitive function, mood stability, and overall physical health. Most experts recommend getting **at least 7 hours of good-quality sleep each night**.

[Sleep](#) supports your body and mind [\[R\]](#) [\[R\]](#). More precisely, sleep helps:

- Support brain health [\[R\]](#) [\[R\]](#)
- Maintain a healthy weight and appetite [\[R\]](#) [\[R\]](#) [\[R\]](#)
- Regulate blood pressure [\[R\]](#) [\[R\]](#)
- Balance blood sugar [\[R\]](#) [\[R\]](#)

Ways to sleep better include [\[R\]](#):

- Reducing your bright light exposure (screen time) in the evenings
- Sticking to a regular sleep schedule
- Avoiding hunger or large meals before bed
- Avoiding nicotine, caffeine, and alcohol before bed
- Maintaining a sleep area that’s cool, dark, and quiet

How it helps

Ensuring 7+ hours of sleep enhances the body's restorative processes, which can help reduce eye strain and support optimal eye health. Quality sleep is crucial for maintaining visual clarity and may prevent the progression of nearsightedness by allowing the eyes to recover and adapt.

13



Dietary Vitamin A

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Include foods high in vitamin A in your daily diet, such as sweet potatoes, carrots, spinach, and fortified foods like milk. Aim for 700-900 micrograms (mcg) of vitamin A per day for adults, depending on your age and sex, with a slightly higher intake recommended for women who are pregnant or breastfeeding.

Description

Vitamin A is essential for maintaining healthy vision, immune function, and skin integrity. It also plays a role in cell differentiation and growth, supporting various bodily functions.

How it helps

Incorporating dietary Vitamin A may support visual health by contributing to the maintenance of photoreceptor cells in the retina, potentially aiding individuals with nearsightedness in optimizing their overall visual function.

14



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. 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

Artificial tears help alleviate dryness and improve lubrication in the eyes, enhancing visual clarity for individuals with nearsightedness. By maintaining optimal moisture levels, they reduce discomfort and support better overall eye health.