

Dark Eye Circles

DNA Health Report

REPORT CATEGORY —



SKIN & BEAUTY

Sample Client

Report date: 15 January 2026

Powered by

 omicsedge

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

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

Dark eye circles are a common condition characterized by a noticeable discoloration beneath the eyes, often bearing a bluish or brownish tinge. They are sometimes referred to as 'dark circles under the eyes' or 'periorbital dark circles.' While they can affect anyone, certain factors such as fatigue, age, and dehydration can exacerbate the appearance of these circles.

The skin around the eyes is exceptionally delicate and thin, making the blood vessels beneath more visible, thus contributing to the darker hue. Additionally, heredity can play a role, with dark eye circles sometimes running in families.

Causes and Management

Besides aesthetic concerns, dark eye circles can also be a signal of underlying health issues, although in most cases, they are not a cause for alarm. Allergies, eczema, anemia, or medications that cause blood vessels to dilate can also lead to darkening of the under-eye area.

Environmental exposure such as sun damage can increase melanin production and aggravate the condition. Treatments range from home remedies, such as the application of cold compresses to reduce swelling and constrict blood vessels, to medical treatments like topical creams containing Vitamin C or K, retinoids, or procedures including chemical peels, laser therapy, and fillers when shadows are due to volume loss.



TYPICAL LIKELIHOOD

Typical likelihood of dark eye circles based on 2 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
VEGFA	rs699947	AC
VEGFA	rs3025039	CC

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	Microneedling	2	Vitamin A700 mcg
3	Sleep for 7+ Hours	4	Vitamin K90 mcg
5	Vitamin C2000 mg	6	Topical Vitamin C
7	Topical Hyaluronic Acid	8	Tea
9	Topical Caffeine	10	Berries
11	Topical Retinol		

1



Microneedling

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

To implement microneedling as a lifestyle recommendation for skin rejuvenation or scar treatment, use a dermaroller or microneedling device with needles of 0.2 to 1.0 mm in length, depending on the treatment area and sensitivity of your skin. Gently roll the device over the target area in a criss-cross pattern, ensuring to cover all desired areas, typically once every 2 to 4 weeks. Cleanse the skin and device before and after each use to prevent infection.

Description

Microneedling is a minimally invasive procedure that uses tiny needles to create tiny punctures in the skin. This can help to stimulate collagen production, improve skin texture, and reduce the appearance of scars.

How it helps

In a split-face clinical trial on 30 volunteers, fractional CO2 laser and microneedling with topical TA showed significant improvement in infraorbital hyperpigmentation with no significant difference between the two methods in efficacy or patient satisfaction. Adverse effects were temporary and comparable except for longer-lasting erythema with microneedling [\[R\]](#).

A randomized clinical trial on women with infra-orbital dark circles found fractional CO2 laser combined with micro-needling and topical TCA cream yielded higher satisfaction and better efficacy compared to micro-needling with TCA cream alone [\[R\]](#).

2



Vitamin A

IMPACT

0 / 5

EVIDENCE

0 / 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 (retinol) can rejuvenate the skin by encouraging cell turnover and collagen production, which may help in reducing the appearance of dark circles under the eyes by thickening the under-eye skin and lessening the visibility of dark blood vessels beneath.

3



Sleep for 7+ Hours

IMPACT

0 / 5

EVIDENCE

0 / 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

Lack of sleep can contribute to dark circles under the eyes. Getting at least 7 hours of sleep a night can help reduce their appearance by allowing the body sufficient rest and recovery time, thus improving overall skin health and reducing puffiness.

4



Vitamin K

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take a vitamin K supplement of around 90-120 micrograms daily with a meal that contains fat for optimal absorption. This dosage is appropriate for adult maintenance of health and should be adjusted based on individual healthcare provider advice.

TYPICAL STARTING DOSE

90 mcg

Description

Vitamin K encompasses two main forms: vitamin K1 (phylloquinone) and vitamin K2 (menaquinone). Vitamin K1 is primarily found in leafy green vegetables and plays a crucial role in blood clotting. Vitamin K2, sourced from animal products and fermented foods, is known for its potential to promote bone health and cardiovascular wellness.

Vitamin K is essential for blood clotting and bone formation [\[R\]](#).

Good sources of vitamin K include [\[R\]](#), [\[R\]](#):

- Green leafy vegetables, such as kale, spinach, and collards
- Soy products, such as natto, roasted soybeans, and edamame
- Carrot juice
- Pumpkin

Healthy adults should get **120 micrograms** of vitamin K per day [\[R\]](#).

How it helps

Vitamin K helps in reducing dark circles under the eyes by aiding in the process of blood clotting and circulation. This can help to decrease the visibility of blood vessels under the thin skin of the eye area, which can reduce the appearance of darkness.

5



Vitamin C

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take 500-2000 mg of vitamin C supplement daily. It can be taken at any time of the day, with or without food, according to personal preference or tolerance.

TYPICAL STARTING DOSE

2000 mg

Description

[Vitamin C](#) is an essential nutrient. This means that our bodies can’t produce it on their own, so we have to get it from food or supplements [\[R\]](#).

Foods rich in Vitamin C include: [\[R\]](#)

- Citrus Fruits
- Peppers
- Brussel sprouts
- Kiwi
- Broccoli
- Tomato
- Cantaloupe
- Cauliflower
- Spinach

Vitamin C has antioxidant properties. It supports immunity, heart health, and wound healing [\[R\]](#), [\[R\]](#).

Vitamin C deficiency is called *scurvy*. In the past, many sailors suffered from it [\[R\]](#).

How it helps

Vitamin C, a potent antioxidant, can help strengthen the skin's barriers, increase collagen production and improve skin health. This aids in thickening the thin under-eye skin and reducing the appearance of dark circles caused by underlying blood vessels.

6

Topical Vitamin C

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Apply a vitamin C serum to your face and neck once a day, preferably in the morning before applying sunscreen and makeup. It should be left on the skin, not washed off. Consistent daily use is needed for best results.

Description

Topical vitamin C, often in the form of ascorbic acid, is used for its antioxidant properties to protect the skin from environmental damage and promote collagen synthesis, benefiting overall skin health. It can be sourced from various natural plant extracts, such as citrus fruits.

[Vitamin C](#) is an essential nutrient. This means that our bodies can’t produce it on their own, so we have to get it from food or supplements [\[R\]](#).

Vitamin C has antioxidant properties. It supports immunity, heart health, and wound healing [\[R\]](#), [\[R\]](#).

Vitamin C deficiency is called *scurvy*. In the past, many sailors suffered from it [\[R\]](#).

How it helps

Vitamin C helps in collagen production and strengthening the skin barrier. It can lighten the dark circles by improving skin elasticity and reducing pigmentation under the eyes.

7



Topical Hyaluronic Acid

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Apply a few drops of hyaluronic acid serum directly to your clean, damp skin twice a day, in the morning and before bedtime. Gently massage it into your face and neck until fully absorbed. Follow up with your regular moisturizer to seal in the hydration.

Description

Hyaluronic acid is a naturally occurring substance in the skin that is used topically to enhance skin hydration, reduce fine lines, and improve overall skin texture. It can be derived from various sources, including microbial fermentation.

Hyaluronic acid is a compound naturally found in the body. It helps the skin, eyes, connective tissues, and joints retain water [\[R\]](#), [\[R\]](#).

By doing so, hyaluronic acid can help keep the [\[R\]](#):

- Joints moving smoothly
- Skin and eyes moist
- Skin flexible

Hyaluronic acid is popular as a topical serum. It is also available as an injection, supplement, and eye drop.

How it helps

Hyaluronic acid hydrates and plumps the skin, reducing the appearance of dark circles by making the skin under the eyes thicker and less prone to show underlying blood vessels.

8



Tea

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Drink 1-3 cups of tea daily, choosing from green, black, or herbal varieties according to preference. It's beneficial to consume tea throughout the day, either hot or cold, for ongoing hydration and health benefits.

Description

Tea is a beverage made by steeping the leaves of the *Camellia sinensis* plant in hot water. It comes in various types, including black, green, white, and herbal teas, and is known for its diverse flavors and potential health benefits due to polyphenols and other bioactive compounds.

[Green](#) and black tea are made from the same plant (*Camellia sinensis*). This plant is processed in different ways to make each type of tea [\[R, R\]](#).

Tea contains many active compounds. These include antioxidants like EGCG and amino acids like [L-theanine](#). Active components of tea help support [\[R, R, R, R, R, R\]](#):

- Heart health
- Cognition
- Immunity
- Relaxation

How it helps

Tea bags, especially those from green tea, contain caffeine and antioxidants that can help to shrink blood vessels underneath the skin, reducing puffiness and dark circles. The cooling effect of chilled tea bags also soothes the skin and may lessen the appearance of under-eye darkness.

9



Topical Caffeine

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Apply a caffeine-containing topical product to the area of concern once or twice daily. Typically, these products should be applied after cleansing the skin but before moisturizing. Regular application over several weeks is generally necessary to observe benefits.

Description

Caffeine, commonly found in skincare products, is used topically to reduce puffiness and improve the appearance of dark circles around the eyes. It can also temporarily tighten and firm the skin.

People drink coffee for an energy and mood boost. [Caffeine](#) is the main ingredient responsible for these effects [\[R, R\]](#).

Caffeine may also help [\[R, R, R\]](#):

- Support heart health
- Improve mood
- Maintain healthy blood sugar

Caffeine is also found in some topical products for hair loss [\[R\]](#).

How it helps

Caffeine constricts blood vessels, which can reduce the appearance of dark circles under the eyes by decreasing blood flow to the area. Its anti-inflammatory properties also help in reducing puffiness and swelling.

10



Berries

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate a variety of berries such as strawberries, blueberries, raspberries, and blackberries into your daily diet. Aim for at least one cup of fresh or frozen berries every day, either as a snack, part of your breakfast (such as in oatmeal or yogurt), or as a dessert.

Description

Berries, such as strawberries, blueberries, and raspberries, are packed with antioxidants, vitamins, and fiber. Regular consumption of berries may support heart health, improve cognitive function, and contribute to overall well-being.

How it helps

Berries, including blueberries and strawberries, are rich in antioxidants and vitamin C. These nutrients help in strengthening the delicate capillaries under the eyes, reducing the appearance of dark circles. Increased intake can improve skin health and circulation.

11



Topical Retinol

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Apply a pea-sized amount of retinol cream to clean, dry skin, focusing on areas of concern such as the face, avoiding the immediate eye area, once every third night for the first two weeks. If well tolerated, gradually increase to every other night, and eventually nightly as your skin adjusts, over a period of several weeks.

Description

Retinol is a form of vitamin A used in skincare for its potential to reduce the appearance of wrinkles, improve skin texture, and promote a youthful complexion. It is derived from animal sources and is widely used in anti-aging products.

Retinol is a form of [vitamin A](#), 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

Retinol is more commonly used in topical skin care products.

How it helps

Retinol can improve the appearance of dark circles by stimulating collagen production, which thickens the skin and makes the blood vessels underneath less noticeable.