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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

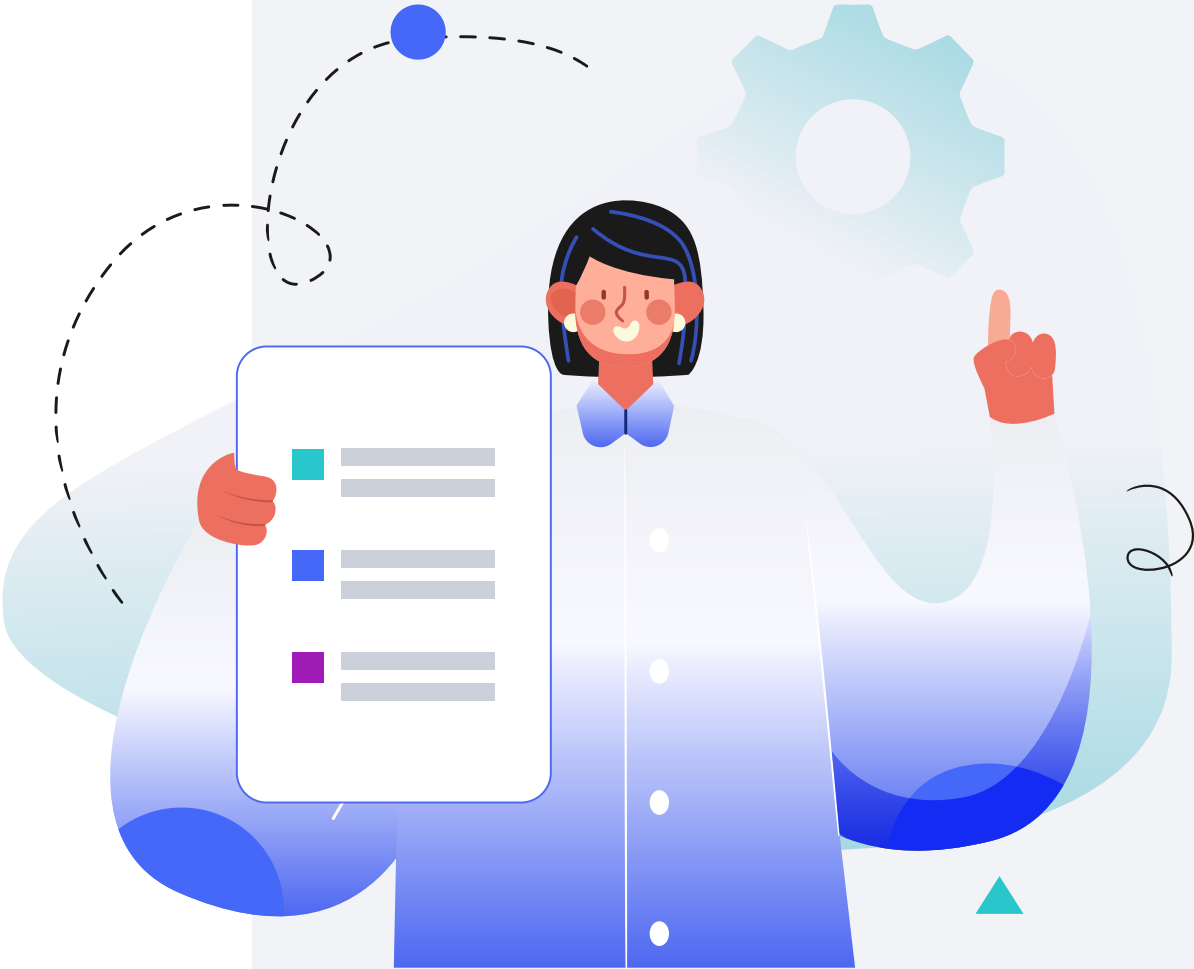
Male

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

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

Having elastic skin does not make you a new comic book superhero. **Skin elasticity is simply the ability of it to stretch and then return to its original form.** Losing elasticity is referred to as *elastosis*. It is a natural part of the aging process, creating **loose skin and wrinkles**.

As we age, we begin to lose **collagen and elastin**, two vital components necessary for keeping the skin elastic. A number of factors can impact this process, including **genetics** [\[R\]](#).

Contributing Factors

Key Takeaways:

- Up to **60%** of differences in people's skin aging may be due to **genetics**.
- Other risk factors include age, excessive sun exposure, smoking, and pollution.
- If you have high genetic risk, you may lower overall risk by taking action on those factors that you can change.
- Click the **Recommendations** tab for potential dietary and lifestyle changes.

Skin elasticity is the ability of it to stretch and then return to its original form. Losing elasticity is a natural part of the aging process, creating **loose skin and wrinkles**.

Risk factors for reduced skin elasticity and wrinkles include [\[R\]](#):

- Older age
- Excessive sun exposure
- Smoking
- Pollution

Up to **60%** of differences in people's skin aging may be due to **genetics**. Involved genes affect the **metabolism of collagen, elastin**, and other proteins involved in skin elasticity [\[R\]](#).



TYPICAL

Predisposed to typical skin elasticity based on 15 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
SGMS1	rs182035024	CC
/	rs61218791	AA
STXBP5	rs117444935	GG
FAM171A1	rs112251095	AA
ANAPC4	rs34293498	TT
CD96	rs9876163	TC
RNF32	rs73499013	GG
IL16	rs8027891	GG
GRAMD2B	rs170580	GT
KIF2B	rs12601165	GA
TFRC	rs146095627	AA
CEBPA	rs6510372	TT
MYO18A	rs8067915	CC
GAD2	rs3847380	TT
DIAPH3		

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	Avoid Excess Sunlight Exposure	2	Topical Retinoids
3	Collagen Peptides10 g	4	Hyaluronic Acid120 mg
5	Avoid Rapid Weight Changes	6	Topical Retinol
7	Aloe Vera50 mg	8	Astaxanthin12 mg
9	Drink at Least 8 Glasses of Water a Day	10	Topical Vitamin C
11	Topical Green Tea	12	Carotenoids6 mg
13	Streptococcus Thermophilus10 billion CFU	14	Green Tea400 mg
15	Pycnogenol100 mg	16	Cocoa
17	Moisturize the Skin	18	Topical Macadamia Oil
19	Soy Milk	20	Alpha-Lipoic Acid600 mg
21	Lactobacillus Plantarum10 billion CFU	22	Bladderwrack300 mg
23	Apigenin50 mg	24	Uva Ursi400 mg
25	Topical Copper-Zinc Malonate	26	Topical Avocado Oil and Saffron
27	Tea Of Heaven	28	Argan Oil1 tbsp
29	Vitamin C2000 mg	30	Zinc and Phytase
31	Rosemary and Grapefruit Extract	32	Shark Cartilage750 mg

33	Lemon Balm	500 mg	34	Amla And Lingonberry	500 mg
35	Almonds		36	Thyme And Lecithin	500 mg
37	Topical Lychee		38	Topical Lycopene	
39	Soy Isoflavones	40 mg	40	Rose Hip	500 mg
41	Persimmon		42	Topical Coffee Extract	
43	Dill Extract		44	Lutein And Zeaxanthin	
45	Djulis		46	Aerobic Exercise (Cardio)	1 hour
47	Salmon		48	Dill And Raspberry	
49	Grape Seed Extract	100 mg	50	Blackberry And Dill Extracts	100 mg
51	Topical Alpha-Ketoglutarate		52	Topical Hydrolyzed Keratin	
53	Pomegranate Extract	250 mg	54	Coenzyme Q10 (CoQ10)	100 mg
55	Omega-3 (Fish Oil)	2000 mg	56	Topical Honeybush	
57	Lutein		58	Strength Training	1 hour
59	Dietary Beta-Carotene		60	Avocado	
61	Topical Niacinamide		62	Derma Roller and PRP	
63	Evening Primrose Oil		64	Radiofrequency (RF) Microneedling	1 hour
65	Rice Ceramides	30 mg	66	Thyme	
67	Topical Saffron		68	Rosemary	400 mg
69	Amla		70	Phytase	
71	Zinc	15 mg	72	Kale Extract	

73	Lingonberry	400 mg	74	Topical Avocado Oil
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1

Avoid Excess Sunlight Exposure

IMPACT

4 / 5

EVIDENCE

4 / 5

How to implement

Limit direct sun exposure to early morning or late afternoon hours, ideally before 10 a.m. or after 4 p.m., when UV rays are less intense. Wear protective clothing, such as long-sleeved shirts, pants, and wide-brimmed hats, along with sunglasses that block UVA and UVB rays. Apply a broad-spectrum sunscreen with at least SPF 30 to all exposed skin, reapplying every two hours or immediately after swimming or sweating.

Description

Avoiding excessive sunlight exposure and practicing sun safety measures, such as wearing sunscreen and protective clothing, helps reduce the risk of skin damage, including sunburn and skin cancer. It supports long-term skin health and minimizes the harmful effects of UV radiation.

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

- Boost your mood
- Boost your performance and energy
- Improve sleep quality

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

However, **excessive sun exposure may lead to sunburn, skin aging, and skin cancer**, so make sure to find the right balance [\[R\]](#), [\[R\]](#).

How it helps

Decreased skin elasticity is a key feature of skin aging due to sunlight (*photoaging*) [\[R\]](#), [\[R\]](#), [\[R\]](#).

Good sun-protection practices recommended by experts to reduce skin aging include [\[R\]](#), [\[R\]](#):

- Using a broad-spectrum sunscreen with an SPF of 30 or more and applying it repeatedly, especially if swimming or sweating
- Wearing sun-protective clothing
- Avoiding sun exposure during peak UV times (between 11 AM and 3 PM in summer)
- Seeking shade whenever possible
- Avoiding the use of indoor tanning
- Consulting the UV index and taking precautions based on its predicted levels

UV radiation from sunlight may age the skin by causing oxidative damage [\[R\]](#).

2

Topical Retinoids

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

Apply a pea-sized amount of topical retinoid to clean, dry skin once every evening before moisturizing. Start with applications 2-3 times a week, gradually increasing to nightly use as your skin tolerates it.

Description

Retinoids are a class of vitamin A derivatives used topically for their ability to address various skin concerns, including acne, fine lines, and hyperpigmentation. They work by promoting cell turnover and collagen synthesis.

Retinoids are compounds related to [vitamin A](#). They include [\[R\]](#):

- Vitamin A (retinol)
- Natural vitamin A derivatives (retinoic acid, retinaldehyde, retinyl esters)
- Synthetic derivatives (tretinoin, isotretinoin, etretinate, tazarotene)

Retinoids control the growth of the skin and blood vessels. People apply topical retinoids to improve skin conditions such as [\[R\]](#):

- **Wrinkles**
- Acne
- Psoriasis
- Eczema
- Skin cancers

Please note: Topical synthetic retinoids are prescription drugs and should only be used if prescribed by a doctor. They can have significant side effects. Natural retinoids are much safer and available in different OTC cosmetic products.

How it helps

Topical retinoids may improve skin elasticity and repair skin damage caused by sunlight. Studied forms include:

- Tretinoin (0.02-0.1%) [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)
- Isotretinoin (0.05-0.1%) [\[R\]](#), [\[R\]](#), [\[R\]](#)
- Retinaldehyde (0.05-0.1%) [\[R\]](#), [\[R\]](#), [\[R\]](#)
- Retinoic acid (0.05%) [\[R\]](#)

Topical retinoids may help by regulating skin cell growth and increasing collagen content [\[R\]](#).

3



Collagen Peptides

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Take 10-20 grams of collagen peptides daily, mixing the powder into a glass of water, juice, or a smoothie. It is recommended to consume this supplement on an empty stomach to improve absorption, ideally first thing in the morning or right before bedtime for a period of at least 8-12 weeks to observe beneficial effects.

TYPICAL STARTING DOSE

10 g

Description

Collagen peptides are a form of collagen that is broken down into smaller, more easily absorbed molecules. They are commonly used in supplements and skincare products for their potential to promote skin elasticity, hair strength, and nail health.

[Collagen](#) is a protein that helps build skin, bones, and joints [\[R\]](#), [\[R\]](#).

People use collagen supplements for [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Joint pain
- Skin health
- Hair growth

How it helps

Oral hydrolyzed collagen (2.5-5 g/day for 8-12 weeks) may improve skin elasticity and other parameters [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Collagen supplements may help by increasing the amount of this protein in the skin [\[R\]](#).

4



Hyaluronic Acid

IMPACT3 / 5

EVIDENCE2 / 5

How to implement

Take 120-240 mg of oral hyaluronic acid supplement daily, ideally with or after a meal to enhance absorption. Consistent use for at least one month is recommended to evaluate its effects on skin hydration and joint health.

TYPICAL STARTING DOSE
120 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.

How it helps

Hyaluronic acid may boost skin quality, serving as a potent adjunct to facial rejuvenation procedures and post-surgical recovery. However, the evidence is limited [\[R\]](#).

Preliminary research suggests that hyaluronic acid may also increase the benefits of other procedures for the management of wrinkles such as botulinum toxin [\[R\]](#).

According to meta-analyses, injected hyaluronic acid may help with nasolabial folds [\[R, R, R, R\]](#)

Hyaluronic acid may help by improving skin hydration [\[R\]](#).

Please note: While hyaluronic acid is widely regarded for its benefits in improving skin, individual reactions can vary. It is essential to consult with a dermatologist before starting any new treatment regimen, especially if you have underlying health conditions or concerns [\[R\]](#).

5



Avoid Rapid Weight Changes

IMPACT

3 / 5

EVIDENCE

2 / 5

How to implement

Maintain a consistent, healthy weight by avoiding extreme dieting or sudden increases in food intake. Aim for gradual weight changes, not exceeding 1-2 pounds per week, by adjusting your diet and physical activity levels accordingly. This approach should be sustained over a long-term period to ensure health and prevent potential adverse effects on the body.

Description

Avoiding extreme and rapid weight changes, whether through crash diets or excessive calorie restriction, is essential for preventing negative health consequences such as nutritional deficiencies and metabolic disruptions.

Your weight is determined by the number of calories you consume compared to those you burn. Changes in exercise frequency, amount and type of food consumed, and alcohol intake may alter your energy expenditure. This may cause small weight fluctuations [\[R\]](#).

Some people may gain or lose weight at a faster rate. Rapid weight fluctuations may be due to [\[R\]](#), [\[R\]](#):

- Very drastic diets
- Water retention or dehydration
- Hormonal changes
- Pregnancy
- Taking certain medications
- Certain health conditions

How it helps

Rapid weight loss, especially from bariatric surgery, may lead to changes in skin quality. The skin often becomes lax and may lack sufficient collagen fiber networks to maintain its firmness and elasticity. This change is attributed to the depletion of collagen and changes in the structural integrity of the skin following massive weight loss [\[R\]](#).

Another study found that after weight loss, people often exhibit a decrease in skin elasticity, which may affect the outcomes of body contouring surgeries. This reduction in elasticity is linked to alterations in the dermal collagen and elastic fiber networks [\[R\]](#).

A study focusing on skin manifestations after bariatric surgery noted that while various skin conditions improved with weight loss, the elasticity of the skin tended to decrease over time. This suggests that while weight loss may have positive effects on certain skin conditions, it may adversely affect skin elasticity [\[R\]](#).

6

Topical Retinol

IMPACT2 / 5

EVIDENCE2 / 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

Topical formulations with retinol (0.1-1%) may improve skin elasticity, moisture, and brightness [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Retinol may help by regulating skin cell growth and increasing collagen content [\[R\]](#).

Please note: Other vitamin A analogs or retinoids are much more potent than retinol. They may cause skin dryness, burning, itching, and swelling at the site of application. Because retinoids increase skin sensitivity to sunlight, people on retinoid therapy are recommended to limit sun exposure. Pregnant women shouldn't use topical retinoids because they may increase the risk of malformations [\[R\]](#).

7



Aloe Vera

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take a 50 mg Aloe vera supplement daily, with a glass of water, preferably at the same time each day to maintain consistency.

TYPICAL STARTING DOSE

50 mg

Description

Aloe vera is a succulent plant native to arid regions and contains a gel-like substance in its leaves that is rich in vitamins, minerals, and antioxidants, making it beneficial for soothing skin irritations, promoting wound healing, and providing relief from conditions such as sunburn and minor burns. The primary active compounds in aloe vera gel include polysaccharides, vitamins like vitamin C and E, and minerals such as zinc, which contribute to its healing and anti-inflammatory effects.

[Aloe vera](#) lives in the desert, and its thick leaves store water in the form of a gel [\[R\]](#).

People use aloe gel to help soften the skin and soothe burns [\[R\]](#).

Oral aloe supplements may help with blood sugar and gut health [\[R\]](#).

How it helps

Consuming aloe extract (1200-5000 mg/day for 8-12 weeks) may improve skin elasticity and hydration [\[R, R, R\]](#).

Aloe vera may also help in combination with other plant extracts [\[R\]](#).

Aloe may help by improving skin barrier function and collagen production [\[R\]](#).

8



Astaxanthin

IMPACT2 / 5

EVIDENCE2 / 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

Supplementation with astaxanthin (3-6 mg/day for 4-12 weeks) may improve skin elasticity, texture, and moisture [\[R, R\]](#). Astaxanthin may help by reducing oxidative damage to the skin and preserving the skin barrier function [\[R\]](#).

9



Drink at Least 8 Glasses of Water a Day

IMPACT

2 / 5

EVIDENCE

2 / 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

A systematic review of studies in healthy adults aged 24 to 56 revealed that drinking water may cause a slight improvement in skin hydration, particularly in those previously consuming less water. Drinking water may also enhance skin elasticity and reduce dryness. However, the evidence supporting these benefits is limited and weak [\[R\]](#).

10



Topical Vitamin C

IMPACT

2 / 5

EVIDENCE

2 / 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

Topical vitamin C (5-20%) may increase skin elasticity and other skin parameters [\[R\]](#), [\[R\]](#).

Topical vitamin C may also help in combination with plant extracts and other antioxidant vitamins [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Vitamin C may help by reducing oxidative damage to the skin and promoting collagen production [\[R\]](#).

11



Topical Green Tea

IMPACT

2 / 5

EVIDENCE

2 / 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

Topical green tea extract (3-10%) may increase skin elasticity and texture. It may help both alone and combined with oral green tea extract (600 mg/day) or the vitamins [C](#) and [E](#) [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Green tea catechins may reduce oxidative damage to the skin [\[R\]](#).

12



Carotenoids

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take a carotenoid supplement daily, with a meal that includes fats to improve absorption. Dosage can vary, but a common range is between 6 to 20 milligrams per day. Continue as long as it is recommended by your healthcare provider.

TYPICAL STARTING DOSE

6 mg

Description

Carotenoids are pigments found in colorful fruits and vegetables like carrots, sweet potatoes, and tomatoes. They have antioxidant properties and may support eye health, immune function, and overall antioxidant protection.

Carotenoids are red, orange, and yellow pigments produced by plants, algae, and some microorganisms. Some of the most common carotenoids include [\[R\]](#):

- [Beta-carotene](#)
- [Lycopene](#)
- [Astaxanthin](#)
- Zeaxanthin
- Lutein

The main effects of carotenoids on human health derive from their antioxidant activity. They help with eye health, cognition, heart health, and more. [\[R\]](#), [\[R\]](#).

Carotenoids are especially abundant in yellow- and orange-colored fruits and vegetables, as well as in green leafy vegetables. Some of the main food sources include [\[R\]](#):

- Carrots
- Sweet potatoes
- Tomatoes
- Mangoes
- Oranges
- Watermelon
- Bell peppers
- Kale
- Spinaches

Supplements are also available for people who don’t consume enough fruits and vegetables. Because they are fat-soluble, carotenoids are better absorbed with a fatty meal.

How it helps

Carotenoids may help repair skin aging, including loss of elasticity. Tested carotenoids include:

- Astaxanthin [\[R\]](#), [\[R\]](#)
- Lycopene [\[R\]](#), [\[R\]](#)
- Beta-carotene [\[R\]](#)
- Zeaxanthin [\[R\]](#)
- Lutein [\[R\]](#)

13



Streptococcus Thermophilus

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take a supplement containing Streptococcus thermophilus according to the product's label, typically once or twice daily with a glass of water. It is commonly found in probiotic supplements and the exact dosage can vary, so following the manufacturer's guidelines is essential. Continue use as part of your daily routine or as directed by a health professional.

TYPICAL STARTING DOSE

10 billion CFU

Description

Streptococcus thermophilus is a probiotic bacterium used in the fermentation of dairy products like yogurt. It contributes to improved gut health by aiding in the digestion of lactose and promoting the growth of beneficial gut bacteria.

How it helps

A study showed that topical application of a cream containing *Streptococcus thermophilus* increased skin ceramide levels in people with atopic dermatitis. This increase in ceramides may help improve skin barrier functions and potentially skin elasticity [\[R\]](#).

Another study investigated the effects of a *Streptococcus thermophilus*-containing cream on the ceramide levels of the stratum corneum in elderly women. The results indicated that the cream increased ceramide levels and improved hydration, suggesting a benefit to skin elasticity as well [\[R\]](#).

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14



Green Tea

IMPACT

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EVIDENCE

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How to implement

Consume 400 mg of green tea extract daily. This can be taken in the form of capsules or tablets available that specify the amount of green tea extract. Ensure the supplement is taken according to the product's specific instructions, usually once a day with water.

TYPICAL STARTING DOSE

400 mg

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 antioxidants 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 antioxidants called **flavonoids**, which may help prevent [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Heart disease
- Cancer
- Diabetes

How it helps

Drinking green tea (1402 mg/day catechins) may improve skin elasticity and other skin parameters [\[R\]](#).

Green tea catechins may reduce oxidative damage to the skin [\[R\]](#).

Please note: polyphenols from green tea may bind to iron and form insoluble complexes, which reduces iron absorption in the gut. If you have anemia, consult your healthcare provider before using green tea [\[R\]](#).

15



Pycnogenol

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 100 mg of pycnogenol supplement daily. This can be taken in a single dose or divided into two doses of 50 mg each, one in the morning and one in the evening.

TYPICAL STARTING DOSE

100 mg

Description

Pycnogenol (pine bark extract) is derived from the bark of the maritime pine (Pinus pinaster). It has been used in traditional n European folk medicine for centuries, and more recently as a supplement. The extract contains a group of bioactive compounds known as proanthocyanidins, which may be beneficial in supporting cardiovascular health, promoting skin health, and aiding in the management of various conditions related to inflammation and oxidative stress.

Pycnogenol comes from the bark of pine trees that grow in the Mediterranean [\[R\]](#), [\[R\]](#).

It may improve [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Athletic performance
- Seasonal allergies
- Cognitive function
- Joint health
- Varicose veins

How it helps

Oral pycnogenol (40-100 mg/day for 12 weeks) may improve skin elasticity and reduce moisture loss [\[R\]](#), [\[R\]](#).

Pycnogenol is rich in polyphenols that may reduce oxidative damage to the skin [\[R\]](#).

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Cocoa

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Incorporate 30-60 grams of high-quality dark chocolate (with at least 70% cocoa content) into your daily diet. Enjoy it as a snack or dessert to reap the potential heart health benefits.

Description

[Cocoa](#) comes from the beans of the *Theobroma cacao* tree. It is found any many foods and drinks, and people have also used it as a medicine for thousands of years. The numerous active components of cocoa can help with weight control, fatigue, mood, and digestion, among others.

[Cocoa](#) comes from the beans of the *Theobroma cacao* tree. It’s often used for making chocolate, hot chocolate, and pastries. People have also used it as a medicine for over a thousand years [\[R\]](#), [\[R\]](#).

Cocoa contains many active components that likely help [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Control weight
- Lower fatigue
- Boost mood
- Improve digestion
- Balance blood sugar
- Support heart health

Note that pure cocoa is likely a healthier choice than chocolate. If you eat chocolate, choose dark chocolate with more cocoa and less sugar and fat.

How it helps

Consuming cocoa (320-600 mg/day flavanols) may improve facial skin elasticity and reduce wrinkles [\[R\]](#), [\[R\]](#).

Cocoa flavonoids may **reduce oxidative damage** to the skin [\[R\]](#).

20



Alpha-Lipoic Acid

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 600-1800 mg of alpha-lipoic acid daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

600 mg

Description

[Alpha-lipoic acid](#) is a natural antioxidant found in almost every cell in your body. People use alpha-lipoic acid to help with issues like skin aging, weight loss, and high blood sugar [\[R, R, R\]](#).

People use alpha-lipoic acid to help with [\[R, R, R, R\]](#):

- Complications of high blood sugar
- Skin aging
- Weight loss
- Carpal tunnel syndrome

How it helps

In a study exploring the effects of alpha-lipoic acid (LA) on aging facial skin, 33 women with an average age of 54.4 years participated in a 12-week experiment. They applied a cream containing 5% LA to one half of their face and a placebo cream to the other half (2x/day) and got a reduction in skin roughness of 50.8% on the LA-treated side compared to 40.7% with placebo [\[R\]](#).

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Lactobacillus Plantarum

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a probiotic supplement containing *Lactobacillus plantarum* 299V daily. The typical dosage is 10 billion colony-forming units (CFUs). Continue for at least 4 weeks to assess benefits on digestive health.

TYPICAL STARTING DOSE
10 billion CFU

Description

Lactobacillus plantarum is a [probiotic](#) bacterium found in many fermented plant products such as sauerkraut, pickles, brined olives, and Korean kimchi [\[R\]](#).

People take *L. plantarum* supplements to improve [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Diarrhea
- Skin appearance
- IBD
- High cholesterol

How it helps

Lactobacillus Plantarum, a type of probiotic, increases the body's production of collagen, a key component in maintaining skin elasticity. Additionally, these beneficial bacteria boost skin hydration, which further aids in preserving its firmness and suppleness.

In a placebo-controlled trial of 21 participants, applying topical L. plantarum LB244R for 56 days **improved skin density, hydration, firmness, and elasticity, while decreasing trans-epidermal water loss and sub-epidermal low echogenic band thickness** [\[R\]](#).

Oral supplementation with L. plantarum HY7714 for 12 weeks **reduced wrinkle depth and increased skin elasticity (by 21.73%) and gloss** in a [placebo-controlled trial for 110 volunteers](#) [\[R\]](#).

28



Argan Oil

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 1-2 tablespoons of argan oil daily, either on its own or mixed into a salad dressing or smoothie. For ongoing dietary supplementation, continue this routine daily.

TYPICAL STARTING DOSE

1 tbsp

Description

Argan oil is a natural oil derived from the kernels of the argan tree, native to Morocco. It is known for its moisturizing and nourishing properties, making it a popular ingredient in skincare and haircare products to promote hydration, reduce signs of aging, and enhance overall skin and hair health.

Argan oil is obtained from the seeds of the argan tree (*Argania spinosa*), endemic to southwestern Morocco. Argan oil is rich in [\[R\]](#):

- Oleic acid
- Linoleic acid
- Vitamin E

The oil is traditionally used for cooking and claimed to reduce blood cholesterol. More recently, it has been marketed as a luxury ingredient for skincare products [\[R\]](#).

How it helps

Combining oral (25 mL/day) and topical (240 mg/day) argan oil may increase skin elasticity in postmenopausal women [\[R\]](#).

Antioxidant compounds in argan oil may reduce oxidative damage to the skin [\[R\]](#).

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Vitamin C

IMPACT

1 / 5

EVIDENCE

1 / 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 is crucial for collagen synthesis, which plays a role in maintaining skin elasticity. Studies show that vitamin C supplementation may stimulate collagen production, thus improving skin elasticity and reducing the appearance of wrinkles [\[R\]](#).

Clinical trials have demonstrated that oral vitamin C supplementation (100 mg/day for 4 weeks) may improve skin elasticity. This includes increased dermal collagen density, which directly enhances the skin's mechanical properties and visual appearance [\[R\]](#).

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Shark Cartilage

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take the shark cartilage supplement orally in capsule or powder form, following the dosage instructions on the product label, which is typically around 750 mg to 2000 mg per day, divided into two to three doses. It should be taken with meals to help with absorption. Continue daily for a period as suggested by a healthcare provider.

TYPICAL STARTING DOSE

750 mg

Description

How it helps

In a [placebo-controlled trial of 66 participants](#), applying blue shark cartilage on the wrists for 10-20 min **enhanced skin elasticity and hydration, and reduced wrinkles** [\[R\]](#).

33



Lemon Balm

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a 500 mg lemon balm supplement daily. This dosage can be consumed at once or divided into smaller doses throughout the day, according to personal preference or the guidance of a healthcare provider.

TYPICAL STARTING DOSE

500 mg

Description

Lemon balm is an herb known for its calming and soothing properties. It is often used in herbal teas and aromatherapy to reduce stress and anxiety, promote relaxation, and improve sleep quality.

[Lemon balm](#) (*Melissa officinalis*) is an herb used in gardening and traditional medicine. **It’s rich in antioxidants and relaxing components** [\[R\]](#), [\[R\]](#).

People use lemon balm as a tea or supplement to [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Relieve anxiety
- Improve sleep quality
- Reduce stress

How it helps

Consuming lemon balm tea may improve cheek skin elasticity [\[R\]](#).

Lemon balm is rich in antioxidants that may reduce oxidative damage to the skin [\[R\]](#).

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Soy Isoflavones

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take a soy isoflavone supplement containing 40 to 80 milligrams daily, ideally with food to improve absorption. This dosage can be continued on a daily basis for several months, but it's recommended to reevaluate its effectiveness and any potential side effects with a healthcare provider periodically.

TYPICAL STARTING DOSE

40 mg

Description

Soy isoflavones are natural compounds found in soybeans and soy products. They are phytoestrogens, which means they can mimic the effects of estrogen in the body and are associated with potential health benefits like menopausal symptom relief and improved heart health.

Soy is a common food in many cuisines around the world, especially Asian cuisines [\[R\]](#).

It's a great source of [\[R\]](#), [\[R\]](#):

- Plant-based protein
- Fiber
- Omega-3 fats
- Antioxidants (isoflavones)

Soy-based foods include [\[R\]](#):

- Tofu
- Tempeh
- Edamame
- Miso
- Natto

Soy protein and soy isoflavones are also available as supplements.

How it helps

Soy isoflavones (40 mg/day) may improve skin elasticity and wrinkles in middle-aged women [\[R\]](#).

Soy components such as isoflavones may help by reducing oxidative damage to the skin, stimulating skin cell growth, and preventing collagen breakdown [\[R\]](#).

