

Canker Sores

DNA Health Report

REPORT CATEGORY —



DENTAL & MOUTH
HEALTH

Sample Client

Report date: 15 January 2026

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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

Mouth ulcers, or canker sores, are known in the medical world as aphthous ulcers. They’re one of the oldest described medical issues: Hippocrates coined the word “*aphtha*” to describe diseases of the mouth in the 4th century B.C. [\[R\]](#)

Canker sores are small, shallow, and painful ulcerations on the sides of the tongue and soft surfaces of the mouth. If you’ve experienced one, you’re not alone- 1 in 4 people may be affected by mouth ulcers at any time [\[R\]](#).

While their exact cause isn’t clear, certain factors such as injuries to the inside of the mouth, poor nutrition, or stress may increase the likelihood of their development.

Genetics is another contributing factor. Moreover, it may interact with the above-mentioned factors to increase your risk of developing these annoying injuries.

For instance, canker sores are more likely to develop in people whose diet is poor in one or more B vitamins. Those with a particular [MTHFR](#) gene variant may have lower levels of B vitamins, potentially increasing their odds of canker sores [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Likewise, people with one [DRD2](#) gene variant may be more prone to stress, which is a trigger for recurrent canker sores [\[R\]](#), [\[R\]](#), [\[R\]](#).

Read on to find out more about:

- **How your genetics play a role in the development of canker sores**
- **Your genetic risk score based on almost 800 genetic variants**
- **Personalized recommendations based on your genetics**

About Canker Sores

Key Takeaways:

- Genetics involved in canker sores may influence immune response.
- Other risk factors include age, being female, use of sodium lauryl sulfate, food sensitivities, certain nutrient deficiencies and health conditions, and stress.
- About **25%** of people will have a canker sore at some point in their lives.
- If your genetic risk is high, taking action on factors you can change may lower your overall risk.
- Click the **next steps** tab for relevant labs.

If you've ever tried eating something but were interrupted by a painful sore on the inside of your mouth, you might be familiar with **canker sores**.

Canker sores are round lesions that can be found on the inner lip or base of the gums. They are usually white or yellow in the center and are surrounded by a red border. Another name for them is **aphthous ulcers** [\[R\]](#).

Canker sores can easily be mistaken for cold sores. However, the two differ in a few ways. Unlike cold sores, canker sores don't appear on the outer lip. They are also not contagious [\[R\]](#).

Canker sores are very common. Up to 25% of people may have had a canker sore at some point in their lives. They seem to occur more often in women, adolescents, and young adults [\[R\]](#), [\[R\]](#), [\[R\]](#).

Scientists aren't sure what causes them, but the following factors may play a role [\[R\]](#):

- Small injuries to the inside of the mouth (e.g., from dental work, accidentally biting your cheek, etc.)
- Toothpaste or mouthwash that contains a chemical called sodium lauryl sulfate
- Certain food sensitivities



TYPICAL LIKELIHOOD

Typical likelihood of canker sores based on 618 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
IL10	rs1800871	GG
TRIM59	rs55667203	TC
IL12A	rs7645203	CT
PPP5C	rs3764613	AG
IRF8	rs7193275	CG
IFNGR1	rs7749390	GA
CCR2	rs34390431	GA
SCHIP1	rs11928736	GC
SCHIP1	rs1353248	CT
POU5F1	rs2523589	TG
SCHIP1	rs7617394	TC
IL12A	rs76830965	CC
SCHIP1	rs116295688	GG
SCHIP1	rs145743887	AA
SCHIP1	rs150921465	GG
IFT80	rs145925847	TT
OTOL1	rs150383292	CC
IL10	rs3813961	CC
IL10	rs4845140	CC
NOD2	rs2066844	CC
FCMR	rs2232359	AA
NOD2	rs72798422	TT
LYZ	rs1800973	CC
LXN	rs73156502	CC

- A diet that lacks nutrients like zinc, iron, and B vitamins
- Stress
- Some chronic health conditions (such as celiac disease, inflammatory bowel disease)

Genetics may also play a role in canker sores. Genes involved in canker sores may influence the immune response [R].

If you do get a canker sore, it will usually go away on its own within 2 weeks. However, more severe canker sores may require medication [R, R, R].

This may be the case if [R, R, R]:

- you have canker sores that return every once in a while
- you also have a fever
- you are having trouble eating or drinking
- the sore extends into the lip

Talk to your doctor if any of these apply to you.

GENE	SNP	GENOTYPE
CCR3	rs4493469	TT
CCR2	rs4683205	GG
C4A	rs138753323	TT
MICB	rs76518703	AA
RIPK2	rs11989430	AA
IL12A	rs73170558	CC
REX1BD	rs144474740	CC
C6ORF47	rs115062572	CC
HLA-C	rs142628781	CC
CCR3	rs17712835	TT
GTDC1	rs16823566	GG
CXCR6	rs1491958	CC
IRF8	rs11649485	AA
IRF8	rs56177354	CC
HLA-B	rs78479381	AA
PRDM1	rs9480610	GG

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	Dietary Folate	2	Zinc10 mg
3	Vitamin B1210 mcg	4	Good Oral Hygiene2 minutes
5	Dietary B Vitamins	6	Relaxation Techniques30 minutes
7	B Vitamins	8	Dietary Vitamin B12
9	Dietary Zinc	10	SLS-Free Toothpaste
11	Topical Aloe Vera	12	Avoid Food Triggers
13	Infrared Light Therapy	14	Topical Hyaluronic Acid
15	Topical Curcumin	16	Topical Licorice Root
17	Turmeric	18	Propolis
19	Red Light Therapy20 minutes	20	Omega-3 (Fish Oil)500 mg
21	Meditation30 minutes	22	Dietary Iron
23	Chlorhexidine Mouthwash10 ml	24	Toothpaste With Enzymes
25	Probiotics10 billion	26	Bacillus Clausii
27	Topical Honey	28	Lactobacillus Brevis10 billion CFU
29	Zinc Sulfate220 mg	30	Dietary Pyridoxine (Vitamin B6)
31	Maintain Optimal Vitamin D Levels1000 iu	32	Topical Myrtle

33	Damask Rose Mouthwash	34	Rhodiola	500 mg
35	Topical Berberine	36	Avoid Spicy Food	
37	Topical Garlic	38	Perilla Oil	600 mg
39	Topical Red Mangrove	40	Topical Myrrh	

1



Dietary Folate

IMPACT

4 / 5

EVIDENCE

3 / 5

How to implement

Increase your intake of folate-rich foods such as leafy green vegetables, fruits, nuts, and legumes. Aim to consume these foods daily, incorporating them into various meals throughout the day to meet the recommended dietary allowance of 400 micrograms for adults.

Description

[Vitamin B9](#) (*folate*) plays an essential role in [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Making DNA
- Metabolism
- Energy production

Rich sources of folate include [\[R\]](#), [\[R\]](#):

- Beef liver
- Spinach
- Black-eyed peas
- Asparagus
- Citrus fruits

While folate deficiency is rare, it can happen in people who don’t eat enough fruits and vegetables. Alcoholics and lactating women may also be at increased risk [\[R\]](#).

Adults should get **400 micrograms (mcg)** of folate per day. Pregnant or breastfeeding women should get **500-600 mcg per day**. Supplements are usually in the form of *folic acid* or [L-methylfolate](#) (5-MTHF) [\[R\]](#), [\[R\]](#).

How it helps

Research on a total of 1,312 people found those with recurrent mouth ulcers had about an 8 times higher risk of folate deficiency. A study of 100 people with a history of recurrent mouth ulcers found reduced dietary intake of folate [\[R\]](#), [\[R\]](#), [\[R\]](#).

2



Zinc

IMPACT

4 / 5

EVIDENCE

2 / 5

How to implement

Take a 15 mg zinc supplement daily, ideally with a meal to enhance absorption.

TYPICAL STARTING DOSE

10 mg

Description

Zinc is an essential mineral found in various foods, including meat, dairy, and nuts. It is crucial for immune function, wound healing, DNA synthesis, and maintaining healthy skin and nails. Zinc supplements are sometimes used to support immune health and manage zinc deficiencies.

[Zinc](#) is an essential mineral. Your body needs it to [\[R\]](#), [\[R\]](#):

- Defend against disease
- Protect DNA from damage
- Heal wounds
- Control blood sugar

Some of the best sources of zinc include **shellfish, pork, beef, and beans**. It is also available as a supplement [\[R\]](#).

Adults should get **8-11 mg of zinc** per day [\[R\]](#).

How it helps

People with recurrent canker sores tend to have lower blood levels of zinc. Low zinc levels may play a role in the development of canker sores because this mineral supports immunity [\[R\]](#), [\[R\]](#).

Zinc (40 mg/day for 1-12 weeks) may help improve canker sores and keep them from coming back [\[R\]](#).

Please note: *A high intake of zinc may cause stomach pain and gut irritation. Medical bodies recommend against taking more than **40 mg** of zinc per day* [\[R\]](#), [\[R\]](#).

3



Vitamin B12

IMPACT3 / 5

EVIDENCE4 / 5

How to implement

Take a 50 mcg vitamin B12 supplement daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

10 mcg

Description

Vitamin B12 is a water-soluble vitamin primarily found in animal-based foods like meat, fish, and dairy products. It plays a crucial role in maintaining healthy nerve cells, DNA synthesis, and red blood cell formation. Vitamin B12 deficiency can lead to anemia, neurological issues, and fatigue.

[Vitamin B12](#) is important for [\[R\]](#), [\[R\]](#):

- Building DNA
- Nervous system function
- Energy production

You can get vitamin B12 from [\[R\]](#):

- Animal products (meat, fish, eggs, and dairy)
- Fortified foods
- Supplements

Adults should be getting **2.4 micrograms** of vitamin B12 every day [\[R\]](#).

How it helps

A meta-analysis of 9 studies and 1,312 participants found those with recurrent mouth ulcers had 3.75-fold higher odds of vitamin B12 deficiency and 7.55-fold higher odds of folate deficiency. In line with this, a study of 100 participants with a history of recurrent mouth ulcers found reduced dietary intake of vitamin B12 and folate [\[R\]](#), [\[R\]](#).

Another meta-analysis (7 trials) concluded that sublingual vitamin B12 (1000 µg) reduces outbreak number and ulcer duration, especially after 6 months, buccal discs (500 µg) reduce perceived pain in 77% of the patients, and vitamin B12 ointment (500 µg) reduces pain after 2 days, and injected vitamin B12 causes improvement in 50% of patients, while multivitamins are ineffective [\[R\]](#).

Similarly, a meta-analysis of 16 studies found that treatment with B vitamins improves healing rate by over 5-fold while reducing recurrence to 20% of control values [\[R\]](#).

Vitamin B12 aids in the regeneration and healing of cells, which can speed up the healing process of canker sores. Moreover, deficiencies in B vitamins might increase the likelihood of these sores.

4



Good Oral Hygiene

IMPACT

3 / 5

EVIDENCE

4 / 5

How to implement

Brush your teeth at least twice a day for two minutes each time using fluoride toothpaste. Floss daily to remove plaque from places your toothbrush can't reach and consider using mouthwash. Visit your dentist at least twice a year for professional cleanings and checkups.

TYPICAL STARTING DOSE

2 minutes

Description

Good oral hygiene, which includes regular brushing, flossing, and dental check-ups, is crucial for preventing tooth decay, gum disease, and maintaining overall oral health. A healthy mouth contributes to overall well-being and can prevent dental issues that may impact systemic health.

Oral hygiene refers to practices that keep the mouth healthy. Good habits include [\[R\]](#), [\[R\]](#):

- Gently brushing the teeth and tongue for two minutes, at least twice a day
- Flossing daily
- Using a toothpaste with fluoride and a soft toothbrush
- Replacing a worn toothbrush at least every 3 months

To help maintain good oral hygiene, it is also important to regularly see dental professionals. They can help prevent and address issues with your teeth and gums.

How it helps

Poor oral hygiene is linked to canker sores. Experts recommend **brushing regularly after meals and flossing once a day** [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Using a **soft brush** rather than a hard one can help prevent mouth tissue irritation [\[R\]](#).

Using **toothpaste that doesn't contain sodium lauryl sulfate** or using a toothpaste that contains enzymes may also help [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

5



Dietary B Vitamins

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Incorporate foods rich in B vitamins like whole grains, meat, eggs, dairy products, leafy green vegetables, beans, peas, and nuts into your daily meals. For a balanced intake, aim to include at least one serving of a B vitamin-rich food in each meal throughout the day.

Description

B-vitamins are a group of water-soluble vitamins that play essential roles in metabolism, energy production, and overall health. They include B1 (thiamine), B2 (riboflavin), B3 (niacin), B5 (pantothenic acid), B6 (pyridoxine), B7 (biotin), B9 (folate), and B12 (cobalamin).

B vitamins help the body function properly. Three examples are [vitamin B9 \(folate\)](#), [vitamin B12](#), and [vitamin B6](#). They play essential roles in heart, brain, and kidney health [\[R, R, R, R\]](#).

You can get these vitamins from [\[R, R, R\]](#):

- Animal products
- Green leafy vegetables
- Fortified foods
- Supplements

Every day, adults should be getting [\[R\]](#):

- **Folate:** 400 mcg
- **Vitamin B12:** 2.4 mcg
- **Vitamin B6:** 1.7 mg

Folic acid is a form of folate found in most supplements [\[R\]](#).

Folate deficiency is rare but can happen in people that don’t eat enough fruits and vegetables. Alcoholics and lactating mothers may also be at an increased risk [\[R\]](#).

Vitamin B12 deficiency often takes years to develop, as the body is able to store large amounts in the liver. Groups that may be at an increased risk include [\[R, R\]](#):

- Vegans
- Pregnant women
- Older people
- People with gut issues

People with kidney problems or gut issues may be at increased risk of vitamin B6 deficiency [\[R\]](#).

How it helps

People who have recurrent canker sores may be deficient in one or more of the following B vitamins [\[R, R, R, R, R\]](#):

- Vitamin B12
- Vitamin B9 (folate)
- Vitamin B1 (thiamine)
- Vitamin B2 (riboflavin)
- Vitamin B6

In people with a B vitamin deficiency, supplementing with B vitamins may improve canker sores and stop them from coming back [\[R, R, R, R, R\]](#).

B vitamins support the normal function of the mouth lining [\[R\]](#).



PERSONALIZED TO YOUR GENES

People with your **MTHFR** gene variant may need more B vitamins. This variant may also be linked to frequent canker sores. Take care to get enough B vitamins [R, R, R, R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
MTHFR	rs1801133	AA	

6



Relaxation Techniques

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Incorporate relaxation techniques such as deep breathing exercises, meditation, or yoga into your daily routine. Spend at least 15-30 minutes each day practicing one of these techniques, preferably in a quiet, comfortable space without interruptions.

TYPICAL STARTING DOSE

30 minutes

Description

Relaxation techniques encompass various methods like deep breathing, yoga, meditation, and progressive muscle relaxation, aimed at reducing stress and promoting mental and physical relaxation. Practicing these techniques regularly can help manage stress, improve mental clarity, and enhance overall emotional well-being.

We all get stressed from time to time.

[Stress](#) can help you deal with a challenge or avoid danger. However, **it’s not healthy to be stressed for a long time** [\[R\]](#), [\[R\]](#).

Relaxation techniques such as [yoga](#) and [meditation](#) can relieve stress in different ways. Most of them focus on breathing and help you get rid of negative thoughts and emotions [\[R\]](#).

People use relaxation techniques to improve conditions like [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Anxiety
- Depression
- Chronic pain

Progressive muscle relaxation is another relaxation technique. In this technique, you focus on tensing and relaxing different parts of your body. It is common to start with the toes and slowly work your way up to the neck and head [\[R\]](#), [\[R\]](#).

Autogenic training is a relaxation technique that a person may carry out on their own. It uses exercises that take the mind’s attention to bodily sensations such as warmth and heaviness [\[R\]](#), [\[R\]](#).

How it helps

Stress may be a trigger in people with recurrent canker sores [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Stress may increase the risk of canker sores by weakening the immune system and increasing inflammation [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Relaxation techniques that may help with canker sores include [\[R\]](#), [\[R\]](#):

- **Imagery** (visualizing peaceful, relaxing scenarios)
- **Meditation**

7



B Vitamins

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

Take a B vitamin complex supplement once daily, preferably with your morning meal to enhance absorption. The supplement should include a range of B vitamins such as B1 (thiamine), B2 (riboflavin), B3 (niacin), B5 (pantothenic acid), B6 (pyridoxine), B7 (biotin), B9 (folate), and B12 (cobalamin). Ensure consistency by taking it at the same time each day.

Description

B vitamins help the body function properly. Two examples are [vitamin B9 \(folate\)](#) and [vitamin B12](#). They play essential roles in [\[R, R, R, R\]](#):

- DNA formation
- Metabolism
- Energy production

You can get these vitamins from [\[R, R, R, R, R\]](#):

- Animal products
- Green leafy vegetables
- Citrus fruits
- Fortified foods
- Supplements

Adults should be getting **400 micrograms (mcg) of folate** and **2.4 mcg of vitamin B12** every day [\[R, R\]](#).

Folate deficiency is rare but can happen in people that don’t eat enough fruits and vegetables. Alcoholics and lactating mothers may also be at an increased risk [\[R\]](#).

Vitamin B12 deficiency often takes years to develop, as the body is able to store large amounts in the liver. Groups that may be at an increased risk include [\[R, R\]](#):

- Vegans
- Pregnant women
- Older people
- People with gut issues

How it helps

Experts classify insufficient dietary intake of nutrients like vitamin B12, folate, vitamin B6, and zinc as potential triggers of mouth ulcers [\[R, R\]](#).

Research shows that people with recurrent mouth ulcers may have a deficiency of B vitamins, especially vitamin B12 and folate. Other B vitamins that may be deficient in mouth ulcers include [\[R, R, R, R\]](#):

- Vitamin B1
- Vitamin B2
- Vitamin B6

In line with this, supplementation with B vitamins (for 3 months) may improve the healing rate by over 5 times while reducing recurrence by 80%. However, not all studies found benefits for multivitamin products [\[R, R, R\]](#).

Supplementing with vitamin B12 may also reduce ulcer number, duration, and pain [\[R\]](#).

8



Dietary Vitamin B12

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Incorporate foods rich in vitamin B12 into your daily diet, such as beef, chicken, fish, and dairy products. If you are vegetarian or vegan, consider fortified cereals or plant-based milks. Aim to meet the recommended dietary allowance (RDA) for adults of 2.4 micrograms of vitamin B12 per day.

Description

Vitamin B12 is important for nerve function, red blood cell production, and overall energy metabolism. It's crucial for preventing pernicious anemia and maintaining neurological health.

How it helps

Research on a total of 1,312 people found those with recurrent mouth ulcers had an almost 4 times higher risk of vitamin B12 deficiency. A study of 100 people with a history of recurrent mouth ulcers found reduced dietary intake of vitamin B12 [\[R\]](#), [\[R\]](#), [\[R\]](#).

9



Dietary Zinc

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Incorporate foods high in zinc, such as beef, poultry, seafood (especially oysters), beans, nuts, and whole grains, into your daily diet. Aim for the recommended dietary allowance of zinc, which is 11 mg per day for adult men and 8 mg per day for adult women.

Description

Dietary zinc is essential for the body. It helps our immune system fight off bacteria and viruses, plays a role in healing wounds, and is essential for our sense of taste and smell. Without enough zinc, these systems may not work as effectively as they should.

How it helps

An analysis of 19 studies found that people with recurrent mouth ulcers may have lower blood zinc levels [\[R\]](#).

10



SLS-Free Toothpaste

IMPACT

3 / 5

EVIDENCE

2 / 5

How to implement

Use SLS-free toothpaste for your daily tooth-brushing routine, replacing your current toothpaste. Brush your teeth at least twice a day, morning and night, for two minutes each time, using this type of toothpaste.

Description

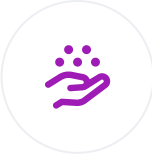
SLS-free toothpaste is a dental product that does not contain sodium lauryl sulfate, a foaming agent commonly found in toothpaste. It can be beneficial for individuals with sensitive gums or those looking to avoid potential irritation caused by SLS.

How it helps

Experts consider that toothpaste and mouth rinses that contain sodium lauryl sulfate (SLS) may trigger mouth ulcers [\[R\]](#).

Toothpaste with SLS may irritate the mouth mucosa and contribute to the development of mouth ulcers. In line with this, research on 123 people concluded that using SLS-free toothpaste reduces the number of episodes, ulcer duration, and pain severity in people with recurrent mouth ulcers [\[R\]](#), [\[R\]](#).

11



Topical Aloe Vera

IMPACT

3 / 5

EVIDENCE

2 / 5

How to implement

Apply a thin layer of pure aloe vera gel extracted directly from the aloe plant or an aloe vera-based product directly to the affected area. Gently rub it in until it is absorbed. Repeat this application 2-3 times daily until the symptoms improve.

Description

Aloe vera is a plant-derived gel known for its skin-soothing and healing properties. Topical applications of aloe vera are commonly used to relieve sunburn, minor burns, and skin irritation, promoting faster healing and reducing discomfort.

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

Topical aloe vera may help soothe burns and skin conditions [\[R\]](#).

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

How it helps

Aloe gel (2-5%) alone may help improve canker sores. It may reduce their size, redness, and oozing. It may also reduce pain from canker sores [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Topical aloe vera may help reduce inflammation [\[R\]](#).

12



Avoid Food Triggers

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Identify foods that trigger negative reactions in your body, such as digestive issues, allergies, or headaches, and eliminate them from your diet entirely. This may require keeping a food diary for a few weeks to observe patterns and might involve cutting out common triggers like dairy, gluten, soy, or certain additives. Continuously monitor and adjust your diet to avoid these triggers as long as the symptoms persist.

Description

Food triggers are specific substances or ingredients in one's diet that can exacerbate or induce adverse reactions, such as allergies, sensitivities, or digestive issues, often leading to symptoms like inflammation, bloating, or discomfort.

A "trigger" is something that prompts or worsens the symptoms of a health condition.

Food triggers can lead to a wide range of symptoms in people who are sensitive to them. These may include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Gut problems
- Skin problems
- Migraines

How it helps

Certain foods may trigger canker sores in some people. These include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Chocolate
- Coffee
- Cow’s milk
- Acidic fruit (e.g., pineapple, grapefruit)
- Carbonated beverages
- Some spices (e.g., pepper, paprika, curry)
- Abrasive, salty foods (e.g., chips, pretzels)
- Gluten, in people with celiac disease

Avoiding certain foods may help prevent canker sores from coming back in people with recurrent canker sores and food sensitivities [\[R\]](#).

13



Infrared Light Therapy

IMPACT

2 / 5

EVIDENCE

3 / 5

Description

Infrared light therapy is a type of light therapy that uses infrared light to improve circulation, reduce pain, and promote healing. It has been shown to be effective in treating a variety of conditions, including arthritis, chronic pain, and wound healing.

How it helps

A meta-analysis of 11 trials and 415 cancer patients found that infrared low-level laser therapy can partly prevent the development of cancer therapy-induced oral mucositis [\[R\]](#).

14

Topical Hyaluronic Acid

IMPACT

2 / 5

EVIDENCE

2 / 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

Applying hyaluronic acid (0.2-2.5%) to the inside of the mouth may help soothe canker sores [\[R\]](#), [\[R\]](#).

Hyaluronic acid may help by [\[R\]](#):

- Reducing inflammation
- Promoting wound healing
- Protecting against harmful bacteria

15



Topical Curcumin

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Apply a cream or gel containing curcumin directly to the affected area of the skin. This should be done 2-3 times daily. It's best to continue this application for as long as the condition persists or according to the product's specific instructions.

Description

Curcumin is a compound found in turmeric, a plant-derived topical application used for its anti-inflammatory and antioxidant properties. It is applied to the skin to reduce inflammation and soothe conditions like arthritis and skin irritations.

[Turmeric](#) is a yellow spice from India. It may reduce inflammation and [oxidative stress](#) [R].

The most important active compound in turmeric is **curcumin**. People use curcumin for [R, R, R, R, R]:

- Joint pain
- Hay fever
- Mood
- High blood sugar
- Gut health

How it helps

Topical curcumin may help reduce canker sore size, number, pain, redness, and oozing [R, R].

It may help by reducing inflammation [R, R, R].

16



Topical Licorice Root

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Apply a thin layer of licorice root extract cream or gel directly to the affected skin areas twice daily, morning and evening, for at least two to four weeks to see improvements.

Description

Licorice root, derived from the Glycyrrhiza plant, is used topically for its anti-inflammatory and soothing properties. Its main compound, glycyrrhizin, can help alleviate skin conditions such as eczema, psoriasis, and dermatitis.

[Licorice](#) (*Glycyrrhiza glabra*) is a plant used to flavor candy and drinks [\[R\]](#).

Its root has long been used in folk medicine. Today, people use it for sore throats, digestive problems, and itchy skin. Its compound *licochalcone A* may also help with rosacea [\[R\]](#).

How it helps

Licorice solution may help with canker sores [\[R\]](#).

Adhesive patches containing licorice extract may also help [\[R\]](#), [\[R\]](#).

Licorice may help by reducing inflammation [\[R\]](#).

17



Turmeric

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate 500-1000 mg of turmeric into your daily diet, either by adding ground turmeric spice to your food, such as in curries, soups, and smoothies, or by taking a dietary turmeric supplement. This should be done daily for at least 8 weeks to observe potential health benefits.

Description

Turmeric is a bright yellow spice derived from the root of the *Curcuma longa* plant. It contains curcumin, a potent antioxidant and anti-inflammatory compound. Turmeric is used for various health conditions, including reducing inflammation, alleviating joint pain, and supporting digestive health.

How it helps

Topical curcumin may help reduce canker sore size, number, pain, redness, and oozing [\[R, R\]](#).

It may help by reducing inflammation [\[R, R, R\]](#).

Note that curcumin is hard to absorb. Look for supplements with *bioavailable* curcumin, which is easier to absorb. Combining it with [piperine](#) (a compound in black pepper) may also help [\[R, R\]](#).

18



Propolis

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take a propolis supplement in capsule or tablet form, typically ranging from 500mg to 1000mg per day. It's best to follow the dosage instructions on the product label or a healthcare provider's advice. Propolis can be taken continuously, but consult a healthcare provider for specific durations especially if it exceeds three months.

Description

Propolis is a resinous substance collected by bees from tree buds and used to seal their hives. It has been traditionally used in natural medicine for its potential antimicrobial properties and as a source of antioxidants that may support oral and immune health.

Propolis is a waxy compound, also known as “bee glue.” Honeybees make it from plants and use it to build, repair, and protect their hives [\[R\]](#).

People use propolis to potentially help [\[R\]](#):

- Reduce the appearance of acne
- Maintain oral health
- Support the immune system

How it helps

In people with recurrent canker sores, **propolis capsules (500 mg/day for at least 6 months)** may help reduce the number of outbreaks. It may also improve the quality of life [\[R\]](#).

The following **topical** forms of propolis may also help [\[R\]](#), [\[R\]](#):

- Adhesive film with propolis extract
- Propolis mouth spray

Propolis may help by reducing the amount of “bad” bacteria in the mouth [\[R\]](#).

Please note: *Be careful with propolis if you are prone to allergies, especially if you are allergic to pollen* [\[R\]](#).

19



Red Light Therapy

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Position yourself or the specific area of your body that needs treatment about 6 inches away from a red light therapy device. Use the device for 10 to 20 minutes daily. It is recommended to continue this daily regimen for at least several weeks to notice benefits.

TYPICAL STARTING DOSE

20 minutes

Description

Red light therapy involves exposure to low-level red or near-infrared light, which may promote skin rejuvenation, reduce inflammation, and improve circulation when used for therapeutic purposes in skin care and wellness treatments.

How it helps

According to a systematic review of 11 trials, both red and infrared light therapy significantly reduced the incidence, severity, and pain of oral mucositis [\[R\]](#).

20



Omega-3 (Fish Oil)

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take 1-2 g of omega-3 (fish oil) supplement daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

500 mg

Description

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

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

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

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

- Salmon
- Tuna
- Herring
- Sardines

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

How it helps

Omega-3s (3 g/day for 3-6 months) may help improve canker sores [\[R\]](#), [\[R\]](#), [\[R\]](#).

Omega-3s may help by reducing inflammation [\[R\]](#), [\[R\]](#).

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

21



Meditation

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Set aside 10-20 minutes each day in a quiet space without distractions to practice meditation. Focus on your breath or perform guided meditation using an app or audio track.

TYPICAL STARTING DOSE

30 minutes

Description

Meditation is a mindfulness practice that can reduce stress, improve mental clarity, and promote relaxation. Regular meditation is associated with numerous mental and emotional health benefits, including reduced anxiety and enhanced emotional well-being.

Meditation is a relaxation technique that trains your mind to focus and redirect your thoughts. Some of the main types of meditation are [\[R\]](#):

- Mindfulness
- Focused
- Transcendental
- Mantra
- Moving

People use meditation to improve [\[R\]](#), [\[R\]](#):

- Stress and anxiety
- Mood
- Sleep disturbances
- Pain

How it helps

Stress may be a trigger in people with recurrent canker sores [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Stress may increase the risk of canker sores by weakening the immune system and increasing inflammation [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Relaxation techniques that may help with canker sores include [\[R\]](#), [\[R\]](#):

- **Imagery** (visualizing peaceful, relaxing scenarios)
- **Meditation**

22



Dietary Iron

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate iron-rich foods into your daily meals, such as red meat, chicken, turkey, fish, beans, lentils, tofu, cooked spinach, and fortified cereals. Aim for at least 18 mg of iron per day for adult women and 8 mg per day for adult men. It's also beneficial to pair these foods with vitamin C-rich foods like oranges, strawberries, or bell peppers to enhance iron absorption.

Description

Iron (Fe) is an essential mineral. It helps make [hemoglobin](#), a protein that carries oxygen to cells. In this way, iron **increases energy** and supports **brain and immune system function** [\[R\]](#), [\[R\]](#), [\[R\]](#).

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

- Oysters
- White beans
- Beef
- Chocolate
- Spinach
- Fortified cereals

Women should be getting **8-18 mg** of iron per day, while **men** should be getting **8 mg** [\[R\]](#).

Groups at risk of iron deficiency include [\[R\]](#):

- Menstruating women
- Children
- Vegetarians
- Routine blood donors

How it helps

Iron deficiency is linked to a higher risk of recurrent canker sores [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Iron supports the normal function of the mouth lining [\[R\]](#).

Please note: *A high dose of iron can be toxic. If you are not deficient, it is best to get iron from food. Talk to your doctor before taking iron supplements* [\[R\]](#).

Please note: *Increased iron intake from meat is linked to higher odds of diabetes and heart disease. Try to find a balance between plant and animal iron sources* [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

23



Chlorhexidine Mouthwash

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Use chlorhexidine mouthwash by rinsing with 10-15 ml (about two teaspoons) of the solution for 30 seconds twice daily, morning and evening, after brushing your teeth. Do this for up to two weeks or as directed by your dentist.

TYPICAL STARTING DOSE

10 ml

Description

Chlorhexidine mouthwash is an antiseptic solution used to reduce plaque and prevent gum disease and oral infections. It can be recommended by dentists to improve oral hygiene and maintain healthy gums and teeth.

How it helps

Experts suggest that using chlorhexidine may decrease the number of ulcers [\[R\]](#).

Antimicrobial mouth rinses with chlorhexidine helped manage and prevent mouth ulcers in 8 studies of 398 people [R](#)].

Please note: *Chlorhexidine may cause brown staining of the teeth and tongue* [\[R\]](#).

24



Toothpaste With Enzymes

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Use a toothpaste containing enzymes twice daily, in the morning and before bed, as part of your regular oral hygiene routine. Brush your teeth for two minutes during each session to allow the enzymatic action to effectively help break down plaque and maintain oral health.

Description

Toothpaste with enzymes contains digestive enzymes like papain or bromelain, which can help break down food particles and plaque on teeth. These enzymes may contribute to improved oral hygiene and fresher breath when used as part of regular dental care routines.

How it helps

Toothpaste with enzymes may promote healing and prevent the recurrence of mouth ulcers, according to 2 studies of 91 people. Studied enzymes include [\[R, R\]](#):

- Amyloglucosidase
- Glucose oxidase
- Lysozyme

25



Probiotics

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take a probiotic supplement containing 10 billion or more live cultures once daily, preferably with a meal or as directed by the packaging or a healthcare provider.

TYPICAL STARTING DOSE

10 billion

Description

Probiotics are live beneficial bacteria and yeasts that can support gut health and digestive function when consumed as supplements or found in fermented foods like yogurt and sauerkraut. They may be beneficial to gut health, immune function, blood sugar, and mood.

Probiotic bacteria are “good” bacteria found mainly in the large intestine. They support your body and mind by [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Maintaining gut health
- Supporting a healthy immune system
- Improving your mood
- Helping to maintain healthy blood sugar

Prebiotics are certain types of fiber and other complex carbs that serve as food for gut bacteria. **They support gut health by helping boost the activity and growth of “good” bacteria** [\[R\]](#), [\[R\]](#).

Prebiotics are also added to foods and supplements. Common prebiotic ingredients are [\[R\]](#), [\[R\]](#):

- Oligo-fructose
- Oligo-galactose
- [Inulin](#)

Mixtures of probiotics and prebiotics are known as **synbiotics** [\[R\]](#).

How it helps

Probiotic lozenges may help relieve pain from canker sores, however, the evidence is mixed [\[R\]](#).

Probiotics may help by reducing inflammation and fighting “bad” bacteria [\[R\]](#).

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Bacillus Clausii

IMPACT

2 / 5

EVIDENCE

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How to implement

Take Bacillus clausii as an oral probiotic supplement, usually found in liquid or capsule form. For adults and children, the typical dosage is one or two capsules (or one or two vials of liquid, if using that form) daily. The duration of use can vary; some may take it for a few weeks during or after antibiotic treatment, while others might use it for longer periods to support digestive health.

Description

Bacillus causii is a type of beneficial bacteria that can be found in probiotic supplements, potentially contributing to digestive health and a balanced gut microbiome.

How it helps

Oral application of probiotics such as *Bacillus clausii* may reduce the severity of ulcers when combined with standard anti-inflammatory therapy. When combined with *Lactobacillus brevis* CD2, *B. clausii* may also help relieve pain and improve ulcer healing [\[R\]](#).

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Topical Honey

IMPACT

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EVIDENCE

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How to implement

Apply a thin layer of raw, unpasteurized honey directly to the affected area of the skin. Cover it with a sterile bandage and leave it on for at least 1 hour, or overnight for best results. Repeat daily until improvement is seen.

Description

Honey is a natural topical application known for its moisturizing, antibacterial, and wound-healing properties. It is used to soothe dry skin, promote skin repair, and address minor burns and cuts.

[Honey](#) is a thick, sweet substance. It's made by honeybees from the nectar of flowering plants. There are many different types of honey. For example, kanuka honey is made from the flowers of the New Zealand kanuka tree [[R](#), [R](#)].

Besides sugar, honey also contains amino acids (protein building blocks), vitamins, and minerals [R].

People use honey for its anti-inflammatory and antioxidant properties. It may help with [R, R, R, R]:

- Heart problems
- Gut problems
- Cough
- Skin problems

How it helps

In a study of 94 people with mouth ulcers, topical application of honey (4x/day for 5 days) reduced ulcer size, days with pain, and redness better than standard anti-inflammatory therapy [R].

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Lactobacillus Brevis

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Take a supplement containing *Lactobacillus brevis*, usually found in dosages around 10 billion CFUs (colony-forming units), once daily. This can be taken with or without food, but consistency in timing can help maintain intestinal balance. Continue supplementation as directed on the product label or by a healthcare provider, which is often recommended for a minimum of one to two months to evaluate benefits.

TYPICAL STARTING DOSE

10 billion CFU

Description

Lactobacillus brevis is a beneficial bacteria strain often found in probiotic supplements. It can contribute to digestive health and overall well-being by promoting a balanced gut microbiome.

How it helps

Oral application of probiotics such as *Lactobacillus brevis* (at least 1 billion live bacteria/day, 4x/day for 7 days) may improve ulcer healing and relieve pain [R].

29



Zinc Sulfate

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Take zinc sulfate as a dietary supplement by swallowing one 220 mg tablet (equivalent to 50 mg elemental zinc) with water, once daily, preferably with a meal to avoid stomach upset. This regimen can be followed for up to 2 weeks unless advised differently by a healthcare professional.

TYPICAL STARTING DOSE

220 mg

Description

Zinc sulfate is a chemical compound containing zinc and sulfur, used in dietary supplements to address zinc deficiencies, boost immune function, and support skin health. It's employed in medical settings to treat conditions like Wilson's disease and zinc deficiency-related disorders.

How it helps

In 3 studies of 111 people with recurrent mouth ulcers, supplementation with zinc sulfate (220-300 mg/day for 1-12 weeks) reduced ulcer size, pain, and recurrence [R, R, R].

Zinc has wound-healing properties that might be beneficial in reducing the duration of canker sores.

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Dietary Pyridoxine (Vitamin B6)

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Increase your intake of vitamin B6 by eating more foods rich in this nutrient, such as bananas, chickpeas, tuna, salmon, chicken breast, and spinach. Aim for a balanced diet that includes these foods regularly, about 2-3 servings of B6-rich foods per day, to help meet the general daily requirement of 1.3mg for adults.

Description

Vitamin B6 is involved in over 100 enzyme reactions in the body and plays a role in brain development, immune function, and hormone regulation. It is found in foods like poultry, fish, potatoes, and bananas.

[Vitamin B6](#) (*pyridoxine*) is important for nervous and immune system health [\[R\]](#).

Good sources of vitamin B6 include [\[R\]](#):

- Poultry
- Fish
- Potatoes
- Chickpeas
- Bananas
- Fortified cereals

How it helps

People with recurrent mouth ulcers may have vitamin B6 deficiency [\[R, R\]](#).

31



Maintain Optimal Vitamin D Levels

IMPACT

1 / 5

EVIDENCE

2 / 5

How to implement

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

TYPICAL STARTING DOSE

1000 iu

Description

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

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

- Mood
- Immunity
- Heart health
- Blood sugar control

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

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

How it helps

People with recurrent mouth ulcers may have lower vitamin D levels than healthy people [\[R\]](#), [\[R\]](#), [\[R\]](#).

Vitamin D deficiency may not cause mouth ulcers, but it may increase the risk of multiple ulcers by almost five times [\[R\]](#).

32



Topical Myrtle

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Apply myrtle essential oil diluted with a carrier oil directly to the affected area of the skin 1-2 times daily. Continue application until symptoms improve, but not longer than 4 weeks without consulting a healthcare provider.

Description

Myrtle (*Myrtus communis*) is a shrub used in traditional Persian medicine. Chemicals in myrtle may help combat microbes and reduce swelling [R].

People use myrtle for acne, canker sores, heavy periods, heartburn, warts, and more [R].

How it helps

In a study of 45 people with recurrent mouth ulcers, applying a paste with myrtle (for 6 days) decreased ulcer size, pain, redness, and exudation while improving quality of life [R].

33



Damask Rose Mouthwash

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Use the damask rose mouthwash twice daily, swishing it around your mouth for 30 seconds before spitting it out, preferably after brushing your teeth in the morning and at night.

Description

Damask rose is known for its aromatic properties and is often used in perfumes and cosmetics. Some preparations, such as damask rose mouthwash and oil, may have potential benefits for oral hygiene and skin health due to their pleasant fragrance and potential antibacterial properties.

How it helps

In a study of 50 people with recurrent mouth ulcers, using a mouthwash with Damask rose (for 2 weeks) reduced pain, size, and number of ulcers [R].

34



Rhodiola

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 500 mg of rhodiola supplement daily, preferably in the morning to avoid potential interference with sleep.

TYPICAL STARTING DOSE

500 mg

Description

Rhodiola is a plant native to the arctic regions of Europe and Asia, where it's traditionally used to enhance stamina, combat stress and fatigue, and improve mental performance and resilience in harsh environments. Its main compounds include rosavins and salidroside.

[Rhodiola](#) (*Rhodiola rosea*) is a plant that grows in the mountains of eastern Europe and Asia [\[R\]](#).

Rhodiola is an *adaptogen*, meaning that it may help you adapt to stress. According to early research, this herb may help with [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Fatigue
- Burnout
- Low mood

How it helps

In a non-placebo-controlled trial of 130 breast cancer patients receiving chemotherapy, supplementation with Rhodiola algida for 14 days caused a faster increment of white blood cell counts and reduced the number of mouth ulcers [\[R\]](#).

35



Topical Berberine

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Apply a thin layer of berberine cream or gel to the affected area of the skin 1-2 times daily. Make sure the skin is clean and dry before application. Continue this application as per the specific condition’s improvement guideline or until advised by a healthcare professional.

Description

Berberine, derived from various plants like goldenseal and barberry, is sometimes used topically for its potential antimicrobial properties. It may be applied to minor wounds or skin infections to support healing and reduce infection risk.

[Berberine](#) is a compound of some plants used in traditional medicine, such as [\[R\]](#):

- European barberry
- Oregon grape
- Goldenseal
- Chinese goldthread
- Tree turmeric

Berberine is also available as a supplement. People use it to help support healthy [\[R, R, R\]](#):

- Blood sugar
- Cholesterol
- Blood pressure

How it helps

Applying berberine gel to the inside of the mouth (50 mg, 4 times a day for 5 days) may help with canker sores. It may reduce their size, redness, and oozing [\[R\]](#).

36



Avoid Spicy Food

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Eliminate or significantly reduce consumption of foods high in spices, such as hot peppers, curry, and salsa, from your daily diet.

Description

For individuals sensitive to spicy foods, avoiding excessively hot or spicy dishes can prevent digestive discomfort and heartburn, promoting better gastrointestinal comfort and overall well-being.

How it helps

Experts consider spicy food as a possible trigger for canker sores. They suggest avoiding abrasive, acidic, or spicy foods that may cause mouth irritation [\[R\]](#).

Spicy foods may also worsen the discomfort associated with canker sores [\[R\]](#).

37



Topical Garlic

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Crush or mince fresh garlic and mix it with a carrier oil, like olive or coconut oil, to dilute its strength. Apply this mixture directly to the affected area of the skin, leave it on for about 20 minutes, then rinse off. Repeat this process daily for up to 2 weeks or until you see improvement.

Description

Garlic is a topical application derived from the garlic bulb, known for its potential antibacterial and anti-inflammatory properties. It is commonly used for skin issues like acne and fungal infections due to its main compound, allicin, and its origins can be traced back to the Allium plant family.

[Garlic](#) is a vegetable often used to flavor food. It’s been a part of traditional medicine for thousands of years [\[R\]](#).

Today, people take garlic to help control their blood pressure and cholesterol [\[R\]](#).

The active component in garlic is called *allicin*.

How it helps

Applying adhesive allicin tablets (5 mg) to the inside of the mouth (4 times a day for 5 days) may help reduce pain and the size of canker sores [\[R\]](#).

Topical garlic may help by reducing inflammation and fighting “bad” bacteria [\[R\]](#).

Please note: *Garlic can interact with blood thinners (such as aspirin, Plavix, and Coumadin). Talk to your doctor before taking garlic* [\[R\]](#), [\[R\]](#).

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Perilla Oil

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 600-900 mg of perilla oil daily, ideally with meals to enhance absorption. This should be divided into two or three doses throughout the day. Continue this regimen for at least 8 to 12 weeks to evaluate its effectiveness.

TYPICAL STARTING DOSE
600 mg

Description

Perilla oil is an edible oil extracted from the seeds of the *Perilla frutescens* plant, which is native to Asia. It is rich in omega-3 fatty acids, particularly alpha-linolenic acid (ALA), and is known for its potential health benefits, including supporting heart health, reducing inflammation, and providing essential nutrients like vitamin E and omega-3s.

How it helps

Perilla Oil has anti-inflammatory properties that help reduce inflammation and speed up the healing process of canker sores. It also helps soothe pain and discomfort from these sores due to its analgesic properties.

In a randomized, placebo-controlled, double-blind trial 30 subjects (8 men and 22 women) who had minor recurrent aphthous stomatitis (RAS) at least once a month, perilla oil (rich in alpha-linolenic acid) as the sole cooking oil (for 8 months) **lowered the prevalence of minor RAS, but just as much as soybean oil** [\[R\]](#).

39



Topical Red Mangrove

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Apply a topical preparation of red mangrove extract to the affected area of the skin once or twice daily. Continue application for a duration as advised by a healthcare professional, typically until the condition improves.

Description

Red mangrove extract, derived from the red mangrove tree, contains tannins and flavonoids. It is used topically for its potential to soothe skin and reduce inflammation, making it suitable for skincare products targeting skin redness and irritation.

How it helps

In a study of 32 people with recurrent mouth ulcers, the topical application of red mangrove (for 5 days) completely healed the ulcers in 71% of people compared to 7% in the placebo group. Topical red mangrove also sped up the improvement of symptoms such as [\[R\]](#):

- Redness
- Burning
- Pain

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Topical Myrrh

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Apply a small amount of myrrh oil diluted in a carrier oil, such as coconut or jojoba oil, directly to the affected area of the skin 1-2 times daily. Continue this application for up to two weeks to see improvements.

Description

Myrrh, a resin obtained from the Commiphora myrrha tree, is used topically for its antimicrobial and anti-inflammatory properties. It can aid in wound healing and help soothe skin conditions like acne and eczema.

How it helps

In a placebo-controlled study of 90 subjects with canker sores, using a gel with myrrh (0.5% w/w) for 5 days greatly reduced pain in 76.7% of the patients [\[R\]](#).

Topical myrrh has anti-inflammatory and antibacterial properties that can promote the healing of canker sores.

Next Steps

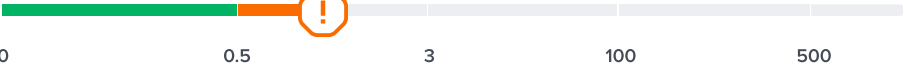
Remember, your genes only tell one important part of your health story!

Now that you've seen your DNA-based results for this health topic, let's take a look at other contributing factors.

Your lab results

Your lab results are impacted by the combined effect of your genes, environment and lifestyle.

Lab tests will give you the best picture of your current health status, while your genes provide insight into your health predispositions and which recommendations are best for you.

	Zinc	17.12 umol/L		9 Nov 2025
	Vitamin B12	687 pg/mL		9 Nov 2025
	hs-CRP	1.6 mg/L		9 Nov 2025
	Vitamin B6	55 ng/mL		13 Jan 2026
	Iron	228 mcg/dL		9 Nov 2025