

Cold Sores

DNA Health Report

REPORT CATEGORY —



IMMUNITY &
INFECTIONS

Sample Client

Report date: 15 January 2026

Powered by

 omicse Edge

Table of Contents

03 How this works

- 04 Impact
- 05 Evidence
- 06 Some things to keep in mind

07 Introduction

08 Your genetics

09 Your recommendations

DISCLAIMER

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

Personal information

NAME

Sample Client

SEX AT BIRTH

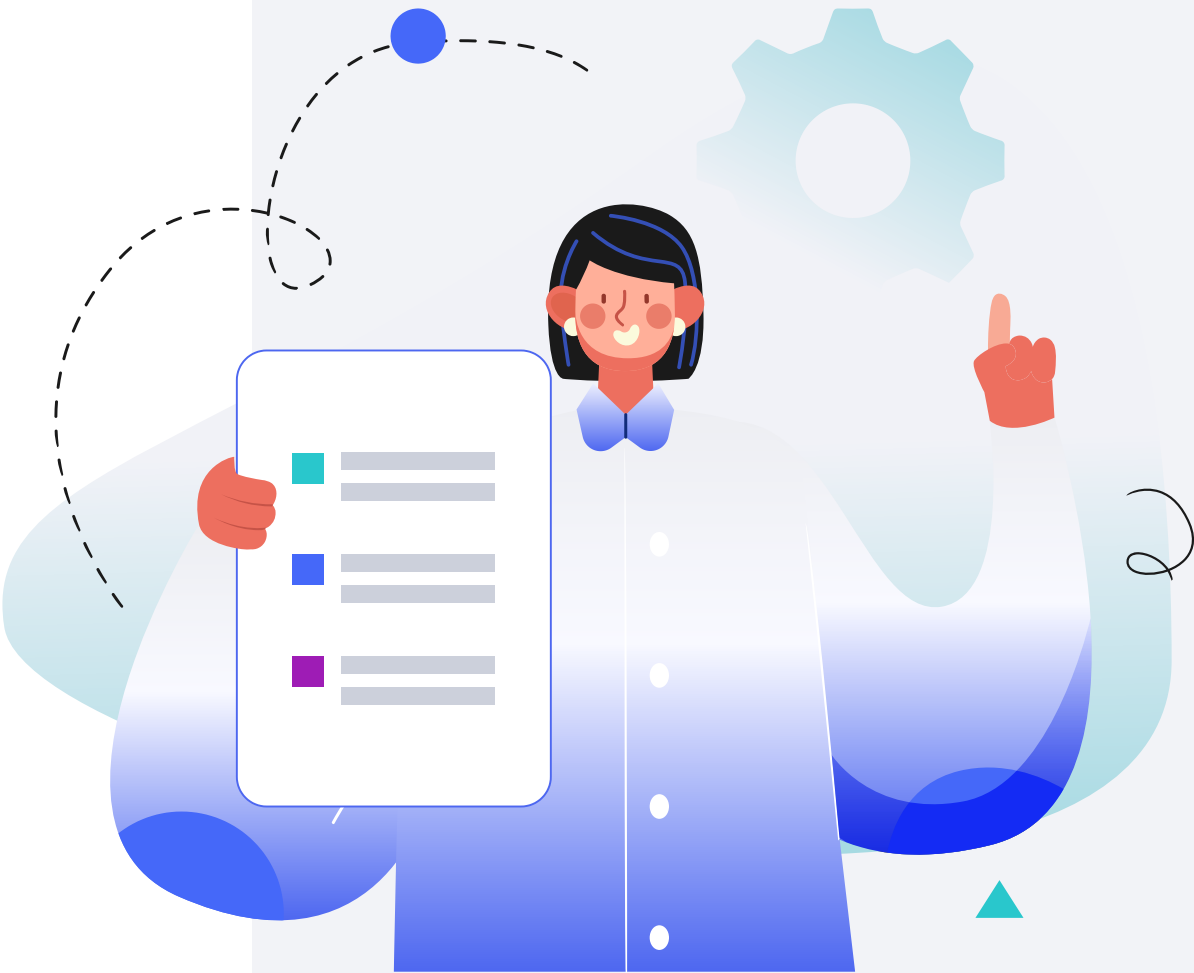
Male

HEIGHT

5ft 5" 165cm

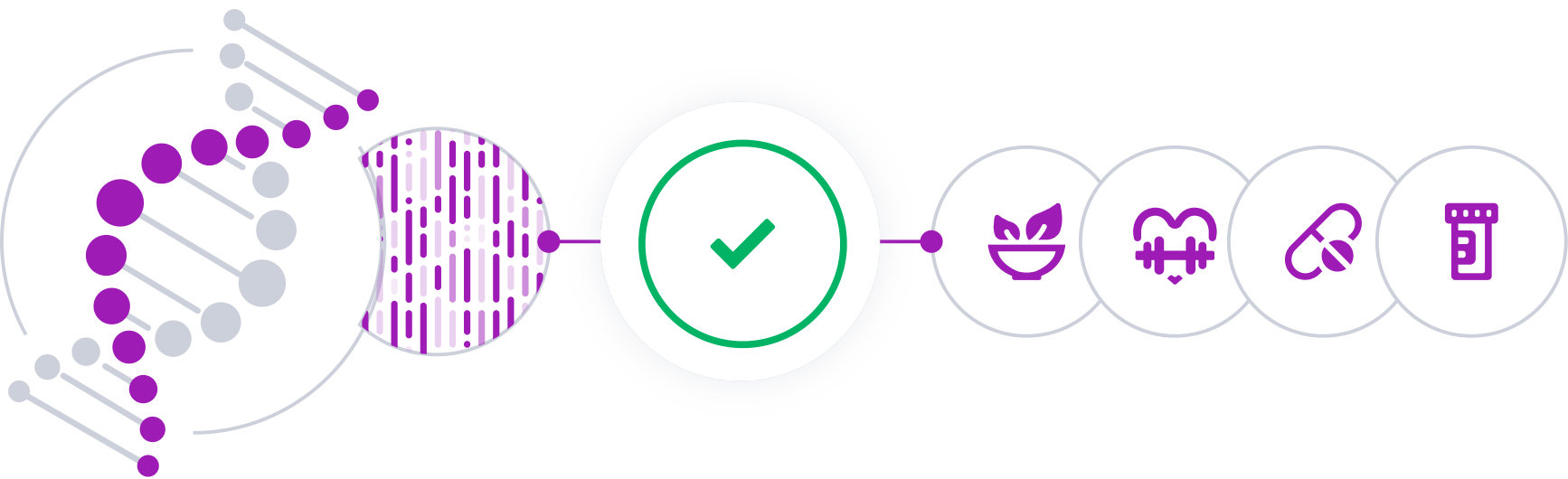
WEIGHT

137lb 62kg



How this works

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

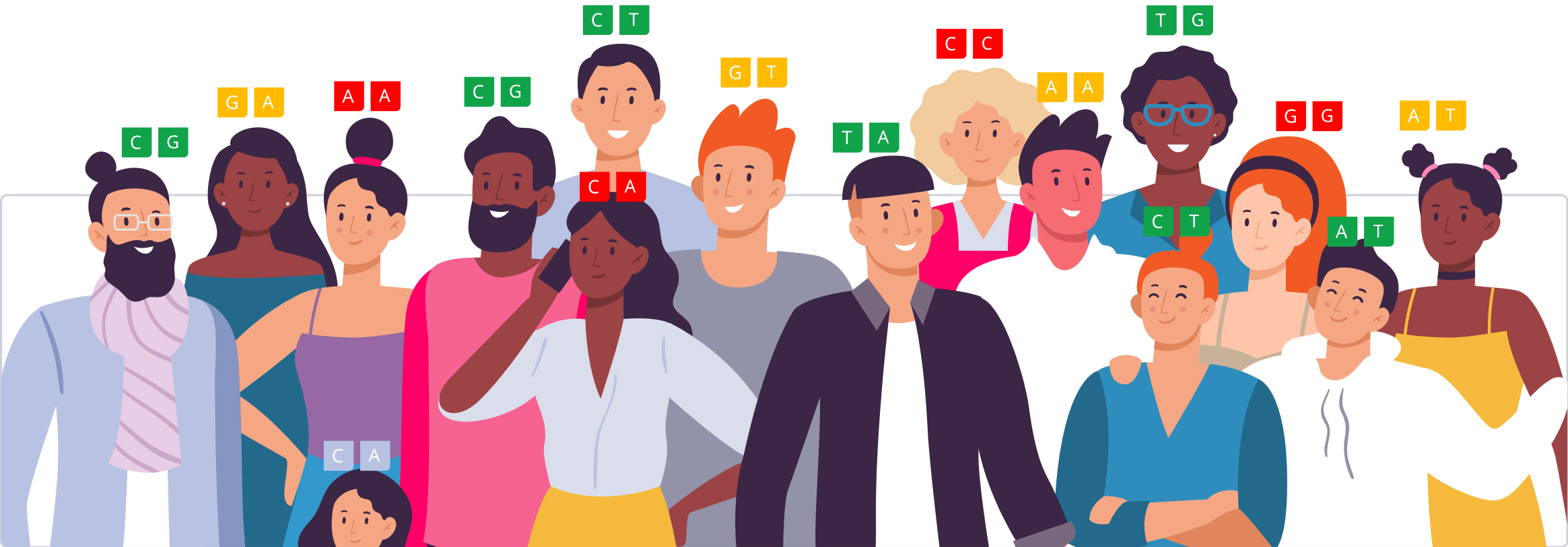


Similarly, our Trait Reports look at how your DNA influences your traits.



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

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



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

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

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



Genotype color info:

AA

You don't have any risk alleles

AA

You have 1 risk allele

AA

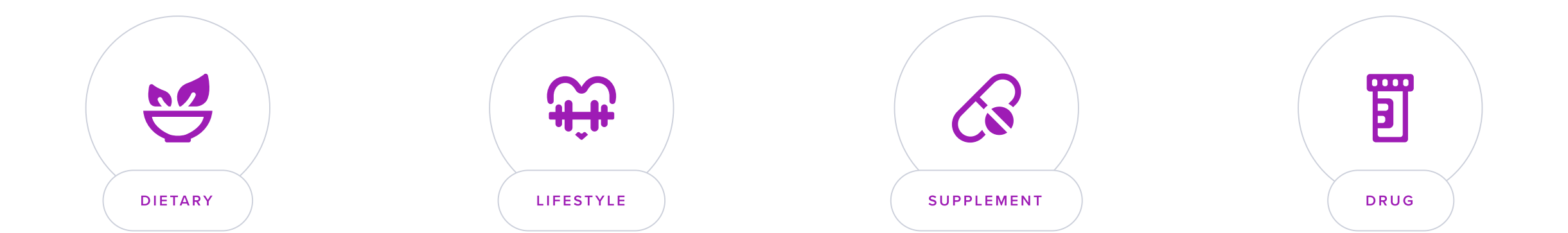
You have 2 risk alleles

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

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

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

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



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

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



Impact

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

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

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

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

Recommendation Evidence

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

Genotype-specific Evidence

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

Some things to keep in mind:

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

Introduction

Cold sores, also known as fever blisters, are tiny, fluid-filled blisters on and around the lips caused by a common viral infection. They're usually caused by herpes simplex virus type 1 (**HSV-1**), and less commonly herpes simplex virus type 2 (HSV-2). Both of these viruses can affect the mouth or genitals [R].

The virus is transmitted through direct contact with infected bodily fluids or lesions, commonly through kissing, oral sex, or sharing personal items like utensils, towels, or lip balm.

After the initial infection, HSV remains dormant in nerve cells and can reactivate periodically, leading to recurrent outbreaks. Outbreak triggers include [R]:

- Stress
- Sunburn
- Temperature changes
- Surgical trauma or dental procedures
- Immunosuppressant therapy
- Hormonal changes

The typical clinical presentation of cold sores includes [R]:

- Prodromal stage: tingling, itching, or burning sensations around the lips for 24-48 hours before blisters appear.
- Blistering phase: formation of small, painful blisters filled with clear fluid, usually at the lip edges.
- Ulcer stage: blisters burst and ooze, forming painful ulcers.
- Scabbing phase: ulcers dry up and form scabs, which can crack and bleed.
- Healing stage: scabs gradually disappear without scarring.

Symptoms can be more severe during the initial outbreak and may include fever, swollen lymph nodes, and body aches.

While there is no cure for HSV-1 infection, several treatment options can help manage symptoms and reduce the frequency of outbreaks [R]:

- **Antiviral medications:** oral antivirals such as acyclovir, valacyclovir, and famciclovir can help reduce the severity and duration of symptoms, especially when taken at the first sign of an outbreak.
- **Topical treatments:** over-the-counter creams and ointments applied directly to the sores can provide symptom relief.
- **Pain relief:** ibuprofen or acetaminophen can help alleviate pain during outbreaks.
- **Home remedies and lifestyle adjustments:** applying ice or a warm compress, keeping the affected area clean and dry, and avoiding acidic or spicy foods can reduce discomfort.

Preventive measures include avoiding direct contact with active lesions, not sharing personal items that touch the lips, and using lip balm with sunblock to prevent sunlight-triggered recurrences.

Genetics of Cold Sores

Genetic variants may affect the risk of HSV-1 infection, as well as the sensitivity to stressors that may trigger outbreaks.

A study of over 200,000 individuals of European ancestry identified two variants associated with increased susceptibility to cold sores: the ‘C’ allele of [rs885950](#) and the ‘A’ allele of [rs4360170](#). These variants belong to the [POU5F1](#) genes, which encodes a protein involved in embryonic development and stem cell differentiation [\[R\]](#), [\[R\]](#).

Another gene associated with susceptibility to cold sores is [C21orf91](#), which has even been called ‘cold sore susceptibility gene 1 (*CSSG1*)’ in some studies. Two polymorphisms, [rs1062202](#)-’G’ and [rs10446073](#)-’G’, have been associated with an increased susceptibility to this condition. However, the function of this gene remains largely unknown and is so far only believed to play a role in brain development [\[R\]](#), [\[R\]](#), [\[R\]](#).

The [VDR](#) gene is responsible for producing a protein called the vitamin D receptor (also known as VDR or the calcitriol receptor) [\[R\]](#).

Among the different *VDR* polymorphisms, [rs2228570](#), also known as FokI, has been most widely researched. Its minor ‘A’ variant encodes a slightly longer version of the protein associated with decreased VDR levels and activity. A study of 235 associated this allele with an increased susceptibility to cold sores and a higher risk of recurrence [\[R\]](#).

The [IL1A](#) gene encodes IL-1α, a pro-inflammatory cytokine involved in fighting off viruses and bacteria, as well as in bone resorption [\[R\]](#).

The major ‘T’ allele of its [rs1304037](#) polymorphism has been associated with an increased number of cold sore outbreaks [\[R\]](#).



TYPICAL LIKELIHOOD

Typical likelihood of cold sores based on 5 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
C21ORF91	rs10446073	GG
VDR	rs2228570	GA
MICA	rs4360170	AA
SLC20A1	rs1304037	TT
C21ORF91	rs1062202	AA
PSORS1C2	rs885950	AA

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Your Recommendations

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

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

- 1

Topical Aloe Vera
- 2

Topical Honey
- 3

Topical Clinacanthus Nutans

1



Topical Aloe Vera

IMPACT

1 / 5

EVIDENCE

1 / 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

Topical application of aloe vera provides soothing relief to cold sores by reducing inflammation and pain while its healing properties promote faster recovery, thereby addressing both discomfort and the duration of the outbreak.

2



Topical Honey

IMPACT

1 / 5

EVIDENCE

1 / 5

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

Topical honey assists in the treatment of cold sores by providing antibacterial properties that inhibit viral growth and promote healing. Its moisturizing capabilities also aid in reducing discomfort and accelerating skin recovery.

3

Topical Clinacanthus Nutans

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Apply a cream or gel containing Clinacanthus nutans extract directly to the affected area of the skin. Use a thin layer and gently massage it in until fully absorbed. Do this 2-3 times daily for up to two weeks or as symptoms improve.

Description

Clinacanthus nutans extract, derived from the Clinacanthus nutans plant, is used topically for its potential anti-inflammatory and antiviral properties. It is applied to soothe skin conditions like insect bites and herpes sores.

Clinacanthus nutans Lindau, also known as Sabah snake grass, is a small shrub native to tropical Asia. People use it as a traditional remedy for [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Viral infections (e.g., herpes, chickenpox)
- Skin rashes
- Insect or snake bites

C. nutans may help reduce pain and inflammation [\[R\]](#), [\[R\]](#).

How it helps

Topical application of Clinacanthus nutans may alleviate cold sores by reducing inflammation and inhibiting viral replication, thereby promoting faster healing and relief from discomfort associated with herpes simplex lesions.