

Cold Intolerance

DNA Health Report

REPORT CATEGORY —



Sample Client

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Personal information

NAME

Sample Client

SEX AT BIRTH

Male

HEIGHT

5ft 5" 165cm

WEIGHT

137lb 62kg

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.



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 sensitivity, or cold intolerance, refers to an unusually strong reaction to cold temperatures in certain individuals. People with cold Intolerance often feel uncomfortably cold or experience pain when exposed to cooler environments, even when others find the temperature mild.

This Intolerance can affect specific areas, such as the fingers and toes, or the entire body.

Common manifestations of cold Intolerance include:

- Numbness or tingling in the extremities during cold exposure.
- Skin discoloration (often white or blue) when exposed to the cold.
- Swelling or pain after cold exposure.
- Worsening of symptoms in damp or humid conditions.

Alternatively, cold immersion (also called cold plunge) is often used by athletes to reduce muscle soreness and speed up recovery after strenuous workouts. The cold temperature can help constrict blood vessels and reduce inflammation, aiding in the repair of muscle tissue.

Individuals with enhanced cold tolerance and metabolic response to cold exposure may benefit the most from cold plunge. In contrast, those less tolerant might benefit from a more gradual approach or shorter exposure times.

Please note: rapid instead of gradual cold exposure causes dangerous, and even fatal, changes in the breath and heart rates, known as the cold shock response. Be cautious with any form of sudden temperature change in your environment, especially if you have heart disease or other chronic conditions [\[R\]](#).

Risk Factors and Genetics

Factors and conditions that might increase the risk or cause cold intolerance include:

- Raynaud's disease: A condition where small blood vessels in the fingers and toes narrow in response to cold, leading to discoloration, numbness, and pain.
- Anemia: A lack of healthy red blood cells to carry adequate oxygen to the body's tissues.
- Hypothyroidism: An underactive thyroid can reduce metabolism and body temperature.
- Poor circulation: Conditions that affect blood flow can cause cold sensitivity.
- Frostbite: Previous frostbite can make the affected area more sensitive to cold.
- Nerve damage or peripheral neuropathy.
- Autoimmune diseases like lupus or rheumatoid arthritis.
- Genetics

Specific gene variants associated with blood vessel constriction and response to cold might increase cold intolerance. Additionally, hereditary conditions like hypothyroidism or certain types of anemia can indirectly result in cold sensitivity.



Typical likelihood of cold intolerance based on 55 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
PPARGC1A	rs8192678	TC
ACTN3	rs1815739	TC
SP1	rs58123204	AA
PRR13	rs11170510	AA
PRR13	rs11170509	CC
PRR13	rs11170516	GG
PRR13	rs12828860	GG
SP1	rs35437931	TT
SORCS1	rs11192989	TC
SORCS1	rs11192988	GC
SORCS1	rs75609190	CA
SORCS1	rs77101060	TC
ATP10A	rs6576563	AC
ATP10A	rs12903035	GA
SORCS1	rs12219036	TA
SORCS1	rs12221205	TC
SORCS1	rs11193001	GA
ATP10A	rs11853274	AT
ATP10A	rs6576565	CT
ATP10A	rs6576564	CG
ATP10A	rs12717759	CT
PRR13	rs7962345	TT
SORCS1	rs2756233	AA
SORCS1	rs821961	AA
SORCS1	rs1252036	CC

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

Your Recommendations

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

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

DOSAGE

1

Lychee Extract

100 mg

2

Hot Water Bathing

3

Hot Applications

20 minutes

4

Avoid Cold Exposure

1



Lychee Extract

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take lychee extract in supplement form, usually available as capsules or powder. For adults, the typical dosage can be around 100 to 200 mg daily, taken with meals. This supplement should be taken consistently for at least one month to begin observing potential health benefits.

TYPICAL STARTING DOSE

100 mg

Description

Lychee extract is derived from lychee fruit and is often used for its potential antioxidant and anti-inflammatory effects. It may offer benefits for skin health, immune function, and overall well-being when used as part of a balanced diet.

How it helps

In a 14-day trial with 25 participants, OPLFE (oligomerized-polyphenol lychee fruit extract) and mixed plant extract with OPLFE increased skin temperature and peripheral blood flow, improving cold sensitivity compared to placebo [\[R\]](#).

2



Hot Water Bathing

IMPACT

1 / 5

EVIDENCE

1 / 5

Description

Hot water bathing is a deeply comforting and therapeutic practice that has been cherished across cultures for centuries. Immersing yourself in hot water can do more than just cleanse the body; it offers a myriad of health benefits that contribute to overall well-being. Here are some of the notable advantages [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Muscle relaxation
- Stress reduction
- Improved mood
- Better sleep

How it helps

Hot water bathing increases peripheral blood flow, thereby enhancing thermoregulation and reducing the chilling sensation associated with cold intolerance. The warmth promotes muscle relaxation and improves overall comfort during episodes of sensitivity to cold.

3



Hot Applications

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Apply a hot pack, heating pad, or a warm towel to the affected area for 15-20 minutes at a time. Do this several times a day, especially before activities that increase pain.

TYPICAL STARTING DOSE

20 minutes

Description

The use of hot applications, such as heating pads or warm compresses, can help relieve muscle tension, reduce pain, and improve blood flow to affected areas. It is a common approach for managing muscular discomfort and promoting relaxation.

People use hot applications to relieve pain, improve blood flow, and help muscles relax [\[R, R\]](#).

Types of hot applications include [\[R, R\]](#):

- Heating pads
- Hot baths
- Saunas

How it helps

Hot applications enhance blood circulation, which alleviates muscle tension and discomfort associated with cold intolerance. This increased thermal comfort can reduce pain and improve overall thermal regulation.

4



Avoid Cold Exposure

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Minimize your time outdoors during cold weather. When you must go out, wear appropriate clothing such as insulated jackets, hats, gloves, and waterproof boots to protect against the cold. It's especially important to keep your extremities covered to prevent frostbite. Aim to limit outdoor exposure on very cold days and try to stay indoors, where it's warm, as much as possible.

Description

Avoiding prolonged exposure to extreme cold temperatures is essential for preventing cold-related health issues like fatigue, hypothermia, and slower body functions. Cold exposure may be risky for people with respiratory conditions like asthma and those with blood vessel problems.

Cold exposure occurs when the body is exposed to lower-than-normal temperatures for a prolonged period of time. It can happen when someone is immersed in cold water or outdoors without proper clothing or shelter [\[R\]](#).

Cold exposure may cause the body's core temperature to drop, which results in shivering and muscle stiffness. Prolonged or extreme cold exposure may lead to [\[R, R\]](#):

- Slower body functions
- Fatigue
- Confusion
- Hypothermia

Cold exposure may be risky for people with respiratory conditions like asthma and those with blood vessel problems [\[R\]](#).

How it helps

Avoiding cold exposure helps individuals with cold intolerance by minimizing the risk of exacerbating symptoms such as fatigue and respiratory distress. This preventative measure preserves optimal body function and reduces the likelihood of complications associated with extreme cold.

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.

	T4 Free (FT4)	1.26 ng/dL		9 Nov 2025
	TSH	2.76 mIU/mL		9 Nov 2025
	Ferritin	102.2 ng/mL		9 Nov 2025
	Iron	228 mcg/dL		9 Nov 2025