SelfDecode™

Symptomatic HTLV-1 Infection

Disease Report

REPORT CATEGORY —

IMMUNITY & INFECTIONS

Sample Client

Report date: 15 January 2026

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Personal information

NAME

Sample Client

SEX AT BIRTH

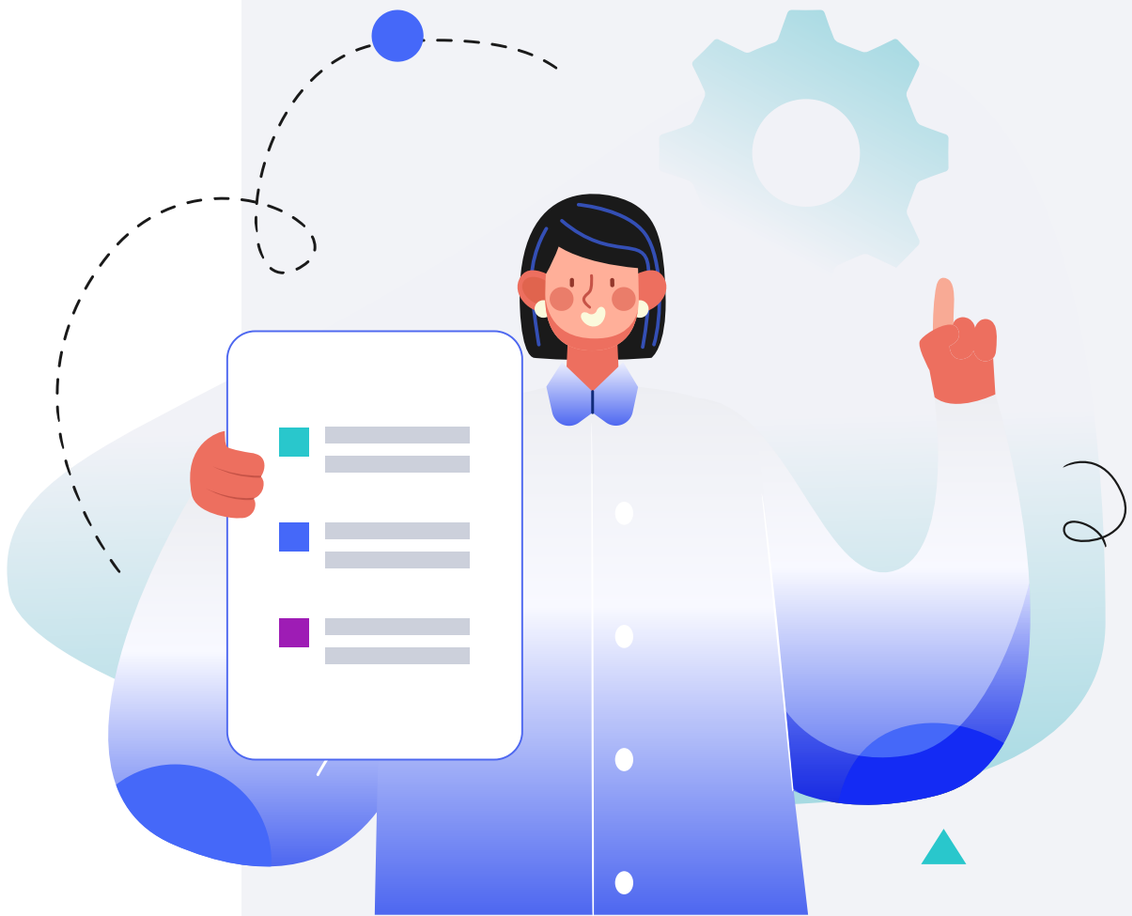
Male

HEIGHT

5ft 5" 165cm

WEIGHT

137lb 62kg

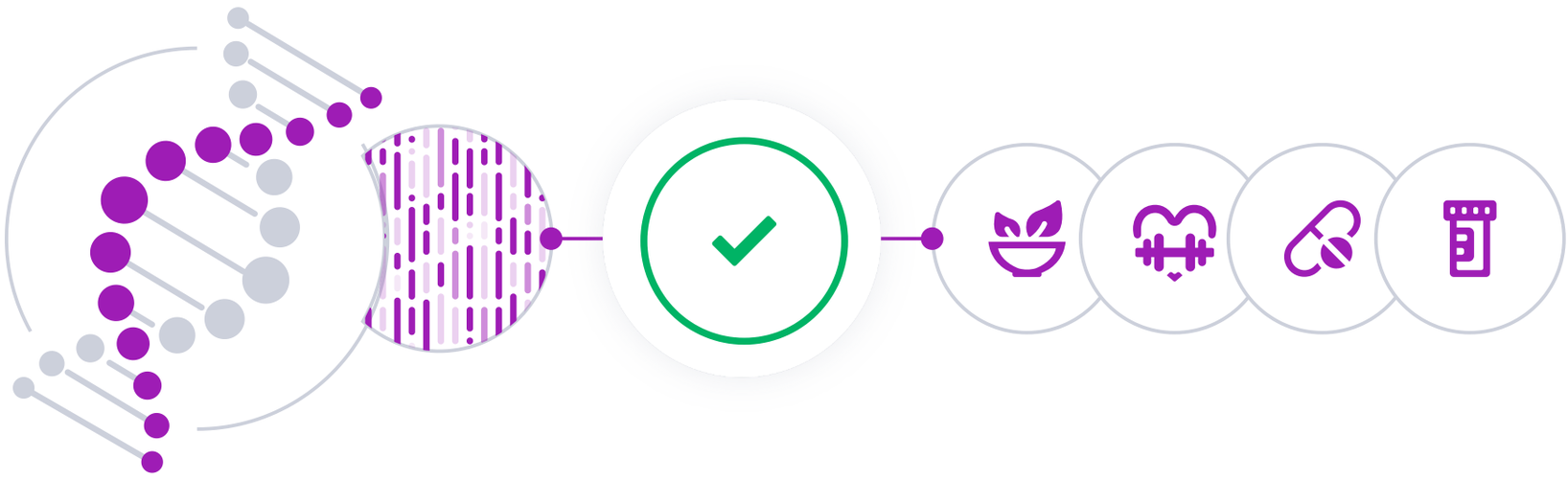


DISCLAIMER

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

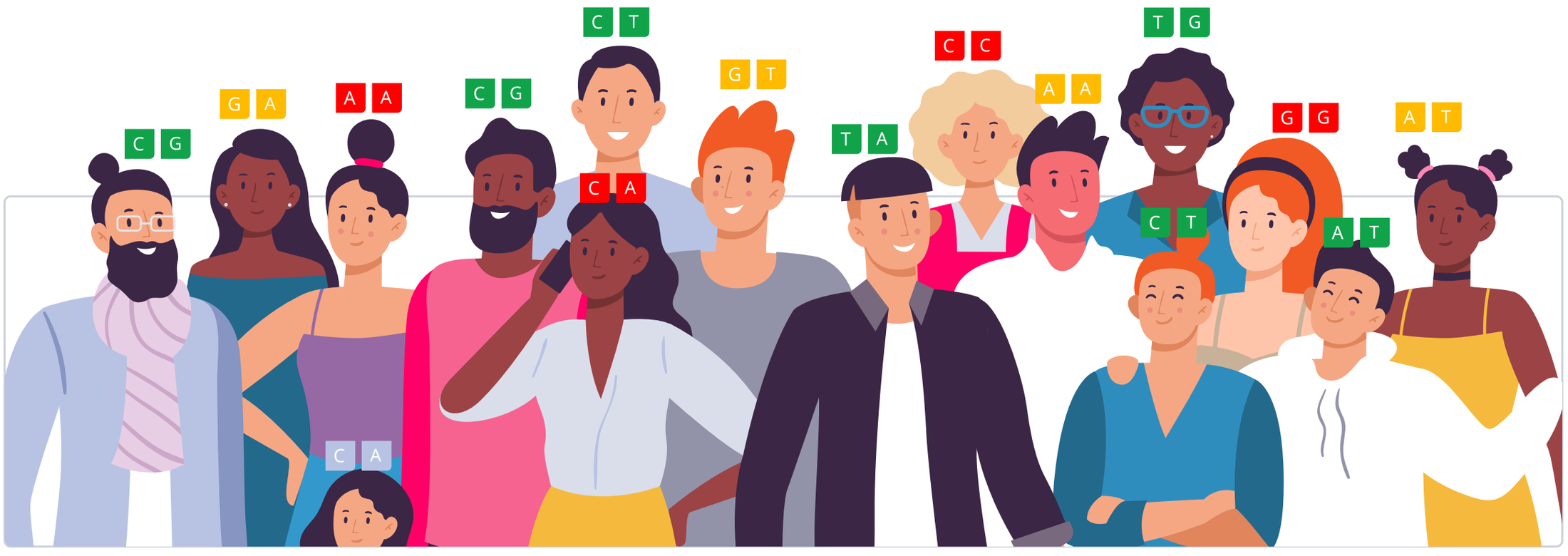
Our Wellness Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.



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.

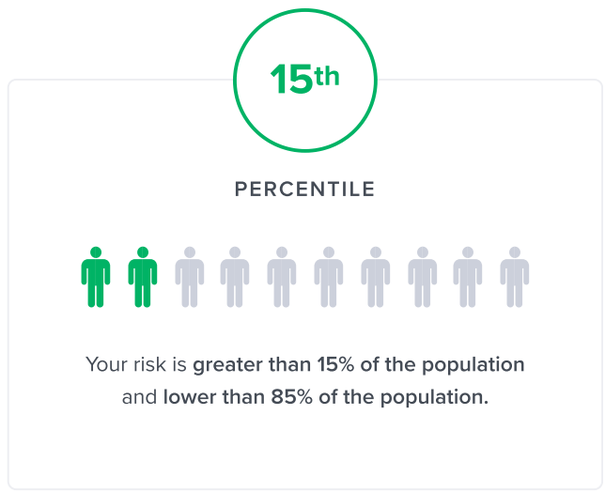
Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.



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.

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

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



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, afew 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

HTLV-1 infection, or Human T-cell Leukemia Virus Type 1, is a retrovirus that infects a type of white blood cell known as T-lymphocytes. This virus can cause a variety of health issues ranging from minor immune system problems to severe conditions such as adult T-cell leukemia/lymphoma (ATLL) and HTLV-1-associated myelopathy/tropical spastic paraparesis (HAM/TSP).

The virus is transmitted through bodily fluids such as blood, breast milk, and sexual contact. Not everyone infected with HTLV-1 will develop symptoms; however, those who do may experience a weakened immune system, making them more susceptible to opportunistic infections.

Management

The management of HTLV-1 infection focuses on the related conditions it can cause, as there is currently no cure for the virus itself. For individuals with HTLV-1 who develop HAM/TSP, symptoms may include neurological impairments such as weakness and stiffness of the legs, lower back pain, and bladder dysfunction.

Those with ATLL may experience symptoms like swollen lymph nodes, fatigue, and skin rashes. Despite its potential severity, HTLV-1 infection remains less commonly understood compared to other retroviruses such as HIV, and research continues to develop better treatments and preventative measures.

TYPICAL LIKELIHOOD

Typical likelihood of HTLV-1 infection based on 505 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
HLA-C	rs2517451	TC
HLA-C	rs3130933	CT
ATP6V1G2	rs3093983	AG
MICB	rs2523554	TC
HLA-DQA2	rs2647012	CT
BTN2A1	rs13195509	GG
HLA-DRB5	rs28895103	GG
H2BC15	rs9461416	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
1	Avoid Lead Exposure	
2	Avoid Mercury Exposure	
3	Avoid Tin Exposure	
4	Safer Sex Practices	
5	Fucoidan	300 mg

1

Avoid Lead Exposure

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Prevent lead exposure by using cold water for drinking and cooking, regularly cleaning dust from windowsills and floors, and ensuring that your home's paint is not chipping if it was built before 1978. For occupations involving potential lead exposure, use protective gear and follow safety protocols. Test your home for lead if it's old or you're concerned about contamination.

Description

Lead is a heavy metal. It is naturally found in the environment in small amounts [R, R].

Exposure to lead can cause it to build up in the body. A buildup of lead can contribute to oxidative stress and cell damage. This is called **lead poisoning** [R, R].

Lead is no longer used in the manufacturing of some products like gasoline and paint. However, it can still be found in some pipes, batteries, and the wall paint of older homes [R, R, R].

How it helps

Avoiding lead exposure is crucial for individuals with symptomatic HTLV-1 infection as lead toxicity may further compromise immune function and exacerbate neurological symptoms, leading to increased morbidity. Reducing exposure helps to protect overall health and supports the management of the infection.

2

Avoid Mercury Exposure

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Limit consumption of large fish such as shark, swordfish, king mackerel, and tilefish, which are known to have higher mercury levels. Opt for smaller fish like salmon, shrimp, pollock, and catfish, and limit seafood intake to 8-12 ounces (two to three servings) per week. Check and follow local advisories regarding the safety of fish caught by family and friends in your local lakes, rivers, and coastal areas.

Description

Avoiding exposure to mercury, a toxic heavy metal found in certain seafood and environmental sources, is essential to prevent adverse health effects, including neurological damage and developmental issues.

Mercury and other heavy metals are found in the soil, water, food, and some commonly-used household products. They adversely affect the environment and living organisms. According to some studies, mercury is considered **the most toxic heavy metal** in the environment [R, R].

A major source of mercury exposure is seafood, especially large fish such as [R]:

- Tuna
- Shark
- Swordfish

How it helps

Avoiding mercury exposure is crucial for individuals with symptomatic HTLV-1 infection, as mercury can exacerbate neurological symptoms and immune dysfunction, potentially worsening the overall clinical picture of the viral infection.

3

Avoid Tin Exposure

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Minimize use of canned foods and avoid products with tin-based packaging. Check labels on personal care items to ensure they do not contain tin compounds. If you work in environments where tin exposure is possible, use protective clothing and ensure proper ventilation.

Description

Exposure to tin, a common metal, can be harmful to your health. It can be found in numerous everyday items, so try to limit your exposure. By doing so, you can reduce the risk of health issues like stomach aches, skin irritation, and more serious conditions in the long term.

How it helps

Avoiding tin exposure is crucial for individuals with symptomatic HTLV-1 infection, as it helps reduce potential environmental toxins that may exacerbate immune dysfunction and neurological symptoms associated with the virus.

4

Safer Sex Practices

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Use latex condoms every time you have vaginal, anal, or oral sex. Reduce the number of sexual partners you have, and get tested regularly for sexually transmitted infections (STIs), ideally every 3 to 6 months if you're sexually active with new or multiple partners.

Description

Safer sex practices refer to using barrier methods like condoms or dental dams during sexual activity to reduce the risk of sexually transmitted infections (STIs) and unintended pregnancies. They are essential for promoting sexual health and preventing the transmission of STIs.

Safer sex practices help reduce the risk of chlamydia and other STDs. They include [R, R]:

- Using a condom for all types of sex
- Limiting the number of sex partners (ideally to one)
- Discussing past partners, STDs, and drug use
- Avoiding alcohol and drug use
- Avoiding douching after intercourse
- Getting regular screenings

Using a condom helps prevent chlamydia in men and women. A **combination of male and female condoms** may be the safest option [R, R].

Women using **birth control pills** may have **3 times higher** risk of chlamydia compared to those using condoms [R].

In men who have sex with men, using **pre-exposure prophylaxis (PrEP) for HIV** may be linked to **11 times higher** risk of chlamydia. Reduced condom use may be one of the reasons for this rise [R, R, R].

Men who go to sex workers may have a **2.5 times higher** risk of chlamydia [R].

How it helps

Engaging in safer sex practices, such as using condoms, significantly reduces the risk of transmitting HTLV-1 during sexual activity, thus protecting both the infected individual and potential partners from further infection.

5

Fucoidan

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take 300 mg of fucoidan supplement once daily, preferably with a meal to aid absorption. Continue this regimen for a minimum of four weeks to evaluate its effects on your health.

TYPICAL STARTING DOSE

300 mg

Description

Fucoidan is a compound found in certain brown seaweeds and marine plants, and it is consumed for its immune system support and anti-inflammatory effects.

How it helps

A single-center open-label trial treated 13 HAM/TSP patients with 6g fucoidan daily for 6-13 months. Fucoidan reduced HTLV-1 transmission in vitro and decreased proviral load by 42.4% without affecting immune cells. While well-tolerated, some patients experienced diarrhea, promptly resolving upon stopping fucoidan. Fucoidan shows promise for HTLV-1-associated diseases [R].

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.