

Rheumatic Fever

Disease Report

REPORT CATEGORIES —



INFLAMMATION &
AUTOIMMUNITY



JOINT & TENDON
HEALTH

Sample Client

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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

Acute rheumatic fever (ARF) is an inflammatory disease that can develop as a complication of inadequately treated streptococcal infections, such as strep throat or scarlet fever. It primarily affects children between the ages of 5 and 15, although it can occur in adults as well. The condition arises when the body's immune system, in its effort to combat the streptococcus bacteria, inadvertently targets healthy tissues, particularly those of the heart, joints, skin, and central nervous system.

ARF is characterized by a wide array of symptoms including fever, painful and swollen joints, heart inflammation, and jerky body movements. Prompt treatment of the initial streptococcal infection with antibiotics is crucial in preventing ARF, highlighting the importance of early detection and management of strep infections.

Complications and Treatment

The cardiac complications associated with ARF are especially concerning, often presenting as carditis or inflammation of the heart. This can lead to chronic health issues, including rheumatic heart disease which might result in long-term valve damage, heart failure, and other severe cardiac conditions. In addition, the disease can provoke Sydenham's chorea, a neurological disorder marked by rapid, involuntary movements, emotional instability, and muscle weakness.

Patients may also exhibit erythema marginatum, a rare skin condition characterized by a distinctive rash, and subcutaneous nodules. Effective diagnosis and treatment of acute rheumatic fever require a multidisciplinary approach, usually involving antibiotics to eradicate the streptococcus bacterium, and anti-inflammatory medications to manage the inflammatory symptoms. For those with carditis, long-term follow-up and prophylactic antibiotics are often necessary to prevent recurrence and mitigate the risk of further damage to the heart.



TYPICAL LIKELIHOOD

Typical likelihood of rheumatic fever based on 1,671 genetic variants we looked at

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	Good Oral Hygiene	2 minutes	2	Whole Grains
3	Limit Meat Intake		4	Vegetables

1



Good Oral Hygiene

IMPACT

0 / 5

EVIDENCE

0 / 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

Maintaining good oral hygiene is beneficial for patients with acute rheumatic fever because it helps prevent streptococcal infections, which can trigger the disease. Regular brushing, flossing, and dental check-ups can reduce the risk of streptococcal bacteria thriving in the mouth and possibly causing a new infection or exacerbating the condition.

2



Whole Grains

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate at least three servings of whole grains into your daily diet. This can include consuming foods such as whole grain bread, brown rice, whole grain pasta, and oats. Aim to replace refined grains with whole grains at each meal for optimal benefits.

Description

Whole grains encompass a variety of grains like wheat, oats, and quinoa, where the entire grain kernel is intact. They are rich in fiber, vitamins, minerals, and antioxidants, supporting heart health and reducing the risk of chronic diseases.

Unlike refined grains, whole grains contain nutritious parts of the grain like bran and germ.

Whole grains provide many crucial nutrients, including:

- Fiber
- B-vitamins
- Iron
- Magnesium
- Phosphorus

Due to their high fiber content, whole grains don't tend to spike blood sugar like refined grains do.

How it helps

Whole grains contain fiber, vitamins, and minerals that support heart health and may reduce inflammation. Eating whole grains instead of refined grains can be beneficial for individuals recovering from acute rheumatic fever.

3



Limit Meat Intake

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Substitute red and processed meats with plant-based proteins, such as beans, lentils, and tofu, for at least two meals per week. Gradually increase the number of meat-free meals by incorporating more fruits, vegetables, and whole grains into your diet daily.

Description

Limiting meat intake involves consuming fewer animal-based products, often as part of a plant-based diet. This dietary choice can provide health benefits such as lower cholesterol levels, reduced risk of certain chronic diseases, and a decreased environmental footprint.

Proteins, fats, and carbs are macronutrients. You need these nutrients in large (‘macro’) amounts. They provide your body with the energy it needs to function properly [\[R\]](#).

You should choose high-quality foods that give you the “best” version of each macronutrient. For example, too much saturated fat and protein from certain animal sources may increase the risk of heart disease and infertility [\[R, R, R\]](#).

Consider replacing red meat with other high-protein foods, such as [\[R, R\]](#):

- Eggs
- Fish
- Soy
- Beans

How it helps

In the context of acute rheumatic fever, where inflammation and heart complications are common, a diet high in fruits, vegetables, and whole grains but low in meat can reduce inflammation. This type of eating pattern may improve heart health and overall inflammation.

4



Vegetables

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate at least 2-3 cups of various vegetables into your daily diet, ensuring a mix of colors like greens, reds, and yellows to maximize nutrient intake. Aim to include vegetables in most meals, either as a side, part of the main dish, or snacks.

Description

Vegetables are edible parts of plants that offer various health benefits due to their rich nutrient content, including vitamins, minerals, fiber, and antioxidants. They are essential components of a balanced diet and contribute to overall health, supporting various bodily functions.

How it helps

Vegetables are rich in vitamins, minerals, and antioxidants that can help reduce inflammation in the body. Consuming a variety of vegetables may support immune system function and overall health, potentially aiding in the recovery from acute rheumatic fever.

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.

