

Psoriatic Arthritis

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

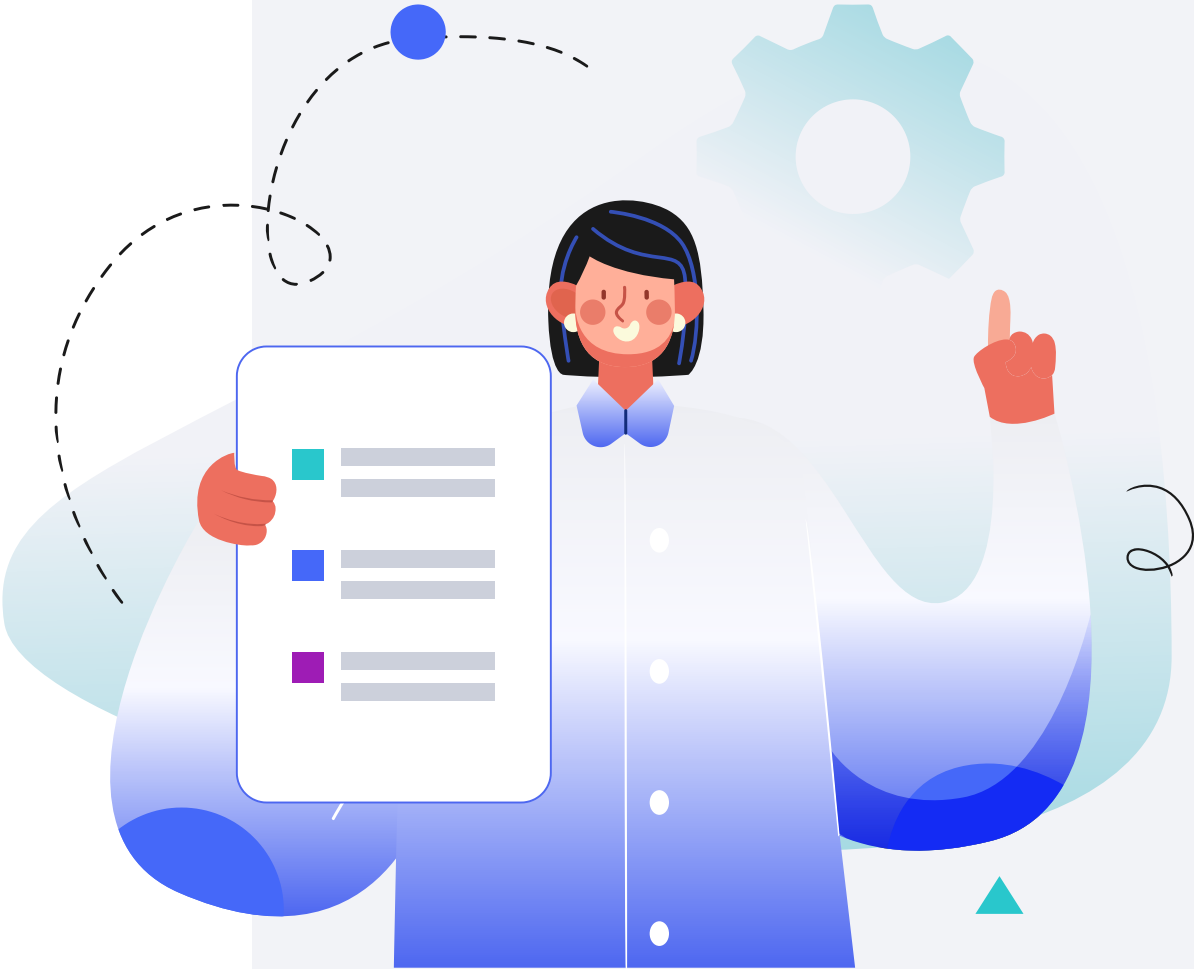
Male

HEIGHT

5ft 5" 165cm

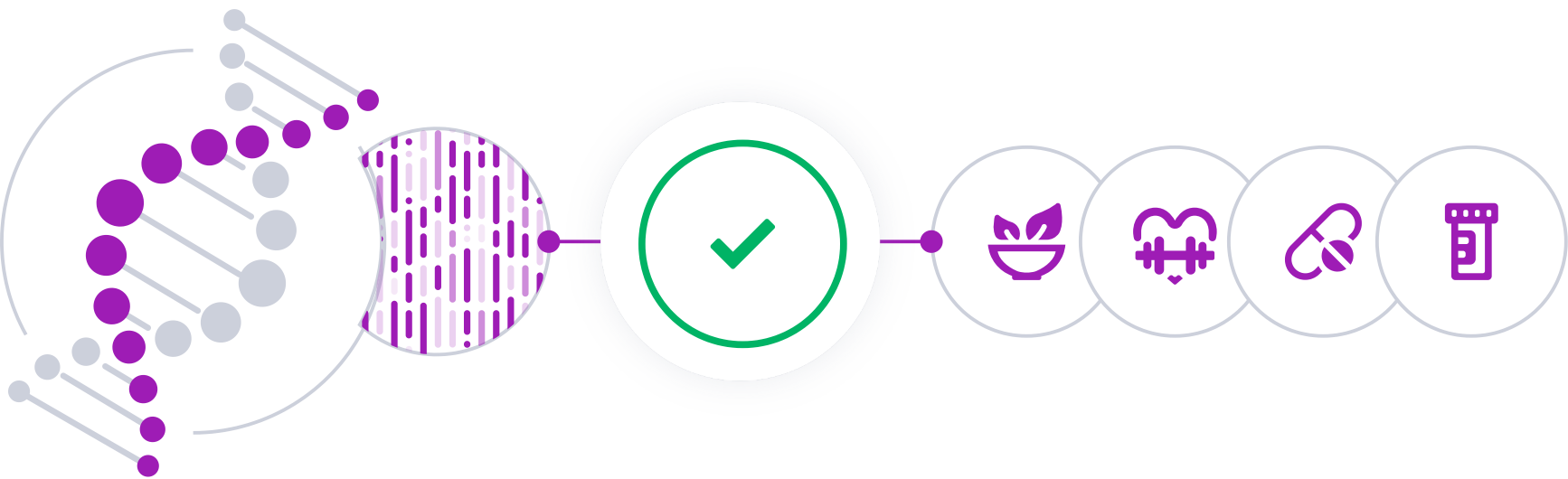
WEIGHT

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.

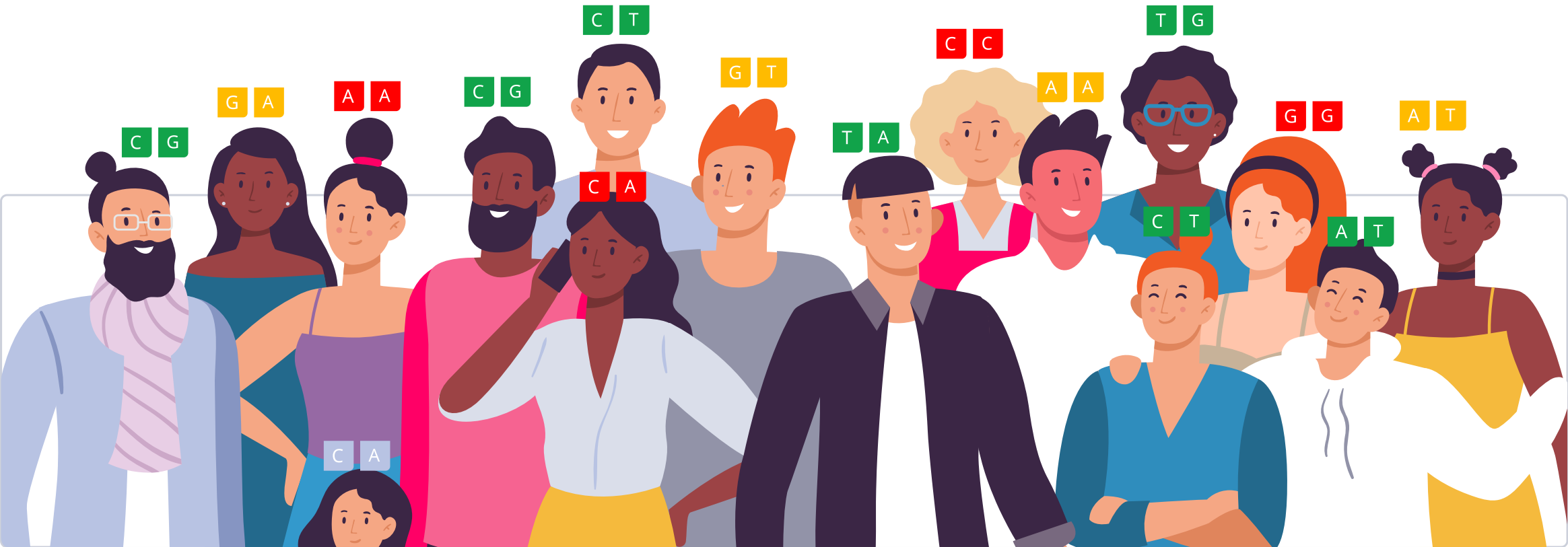


Similarly, our Trait Reports look at how your DNA influences your traits.



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

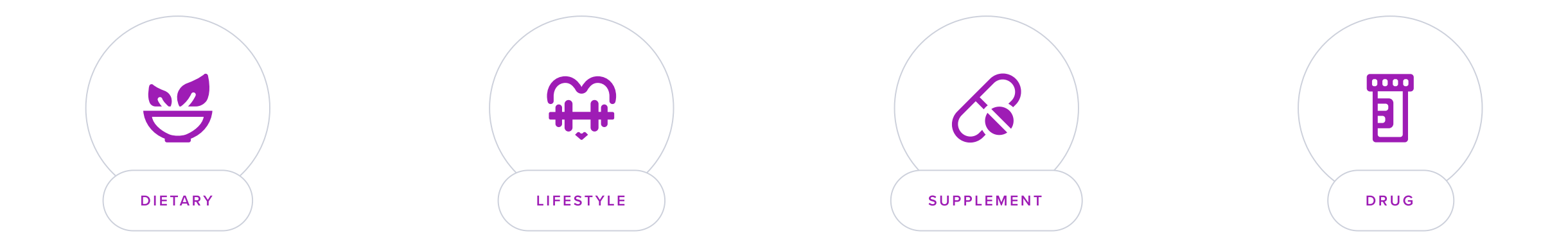
You have 2 risk alleles

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

Psoriatic arthropathy, commonly known as psoriatic arthritis (PsA), is a chronic autoimmune condition that primarily affects the skin and joints, manifesting as a combination of psoriasis and arthritis. Psoriasis is characterized by the appearance of red, scaly patches on the skin due to the rapid growth of skin cells triggered by the immune system. Psoriatic arthritis stems from this underlying etiology, whereby the immune system mistakenly attacks the joints and causes inflammation.

This results in joint pain, stiffness, and swelling, which can range from mild to severe and can lead to joint damage over time if not properly managed. The condition can affect any joint in the body, and the severity and symptoms can vary greatly from one individual to another.

Diagnostic and Treatment

The diagnostic process for psoriatic arthritis typically involves a multifaceted approach due to its diverse clinical presentations. A healthcare provider will often look for symptoms such as joint pain combined with psoriasis or nail changes, as well as a family history of psoriatic conditions. Sufferers may also experience symptoms beyond joint pain and skin lesions, including fatigue, nail pitting or separation, and eye inflammation like conjunctivitis.

Treatments for psoriatic arthritis focus on controlling inflammation to prevent joint damage and alleviate symptoms. Therapeutic strategies may include a combination of medication, such as nonsteroidal anti-inflammatory drugs (NSAIDs), immunosuppressants, or biologics, and lifestyle modifications, including physical therapy and exercise.



TYPICAL LIKELIHOOD

Typical likelihood of psoriatic arthropathy based on 306 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
TYK2	rs34536443	GG
MICB	rs12191877	TC
MICB	rs13191343	TC
IL12B	rs4921482	TT
STAT2	rs2020854	TT
IL12B	rs62377586	GG
SLC22A5	rs848	CC
NXPE3	rs4683946	GG
CNTN4	rs17194140	TT
INSIG1	rs306281	GG
NAPG	rs11665266	GA
CTNNA3	rs12356475	CT
FAP	rs2111485	GA
TYK2	rs34725611	GA
REL	rs13017599	AG
SLC22A5	rs17622208	AG
LYRM9	rs3794767	TC
CCDC116	rs5754467	GA
RUNX3	rs1395621	CT
STX4	rs12924903	GA
TNFAIP3	rs610604	TG
INSL6	rs145699582	CC
TNIP1	rs76956521	AA
IL12B	rs12188300	AA
TRAF3IP2	rs33980500	CC
DEFB1	rs56677333	AA
FLRT2	rs76800961	CC
C1ORF141	rs12044149	GG
LGALS9	rs4795067	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.

DOSAGE		DOSAGE			
1	Aerobic Exercise (Cardio)	1 hour	2	Mediterranean Diet	
3	Maintain Optimal Vitamin D Levels	1000 iu	4	Tai Chi	1 hour
5	Topical Coal Tar		6	Turmeric	
7	Exercise At Least One Hour a Day	1 hour	8	Swimming	30 minutes
9	Avoid Refined Sugar		10	Curcumin	500 mg
11	Topical Capsaicin		12	Topical CBD	

1



Aerobic Exercise (Cardio)

IMPACT3 / 5

EVIDENCE2 / 5

How to implement

Engage in at least 150 minutes of moderate-intensity aerobic exercise or 75 minutes of vigorous-intensity activity each week. Distribute this time over at least 3 days per week, avoiding consecutive days of vigorous exercise to allow for recovery.

TYPICAL STARTING DOSE

1 hour

Description

Engaging in regular aerobic exercise, such as running, swimming, or cycling, offers numerous health benefits, including improved cardiovascular fitness, weight management, and mood enhancement. It supports overall physical and mental well-being while reducing the risk of chronic diseases.

Cardio, short for cardiovascular exercise, is any type of physical activity that temporarily increases your heart rate. Examples include **running, cycling, swimming, and brisk walking**.

Regular cardio exercise has many benefits for your overall health. It can help lower your risk of heart disease and diabetes, support weight loss, and improve your mood and energy levels. To get the most out of cardio, try to do it for at **least 30 minutes, 3-5 times a week**.

Interval training is a type of cardio that combines periods of high-intensity training with brief rest periods.

How it helps

Physical activity may improve physical function, but not quality of life, in people with psoriatic arthropathy [\[R\]](#).

Aerobic exercise in particular may improve [\[R\]](#):

- Disability
- Fatigue
- Aerobic capacity
- Body composition
- Blood lipid profile

2



Mediterranean Diet

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Incorporate a variety of primarily plant-based foods, such as fruits, vegetables, whole grains, nuts, and legumes, into every meal. Choose healthy fats, like olive oil, over saturated fats and consume fish and poultry at least twice a week. Limit red meat to a few times a month and include a moderate amount of dairy products. Opt for water and red wine in moderation as your beverages.

Description

The [Mediterranean diet](#) is based on the traditional cuisine from the Mediterranean regions. It moderates the intake of red meat and dairy, while being rich in fruits and vegetables, whole grains, and healthy fats ([olive oil](#)).

The [Mediterranean diet](#) focuses on traditional cuisine from the Mediterranean regions. It’s rich in [\[R\]](#):

- [Olive oil](#)
- Fruits and vegetables
- Whole grains
- Nuts and seeds
- Fish

This type of diet may **reduce inflammation and protect the brain and heart** [\[R, R, R, R\]](#).

Limited intake of animal products, saturated fat, and refined sugar likely contribute to the health benefits of the Mediterranean diet [\[R\]](#).

How it helps

In people with psoriatic arthropathy, low adherence to a Mediterranean diet has been associated with increased disease activity [\[R\]](#).

A combined ketogenic-Mediterranean diet followed for 8 weeks reduced disease activity and inflammatory markers in a non-placebo-controlled trial of 26 patients with psoriatic arthropathy. However, the benefits were mostly attributed to the ketogenic component of the diet [\[R\]](#).

The Mediterranean diet may help by reducing inflammation.

3



Maintain Optimal Vitamin D Levels

IMPACT

1 / 5

EVIDENCE

1 / 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 psoriatic arthritis may have lower vitamin D levels. However, there is no evidence that supplementation helps prevent or improve this condition [\[R, R\]](#).

4



Tai Chi

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Practice Tai Chi for 30 to 60 minutes at least twice a week. Choose a quiet, spacious area and follow along with a qualified instructor, either in person at a class or through an online video tutorial, to ensure proper technique and maximum benefit.

TYPICAL STARTING DOSE

1 hour

Description

Tai Chi is a traditional Chinese mind-body practice involving slow, flowing movements and deep breathing. It is known for its potential to reduce stress, improve balance, and enhance overall physical and mental well-being.

Tai chi involves gentle movements and breathing to strengthen and relax the mind and body. Practicing tai chi may help [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Manage pain
- Improve fitness
- Increase well-being
- Improve sleep and mood

How it helps

Tai Chi is a gentle form of exercise that can improve flexibility, balance, and muscle strength in individuals with psoriatic arthritis. It also helps in stress reduction which is beneficial in managing the symptoms.

5



Topical Coal Tar

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Apply a thin layer of coal tar ointment, lotion, or solution to the affected skin areas once daily. Gently massage it into the skin and leave it on for at least one hour or overnight; follow up by washing the area with soap and water. Use consistently for at least 4 weeks to see improvement.

Description

Coal tar is a topical treatment derived from coal that contains various compounds. It is used to alleviate skin conditions like psoriasis and eczema due to its ability to slow down the excessive growth of skin cells and reduce inflammation.

Coal tar is a thick black liquid made when coal is processed to fuel [\[R\]](#).

It was first used to soothe psoriasis and other skin conditions hundreds of years ago [\[R\]](#).

How it helps

Coal tar is a traditional treatment for psoriasis with anti-inflammatory and keratolytic effects, helping to reduce scaling, itching, and inflammation.

6



Turmeric

IMPACT

0 / 5

EVIDENCE

0 / 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

Turmeric contains curcumin, a compound that has been found to reduce inflammation. In the context of psoriatic arthropathy, incorporating turmeric into the diet might help alleviate joint pain and inflammation associated with the condition.

7

Exercise At Least One Hour a Day

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Dedicate a minimum of 60 minutes to moderate-intensity activities such as brisk walking, swimming, or cycling. Do this most days of the week, aiming for at least 5 days to optimize benefits.

TYPICAL STARTING DOSE

1 hour

Description

[Exercise](#) can do wonders for your health. It can help you lose weight, improve your heart health, boost your mood, and more [\[R\]](#).

There are many ways you can be active. You can walk, run, swim, dance, or play team sports. **Everything counts, and it's never too late to start!**

Try to get at least **60 minutes of moderate physical activity on most days**, including walking. **Getting a mix of cardio (min 150 min/day) and strength training (min 2 times a week) may be optimal.**

How it helps

Regular exercise for at least 30 minutes a day can significantly improve joint movement and reduce the pain associated with psoriatic arthritis. It helps in maintaining a healthy weight, which reduces the strain on joints.

8

Swimming

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate swimming into your routine for at least 30 minutes, 3 times a week. Choose a pace and stroke that keeps your heart rate elevated yet allows you to breathe comfortably. Continue this practice regularly for long-term health benefits.

TYPICAL STARTING DOSE

30 minutes

Description

Swimming is a whole-body workout that engages various muscle groups, promoting strength and endurance. It helps keep the heart and lungs healthy, improves flexibility, and can even help reduce stress. Regular swimming is a great way to maintain a balanced, fit, and healthy lifestyle.

How it helps

Swimming and water exercises are excellent for people with psoriatic arthritis because they are low-impact activities that can improve joint flexibility and strength without putting too much strain on the joints.

9



Avoid Refined Sugar

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Eliminate foods and beverages high in refined sugars, such as sodas, candies, pastries, and white bread, from your diet. Replace them with natural sugars found in fruits and whole grains. Implement this change immediately and maintain it indefinitely for long-term health benefits.

Description

Reducing the consumption of refined sugar and high-sugar foods can help prevent dental problems, manage blood sugar levels, and support weight management.

How it helps

Consuming high amounts of refined sugar can lead to increased inflammation in the body, potentially worsening the symptoms of psoriatic arthritis. Reducing refined sugar intake can help manage inflammation and mitigate symptom severity.

10



Curcumin

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take a 500 mg curcumin supplement daily with food. To enhance absorption, take it with a meal that contains fats or oils since curcumin is fat-soluble.

TYPICAL STARTING DOSE
500 mg

Description

Curcumin is a compound found in turmeric known for its anti-inflammatory and antioxidant properties. It has been studied for its potential to reduce inflammation, support joint health, and contribute to overall well-being.

[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, R]:

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

How it helps

Curcumin, the active compound in turmeric, has potent anti-inflammatory effects that can help reduce pain and inflammation in joints for those with psoriatic arthritis.

11



Topical Capsaicin

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Apply a capsaicin cream or gel to the affected area 3 to 4 times daily. Make sure the skin is clean and intact before application. Avoid contact with eyes, mouth, and other sensitive areas. Use consistently for several weeks to see improvement.

Description

Capsaicin is a compound found in chili peppers and is used topically in creams and patches for its potential to alleviate pain related to conditions like arthritis, neuropathy, and muscle soreness.

[Capsaicin](#) is the compound that makes chili peppers spicy [\[R\]](#).

People use topical capsaicin to relieve pain and oral capsaicin to aid weight loss [\[R, R\]](#).

In the short term, capsaicin causes pain. However, **if you’re exposed to a lot of capsaicin over a long period of time, it can reduce your pain sensitivity** [\[R, R\]](#).

***Please note:** Capsaicin may irritate the skin. Consult your doctor if the irritation is severe or lasts longer than 4 weeks. If capsaicin gets in your eyes, flush them with water immediately and consult your doctor [\[R, R, R\]](#).*

How it helps

Capsaicin cream, derived from chili peppers, may help reduce pain sensitivity in joints affected by psoriatic arthritis through a counterirritant effect.

12



Topical CBD

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Apply a CBD-infused cream or ointment to the affected area of the skin 2-3 times per day, gently massaging it into the skin until fully absorbed. Continue this regimen for at least 4 weeks to assess effectiveness.

Description

CBD, derived from the cannabis plant, is used topically in various skincare products for its potential anti-inflammatory and soothing effects on the skin. It is applied to address skin conditions like acne, eczema, and psoriasis.

[Cannabidiol](#) (CBD) is a compound found in cannabis. Unlike its cousin THC, **CBD is not psychoactive and can't get you "high"** [\[R\]](#).

People use CBD to:

- Reduce anxiety [\[R, R\]](#)
- Relieve pain [\[R, R, R\]](#)
- Prevent seizures [\[R\]](#)
- Improve sleep [\[R\]](#)

Topical CBD products are also available. People use them for skincare, joint problems, and more [\[R, R\]](#).

How it helps

CBD has anti-inflammatory and analgesic properties. Applying it topically can potentially relieve joint pain and inflammation in psoriatic arthritis.

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.

