

Multiple Myeloma

Disease Report

REPORT CATEGORIES —



Sample Client

Report date: 15 January 2026

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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

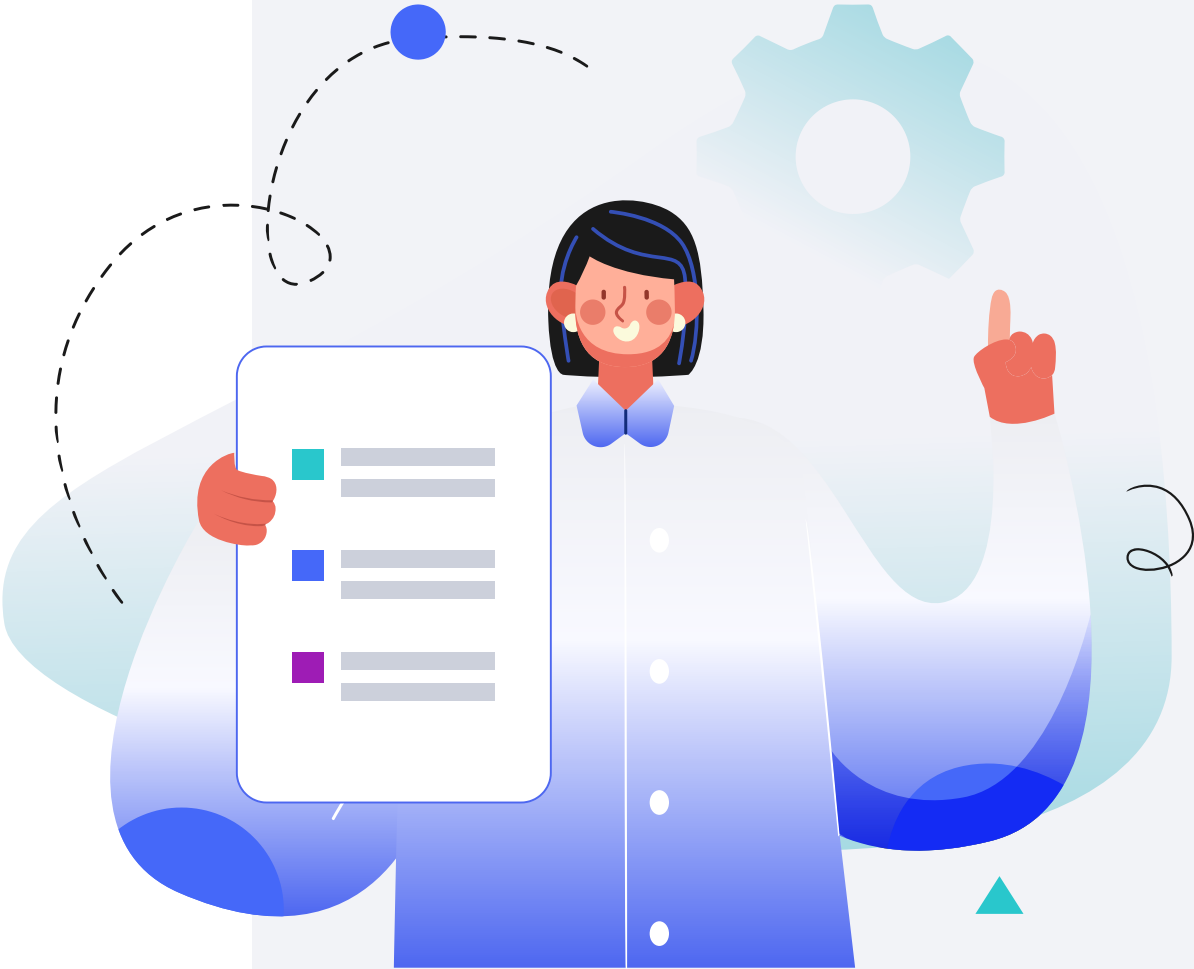
Male

HEIGHT

5ft 5" 165cm

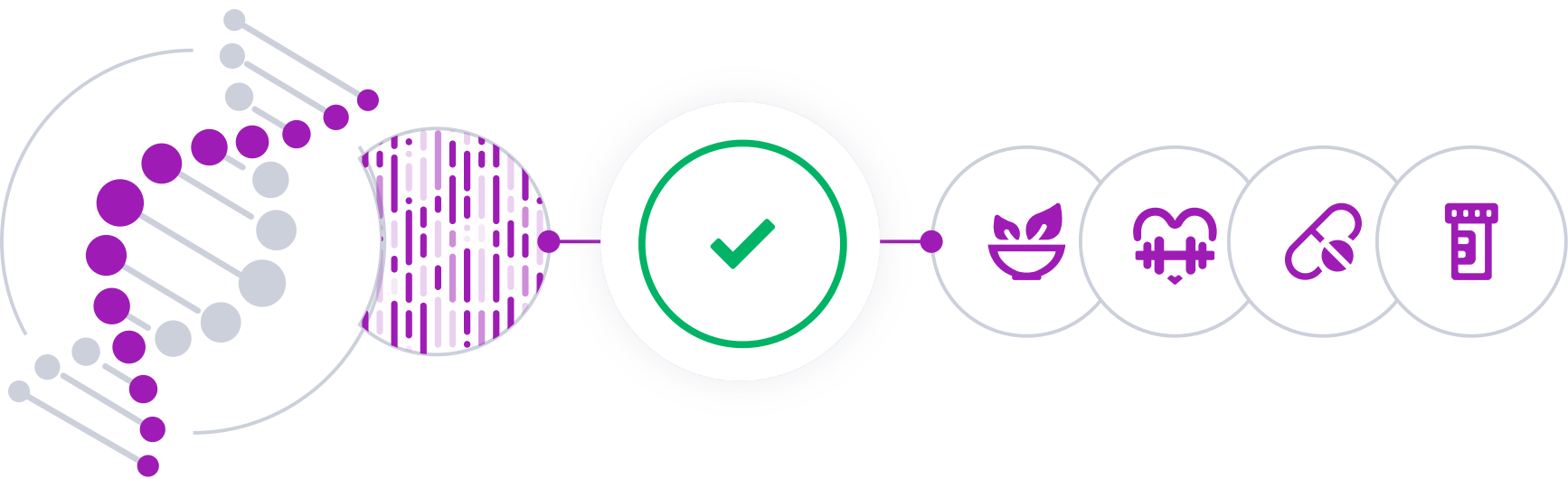
WEIGHT

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

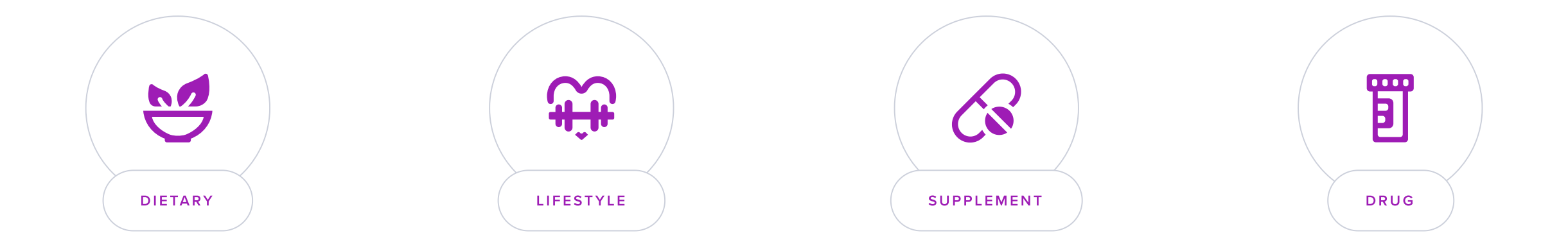
You have 2 risk alleles

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

Multiple myeloma is a type of cancer that forms in a type of white blood cell called a plasma cell. Plasma cells help you fight infections by producing antibodies that recognize and attack germs. In multiple myeloma, cancerous plasma cells accumulate in the bone marrow and crowd out healthy blood cells. Rather than produce helpful antibodies, the cancer cells produce abnormal proteins that can cause complications.

In its early stages, multiple myeloma might not cause any symptoms. As it progresses, it can lead to a range of problems including:

- Bone pain: Especially in the spine or chest.
- Nausea
- Constipation
- Loss of appetite
- Weight loss
- Frequent infections
- Weakness or fatigue: Due to anemia or kidney failure.
- Excessive thirst
- Bone fractures: From minimal trauma due to weakened bones.
- High blood calcium levels: Leading to abnormal heart rhythms and severe constipation.

Risk Factors and Treatment

The exact cause of multiple myeloma is unknown, but several factors may increase the risk of developing the disease:

- Age: It primarily affects older adults, typically those over the age of 60.
- Gender: Men are slightly more likely to develop the disease than women.
- Race: African Americans are about twice as likely to develop multiple myeloma as white Americans.
- Family history: Having a sibling or parent with multiple myeloma increases your risk.
- Personal history: Having a personal history of a monoclonal gammopathy of undetermined significance (MGUS) is a known risk factor. MGUS is a precursor condition to multiple myeloma.
- Obesity: Higher body weight is associated with an increased risk of multiple myeloma.

Multiple myeloma is generally considered treatable but incurable. Treatment options include:

- Chemotherapy: To kill fast-growing myeloma cells.
- Targeted therapy: Uses drugs that specifically attack cancer cells with minimal effects on normal cells.
- Biological therapy: Uses treatment that helps your immune system recognize and attack myeloma cells.
- Radiation therapy: To target and reduce pain in specific areas with bone damage.
- Bone marrow transplant: Involves replacing diseased bone marrow with healthy marrow.
- Corticosteroids: To regulate the immune system to help control myeloma.

The prognosis for multiple myeloma varies widely based on the stage at diagnosis, the patient’s age, and overall health. Advances in treatments have significantly improved survival rates and quality of life for many patients, though the disease typically involves cycles of remission and recurrence.



TYPICAL LIKELIHOOD

Typical likelihood of multiple myeloma based on 68,535 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
DTNB	rs7577599	TT
LRRC34	rs10936600	AA
CCHCR1	rs3132535	AA
ELL2	rs1423269	AA
TNFRSF13B	rs34562254	AG
CCSER1	rs72665486	GG
ULK4	rs6599192	AG
WAC	rs2790457	GG
TOM1	rs138747	TA
RFWD3	rs7193541	CT
CCDC71L	rs17507636	TC
RP1	rs28571765	CT
RNF40	rs8058578	CT
JARID2	rs34229995	CC
PREX1	rs6066835	TT
SOHLH2	rs76601148	AA
CBX7	rs139402	TT
SMARCD3	rs7781265	GG
PRDM1	rs9372120	TT
CDKN2B	rs2811710	CT
POU5F1B	rs1948915	TT
/	rs1034447	CC
/	rs6071887	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		DOSAGE			
1	Avoid Organochlorine Pesticide Exposure	2	Avoid Organophosphate Pesticide Exposure		
3	Aerobic Exercise (Cardio)	1 hour	4	Thymus Glandular	
5	Pomegranate		6	Green Tea	400 mg
7	Strength Training	1 hour	8	Avoid Secondhand Smoke	
9	Curcumin	500 mg			

1



Avoid Organochlorine Pesticide Exposure

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Minimize exposure by choosing organic fruits and vegetables, thoroughly washing produce before consumption, and avoiding areas where organochlorine pesticides are applied. Consider using air purifiers in homes close to agricultural areas to reduce indoor pesticide levels.

Description

Reducing organochlorine pesticide exposure involves minimizing contact with pesticides like DDT, which can accumulate in the body and potentially lead to adverse health effects, including disruption of hormonal functions and carcinogenicity.

How it helps

This study used PRISMA Guidelines to review 32 studies on cancer occurrence among pesticide applicators. Most pesticides were associated with increased cancer risk, with lung cancer being the most prevalent [\[R\]](#).

2



Avoid Organophosphate Pesticide Exposure

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

To reduce organophosphate pesticide exposure, buy organic produce when possible, thoroughly wash and peel fruits and vegetables, avoid using chemical pesticides in your home and garden, and wear protective clothing and a mask if you must handle pesticides for agricultural or landscaping work.

Description

Reducing organophosphate exposure involves minimizing contact with pesticides and insecticides containing these chemicals, which can protect against potential health risks such as neurotoxicity and respiratory issues, particularly for individuals working in agriculture or pest control.

Organophosphates (OP) are the most widely used pesticides worldwide. They include [\[R\]](#):

- Parathion
- Malathion
- Chlorpyrifos
- Diazinon
- Phosmet

Chronic exposure to OPs has been linked to [\[R\]](#), [\[R\]](#):

- Fertility problems
- Cognitive problems
- Nerve damage
- Cancer and gene damage

How it helps

This study analyzed 58 studies on occupational exposures and follicular lymphoma (FL). It found positive associations with DDE, PCBs, solvents, and chlorinated solvents, with limited data on other exposures [\[R\]](#).

3



Aerobic Exercise (Cardio)

IMPACT2 / 5

EVIDENCE3 / 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

Physically active people may be at decreased risk of multiple myeloma [\[R\]](#).

In people with this condition, adding aerobic exercise to standard care may improve depression and fatigue. However, they may not improve quality of life [\[R, R\]](#).

4



Thymus Glandular

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a thymus glandular supplement, usually found in capsule form, once daily with a meal. It is commonly recommended to follow the dosage instructions on the product label or as directed by a healthcare professional. Continue as long as recommended in the guidance you receive.

Description

Thymus extract is derived from the thymus gland of animals and may contain bioactive compounds believed to support the immune system. It's used in some dietary supplements for potential immune-modulating effects.

How it helps

Prospective studies on plasmacytic myeloma treatment involved 208 patients. Melphalan-only and polychemotherapy yielded similar response rates and survival times. Polychemotherapy, especially with large neoplasms, is justified. Immunomodulatory agents, notably calf thymus extract or levamisole, extended survival and facilitated chemotherapy during leucopenia [R].

5



Pomegranate

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate pomegranate into your diet by consuming fresh pomegranate seeds, drinking pure pomegranate juice, or adding pomegranate extract to smoothies or yogurts. Aim for at least one serving per day, which could be about half a cup of seeds or a glass (8 ounces) of juice, to gain its health benefits.

Description

Pomegranate is a fruit native to regions of the Middle East and Mediterranean. It is rich in antioxidants and nutrients such as vitamin C, vitamin K, and dietary fiber. It contains punicalagins, anthocyanins, and ellagic acid, which give it anti-inflammatory effects and potential heart health benefits.

[Pomegranates](#) are red fruits that contain seeds covered by edible sweet coats. They are rich in antioxidants [R, R].

Pomegranate may reduce inflammation and support heart health. People use pomegranate seed oil and peel in cosmetics and traditional medicine [R, R].

How it helps

Pomegranate contains compounds that have been shown to induce apoptosis (cell death) in multiple myeloma cells in some laboratory studies. While these findings are preliminary, they suggest potential anti-cancer properties that could support the body's fight against multiple myeloma.

6



Green Tea

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Consume 400 mg of green tea extract daily. This can be taken in the form of capsules or tablets available that specify the amount of green tea extract. Ensure the supplement is taken according to the product's specific instructions, usually once a day with water.

TYPICAL STARTING DOSE

400 mg

Description

Tea is a beverage made by steeping the leaves of the *Camellia sinensis* plant in hot water. It comes in various types, including black, green, white, and herbal teas, and is known for its diverse flavors and potential health benefits due to antioxidants and other bioactive compounds.

[Green](#) and black tea are made from the same plant (*Camellia sinensis*). This plant is processed in different ways to make each type of tea [\[R, R\]](#).

Tea contains antioxidants called **flavonoids**, which may help prevent [\[R, R, R, R\]](#):

- Heart disease
- Cancer
- Diabetes

How it helps

Green tea contains antioxidants known as catechins which have been suggested to inhibit the growth of multiple myeloma cells in some early research. Catechins may work by causing death of cancer cells and preventing new cancer cells from growing.

7



Strength Training

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Engage in strength training exercises, such as weight lifting or bodyweight exercises, for 60 minutes per session, 2 to 3 times per week. Ensure you work all major muscle groups and rest each muscle group for at least 48 hours before exercising it again.

TYPICAL STARTING DOSE

1 hour

Description

Strength training, also called resistance or *anaerobic* training, contracts the muscles against an external resistance for short periods of time. This helps gain muscle strength, tone, and mass. This can include activities like weight lifting, pushups, and crunches.

Strength training, also known as resistance training, is a type of physical exercise that uses resistance to build strength, anaerobic endurance, and size [\[R\]](#). Some of the most common strength training methods include [\[R\]](#):

- Weight lifting
- Bodyweight exercises like push-ups, pull-ups, squats, and lunges.
- Resistance bands
- Plyometrics or explosive force exercises

The benefits of strength training are numerous, and include [\[R\]](#):

- Increased muscle strength
- Improved bone health
- Reduced risk of injury
- Improved balance and coordination
- Enhanced mood
- Boost metabolism

Consult with a doctor before starting any new exercise program, especially if you have any health conditions.

How it helps

Strength training can be beneficial for individuals with multiple myeloma, as it helps in maintaining muscle mass, improving physical strength, and supporting bone health. Engaging in light to moderate strength training exercises helps manage symptoms and enhances overall well-being.

8



Avoid Secondhand Smoke

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Implementing a smoke-free lifestyle involves communicating your needs to family, friends, and coworkers, requesting they respect your choice by smoking away from you. At home, establish strict no-smoking policies indoors. When out, choose smoke-free venues and accommodations. Advocate for smoke-free environments in your community and support legislation that promotes public health by reducing exposure to secondhand smoke. Utilize air purifiers at home to reduce any residual particles.

Description

Avoiding secondhand smoke is crucial for maintaining good health. Exposure to secondhand smoke can lead to respiratory problems, cardiovascular disease, and an increased risk of lung cancer, even in non-smokers. Protecting oneself from secondhand smoke involves staying away from smoking areas, ensuring smoke-free environments at home and work, and advocating for smoke-free policies in public spaces.

How it helps

Cigarette smoke contains carcinogens that can increase the risk of multiple myeloma and other cancers. Avoiding cigarette smoke, whether by not smoking or avoiding secondhand smoke, helps reduce the risk of multiple myeloma and improve overall health.

9



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, a component found in turmeric, has been studied for its potential anti-myeloma effects. It may help slow the growth of multiple myeloma cells by interfering with various signaling pathways that these cancer cells use to grow and survive. Additionally, curcumin has been shown to enhance the effectiveness of certain chemotherapy drugs used in treating multiple myeloma, potentially improving outcomes for patients.

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.

✓	Platelet Count	215 x10 ³ /mm ³	✓	9 Nov 2025
✓	Uric Acid	4.4 mg/dL	✓	9 Nov 2025
!	Hematocrit	51.8 %	!	9 Nov 2025
!	Hemoglobin	17.1 g/dL	!	9 Nov 2025
✓	Creatinine	1.08 mg/dL	✓	9 Nov 2025
✓	Calcium	9.2 mg/dL	✓	9 Nov 2025