

Testicular Cancer

Disease Report

REPORT CATEGORIES —



REPRODUCTIVE
HEALTH



CANCER

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

Testicular cancer arises from the testicles (testes), which are located inside the scrotum, a loose bag of skin underneath the penis. It's a relatively rare condition but is one of the most common cancers in American males between the ages of 15 and 35.

Symptoms of testicular cancer can vary but may include [\[R\]](#):

- A painless lump or swelling in either testicle
- Pain or discomfort in the testicle or scrotum, which may be constant or intermittent
- Changes in testicle size
- A feeling of heaviness in the scrotum or lower abdomen
- Rarely, testicular cancer can cause tenderness or swelling in the breasts due to hormonal changes

Treatment and Prognosis

Several factors can increase the risk of developing testicular cancer:

- Undescended testicle at birth
- Family history
- Personal history
- Age: Most common in men between 15 and 35.
- Ethnicity: More common in Caucasian men compared to African-American men.

There's no way to prevent testicular cancer but some healthcare providers recommend regular testicle self-exams.

Treatment options depend on the cancer’s stage and type and may include [\[R\]](#):

- Surgery: The primary treatment is often a radical inguinal orchiectomy, where the affected testicle is removed through an incision in the groin.
- Radiation therapy: Used primarily for certain types of testicular cancer, such as seminomas, often after surgery.
- Chemotherapy: Drugs used to kill cancer cells, especially for cancers that have spread or are considered high risk.
- Surveillance: In some cases, particularly for early-stage cancers, doctors may recommend regular monitoring with follow-up exams and tests instead of immediate treatment.

Testicular cancer generally has a high cure rate, especially when detected early. The prognosis is usually very good, with a high survival rate even for advanced stages, due to effective treatments available. The exact prognosis depends on factors such as the type of testicular cancer, its stage at diagnosis, and the patient’s overall health.

Please note: This report is not diagnostic and can't be used to make any medical decisions. Most cancers are uncommon and have a strong environmental component. Even if your genetic predisposition is high, you will most likely not develop the disease. This report doesn’t test for hereditary cancer syndromes or ‘cancer genes’. These



LESS LIKELY

Less likely to have testicular cancer based on 981,211 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
KITLG	rs1907702	AA
KITLG	rs995030	GG
C12ORF29	rs11104702	TT
DMRT3	rs7863616	CC
DMRT1	rs755383	TT
ZNF681	rs61193264	TT
MANBA	rs7659556	TT
ATF7IP	rs2900333	CC
CLPTM1L	rs36115365	CG
HEATR3	rs8046148	GA
MCM3AP	rs2839186	CT
RFTN1	rs10510452	GA
MANBA	rs2720460	AG
MPO	rs9905704	TG
UCK2	rs3790672	CT
NELL1	rs186464019	AA
SIM2	rs56016578	CC
DEPDC1	rs185424124	GG
/	rs80348946	AA
ARL8A	rs61823671	TT
ACTL8	rs111581773	GG
SPRY4	rs4624820	GG
ALCAM	rs9862599	TT
BAK1	rs210138	AA
PRTG	rs10851590	CC
CLPTM1L	rs4635969	AG
PITX1	rs3805663	GA
PRDM14	rs7010162	CT
SLC25A44	rs2072499	AA

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

are usually caused by rare mutations that can’t be analyzed by our test. If you're concerned about your risk of hereditary cancer, consider getting a specialized test at a reference laboratory.

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	Magnesium	350 mg
3	Strength Training	1 hour	4	Stress Management Therapy	1 hour
5	Exercise At Least One Hour a Day	1 hour	6	Avoid Radiation Exposure	
7	Walking	30 minutes	8	Avoid Secondhand Smoke	
9	Avoid Exposure To Organic Solvents		10	Fruits And Vegetables	
11	Support Groups				

1



Aerobic Exercise (Cardio)

IMPACT2 / 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 exercise (especially cardio) during and shortly after chemotherapy for testicular cancer may improve cardiorespiratory function [\[R, R\]](#).

In testicular cancer survivors, high-intensity aerobic interval training may improve cancer-related fatigue, cardiorespiratory fitness, cardiovascular risk factors, and quality of life [\[R, R\]](#).

However, it's unclear whether physical activity reduces the risk of testicular cancer [\[R\]](#).

2



Magnesium

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take up to 350 mg of magnesium daily as a supplement, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

350 mg

Description

Magnesium is an essential mineral involved in various bodily functions, including muscle contractions, nerve signaling, and bone health. Maintaining adequate magnesium levels through diet or supplements can support overall well-being and reduce the risk of magnesium deficiency-related health issues.

[Magnesium](#) is an essential mineral. Your body needs it for [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Muscle, nerve, and bone function
- Blood sugar and blood pressure control
- DNA and protein production
- Strong immunity

Women need **310-320 mg** of magnesium per day, while men need **400-420 mg** [\[R\]](#).

Foods rich in magnesium include **nuts, seeds, and leafy greens**. Magnesium is also available as a supplement [\[R\]](#).

How it helps

In a study of 17 patients receiving cis-platin treatment (16 with testicular cancer), 8 received magnesium supplements (IV and oral). The supplemented group showed less renal tubular damage, fewer neutropenic episodes, and higher magnesium levels [\[R\]](#).

3



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 help maintain muscle mass and strength during and after cancer treatment, improving physical function and quality of life.

4



Stress Management Therapy

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Engage in stress management therapy sessions, such as cognitive-behavioral therapy (CBT), for at least 1 hour per week over a course of 8 to 12 weeks. Techniques can include mindfulness, deep breathing exercises, and identifying stressors to develop coping strategies.

TYPICAL STARTING DOSE

1 hour

Description

Stress management therapy refers to various techniques and approaches aimed at reducing and coping with stress. It can improve mental and physical well-being by helping individuals better manage the effects of stress on their health.

How it helps

Stress management therapy can improve the overall quality of life and emotional well-being of testicular cancer patients, helping them cope with the emotional stress of diagnosis and treatment.

5



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 helps improve the body's immune system and overall health, which can aid in the recovery and prevention of cancer, including testicular cancer. Aerobic exercises for at least 30 minutes a day can also help manage symptoms and improve energy levels during treatment.

6



Avoid Radiation Exposure

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Minimize your exposure to radiation by staying at least six feet away from radiation-emitting devices like X-rays and microwaves whenever possible. Limit your time in areas with high radiation levels and opt for alternatives to X-ray exams when available. Wear protective gear, such as lead aprons, when exposure is unavoidable, and follow safety protocols during medical procedures involving radiation.

Description

Avoiding excessive exposure to radiation, whether from medical procedures or environmental sources, can help protect against the risk of DNA damage and potential cancer development.

How it helps

Radiation exposure has been linked to various forms of cancer, including testicular cancer. Reducing exposure can help in lowering the risk of cancer development or progression.

7



Walking

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate at least 30 minutes of brisk walking into your daily routine, aiming for a minimum of five days a week. This can be done in one continuous session or broken into shorter periods, such as three 10-minute walks throughout the day.

TYPICAL STARTING DOSE

30 minutes

Description

Walking is a low-impact form of exercise that can contribute to cardiovascular fitness, weight management, and improved overall health. It is used to support physical activity goals, enhance mood, and promote better cardiovascular health.

How it helps

Regular walking can help improve physical health and reduce fatigue during and after cancer treatment, which is beneficial for overall recovery.

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

Secondhand smoke contains multiple carcinogens that can increase cancer risk. Staying away from it helps lower the potential for developing cancers, including testicular cancer.

9

Avoid Exposure To Organic Solvents

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Ensure to work in well-ventilated areas and wear protective gear when handling products like paints, varnishes, and adhesives. When possible, choose solvent-free or water-based products to minimize exposure. Regularly check labels for any solvents listed and strive to limit their use in both personal and professional settings.

Description

Avoiding exposure to organic solvents, commonly found in paints, adhesives, and cleaning products, can protect against the potential health risks associated with inhalation or skin contact, such as respiratory issues and skin irritation.

Organic solvents are used in various industries and workplaces for tasks like cleaning, painting, and manufacturing.

However, their use can be hazardous to workers' health. Exposure to these solvents can lead to problems such as breathing difficulties, skin irritation, and reduced fertility [\[R\]](#).

How it helps

Exposure to organic solvents has been implicated in increasing the risk of testicular cancer by damaging genetic material and causing cellular mutations. Reducing or eliminating exposure can thus potentially lower the risk of developing testicular cancer.

10



Fruits And Vegetables

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Increase your intake of fruits and vegetables to at least five servings per day, aiming for a variety of types and colors to ensure a broad range of nutrients. Each serving size should roughly be the amount you can fit in one hand. Try to incorporate at least one serving of fruits or vegetables into every meal and snack throughout the day.

Description

A diet rich in fruits and vegetables provides essential nutrients, antioxidants, and dietary fiber. This combination supports overall health, helps maintain a healthy weight, and reduces the risk of chronic diseases such as heart disease and certain cancers.

How it helps

Eating a variety of fruits and vegetables provides antioxidants, vitamins, and minerals which can support immune function and help in combatting cancer cells.

11



Support Groups

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Attend a support group meeting related to your condition at least once a week. These meetings can be found through local hospitals, online platforms, or health organizations specific to your condition. Participation can be in-person or virtual, depending on what is offered and your preference.

Description

Support groups are gatherings of individuals facing similar challenges, where they can share experiences, emotions, and coping strategies. They offer emotional support, camaraderie, and valuable insights for those dealing with various health conditions or life circumstances.

Support groups involve people with similar struggles helping each other. Support groups usually take place in a casual setting. During sessions, people share their [\[R\]](#):

- Knowledge
- Experiences
- Coping strategies
- Understanding of the recovery process

Support groups may help support recovery from addictions [\[R\]](#).

How it helps

Support groups provide social and emotional support to testicular cancer patients, allowing them to share experiences and gain strength from others in similar situations.

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.