

Groin Hernia

DNA Health Report

REPORT CATEGORY —



INJURIES

Sample Client

Report date: 15 January 2026

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Table of Contents

03 How this works

- 04 Impact
- 05 Evidence
- 06 Some things to keep in mind

07 Introduction

08 Your genetics

10 Your recommendations

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

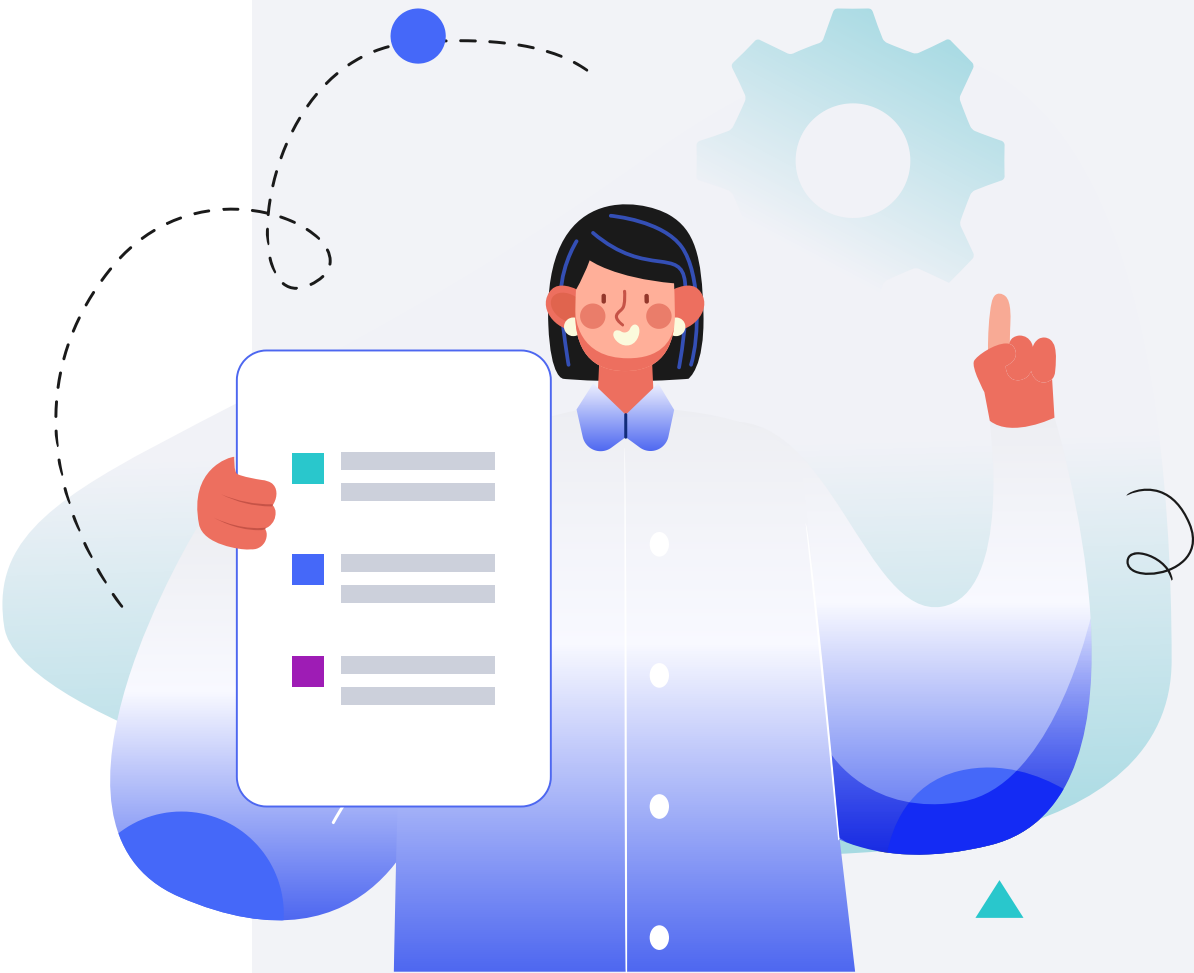
Male

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

A hernia occurs when tissue from one body cavity bulges through an opening in your muscle wall into another. **Groin (inguinal) hernias are the most common type of hernia, where intestine or abdominal tissue pushes through a weak spot in the groin area.**

Did you know? Surgical repair of a groin hernia is one of the most common medical practices implemented in childhood.

A direct inguinal hernia penetrates directly through the wall of your inguinal canal. In men, this is the passageway through which testicles descend. For women, it is the passage through which a ligament holding the uterus descends.

An indirect inguinal hernia enters your inguinal canal through the top. This usually occurs because of a birth defect.

Groin hernia signs and symptoms include [\[R\]](#):

- A bulge in the area on either side of your pubic bone, especially when you cough or strain
- Pain or discomfort in your groin, especially when bending over, coughing, or lifting
- A heavy or dragging sensation in your groin
- Weakness or pressure in your groin
- Occasionally, pain and swelling around the testicles

If not dealt with appropriately, a hernia can become strangulated. When this happens, the blood supply is cut off to the herniated section of intestine and can lead to life-threatening symptoms. For this reason, it is important to **seek medical attention** if you notice hernia signs and symptoms.

Triggers and Risk Factors

A hernia occurs when tissue from one body cavity bulges through an opening in your muscle wall into another. Groin (inguinal) hernia is the most common type of hernia.

Some groin hernias have no apparent cause. Others might occur as a result of [\[R\]](#):

- Increased pressure within the abdomen
- A preexisting weak spot in the abdominal wall
- Straining during bowel movements or urination
- Strenuous activity
- Pregnancy
- Chronic coughing or sneezing

Genetics can have an impact on your susceptibility to a groin hernia. Involved genes may affect collagen and elastin fibers, which can weaken the abdominal wall [\[R\]](#), [\[R\]](#).

Other risk factors for developing a groin hernia include [\[R\]](#):

- Male sex
- Older age
- Being white
- Premature birth and low birth weight
- Previous groin hernia or repair



MORE LIKELY

More likely to get a groin hernia based on **857,808** genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
EFEMP1	rs3791679	AG
EFEMP1	rs1346789	TC
EFEMP1	rs10496052	TC
RBBP8	rs11659211	GG
EFEMP1	rs80172616	GA
PATJ	rs2365498	AA
ADAMTS6	rs370763	AT
LTBP4	rs11083561	CC
TGFB2	rs2820441	AC
ZC3H11B	rs2820443	TC
MAP2K4	rs12453693	CT
CRISPLD2	rs4238714	TC
HMGA2	rs12810758	CT
PLCE1	rs3945750	CA
/	rs78413067	CC
EBF2	rs4410916	AA
UHRF1BP1	rs115661362	TT
RAB11FIP2	rs56390591	TT
TWIST2	rs80225179	TT
ICE1	rs7715383	GG
RRP15	rs2799098	GG
DLEU7	rs573666	CC
COL8A1	rs6805055	TT
HAND2	rs11722597	CC

GENE	SNP	GENOTYPE
LOX	rs10519694	CC
VGLL2	rs200889152	AA
AGTR2	rs4969771	C
/	rs56976399	C
RBPMS	rs13258503	CC
FAM9A	rs56355307	T

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 Strenuous Activity	2	Transcutaneous Electrical Nerve Stimulation (TENS) 30 minutes
3	Eat Fiber-Rich Foods	4	Avoid Rapid Weight Changes
5	Avoid Lifting Heavy Objects	6	Avoid Overeating
7	Avoid High-Impact Exercise	8	Avoid Large Meals

1



Avoid Strenuous Activity

IMPACT4 / 5

EVIDENCE4 / 5

How to implement

Refrain from participating in high-intensity physical activities such as running, heavy weightlifting, and high-impact sports. Opt instead for low-impact exercises like walking, swimming, or yoga. It's important to listen to your body's signals and rest as needed, avoiding these strenuous activities until advised otherwise by a health professional.

Description

Avoiding strenuous physical activity in certain medical conditions or during illness can help prevent injury and promote better recovery. It allows the body to conserve energy and supports the healing process.

Strenuous activity is physical activity that requires a lot of effort. Exercise done at 70-85% of a person’s heart rate is considered strenuous. Examples include [\[R\]](#):

- Running, cycling, or swimming at high speed
- Running or hiking uphill
- Jumping rope
- Single tennis
- Sports that involve a lot of running (soccer, basketball, hockey, etc.)

On the other hand, strenuous daily activities include [\[R\]](#):

- Lifting and carrying heavy objects
- Gardening with heavy digging
- Shoveling snow
- Fast dancing

How it helps

A physically demanding work may increase the risk of groin hernia. Activities that may **gradually** develop a hernia include standing or walking for more than 6 hours/day and frequently lifting heavy objects [\[R, R, R, R\]](#).

A **sudden** strain from activities such as lifting a heavy object, coughing, exercising, or gardening can also cause a groin hernia [\[R, R, R\]](#).

In people recovering from surgery for groin hernia repair, lifting heavy objects in a bent-over position increases the risk of persistent pain. Depending on the type of surgery, experts recommend **taking a break from heavy lifting for 14-42 days and from sport for 7-12 days** [\[R, R\]](#).

2



Transcutaneous Electrical Nerve Stimulation (TENS)

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Apply TENS unit electrode pads around the area in pain; begin with the device set to a low setting and gradually increase intensity to a comfortable level. Use the device for 15-30 minutes per session for pain relief, and it can be used multiple times a day as needed.

TYPICAL STARTING DOSE
30 minutes

Description

TENS is a therapy that uses low-level electrical currents to relieve pain by stimulating the nerves. It's commonly used as a non-invasive method to manage various types of pain, such as musculoskeletal pain or chronic pain conditions.

How it helps

TENS may reduce pain after surgery for groin hernia repair [\[R\]](#).

3



Eat Fiber-Rich Foods

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Incorporate foods high in fiber, such as fruits, vegetables, whole grains, and legumes, into your daily meals. Aim for a total dietary fiber intake of 25 to 30 grams per day, spread out over all meals.

Description

Fiber is a type of carb that your body can’t digest which supports digestion, heart health, and blood sugar control. You can get fiber by eating things like whole grains, fruits, nuts, seeds, and leafy greens.

Fiber is a type of carb that your body can’t digest. It supports digestion, heart health, blood sugar control, and more [\[R, R\]](#).

Adults should get 28 g of fiber every day. Most people in the US don’t get enough fiber [\[R, R\]](#).

You can get more fiber by eating [\[R, R\]](#):

- Whole grains
- Fruits
- Leafy greens
- Nuts and seeds
- Beans
- Broccoli

Fiber supplements, such as [psyllium husk](#), are available for people who don’t get enough fiber from their diets [\[R, R\]](#).

How it helps

Constipation may increase the risk of a groin hernia. This may be because constipation increases straining during defecation [\[R, R, R\]](#).

Eating a diet rich in fiber may reduce the risk by preventing constipation [\[R\]](#).

4



Avoid Rapid Weight Changes

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Maintain a consistent, healthy weight by avoiding extreme dieting or sudden increases in food intake. Aim for gradual weight changes, not exceeding 1-2 pounds per week, by adjusting your diet and physical activity levels accordingly. This approach should be sustained over a long-term period to ensure health and prevent potential adverse effects on the body.

Description

Avoiding extreme and rapid weight changes, whether through crash diets or excessive calorie restriction, is essential for preventing negative health consequences such as nutritional deficiencies and metabolic disruptions.

Your weight is determined by the number of calories you consume compared to those you burn. Changes in exercise frequency, amount and type of food consumed, and alcohol intake may alter your energy expenditure. This may cause small weight fluctuations [\[R\]](#).

Some people may gain or lose weight at a faster rate. Rapid weight fluctuations may be due to [\[R\]](#), [\[R\]](#):

- Very drastic diets
- Water retention or dehydration
- Hormonal changes
- Pregnancy
- Taking certain medications
- Certain health conditions

How it helps

Stable weight maintenance prevents unnecessary strain on the abdominal muscles, reducing the risk of hernia complications.

5



Avoid Lifting Heavy Objects

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Refrain from picking up items that require significant strain or exertion, typically defined as those weighing more than 25 pounds (11 kilograms), to avoid unnecessary pressure on your body. This restriction should be adhered to as long as your healthcare provider advises, which may be indefinitely for chronic conditions or for a specific recovery period following surgery or injury.

Description

Avoiding improper lifting techniques when handling heavy objects can help prevent back injuries and musculoskeletal strain. Practicing safe lifting methods and using proper equipment promotes spine and musculoskeletal health.

How it helps

Avoiding heavy lifting is crucial because it can increase intra-abdominal pressure, potentially worsening the hernia and leading to further complications.

6



Avoid Overeating

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Consume meals slowly, taking time to chew your food thoroughly and pausing between bites to allow your body to signal when it is full. Aim to stop eating when you feel about 80% full rather than waiting until you feel uncomfortably full. Implement this practice at every meal and snack, making it a consistent part of your daily eating habits.

Description

People who overeat take in more food than their body needs. Overeating may contribute to obesity and diabetes, as well as digestive and sleep problems.

People who overeat take in more food than their body needs.

Overeating may contribute to [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Obesity
- Diabetes
- Digestive problems
- Sleep problems

How it helps

Not overeating can minimize intra-abdominal pressure, potentially reducing the risk of hernia enlargement or complications.

7



Avoid High-Impact Exercise

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Opt for low-impact activities such as swimming, cycling, or walking instead of running or jumping exercises. Engage in these alternative exercises for at least 150 minutes per week, spread out over several days to ensure rest periods between sessions.

Description

For individuals with certain medical conditions or joint issues, avoiding high-impact exercise can help prevent injuries and joint strain. Choosing lower-impact activities like swimming or cycling can provide similar cardiovascular benefits while minimizing the risk of overuse injuries.

How it helps

Sticking to low-impact activities reduces strain and stress on the groin area, helping to avoid further injury or exacerbation of the hernia.

8



Avoid Large Meals

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Divide your daily food intake into smaller portions spread out over five to six times a day instead of having three large meals. Ensure that each portion is balanced and includes a variety of nutrients. This means having breakfast, a mid-morning snack, lunch, an afternoon snack, dinner, and possibly a light evening snack, depending on your caloric needs.

Description

Eating smaller, more frequent meals may help prevent overeating. This involves eating the same number of meals at about the same times every day. Doing so may help with issues like blood pressure, body weight, cholesterol levels, and migraines.

Eating smaller, more frequent meals may help prevent overeating. One way to do this is to keep a regular meal schedule. This involves eating the same number of meals at about the same times every day. Doing so may help [\[R, R, R\]](#):

- Manage blood pressure
- Balance the internal clock
- Maintain a healthy body weight
- Support healthy cholesterol levels
- Prevent migraines

How it helps

Consuming smaller meals can decrease pressure in the abdomen, which is beneficial for managing a groin hernia.