getTested

Hormone Health

Summary Report

REPORT CATEGORY —

HORMONES

Report date: 10 January 2024

Table of contents

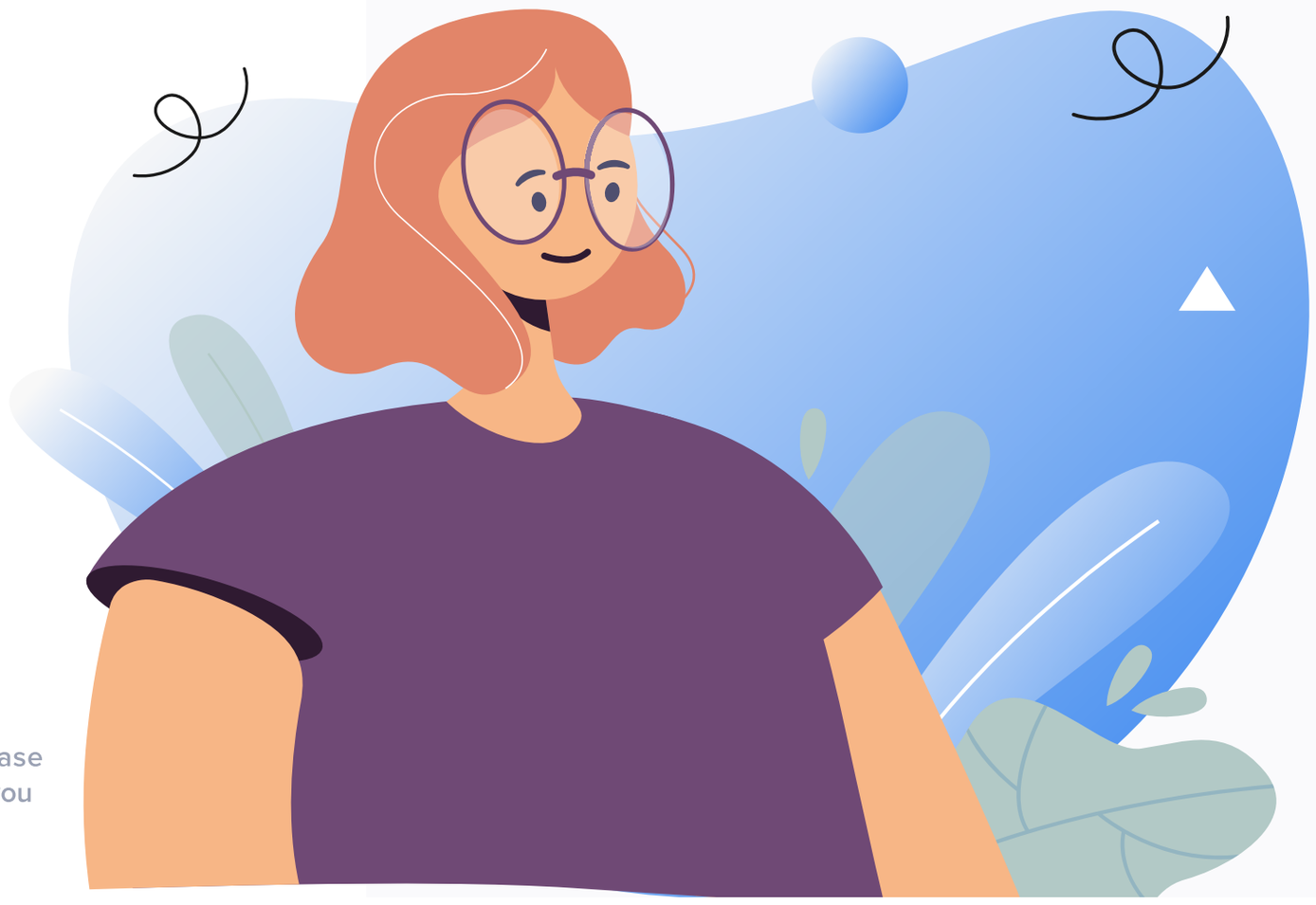
REPORT PROVIDED BY

Get Tested International AB

for Dummy Persson

hello@gettested.io

https://gettested.io



How this works

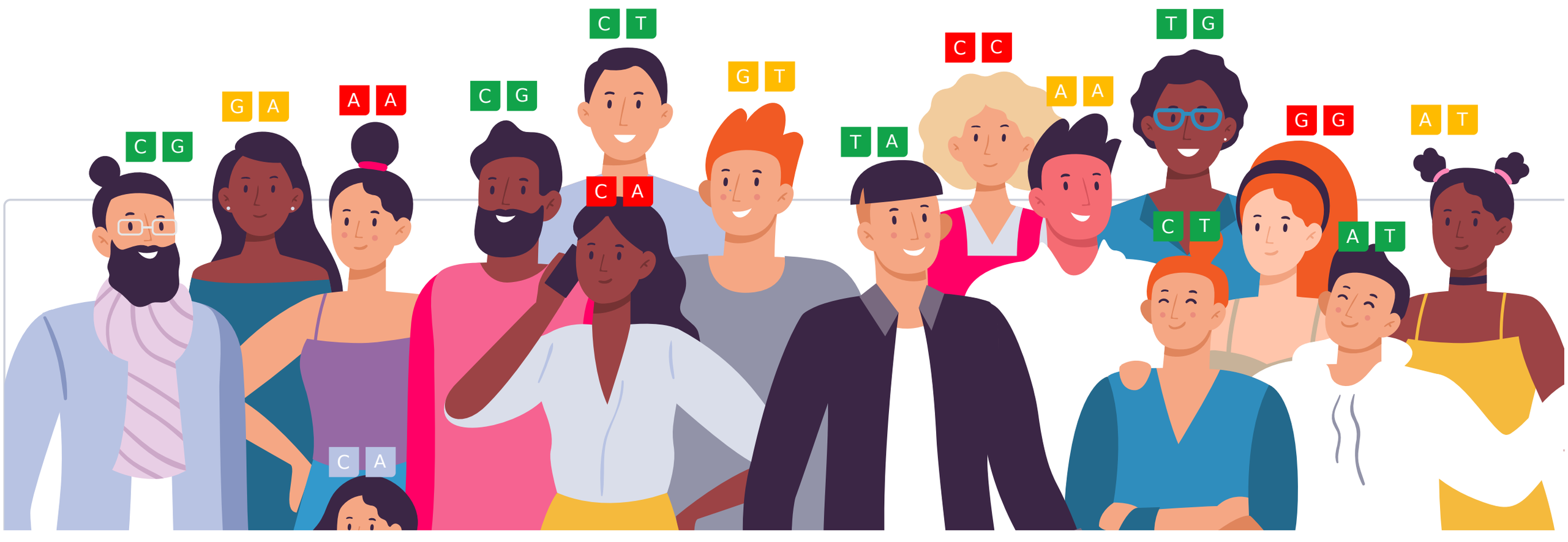
Our Health Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.

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.

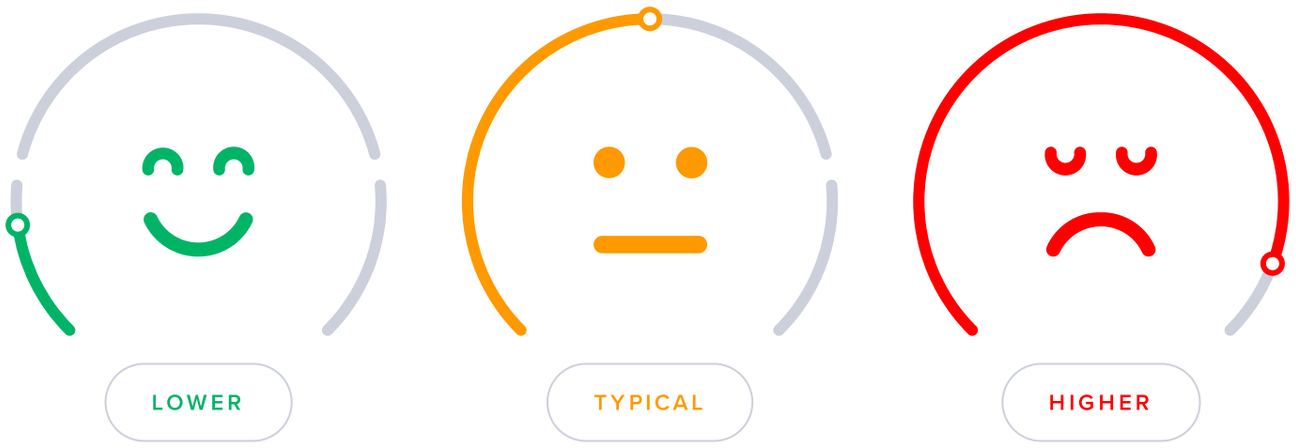
Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.

Our Summary Reports combine different Wellness and Trait Reports related to a certain health topic. They give you a more complete picture about different aspects of your health and wellness.



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.
When we give a risk score, the risk icon tells you if you are at a higher or lower risk compared to other people:

In total, we analyze up to 83 million genetic variants.



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: diet, lifestyle, 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 strength of evidence.

Impact shows how strongly a recommendation will affect your health in a certain area.
Evidence reflects how much scientific support there is for the recommendation in the medical literature. Rankings are from 1 to 5 (low to high):

In Summary Reports, we combine top evidence-based recommendations for different conditions.

We focus on recommendations that help with more conditions included in a Summary Report.

For each recommendation, we list all conditions it may help with. We also include impact, evidence, regimen, personalized parts, and other details specific to each condition.

1

Recommendation

Helps with the following

	IMPACT	EVIDENCE
Condition	4 / 5	4 / 5
Condition	4 / 5	4 / 5
Condition	4 / 5	4 / 5
Condition	4 / 5	4 / 5

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:

- The scores/gauges use the latest scientific studies. But they are not perfect and will change as the models improve.
- Not everyone with risk variants will develop a health condition.
- Genetics is not the whole story. Your health is most often a combination of genetics, lifestyle, and environmental factors. Great news, as this means that you can often change your lifestyle to lower your risk.
- Results might be more accurate for some ethnic groups than others. This depends on the studies used in each report.
- People without risk variants can also develop health conditions.
- It's important to work with your doctor to better understand your risks. Our reports do not diagnose or treat any health condition. They are not a substitute for medical advice. If you're diagnosed with a certain health condition, follow your doctor's advice.

Summary

Your hormonal (endocrine) system regulates body processes, such as appetite, sex drive, tissue repair, metabolism, and more. Hormones affect more or less everything in your body!

Your genetics can influence hormone function in many ways, raising and lowering their levels and affecting their usage and removal. Given how crucial hormones are for your physical and mental health, knowing your predispositions will be a powerful tool for your health regimen.

This comprehensive report will help you discover your genetics for a wide range of hormones, including:

- Thyroid hormones
- Reproductive hormones
- Metabolic hormones
- Stress hormones

This summary report contains:

17 Genetic Results

50 Recommendations

Overview of Your Results

Thyroid Hormones

TYPICAL LIKELIHOOD
Overactive Thyroid
Typical likelihood of hyperthyroidism

TYPICAL LIKELIHOOD
Underactive Thyroid
Typical likelihood of hypothyroidism

TYPICAL LEVELS
T3 (Triiodothyronine)
Likely typical T3 levels

LOWER LEVELS
T4 (Thyroxine)
Likely lower T4 levels

TYPICAL LEVELS
Free T4
Likely typical free T4 levels

TYPICAL LEVELS
TSH
Likely typical TSH levels

Reproductive Hormones

TYPICAL LEVELS
Testosterone
Likely typical testosterone levels

TYPICAL LEVELS
Bioavailable Testosterone
Likely typical bioavailable testosterone levels

TYPICAL LEVELS
SHBG
Likely typical SHBG levels

TYPICAL LEVELS
Estradiol (M)
Likely typical estradiol levels

HIGHER LEVELS
DHEAS
Likely higher DHEAS levels

TYPICAL LEVELS
Prolactin
Likely typical prolactin levels

TYPICAL LEVELS
FSH
Likely typical FSH levels

Metabolic Hormones

HIGHER LEVELS
Insulin
Likely higher insulin levels

LOWER LEVELS
Ghrelin
Likely lower ghrelin levels

TYPICAL LEVELS
IGF-1
Likely typical IGF-1 levels

Stress Hormones

TYPICAL LEVELS

Cortisol

Likely typical cortisol levels

Your Results in Details

Thyroid Hormones

Thyroid hormones are key players in your health. They affect your metabolic rate, body temperature, heart function, energy production, breathing, and fertility. Needless to say, if your thyroid is out of balance, your whole body is going to suffer.

Thyroid issues are something to discuss with your doctor if you suspect anything. Your genetic predispositions may indicate particular aspects of thyroid health to focus on and help reduce the risk of potential problems.

TYPICAL LIKELIHOOD

Overactive Thyroid

Typical likelihood of hyperthyroidism

TYPICAL LIKELIHOOD

Underactive Thyroid

Typical likelihood of hypothyroidism

TYPICAL LEVELS

T3 (Triiodothyronine)

Likely typical T3 levels

LOWER LEVELS

T4 (Thyroxine)

Likely lower T4 levels

TYPICAL LEVELS

Free T4

Likely typical free T4 levels

TYPICAL LEVELS

TSH

Likely typical TSH levels

Overactive Thyroid

Key Takeaways:

- Up to **65%** of differences in thyroid hormone levels may be due to genetics.
- Risk factors include: Graves' disease, goiter, too much/little iodine, thyroiditis, pituitary or thyroid gland tumors.
- It can cause: weight loss, increased appetite, irritability, irregular heartbeat, goiter, heart, bone, and muscle problems.
- Hyperthyroidism is fairly rare, mostly due to Graves' disease or iodine deficiency. If your genetic risk is high, the overall risk is still low due to its rarity, but be aware of symptoms.
- Click the **next steps** tab for relevant labs.

The thyroid is a gland found in the front of the neck. It produces T3 and T4, thyroid hormones that affect [R]:

- Heart function
- Energy production
- Breathing rate
- Bone growth
- Alertness
- Reproductive health

In some people, the thyroid produces too much of these hormones. This condition is called *hyperthyroidism* (overactive thyroid) [R, R, R].

Potential causes of overactive thyroid include [R, R]:

- **Autoimmune conditions like *Graves' disease***
- **Thyroid nodules (goiter)**
- Too much or too little iodine
- Thyroid inflammation (*thyroiditis*)
- Pituitary or thyroid gland tumors

Hyperthyroidism is fairly rare. In countries with iodine deficiency, goiter is a common cause. In developed countries like the United States, most people get enough iodine and Graves' disease is a more common cause [R, R].

When the thyroid is overactive, it may produce signs and symptoms like [R]:

- Weight loss
- Increased appetite
- Nervousness or irritability
- Rapid or irregular heartbeat
- Shaking
- Intolerance to heat
- Enlarged thyroid (*goiter*)

Treatment for hyperthyroidism may be different for each person. A doctor may recommend [R]:

- Medication
- Radiation therapy
- Surgery

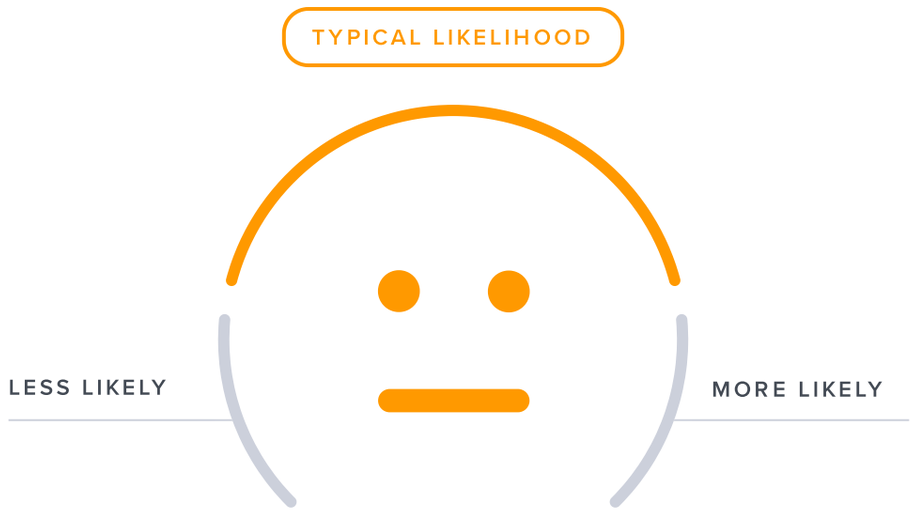
Diet changes may also help manage some cases. For example, if you have an autoimmune thyroid condition, you may need to avoid iodine-rich foods like seaweed [R].

It is extremely important to treat hyperthyroidism according to your doctor's instructions. Left untreated, an overactive thyroid can cause [R]:

- Heart problems
- Bone and muscle problems
- Eye problems
- Fertility problems

Up to 67% of differences in thyroid hormone levels may be attributed to genetics. Genes involved in hyperthyroidism may influence [R, R]:

- Thyroid hormones (PDE8B, DIO1, CAPZB, TSHR)
- Immune function (HLA-DPB1, PTPN22, CTLA4)



Typical likelihood of hyperthyroidism based on 466 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
CTLA4	rs3087243	GG
FCRL3	rs7522061	CC
MICB	rs2517532	GG
TSHR	rs12101261	CT
SH2B3	rs653178	CT
CD40	rs1883832	TC
PDE8B	rs2046045	TT
TRMO	rs925488	AA
LRRC6	rs118039499	AA
BACH2	rs604912	GG
TSHR	rs2160215	TC
FAM227B	rs17477923	CT
SYT13	rs11038357	TA
SOX9	rs8077245	GT
PDE10A	rs2983514	AG
FAM227B	rs4338740	CT
MAF	rs140851213	TI
CD40	rs6131010	AG
FCRL3	rs1977710	GG

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

Underactive Thyroid

Key Takeaways:

- Up to **65%** of differences in thyroid hormone levels may be due to genetics.
- Other risk factors for underactive thyroid include: autoimmune conditions, too much/little iodine, and radiation treatment.
- It can cause fatigue, sensitivity to cold, constipation, goiter, weight gain, voice changes, dry skin, and puffy face.
- Up to **1 in 10** people may have an underactive thyroid, and half of those don't know they have it.
- Be aware of the factors and symptoms, even if your genetic risk is low.
- Click the **Recommendations** tab for potential dietary and lifestyle changes and **next steps** for relevant labs.

The thyroid is a gland found in the front of the neck. It produces hormones T3 and T4, which affect [R]:

- Heart function
- Energy production
- Breathing rate
- Bone growth
- Alertness
- Reproductive health

If the thyroid does not produce enough of these hormones, the whole body may suffer ill effects. This condition is known as *hypothyroidism* (underactive thyroid) [R, R, R].

Up to 10% of people may have an underactive thyroid. Of these, about half don't know they have it [R].

Hypothyroidism can have a number of causes. These include [R, R, R]:

- Autoimmune conditions like *Hashimoto's disease*
- Too much or too little iodine
- Thyroid inflammation (*thyroiditis*)
- Surgery that removes all or part of the thyroid gland
- Radiation treatment
- Some medications
- **Genetics**

If your doctor suspects hypothyroidism, they may look for signs and symptoms like [R, R, R]:

- Fatigue
- Sensitivity to cold
- Constipation
- Enlarged thyroid gland (*goiter*)
- Weight gain
- Voice changes
- Dry skin
- Puffy face

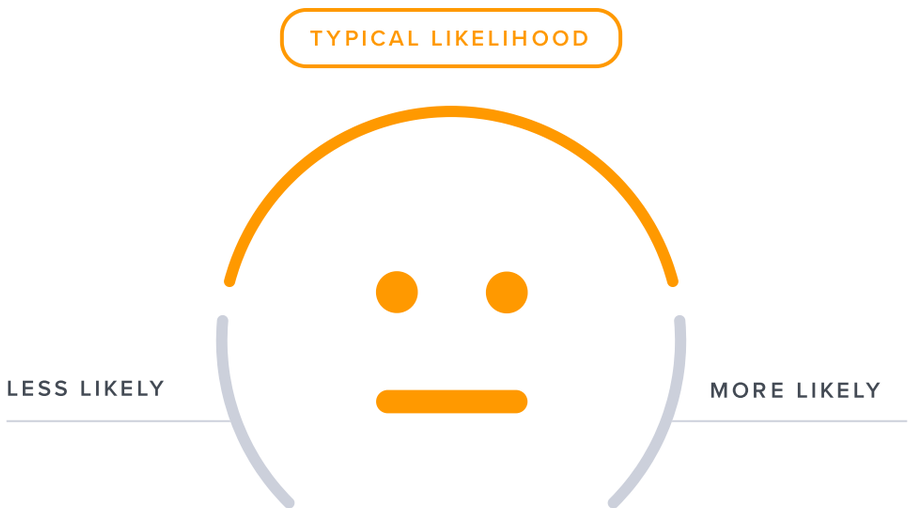
Diagnosis is confirmed with blood tests. These tests check for hormone levels that indicate the thyroid is not as active as it should be [R].

If you have an underactive thyroid (hypothyroidism), treatment will depend on your hormone levels, medical history, and your signs and symptoms.

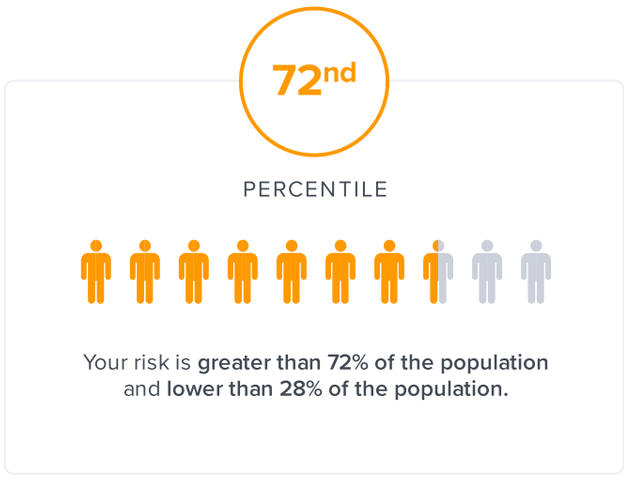
The standard treatment involves a daily dose of synthetic thyroid hormone medication that can restore thyroid hormone levels and reverse the signs and symptoms. But keep in mind that it may take some time to adjust the dosage of thyroid hormones so they are right for you [R].

It is extremely important to treat hypothyroidism according to your doctor's instructions. Left untreated, hypothyroidism can lead to *myxedema coma*. This condition is a medical emergency. Even with treatment at a hospital, up to 60% of these cases can lead to death [R].

Up to 67% of differences in thyroid hormone levels may be attributed to



Typical likelihood of hypothyroidism based on 875 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
TPO	rs11675434	TT
TRMO	rs925489	TT
CTLA4	rs3087243	GG
FCRL3	rs7522061	CC
MICB	rs2517532	GG
VAV3	rs7537605	GA
TSHR	rs12101261	CT
SH2B3	rs653178	CT
/	rs9271365	GG
TRMO	rs7030280	TT
TYK2	rs34536443	GG
/	rs187707293	TA
CLECL1	rs370475698	TT
TPO	rs11675342	TT
CD44	rs736374	AA
CBLB	rs13090803	TT
SASH1	rs9497965	TT
FAP	rs2111485	GG
BACH2	rs6908626	TG

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

- TSHR
- FOXE1

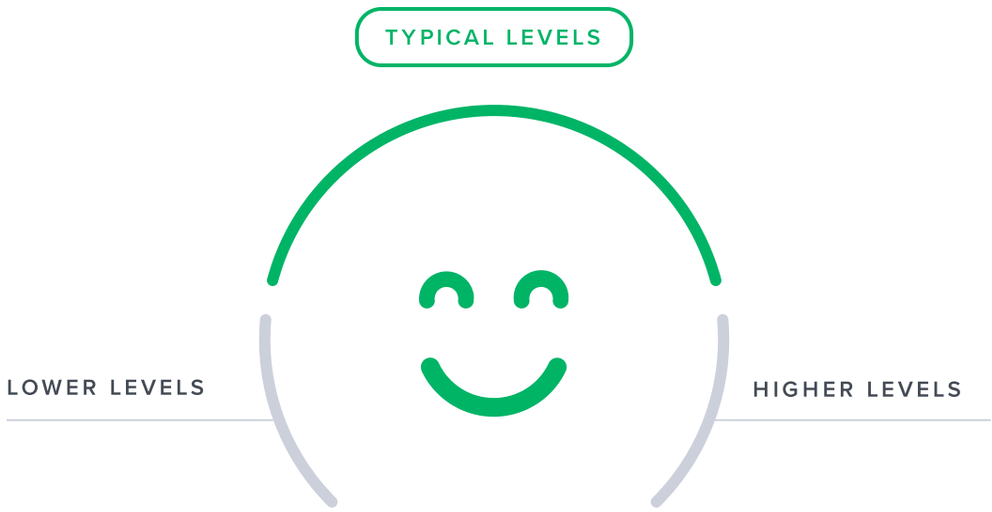
T3 (Triiodothyronine)

The thyroid is a gland found in the front of the neck that produces thyroid hormones. **T3 (triiodothyronine) is the active thyroid hormone.**

Up to **65%** of the differences in people's T3 levels may be due to **genetics**. Involved genes play a role in thyroid function and immune response [R, R].

Other factors that may affect T3 levels include [R, R, R, R]:

- Autoimmunity
- Stress
- Sleep problems
- Dietary iodine
- Dietary goitrogens (substances that reduce thyroid function)



Likely typical T3 levels based on 20,697 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
EPHB2	rs67142165	CT
SLK	rs2475217	CC
FBLL1	rs590784	AA
PRKCE	rs10192064	CT
TIAM2	rs4482989	TC
INSIG1	rs12534332	AG
SERPINA7	rs12687280	T
RAB38	rs116951285	TT
MOV10L1	rs2066773	GG
VPS37B	rs76465767	TT
AGPAT2	rs7020640	CC
CD200R1	rs145944228	GG
ZNF616	rs749618	AA
GALNT13	rs80190198	AA
ERBB4	rs13428799	CC
AGBL1	rs72752186	GG

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

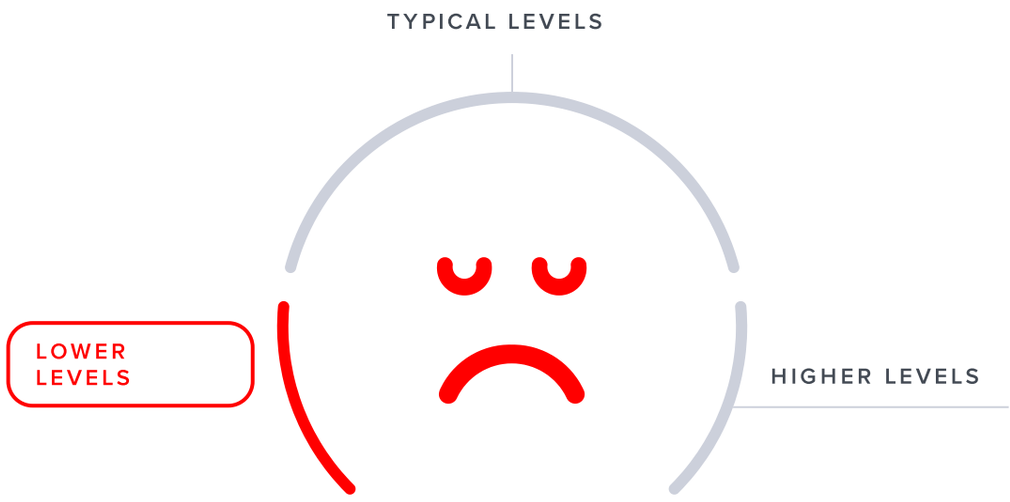
T4 (Thyroxine)

The thyroid is a gland found in the front of the neck that produces thyroid hormones. **T4 (thyroxine)** is a more abundant but less active thyroid hormone. Its breakdown releases active T3.

About **40-55%** of the differences in people's T4 levels may be due to **genetics**. Involved genes play a role in thyroid function and immune response [R, R].

Other factors that may affect T4 levels include [R, R, R, R]:

- Autoimmunity
- Stress
- Sleep problems
- Obesity
- Dietary iodine



Likely lower T4 levels based on 2,581 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
QSOX2	rs7860634	GA
TRMO	rs7045138	TC
LRRC42	rs12127960	TT
LPCAT2	rs6499766	AT
MC4R	rs56069042	AA
SEPHS1	rs72783371	AA
CA8	rs67583169	CC
CPPED1	rs8063103	CC
SLCO1B1	rs4149056	TT
QSOX2	rs11103377	AG
/	rs7240777	GA
ILRUN	rs73405691	AG
H2BC1	rs9356988	AG
GLIS3	rs10119187	TC
DIO2	rs225014	TC
NCOR1	rs11078333	AT
MTCH2	rs11039355	CT
EPHB2	rs67142165	CT
TIAM2	rs4482989	TC

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

Free T4

Free T4 is a small fraction of the thyroid hormone thyroxine not bound to proteins.

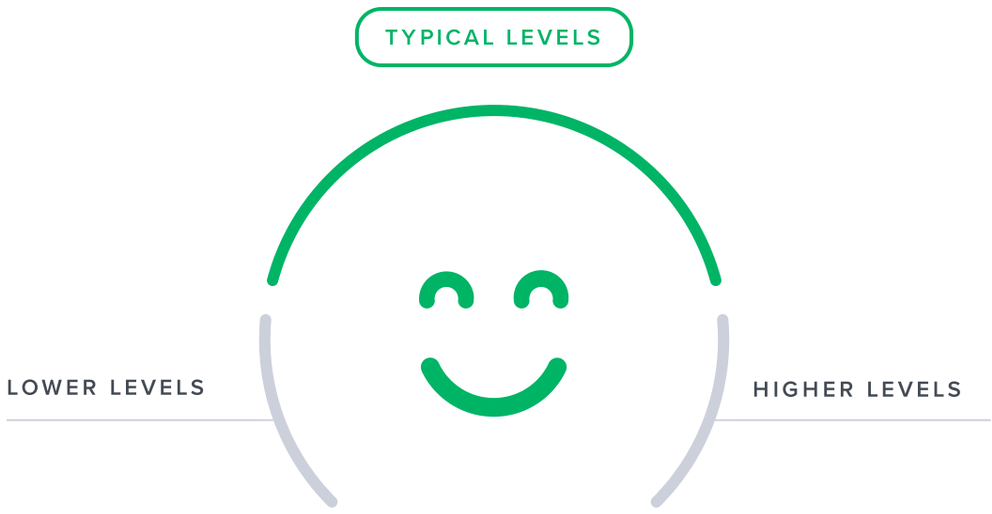
About **40-65%** of the differences in people's free T4 levels may be due to **genetics**. Involved genes play a role in thyroid function and immune response [R, R].

A high or low Free T4 usually indicates over- or underactive thyroid, respectively. A range of factors may affect thyroid function and free T4 levels, including [R, R, R, R, R, R]:

- Autoimmunity
- Obesity
- Exercise
- Toxins like BPA
- Dietary iodine and iron

Genetically higher free T4 levels may be associated with [R, R, R, R, R, R]:

- Lower LDL/Total cholesterol
- High cholesterol
- High blood pressure
- Heart health
- High blood sugar
- Mood swings
- HDL cholesterol
- Age-related macular degeneration
- Gallstones



Likely typical free T4 levels based on 26 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
MC4R	rs56069042	AA
SEPHS1	rs72783371	AA
CA8	rs67583169	CC
CPPED1	rs8063103	CC
SLCO1B1	rs4149056	TT
QSOX2	rs11103377	AG
ILRUN	rs73405691	AG
H2BC1	rs9356988	AG
GLIS3	rs10119187	TC
DIO2	rs225014	TC
NCOR1	rs11078333	AT
MTCH2	rs11039355	CT
ZGRF1	rs6834538	CC
B4GALT6	rs113107469	CC
/	rs7951105	GG
DIO1	rs2235544	CC
AADAT	rs7694879	CC
JAZF1	rs7785730	AA
SIM1	rs17185536	CC

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

TSH

Thyroid-stimulating hormone (TSH), also known as thyrotropin, is a hormone produced by the pituitary gland — a small gland at the base of the brain. **TSH stimulates the thyroid gland** to produce thyroid hormones (T3 and T4). These hormones affect several processes, including energy production, heart function, and reproductive health [R].

Around **65%** of people's differences in TSH levels may be due to genetics [R, R, R].

Even though higher TSH levels may indicate an underactive thyroid, **genetically higher TSH** levels are linked to [R, R, R, R, R, R, R, R, R]:

- Reduce mortality, especially from respiratory infections
- Reduce the rate of some types of heart disease and stroke
- Reduce diabetes rates
- Fractures in men
- Alzheimer's in certain groups
- Reduce blood pressure

On the other hand, genetically lower TSH levels are linked to lower cholesterol, gaining weight [R, R, R, R].

Likely typical TSH levels based on 92 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
LRRC6	rs117764941	GG
LRRC6	rs118039499	AA
NKX2-1	rs116909374	CC
NFIA	rs334725	AA
NR3C2	rs11732089	TT
VEGFA	rs1317983	CC
TBX2	rs1157994	GG
CERS6	rs62174422	TT
VEGFA	rs9381266	TT
PDE8B	rs2928167	GA
/	rs3104389	AA
TRMO	rs925488	AA
PDE10A	rs2983511	GC
VAV3	rs17020122	CT
CDK17	rs10735341	GG
MAF	rs58722186	CT
VEGFC	rs4571283	AA
FAM227B	rs17477923	CT
FOXA2	rs1203949	TC

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

Reproductive Hormones

Reproductive hormones maintain your sexual and reproductive health. They affect everything from sex drive to sperm production, ovulation, and menstruation. A decline in these hormones is natural with age, but when they get out of balance, they can create problems for people of any age.

Your genetics of hormones like testosterone, estradiol, and DHEAS can tell you a lot about your reproductive health but also about many other aspects, including mental health and metabolism. This may help you make smarter choices about your health regimen.

TYPICAL LEVELS

Testosterone

Likely typical testosterone levels

TYPICAL LEVELS

Bioavailable Testosterone

Likely typical bioavailable testosterone levels

TYPICAL LEVELS

SHBG

Likely typical SHBG levels

TYPICAL LEVELS

Estradiol (M)

Likely typical estradiol levels

HIGHER LEVELS

DHEAS

Likely higher DHEAS levels

TYPICAL LEVELS

Prolactin

Likely typical prolactin levels

TYPICAL LEVELS

FSH

Likely typical FSH levels

Testosterone

Testosterone is the major male sex hormone. It is mainly produced in the testes and helps men develop masculine features like increased muscle mass and body hair. Males begin producing testosterone when they are still in the womb and lose 1% of their testosterone per year after the age of 30. Testosterone helps develop a normal male reproductive system and produces some of the changes males experience during puberty [R, R].

Up to 60% of differences in people's testosterone levels may be due to genetics. Genes involved may influence testosterone metabolism [R, R, R, R].

Testosterone levels are also influenced by your environment and lifestyle habits. Ways to balance your testosterone include [R, R, R, R]:

- Exercising
- Maintaining a healthy weight
- Improving your sleep quality
- Eating a healthy diet that includes healthy fats. Testosterone is made from cholesterol, and low-fat diets have been linked to low testosterone levels

Likely typical testosterone levels based on 1,655 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
FKBP4	rs56196860	CC
SERPINA1	rs28929474	CC
XDH	rs77775907	GG
EDA2R	rs141086308	C
FAM9A	rs5934505	T
TDGF1P3	rs5942977	G
NR2F2	rs8023580	TT
GNGT2	rs11655704	TT
MYPOP	rs35318830	TT
YIPF6	rs7052964	G
DGKB	rs10278686	CC
/	rs7097842	GG
NRBF2	rs7084569	GA
GPR139	rs2764772	TT
STAT6	rs7484541	AA
UGT2B17	rs9884390	TT
HACE1	rs11156429	TT
HSD17B13	rs6811902	CC
UBQLN2	rs6651991	G

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

Bioavailable Testosterone

Free blood testosterone and the one weakly bound to albumin constitute **bioavailable testosterone**. This fraction of testosterone (roughly 50%) can enter tissues and cause health effects [R].

About **45%** of the differences in bioavailable testosterone levels may be due to **genetics** [R].

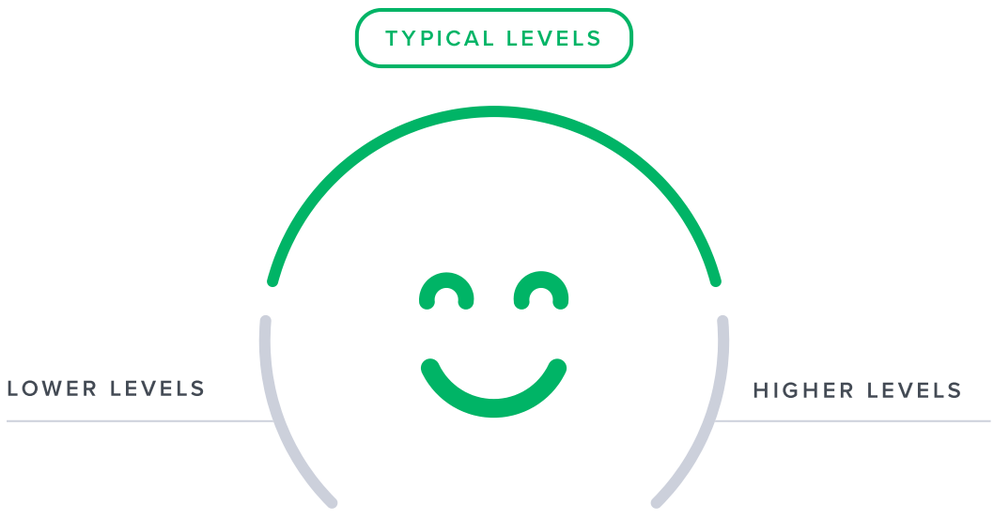
Free testosterone declines with age in both men and women after peaking in the late 20s [R, R].

Other factors associated with low testosterone include [R]:

- **Obesity**
- Some medications
- Alcohol abuse
- Certain chronic medical conditions (e.g., type 2 diabetes, obstructive sleep apnea)

Bioavailable and free testosterone are less often ordered as lab markers than total testosterone because they are **more expensive and difficult to measure**.

However, it may be necessary to test free testosterone levels in people who have symptoms of low testosterone but have normal total testosterone levels [R].



Likely typical bioavailable testosterone levels based on 20,252 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
FKBP4	rs56196860	CC
EIF4A1	rs545206972	CC
SRD5A2	rs113017476	GG
ESR1	rs190930099	AA
FAM9A	rs111386834	T
/	rs7912521	TT
DGKB	rs9986829	GG
PPP2R3C	rs10137488	TT
KCNIP4	rs7679843	CC
MME	rs61762319	AA
LIN28B	rs9322822	TT
ORM1	rs10982156	TT
CYP19A1	rs17703883	TT
ABT1	rs79310511	AA
RORB	rs912202	GG
GPR139	rs2764772	TT
GOLT1A	rs35737316	TC
/	rs11703376	TC
JHY	rs10892924	TA

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

SHBG

SHBG (sex hormone-binding globulin) is a protein made in the liver that binds to sex hormones and helps transport them in the blood. Hence, SHBG controls the levels of sex hormones. Your doctor may order a test in unusual circumstances, like if you have signs of high or low testosterone with normal testosterone levels [R, R, R].

SHBG production is controlled by [R, R, R]:

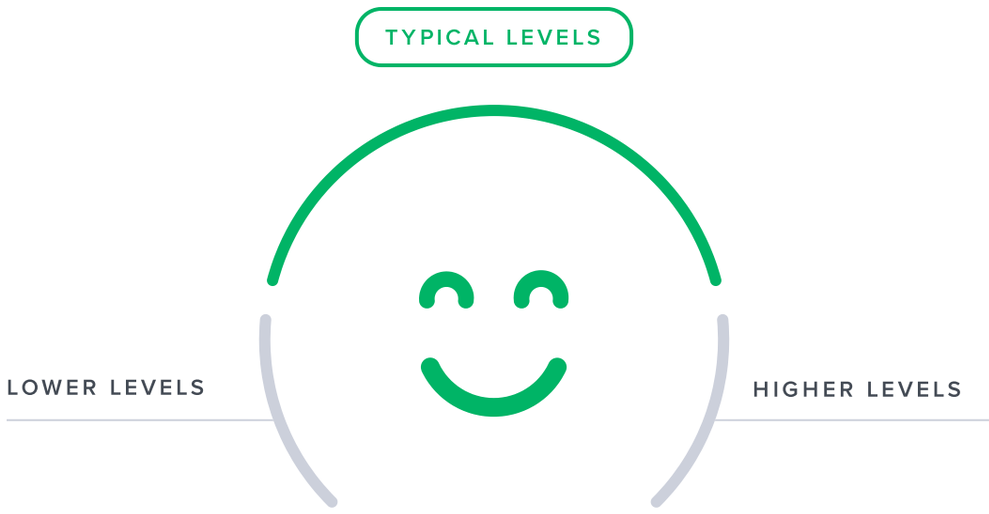
- Sex hormones
- Thyroid hormones
- Insulin
- Dietary factors

Disturbances in any of these can affect SHBG levels.

Around 40% of differences in people's SHBG levels may be due to genetics [R].

Genetically higher levels of SHBG may be causally associated with:

- Heart rate (lower) [R]
- Bone health (lower BMD) [R, R, R, R]
- High cholesterol (lower risk) [R]
- High blood sugar (lower risk) [R, R, R, R, R, R]
- Asthma (women) [R]
- Joint pain [R]
- PCOS [R, R]
- High blood pressure (lower risk) [R]
- Gout (lower risk) [R]
- Varicose veins (women) [R]
- Fractures [R, R]
- Kidney health (lower risk, men) [R]
- Erectile dysfunction (lower risk) [R]
- Stroke (lower risk) [R]
- Fatty liver (lower risk) [R, R]
- Facial wrinkles [R]
- Schizophrenia [R]
- Joint inflammation [R]
- Heart health (lower risk, men) [R]
- Overweight (reduced bmi) [R]
- Deep vein thrombosis [R]



Likely typical SHBG levels based on 512,384 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
TP53	rs1042522	CC
TNFSF12	rs3803800	GG
TNFSF12	rs4227	TG
TNFSF12	rs35386490	CC
TP53	rs1625895	CC
TNFSF12	rs74351250	AG
TNFSF12	rs4968200	CG
TMEM102	rs117573122	GG
DNAH2	rs142627042	CC
ZBTB4	rs12051767	CC
NR1H4	rs61755050	TT
MPDU1	rs11078697	CC
SHBG	rs116289877	AA
SERPINA1	rs28929474	CC
SAT2	rs55784804	GG
EIF4A1	rs17883687	GG
DNAH2	rs34511268	TT
FXR2	rs118174079	GG
EFNB3	rs117584963	CC

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

Estradiol (M)

Estradiol is a type of estrogen. Estrogens are sex hormones that maintain sexual and reproductive health. In males, estradiol impacts sex drive, sperm production, and the ability to get an erection. The main sources of estradiol in men are the testes and the adrenal glands [R, R, R, R].

Your estradiol levels partially depend on your genetics, but factors other than genetics also influence your hormones [R].

The following lifestyle changes can help balance your estradiol [R]:

- Getting enough sleep
- Managing your stress
- Exercise
- Limiting alcohol
- Eating a healthy diet, low in sugar and processed foods, and high in healthy fats and fiber

Estradiol levels that are consistently low or consistently high can signal an underlying condition that may need medical attention. If you are concerned about your hormone levels, talk to your doctor.

Likely typical estradiol levels based on 86 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
CYP19A1	rs727479	AC
UGT2B7	rs7662029	GG
RBBP8	rs113047993	TC
IL7R	rs1073548	GT
TNFSF12	rs62059839	CT
CYP19A1	rs7173595	TC
TMOD2	rs3751591	GG
TNFSF12	rs727428	TC
XDH	rs559555	TA
GCKR	rs1260326	CT
EDA2R	rs12850857	G
SRD5A2	rs112881196	CC
FKBP4	rs56196860	CC
CYP3A7	rs45446698	TT
ABO	rs657152	CC
FAM9A	rs5933688	A
BCL7B	rs188982745	GG
KCNV1	rs570754094	AA
SULT2A1	rs62129966	CC

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

DHEAS

DHEA is a steroid hormone produced primarily by the adrenal glands. The majority of DHEA gets quickly converted into **DHEA sulfate (DHEAS).** Together with DHEA, DHEAS is the most abundant steroid hormone circulating in the blood. It helps make major sex hormones, testosterone and estradiol [R, R, R, R].

Factors linked to **lower DHEAS** include:

- Chronic stress [R, R]
- Autoimmune disease, such as lupus or Sjögren's syndrome [R, R, R, R, R]
- Adrenal insufficiency (Addison's disease) [R]
- Low pituitary function (hypopituitarism) [R, R]
- Serious illness or injury [R, R, R, R]
- Aging [R, R]

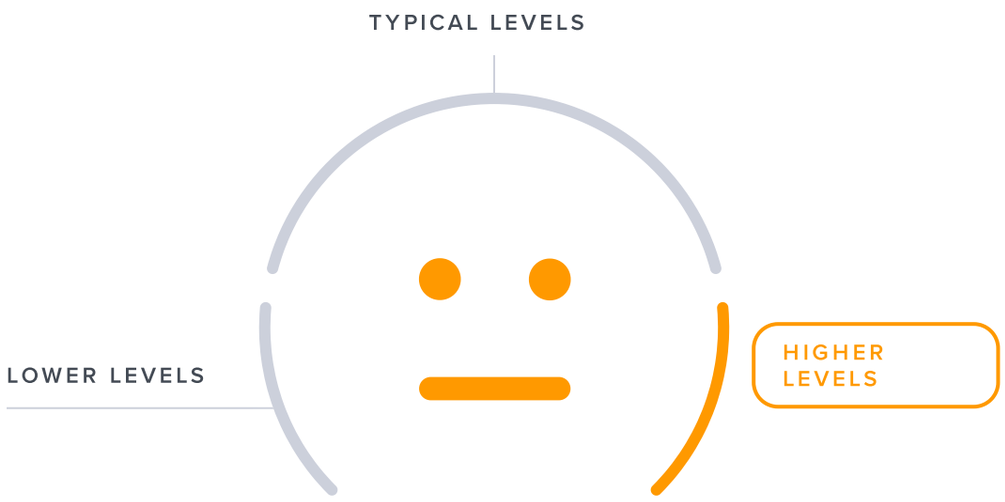
On the other hand, factors linked to **increased DHEAS** include:

- Acute stress [R, R, R, R, R]
- Cigarette smoking [R]
- DHEA supplementation [R]
- Polycystic ovary syndrome (PCOS) [R, R, R]

Genetically higher DHEAS levels may play a role in [R, R, R, R, R, R, R]:

- Alzheimer's disease
- HDL/LDL/Total Cholesterol
- ApoB
- Hair loss
- Muscle Mass
- Hematocrit

Up to 60% of differences in people's DHEAS levels may be due to genetics [R].



Likely higher DHEAS levels based on 48,496 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

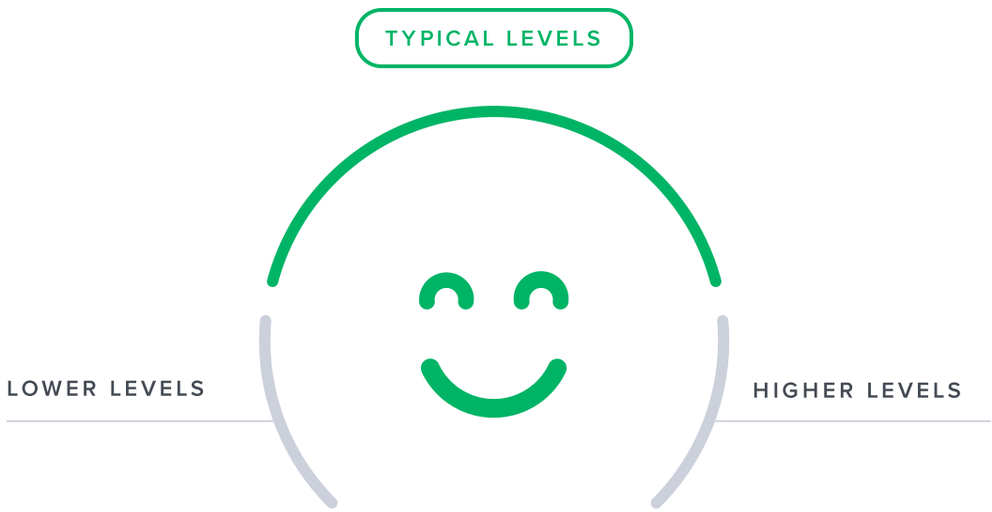
GENE	SNP	GENOTYPE
CABP5	rs2431830	TT
ARPC1B	rs143524414	GA
ARPC1B	rs143524414	GA
ARPC1B	rs143524414	GA
ZKSCAN5	rs10257273	AT
ZKSCAN5	rs10257273	AT
ZKSCAN5	rs10257273	AT
FGF9	rs615567	TA
SRP14	rs28620926	AG
FGF9	rs615567	TA
PLEKHH2	rs77533229	GG
ZKSCAN5	rs77356530	GG
ZKSCAN5	rs77356530	GG
ZKSCAN5	rs77356530	GG
PILRB	rs13222543	CC
CYP3A7	rs80193476	AA
PILRB	rs13222543	CC
CYP3A7	rs80193476	AA
ZKSCAN5	rs10278040	GG

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

Prolactin

Key Takeaways:

- Both high and low prolactin can cause issues with weight control, fertility, milk production, and more.
- High prolactin levels are normal only during pregnancy and breastfeeding.
- Up to **50%** of differences in people's prolactin levels may be due to genetics.
- Besides genetics, different lifestyle factors and health conditions can affect prolactin levels.



Likely typical prolactin levels based on 77 genetic variants we looked at

Prolactin is a hormone with key roles in fertility and reproduction. It stimulates the production of breast milk (lactation) and enhances motherly behavior [R, R, R].

Up to 50% of differences in people's prolactin levels may be due to genetics [R].

Men and non-pregnant women generally have low levels of prolactin. Women's prolactin levels peak during pregnancy and remain elevated after childbirth [R].

Prolactin levels also vary during the day. They increase during sleep and peak in the early morning.

Low prolactin may result from:

- Obesity [R, R]
- Underactive pituitary gland [R, R]
- Some drugs [R, R, R, R]

Factors that may lead to high prolactin include:

- Stress [R, R]
- Alcohol [R]
- Underactive thyroid [R, R]
- Polycystic ovary syndrome (PCOS) [R]
- Kidney and liver disease [R, R, R]
- Pituitary tumors (prolactinoma) [R, R, R].
- Some drugs [R, R, R, R, R, R, R]

FSH

Follicle-stimulating hormone or FSH is a crucial hormone for reproduction, released by the pituitary gland.

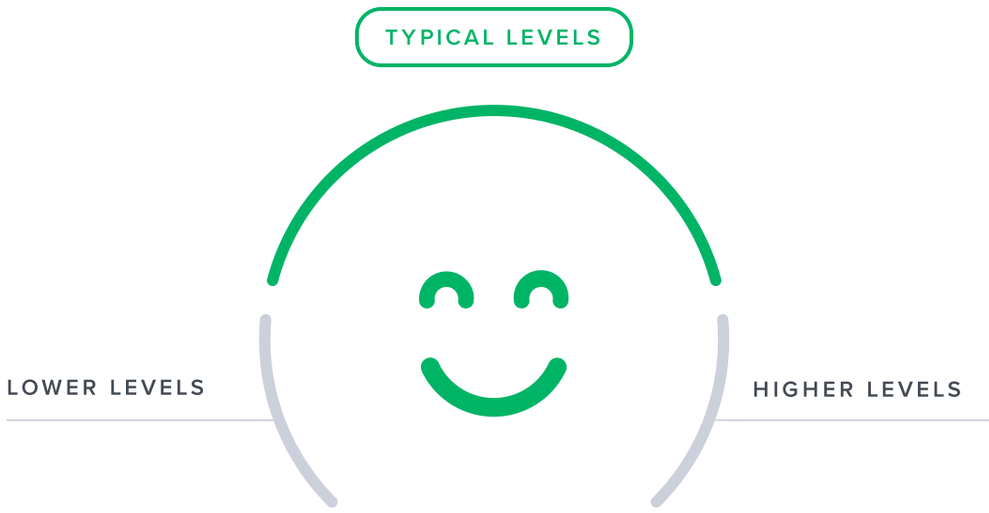
Low FSH levels may be caused by issues with the pituitary or the hypothalamus.

High FSH levels may be caused by issues with the ovaries or testes [R, R].

In women, FSH increases during the first half of the menstrual cycle and then decreases after ovulation. Levels also increase in menopause. In adult men, FSH levels don't tend to change [R].

Up to **80%** of the differences in people's FSH levels may be due to **genetics**. **However, genetic predisposition to lower or higher FSH doesn't imply a health issue** [R].

Interestingly, people with **genetically higher FSH levels** may be more prone to conditions affecting the **esophagus** [R].



Likely typical FSH levels based on 725,000 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
UBE3A	rs4109610	CC
FSHR	rs2300441	GA
CYP19A1	rs2414095	GA
OR2B6	rs140386588	CC
/	rs11803159	GG
ARL14EP	rs11031005	TT
ARL14EP	rs11031006	GG
GAD2	rs8190595	CC
ZNF438	rs187634935	GG
PTER	rs116990127	CC
PFKFB3	rs12269260	TT
KLF6	rs183217426	CC
CACNB2	rs138339030	GG
AKR1E2	rs144252918	CC
ASB13	rs185593246	AA
NEBL	rs114697026	CC
GATA3	rs185495652	TT
ECHDC3	rs142442083	GG
ADARB2	rs17156880	TT

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

Metabolic Hormones

Did you know that even your stomach produces a hormone (called *ghrelin*). It helps control appetite and interacts with other metabolic hormones like insulin. **A complex interplay of metabolic hormones ensures optimal food intake, energy production, weight control, and more!**

Your genetic predispositions can affect the levels of many metabolic hormones, thus playing a major role in your metabolism. **Check out this section for details!**

HIGHER LEVELS

Insulin

Likely higher insulin levels

LOWER LEVELS

Ghrelin

Likely lower ghrelin levels

TYPICAL LEVELS

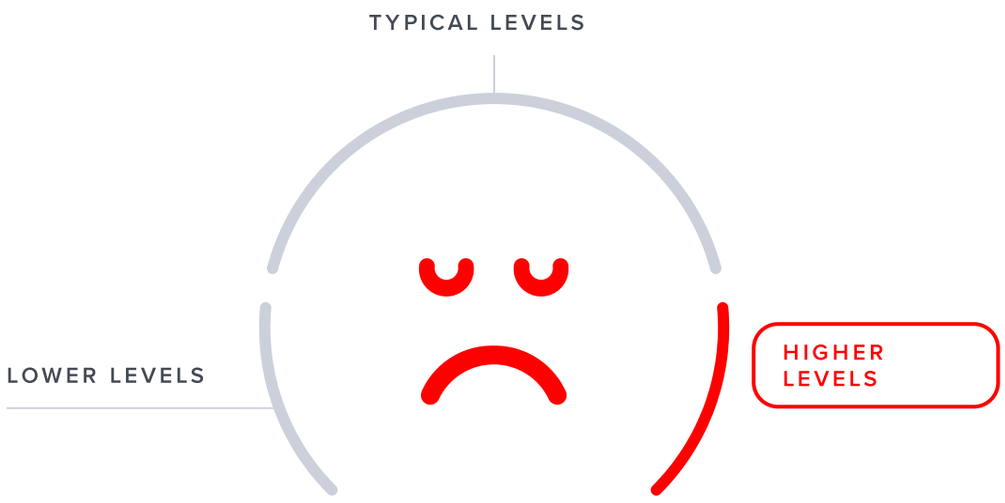
IGF-1

Likely typical IGF-1 levels

Insulin

Key Takeaways:

- Insulin is the key hormone for blood sugar control.
- High insulin levels may play a role in diabetes, obesity, heart disease, and cancer.
- Low insulin levels may result from type 1 diabetes and pancreas conditions.
- Up to 55% of differences in people's insulin levels may be due to genetics.



Likely higher insulin levels based on 462 genetic variants we looked at

Insulin is a hormone that increases the uptake and storage of sugar in muscles, liver, and fat cells for energy production. By doing this, insulin lowers blood sugar levels [R, R, R, R, R].

Between **30%-55%** of differences in people's insulin levels may be due to genetics [R, R, R].

Besides genetics, factors linked to **high insulin levels** include:

- Insulin resistance [R]
- Type 2 Diabetes [R]
- Weight change and obesity [R, R, R, R]
- Insulinomas (usually benign pancreatic tumors) [R, R]

Low insulin levels may result from:

- Type 1 diabetes [R, R]
- Inflammation of the pancreas (pancreatitis) [R]
- Pancreas removal [R]

Ghrelin

Ghrelin is a hormone mainly produced by the stomach. Ghrelin is considered the “hunger hormone” because it stimulates appetite, promotes eating, and increases fat storage. It also plays important roles in immunity, muscle growth, and brain health [R, R, R, R].

Genetics may influence ghrelin levels. For example, variants of the GHRL gene, which helps produce ghrelin, are linked to lower ghrelin levels [R].

Several other factors may change ghrelin levels, including [R, R, R, R]:

- **Time of the day:** Ghrelin levels are higher at night and lower during the day
- **Food intake:** Ghrelin is highest when the stomach is empty and lowest after a meal
- **Type of meals:** Carbohydrate-rich meals lower ghrelin levels the most, followed by fat-rich meals and high-protein meals

Although counterintuitive, **obese people may have lower levels of hunger hormone** than lean people. However, after a meal, ghrelin levels in obese people seem to drop less, which may keep them hungry. Research on this matter is still ongoing [R, R, R, R].

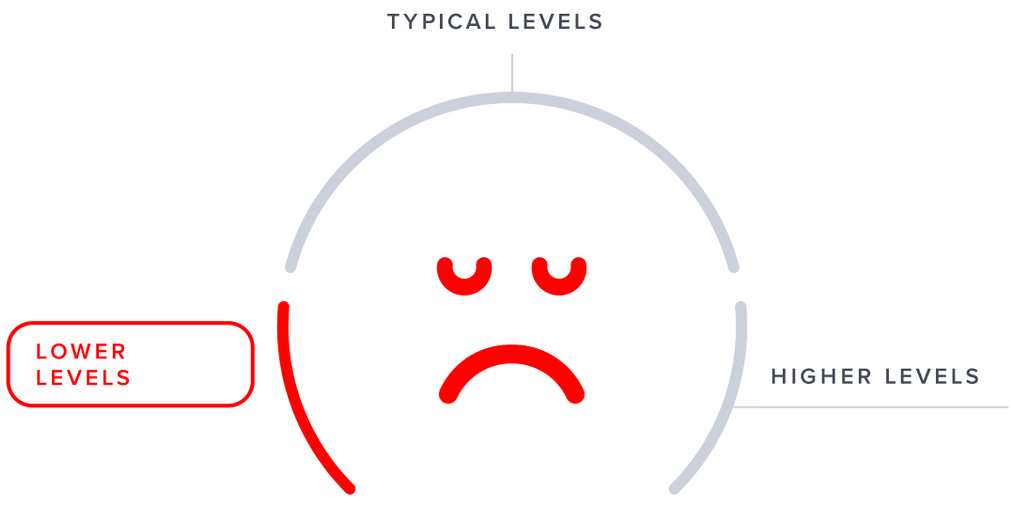
Other health conditions linked to **low ghrelin levels** include:

- Type 2 diabetes [R]
- Hyperthyroidism (overactive thyroid) [R]
- Gastritis due to *Helicobacter pylori* infection [R]
- Stomach surgery [R, R]

High ghrelin levels may result from sleep deprivation and chronic stress. People with **anorexia may also have high levels of hunger hormone** but be less sensitive to it than healthy people. Other health conditions linked to high ghrelin levels include [R, R, R, R, R]:

- Lung disease [R]
- Rare genetic disorders [R]

Keep in mind that this report is not about the rare genetic disorders mentioned above. They are very rare and usually diagnosed in infancy.



Likely lower ghrelin levels based on 12 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
CNTNAP2	rs192092592	AA
ALX4	rs143653572	CC
MAF	rs76823993	CC
BANK1	rs142224718	TT
BRINP1	rs139359241	GG
EPDR1	rs74483218	GG
BRK1	rs143729751	GG
TRMT6	rs187860960	CC
AKT3	rs112426408	AA
PAX5	rs138296128	AC
/	rs77563704	CC
AKT3	rs80240706	TC

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

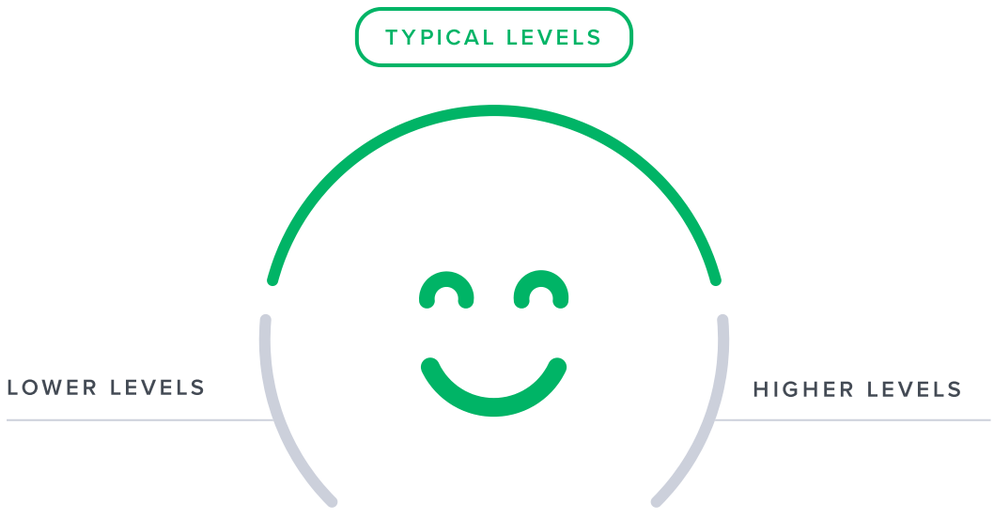
IGF-1

Insulin-Like Growth Factor 1 (IGF-1) is a hormone that looks similar to insulin – that is where its name comes from. However, it has a different function. It works with growth hormone to help cells multiply and regenerate. Growth hormone signals the liver to produce IGF-1. Based on what the body needs, IGF-1 then stimulates the growth of cells throughout the body [R, R, R, R, R].

You may have a genetic predisposition for lower or higher IGF-1 within the normal range. Around 40% of differences in IGF-1 levels are estimated to be due to genetics [R].

Other factors that influence IGF-1 include [R, R, R, R, R, R, R, R]:

- Age
- Calorie intake
- Intake of dietary protein and dairy
- Physical activity

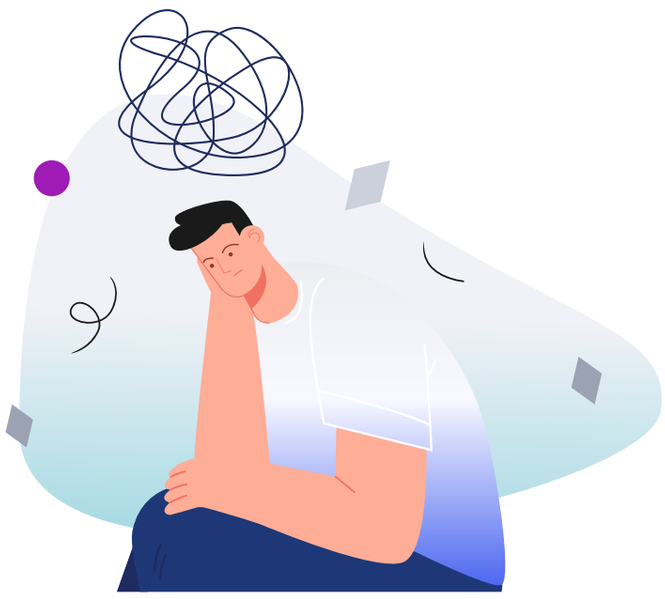


Likely typical IGF-1 levels based on 1,014,257 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
ADH1B	rs1229984	CC
ADH1C	rs283413	CC
/	rs111583052	GA
/	rs117865101	TC
IGFBP3	rs117729644	TC
SSTR5	rs121917877	CC
GH1	rs5388	CC
PAH	rs118092776	CC
ZNF12	rs199761265	GG
IGFBP3	rs9282734	TT
ABHD14A-ACY1	rs121912698	CC
MAP1A	rs55707100	CC
IGFALS	rs34680334	GG
HNF1A	rs1800574	CC
EIF3J	rs151291132	AA
STARD9	rs202077402	AA
PAPPA2	rs10913200	GG
SSTR5	rs118125269	CC
SPSB3	rs35816944	GG

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



Stress Hormones

Much of the response to stress comes from the brain. It is responsible for stimulating the production of *cortisol*, the “stress hormone”, which impacts numerous other systems in the body to help it manage stressful situations and get the body back in balance.

Your genetics can impact this hormone system, helping or hindering your body’s response to stress. Knowing your predispositions, along with diet, lifestyle, and environmental factors, can help you make better decisions about your health regimen.

TYPICAL LEVELS

Cortisol

Likely typical cortisol levels

Cortisol

Cortisol is a hormone produced by the adrenal glands — small glands on top of the kidneys. It is most widely known as a **“stress hormone”** that initiates the body’s “fight-or-flight” response. This helps the body react to stress by shifting into an “emergency mode” where non-critical functions are put on hold [R, R].

Genetics influence cortisol levels. Up to 60% of people’s differences in blood cortisol levels may be due to genetics. **Please note that this report is looking at your genetics of salivary cortisol**, which is closely related to blood cortisol [R, R].

Cortisol levels vary naturally throughout the day. They are generally highest in the morning after waking and gradually decrease throughout the day [R, R].

Cortisol levels also rise naturally:

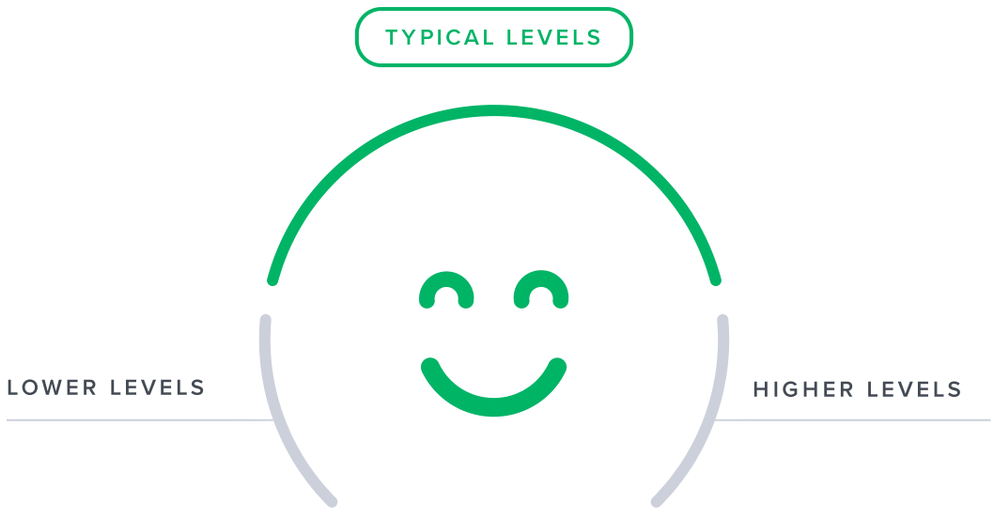
- After eating [R]
- After physical activity [R, R, R, R, R]
- In response to physical and psychological stress [R, R, R, R, R, R]

Very high or low cortisol levels may be indicative of chronic health conditions such as [R]:

- Hypercortisolism or high cortisol (e.g. Cushing syndrome)
- Hypocortisolism or low cortisol (e.g. Addison’s disease)

Genetically higher cortisol may be causally associated with:

- Depression [R]
- Heart disease [R, R, R]
- Atrial fibrillation [R, R]
- Muscle mass (women) [R]
- Strength (women) [R]
- Cognitive decline [R]
- Alzheimer’s (lower risk) [R]
- Parkinson’s (lower risk) [R]
- Overweight [R]
- High blood pressure [R]



Likely typical cortisol levels based on 10 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
TMPRSS9	rs7248779	GG
DGKH	rs1170109	TG
ZFP42	rs6849009	CT
LDLR	rs5927	GA
SPC24	rs11557092	CT
/	rs6768297	AA
CNTNAP5	rs11899245	CC
PDE10A	rs2983496	GG
INHBA	rs10244501	CC
TFAP2C	rs6069930	GG

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

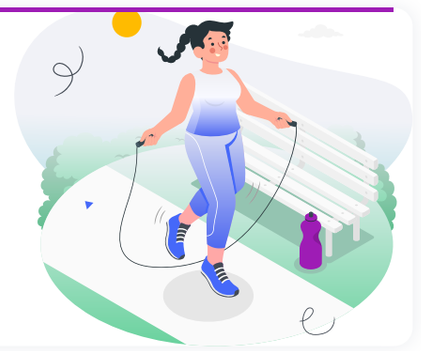
Your Recommendations

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.

1

Avoid Perchlorate



Helps with the following

Insulin

IMPACT 2 / 5

EVIDENCE 2 / 5

Recommendation References: [R, R]

TSH

IMPACT 2 / 5

EVIDENCE 3 / 5

Recommendation References: [R, R, R, R]

Testosterone

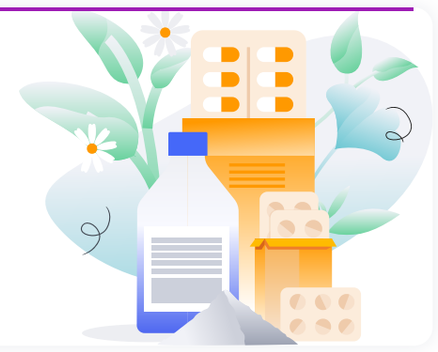
IMPACT 1 / 5

EVIDENCE 1 / 5

Recommendation References: [R]

2

Glucomannan



Helps with the following

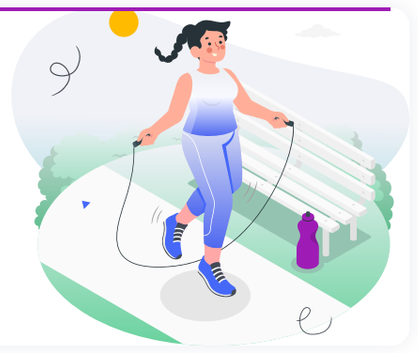
Overactive Thyroid

IMPACT 0 / 5

EVIDENCE 0 / 5

3

Avoid PAHs Exposure



Helps with the following

T4 (Thyroxine)

IMPACT 2 / 5 | EVIDENCE 2 / 5

Recommendation References: [R, R, R]

Testosterone

IMPACT 2 / 5 | EVIDENCE 2 / 5

Recommendation References: [R, R, R, R]

SHBG

IMPACT 2 / 5 | EVIDENCE 2 / 5

Recommendation References: [R, R, R, R]

T3 (Triiodothyronine)

IMPACT 2 / 5 | EVIDENCE 2 / 5

Recommendation References: [R, R, R]

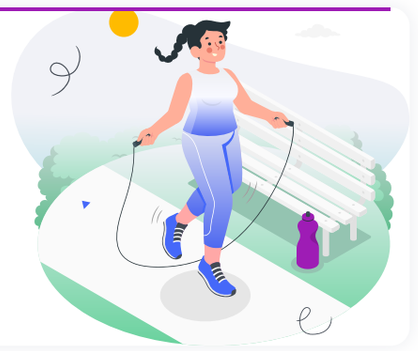
Free T4

IMPACT 2 / 5 | EVIDENCE 2 / 5

Recommendation References: [R, R, R]

4

Aerobic Exercise (Cardio)



Helps with the following

Insulin

IMPACT 1 / 5

EVIDENCE 1 / 5

Bioavailable Testosterone

IMPACT 3 / 5

EVIDENCE 2 / 5

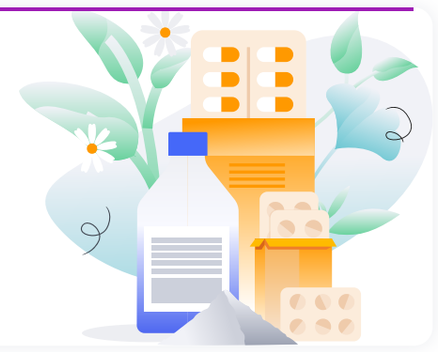
Moderate to vigorous exercise (for 20-90 minutes) may increase free testosterone levels **immediately and within 30 min after exercise** [R].

Similarly, **regular training (for 3 weeks or more) may increase free testosterone levels** [R, R].

Older people may benefit the most from cardio or interval training. They can help by boosting testosterone production [R, R].

5

Barberry



Helps with the following

Insulin

IMPACT 2 / 5

EVIDENCE 3 / 5

Recommendation References: [R, R, R, R]

IGF-1

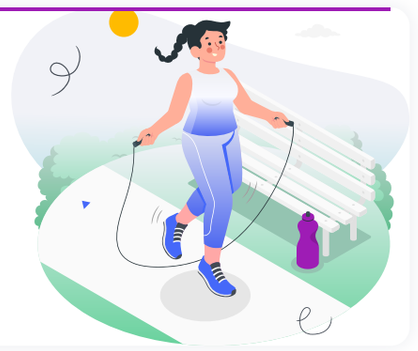
IMPACT 1 / 5

EVIDENCE 1 / 5

Recommendation References: [R]

6

Bikram Yoga



Helps with the following

Insulin

IMPACT 1 / 5

EVIDENCE 1 / 5

Recommendation References: [R, R]

Cortisol

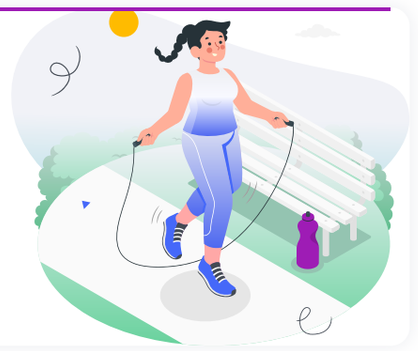
IMPACT 1 / 5

EVIDENCE 1 / 5

Recommendation References: [R, R, R]

7

Restorative Yoga



Helps with the following

Insulin

IMPACT 1 / 5

EVIDENCE 1 / 5

Recommendation References: [R]

Cortisol

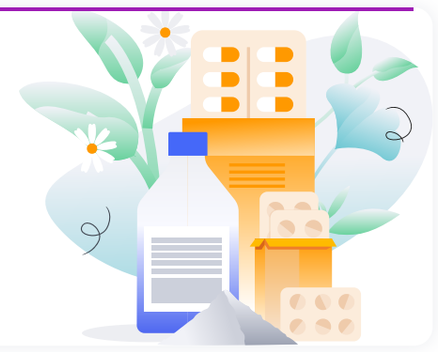
IMPACT 1 / 5

EVIDENCE 1 / 5

Recommendation References: [R, R]

8

Akkermansia



Helps with the following

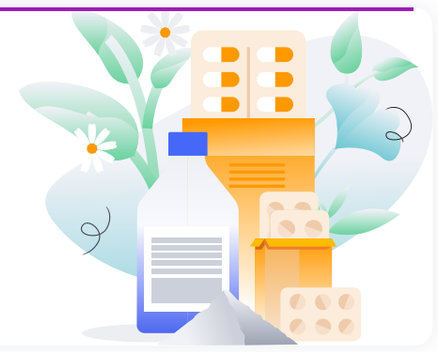
Insulin

IMPACT 1 / 5

EVIDENCE 1 / 5

9

Amaranth



Helps with the following

Insulin

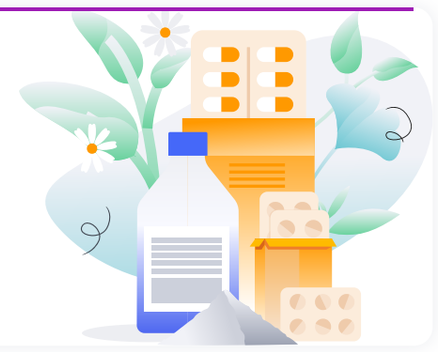
IMPACT 1 / 5

EVIDENCE 1 / 5

Recommendation References: [R]

10

Artemisia Extract



Helps with the following

Insulin

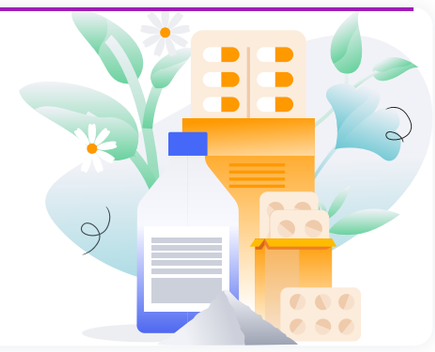
IMPACT 2 / 5

EVIDENCE 2 / 5

Recommendation References: [R, R]

11

Banaba



Helps with the following

Insulin

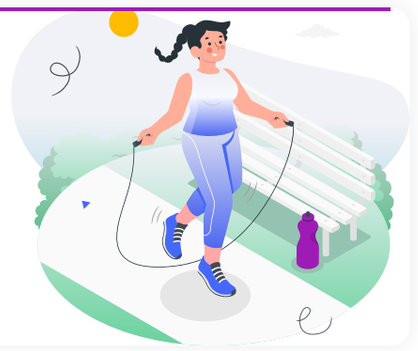
IMPACT 1 / 5

EVIDENCE 1 / 5

Recommendation References: [R, R]

12

Behavioral Sleep Extension



Helps with the following

Insulin

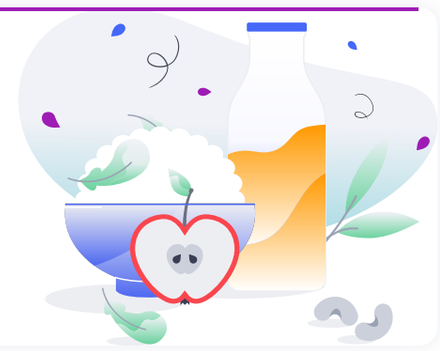
IMPACT 2 / 5

EVIDENCE 3 / 5

Recommendation References: [R, R, R, R]

13

Black Strap Molasses



Helps with the following

Insulin

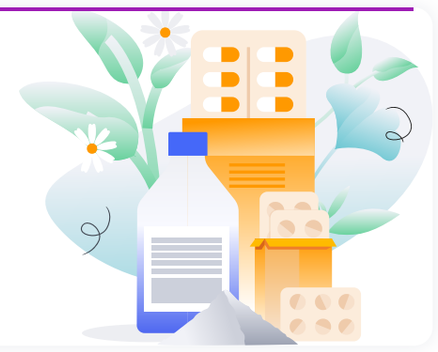
IMPACT 1 / 5

EVIDENCE 1 / 5

Recommendation References: [R]

14

Bladderwrack



Helps with the following

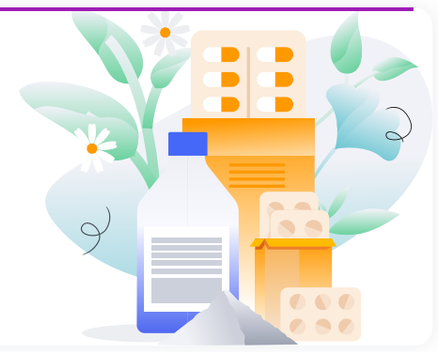
Insulin

IMPACT 0 / 5

EVIDENCE 0 / 5

15

Brown Seaweed



Helps with the following

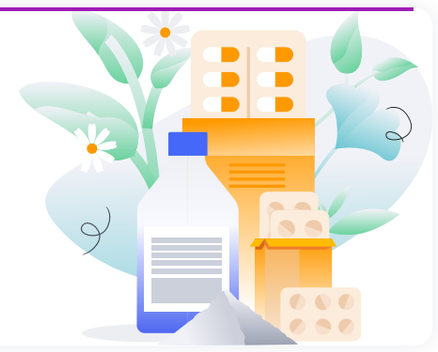
Insulin

IMPACT 0 / 5

EVIDENCE 0 / 5

16

Brown Seaweed And Bladderwrack



Helps with the following

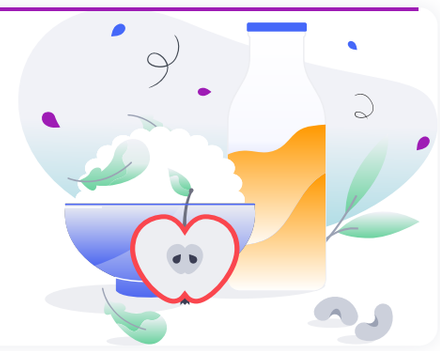
Insulin

IMPACT 1 / 5

EVIDENCE 1 / 5

17

Buckwheat



Helps with the following

Insulin

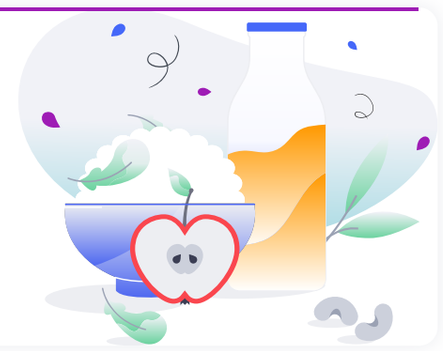
IMPACT 1 / 5

EVIDENCE 1 / 5

Recommendation References: [R, R]

18

Chickpeas



Helps with the following

Insulin

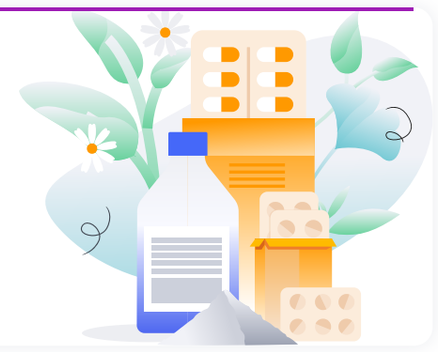
IMPACT 3 / 5

EVIDENCE 3 / 5

Recommendation References: [R, R, R, R, R, R, R, R, R, R]

19

Dill



Helps with the following

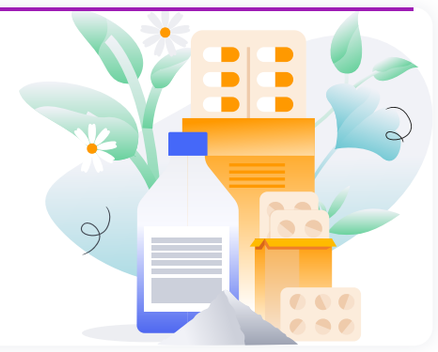
Insulin

IMPACT 2 / 5

EVIDENCE 2 / 5

20

Folate



Helps with the following

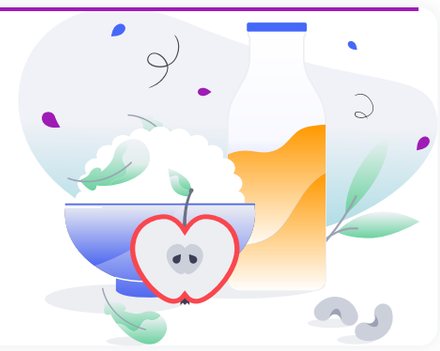
Insulin

IMPACT 3 / 5

EVIDENCE 3 / 5

21

Green Peas



Helps with the following

Insulin

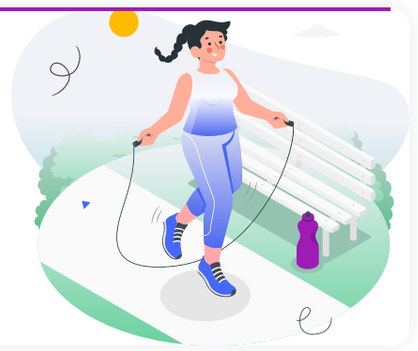
IMPACT 2 / 5

EVIDENCE 2 / 5

Recommendation References: [R]

22

Hot Yoga



Helps with the following

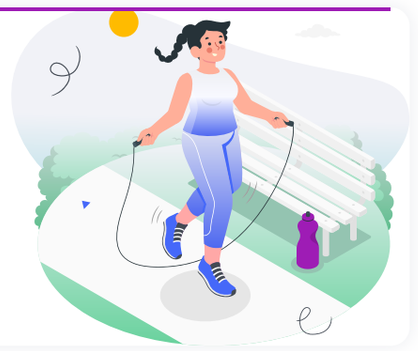
Insulin

IMPACT 1 / 5

EVIDENCE 1 / 5

23

Hyperbaric Oxygen Therapy



Helps with the following

Insulin

IMPACT 1 / 5

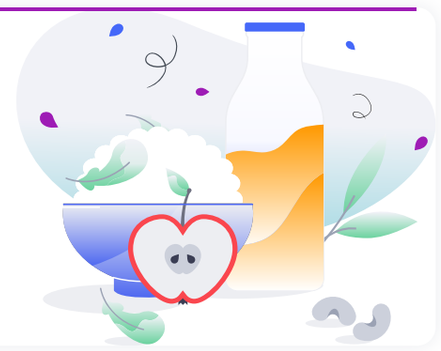
EVIDENCE 1 / 5

Recommendation References: [R, R]

Please note: *Hyperbaric oxygen therapy is a potentially dangerous procedure that should only be performed under medical supervision. People with pneumothorax or congestive heart failure are at especially high risk of adverse effects. Because highly concentrated oxygen can easily catch on fire, avoid potential fire sources around hyperbaric oxygen chambers, oxygen gas cylinders, tanks, and concentrators* [R, R].

24

Kefir



Helps with the following

Insulin

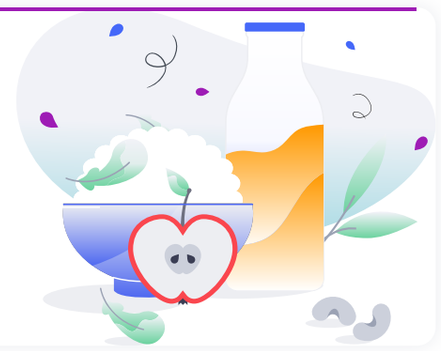
IMPACT 2 / 5

EVIDENCE 3 / 5

Recommendation References: [R, R]

25

Kimchi



Helps with the following

Insulin

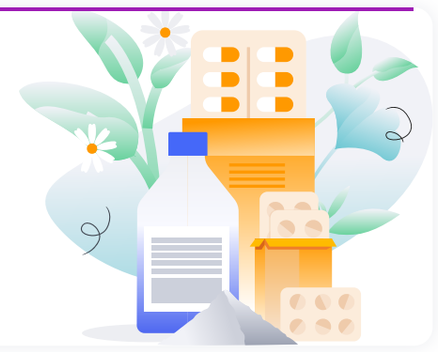
IMPACT 2 / 5

EVIDENCE 2 / 5

Recommendation References: [R]

26

Kiwifruit



Helps with the following

Insulin

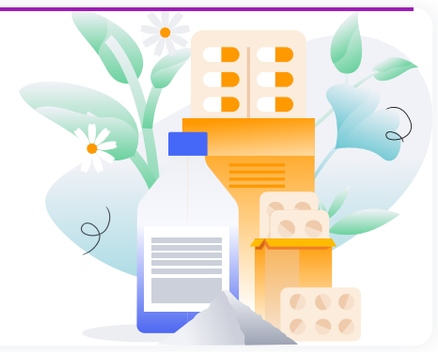
IMPACT 1 / 5

EVIDENCE 1 / 5

Recommendation References: [R, R]

27

Lactobacillus Casei



Helps with the following

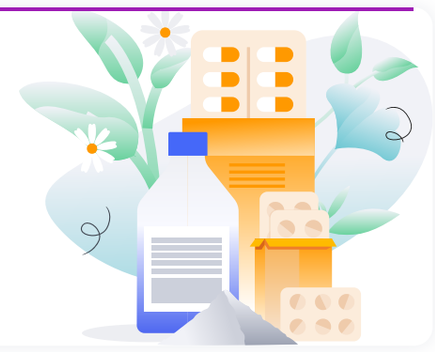
Insulin

IMPACT 1 / 5

EVIDENCE 1 / 5

28

L-Citrulline



Helps with the following

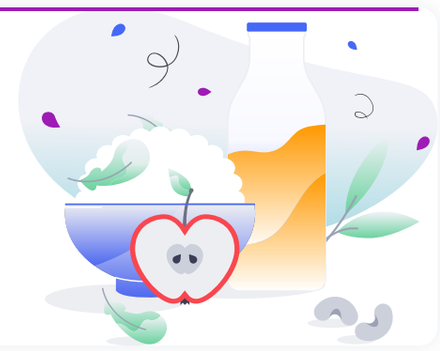
Insulin

IMPACT 1 / 5

EVIDENCE 1 / 5

29

Lettuce



Helps with the following

Insulin

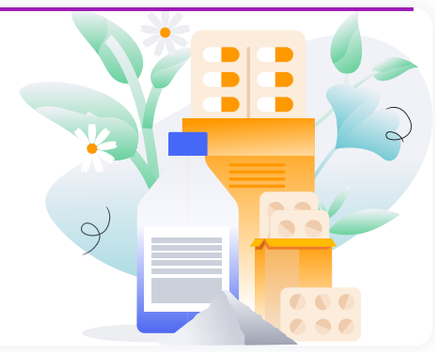
IMPACT 1 / 5

EVIDENCE 1 / 5

Recommendation References: [R]

30

Moringa



Helps with the following

Insulin

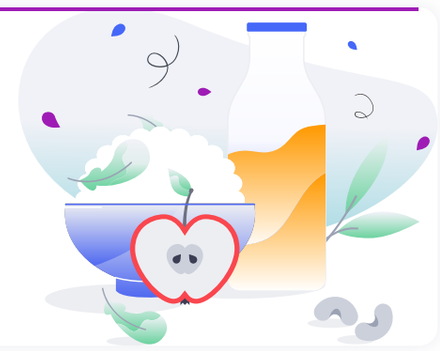
IMPACT 1 / 5

EVIDENCE 1 / 5

Recommendation References: [R]

31

Paleo Diet



Helps with the following

Insulin

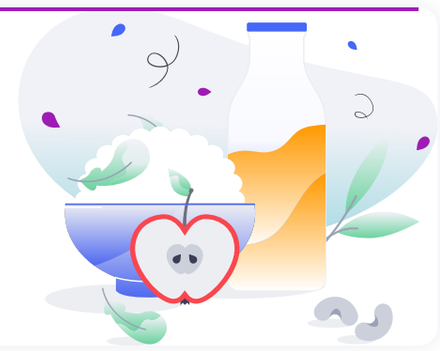
IMPACT 3 / 5

EVIDENCE 3 / 5

Recommendation References: [R, R, R, R]

32

Pecans



Helps with the following

Insulin

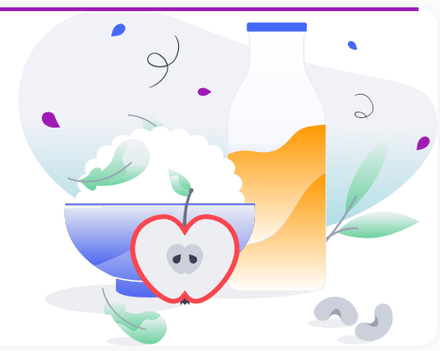
IMPACT 1 / 5

EVIDENCE 1 / 5

Recommendation References: [R]

33

Pistachios



Helps with the following

Insulin

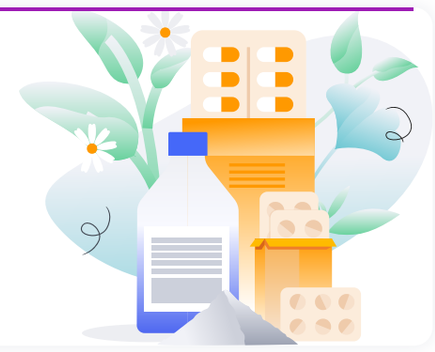
IMPACT 3 / 5

EVIDENCE 3 / 5

Recommendation References: [R, R, R, R]

34

Red Clover



Helps with the following

Insulin

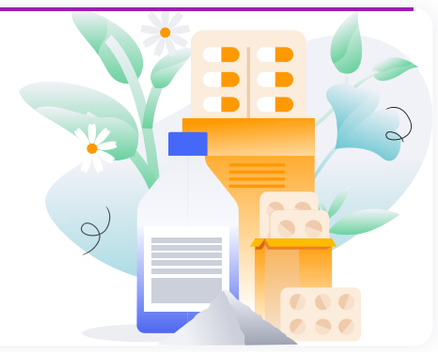
IMPACT 1 / 5

EVIDENCE 1 / 5

Recommendation references: [R, R]

35

Resveratrol



Helps with the following

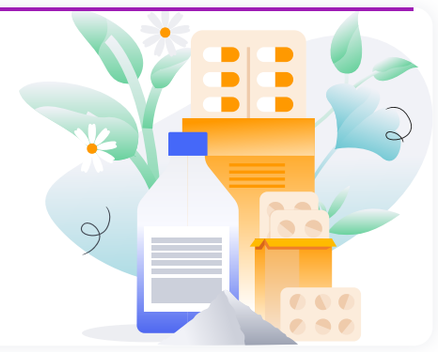
Insulin

IMPACT 3 / 5

EVIDENCE 3 / 5

36

Rutin



Helps with the following

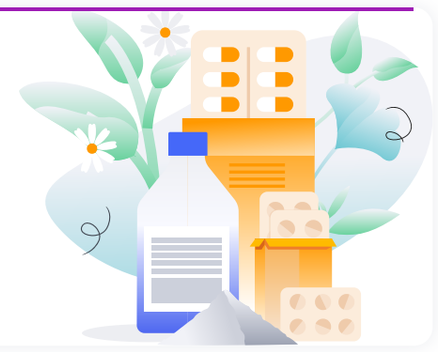
Insulin

IMPACT 1 / 5

EVIDENCE 1 / 5

37

Saccharomyces Boulardii



Helps with the following

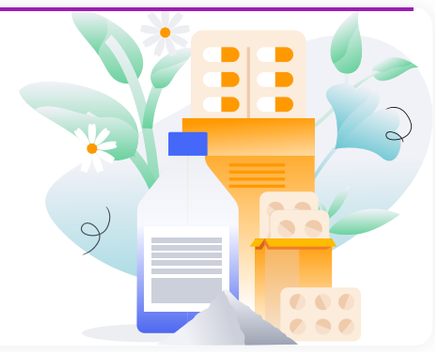
Insulin

IMPACT 1 / 5

EVIDENCE 1 / 5

38

Sea Buckthorn



Helps with the following

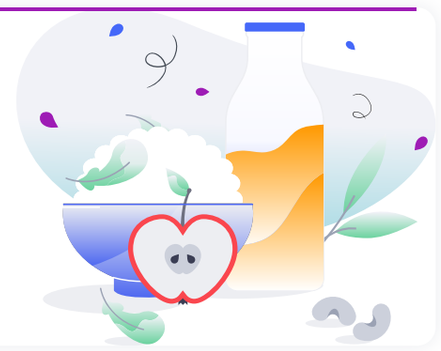
Insulin

IMPACT 1 / 5

EVIDENCE 1 / 5

39

Spinach



Helps with the following

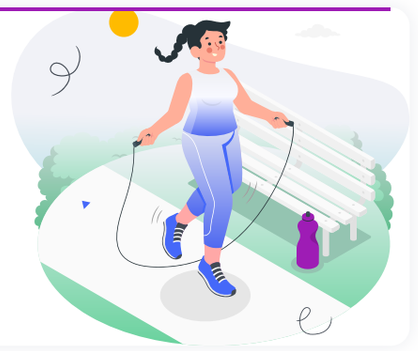
Insulin

IMPACT 1 / 5

EVIDENCE 1 / 5

40

Stair Climbing



Helps with the following

Insulin

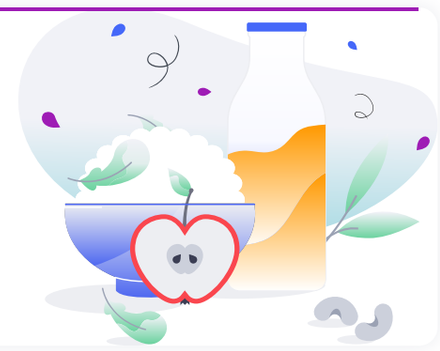
IMPACT 1 / 5

EVIDENCE 1 / 5

Recommendation References: [R]

41

Strawberries



Helps with the following

Insulin

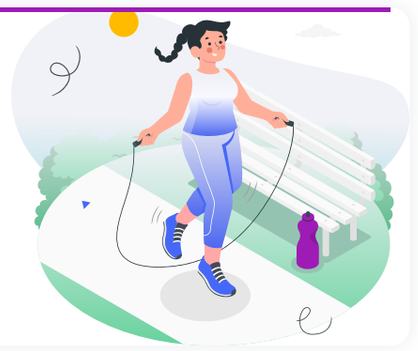
IMPACT 1 / 5

EVIDENCE 1 / 5

Recommendation References: [R, R]

42

Swimming



Helps with the following

Insulin

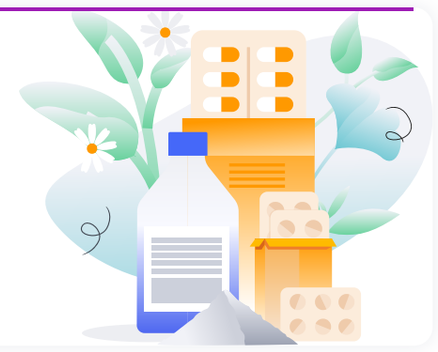
IMPACT 1 / 5

EVIDENCE 1 / 5

Recommendation references: [R]

43

Tocotrienols



Helps with the following

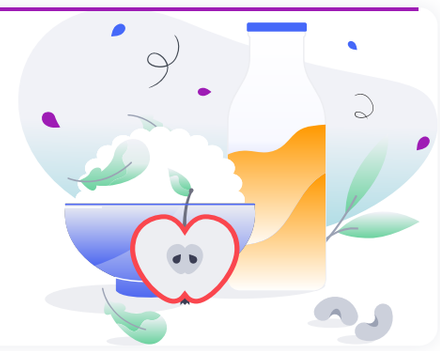
Insulin

IMPACT 2 / 5

EVIDENCE 1 / 5

44

Yacon



Helps with the following

Insulin

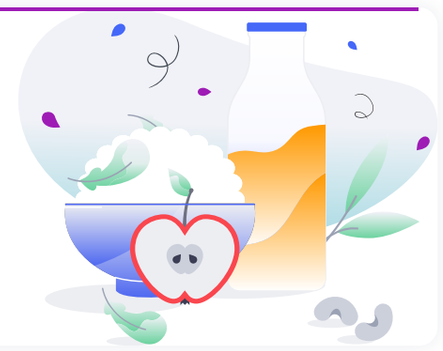
IMPACT 2 / 5

EVIDENCE 2 / 5

Recommendation References: [R, R, R, R]

45

Brazil Nuts



Helps with the following

Ghrelin

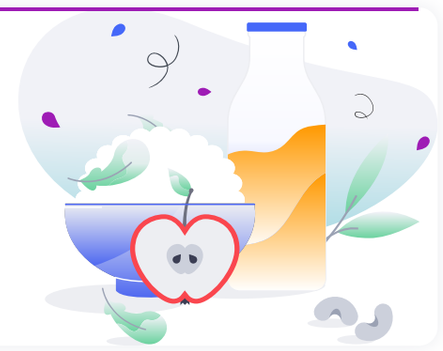
IMPACT 0 / 5

EVIDENCE 0 / 5

Recommendation References: [R, R]

46

Cashews



Helps with the following

Ghrelin

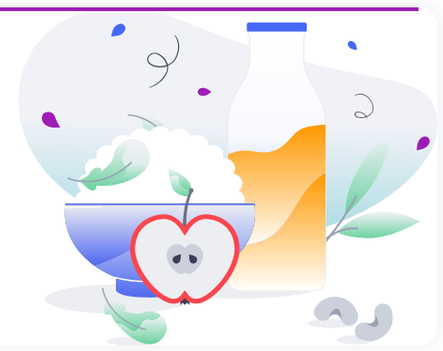
IMPACT 0 / 5

EVIDENCE 0 / 5

Recommendation References: [R, R]

47

Cashews and Brazil Nuts



Helps with the following

Ghrelin

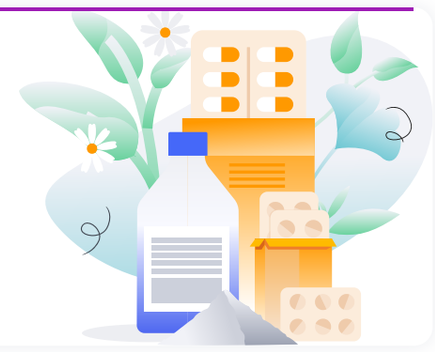
IMPACT 1 / 5

EVIDENCE 1 / 5

Recommendation References: [R, R]

48

Oyster Mushroom



Helps with the following

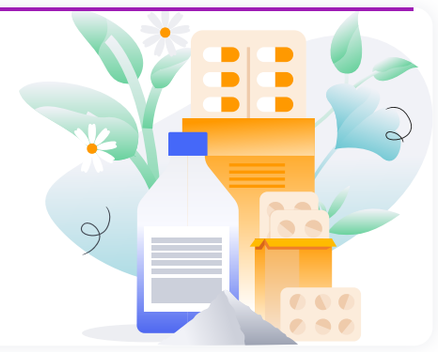
Ghrelin

IMPACT 2 / 5

EVIDENCE 2 / 5

49

Vitamin D



Helps with the following

Underactive Thyroid

IMPACT 2 / 5 | EVIDENCE 2 / 5

People with autoimmune thyroid conditions tend to have lower vitamin D levels [R, R].

In people with these conditions, vitamin D supplements may help balance the immune response. However, not all studies found this benefit [R, R, R].

Please note: *Experts recommend getting 600-800 IU of vitamin D per day. Medical bodies recommend against taking more than 4,000 IU per day. Vitamin D is not a replacement for thyroid medication.Talk to your doctor before using any supplements for thyroid issues* [R].

PERSONALIZED TO YOUR GENES

People with your GC variant may have lower vitamin D levels [R]. Make sure to get enough vitamin D to potentially support thyroid health.

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	**rs7041**	/	

Overactive Thyroid

IMPACT 0 / 5 | EVIDENCE 0 / 5

Bioavailable Testosterone

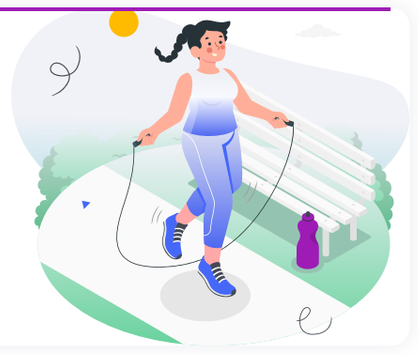
IMPACT 0 / 5 | EVIDENCE 0 / 5

Testosterone

IMPACT 1 / 5 | EVIDENCE 2 / 5

50

Reduce Organophosphate Pesticide Exposure



Helps with the following

Underactive Thyroid

IMPACT 2 / 5 | EVIDENCE 3 / 5

Recommendation References: [R, R, R, R, R]

TSH

IMPACT 2 / 5 | EVIDENCE 3 / 5

Recommendation References: [R, R, R, R, R]

Testosterone

IMPACT 2 / 5 | EVIDENCE 2 / 5

Recommendation References: [R, R]

SHBG

IMPACT 2 / 5 | EVIDENCE 2 / 5

Recommendation References: [R, R]