

Gut Health

Summary Report

REPORT CATEGORY —



GUT HEALTH

Table of contents

How this works

Summary

Overview of results

Details

Recommendations

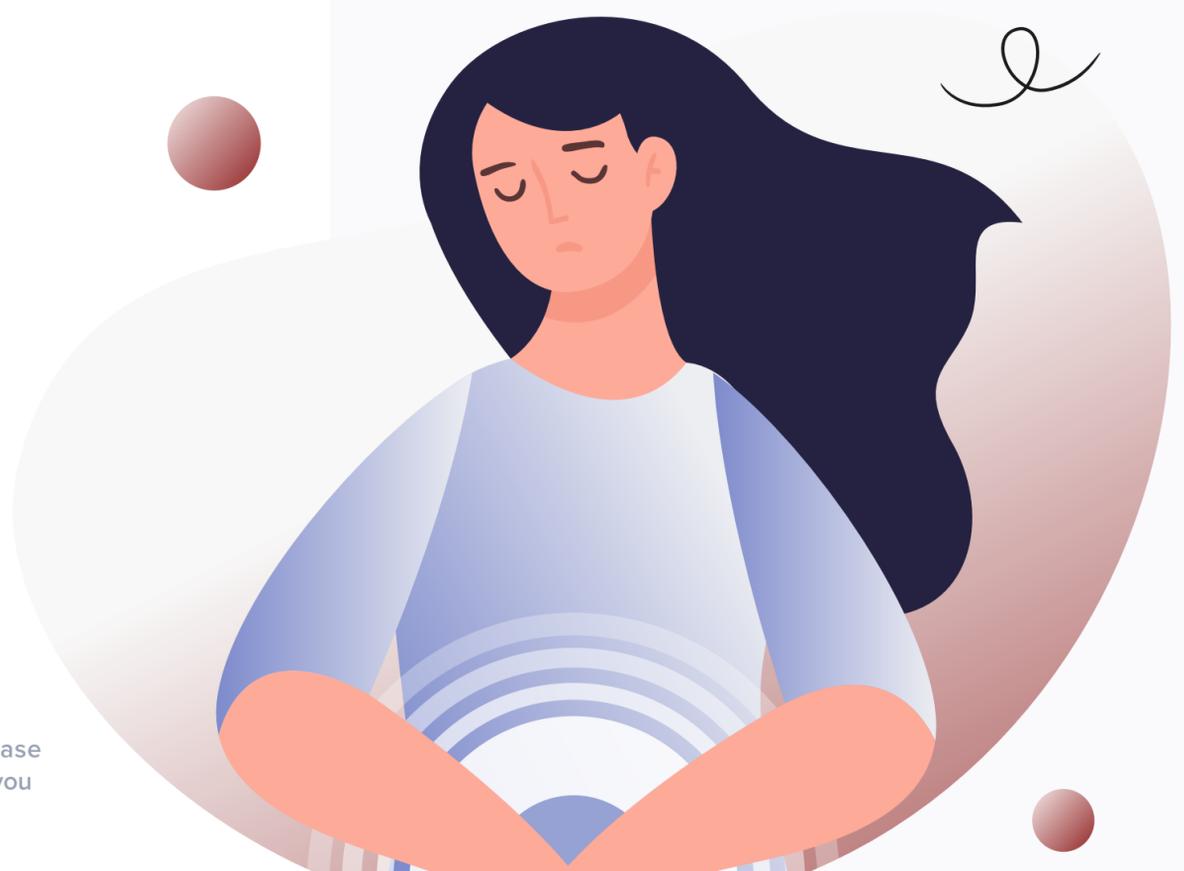
REPORT PROVIDED BY

Get Tested International AB

for Dummy Persson

✉ hello@gettested.io

🌐 <https://gettested.io>



DISCLAIMER

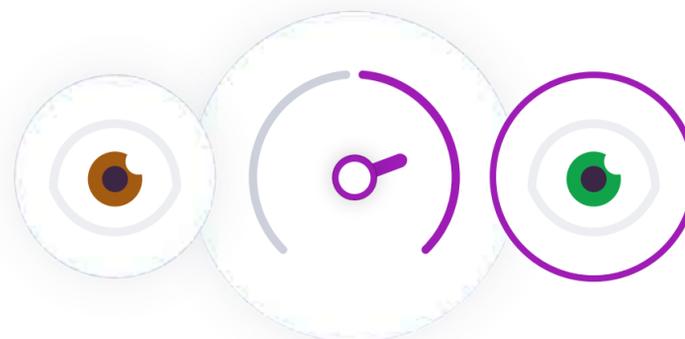
This report does not diagnose this or any other health conditions. Please talk to a healthcare professional if this condition runs in your family, you think you might have this condition, or you have any concerns about your results.

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.

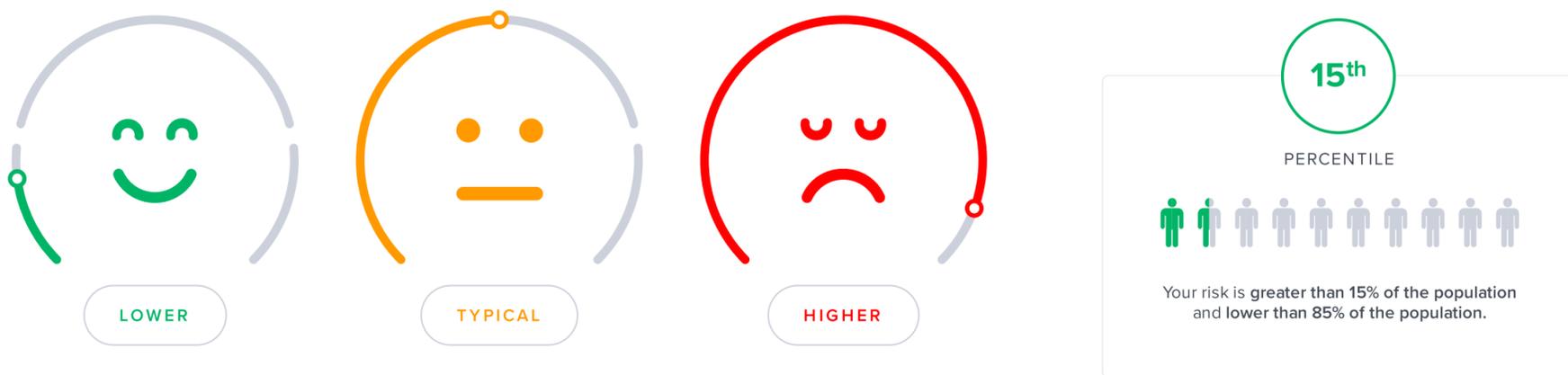
Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.

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.

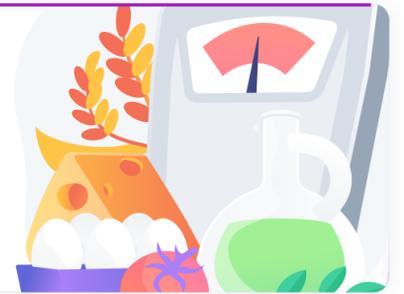
We focus on recommendations that help with more conditions included in a Summary Report.

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.



Recommendation

Helps with the following



Condition

IMPACT 4 / 5

EVIDENCE 4 / 5



Condition

IMPACT 4 / 5

EVIDENCE 4 / 5



Condition

IMPACT 4 / 5

EVIDENCE 4 / 5



Condition

IMPACT 4 / 5

EVIDENCE 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 gut is an amazingly complex system of organs, finely tuned to take in and process nutrients and then get rid of the waste.

Besides supplying you with the energy you need, it is also a central hub for overall health, comprising about 70% of your immune system and having a direct connection to your brain.

Given its enormous importance to your health, it's crucial to keep your digestive system healthy. When the gut is out of balance various things can happen, from indigestion and constipation to inflammation and ulcers.

The important thing is to understand the signs, what they might mean, and what you can do about it.

Everything from lifestyle to diet and exercise can impact gut health. **Importantly, your genetic predispositions play a major role.** This comprehensive report looks at your genetics in a number of major categories, including:

- Digestive issues
- Infections and inflammation
- Food intolerance
- Gut microbiome

This summary report contains:

16 Genetic Results

50 Recommendations

Overview of Your Results

Digestive Issues

 TYPICAL LIKELIHOOD Irritable Bowel	 TYPICAL LIKELIHOOD Peptic Ulcers	 TYPICAL LIKELIHOOD Indigestion
Typical likelihood of IBS	Typical likelihood of peptic ulcers	Typical likelihood of indigestion
 TYPICAL LIKELIHOOD Acid Reflux	 TYPICAL LIKELIHOOD Constipation	 MORE LIKELY Gallstones
Typical likelihood of GERD	Typical likelihood of constipation	More likely to have gallstones

Infections And Inflammation

 TYPICAL LIKELIHOOD Gut Inflammation	 TYPICAL LIKELIHOOD Appendicitis	 MORE LIKELY Pancreas Inflammation
Typical likelihood of IBD	Typical likelihood of appendicitis	More likely to get pancreas inflammation
 MORE LIKELY C. difficile Infection	 TYPICAL LIKELIHOOD H. pylori	 TYPICAL LIKELIHOOD EBV Infection
More likely to get a C. difficile infection	Typical likelihood of H. pylori infection	Typical likelihood of getting EBV infection
 TYPICAL LIKELIHOOD Gastrointestinal Infection		
Typical likelihood of a GI infection		

Food Intolerance



LIKELY TOLERANT

Lactose Intolerance

Likely lactose tolerant



HIGHER

**Gluten Sensitivity
(Celiac)**

Likely higher sensitivity to gluten

Gut Microbiome



TYPICAL

**Gut Microbiome
Diversity**

Likely typical gut microbiome diversity

Your Results in Details



Digestive Issues

We deal with digestive problems on a common basis. One look at store shelves and the number of products for digestive problems will tell you just how prevalent they are. Heartburn medications are the number three selling class of over-the-counter drugs.

Modern life is filled with stressors and poor diet and lifestyle choices, leading to bloating, gas, burning sensations, constipation, diarrhea and more... Your genetic predispositions can impact all of these elements, significantly affecting gut function. Knowing your genetics will help you make smarter, more informed decisions to deal with potential digestive issues like irritable bowel, indigestion, and ulcers.



TYPICAL LIKELIHOOD

Irritable Bowel

Typical likelihood of IBS



TYPICAL LIKELIHOOD

Peptic Ulcers

Typical likelihood of peptic ulcers



TYPICAL LIKELIHOOD

Indigestion

Typical likelihood of indigestion



TYPICAL LIKELIHOOD

Acid Reflux

Typical likelihood of GERD



TYPICAL LIKELIHOOD

Constipation

Typical likelihood of constipation



MORE LIKELY

Gallstones

More likely to have gallstones

Irritable Bowel

Key Takeaways:

- Up to **60%** of IBS differences may be due to genetic factors.
- Other risk factors include young age, female sex, stress, and gut infections.
- IBS affects **1 in 10** people in the US. Symptoms include cramping, vomiting, rectal bleeding, diarrhea, and constipation.
- If you have high genetic risk or symptoms, look to improve modifiable factors like stress, sleep, and diet.
- Click the **Recommendations** tab for potential dietary and lifestyle changes and **next steps** for relevant labs.

There is no known cure for IBS. If you have IBS, **doctors can help you manage symptoms and prevent flare-ups** so that you can live a normal life [\[R, R\]](#).

The main IBS management strategies include [\[R\]](#):

- Eating foods high in dietary fiber
- Drinking lots of water
- Regular exercise
- A healthy & regular [sleep](#) schedule
- Avoiding stress
- Avoiding triggering foods

The strategies most likely to work for you may be written into your genes. Up to 60% of IBS differences may be due to genetic factors [\[R\]](#).

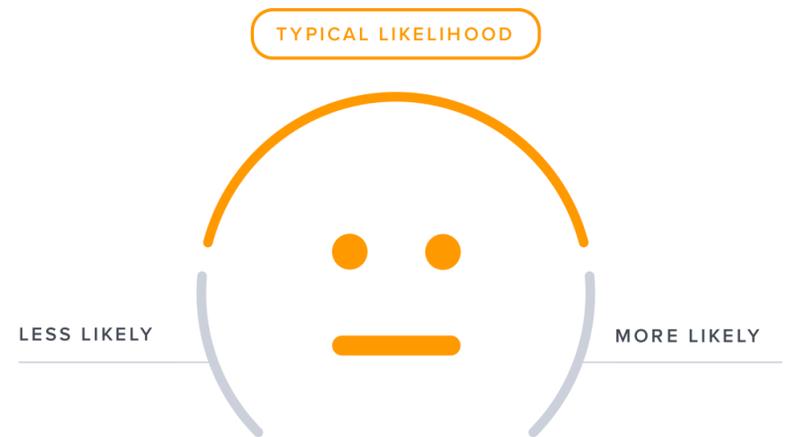
Genes involved in IBS may play a role in [\[R, R\]](#):

- [Bile](#) production and release (KLB)
- Gut movement (HTR3E)
- Pain perception (HTR3E)
- Immune system activity (TLR9)

Moreover, genetically high betaine levels may be causally associated with a high risk of Crohn's disease [\[R\]](#).

It's important to remember that **genetics is only one piece of the puzzle**. You are also more likely to develop IBS if you are [\[R\]](#):

- Under the age of 50
- Experiencing a lot of mental [stress](#)
- Female or taking [estrogen](#)
- [Anxious](#) or [depressed](#)
- Recovering from a gut infection
- Related to other people with IBS



Typical likelihood of IBS based on 1,671 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
TRPM8	rs10166942	TT
MAPT	rs242924	TG
NNMT	rs1062613	TC
STK17A	rs7802995	AG
OLFM4	rs5803650	CC
PRRC2A	rs2736155	CC
NCAM1	rs7947502	CT
NCAM1	rs7106434	TC
DOCK9	rs9513519	AG
ABCC5	rs56109847	GG
SPATA5	rs9999118	AA
EXTL2	rs72987295	GG
LSR	rs10424110	AA
PCDH15	rs10825269	CC
HES6	rs4663866	AA
/	rs2366846	CC
TGFBR2	rs7427882	CC
/	rs17112758	GG
PON2	rs6973126	TT

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

Peptic Ulcers

Key Takeaways:

- Up to **30%** of differences in people's chances of developing peptic ulcers may be attributed to genetics.
- Risk factors include: stress, mental health issues, smoking, alcohol use, excessive NSAID use, H.Pylori, and genetics.
- If you have a high genetic risk, you may reduce overall risk by taking action on risk factors that you can change.
- Click the **next steps** tab for relevant labs and lifestyle factors.

Ulcers are open sores anywhere inside or on the body. **Peptic ulcers** are a **very common type**. Up to 1 in 10 people may develop them at some point in their life. These ulcers usually affect the lining of the stomach (*gastric ulcers*) or the upper part of the small intestine (*duodenal ulcers*) [R, R].

Many people with peptic ulcers don't have any symptoms. Those that do may experience [R]:

- Burning pain in the stomach
- Heartburn
- Nausea or vomiting

There are two main causes of peptic ulcers [R, R, R]:

- *H. pylori* infection
- Long-term use of anti-inflammatory drugs called NSAIDs (e.g., aspirin, ibuprofen)

Other risk factors include [R, R, R, R]:

- Stress and mental health issues
- Smoking
- Drinking alcohol
- **Genetics**

Treatment for peptic ulcers often includes medications that neutralize or reduce stomach acid. Other medications may be used to protect the stomach lining or kill *H. pylori* [R].

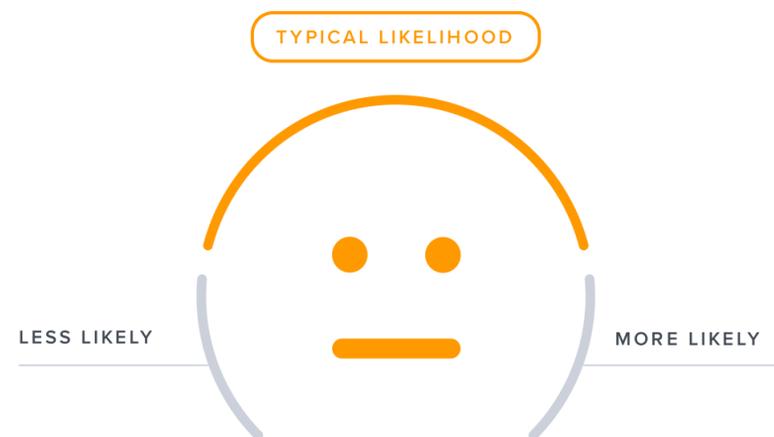
It's important to follow your doctor's instructions to treat peptic ulcers.

Untreated, they may lead to [R]:

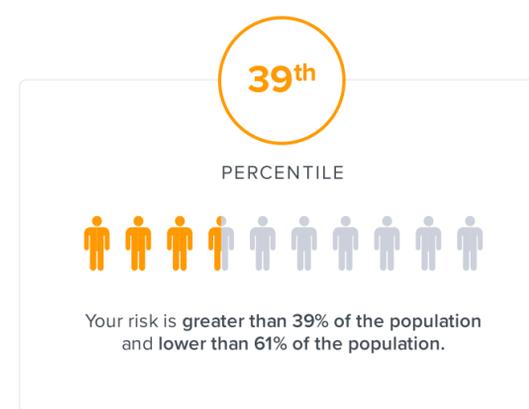
- Bleeding in the gut
- Holes in the gut wall
- Gut blockage
- Stomach cancer

About 30% of differences in people's chances of developing peptic ulcers may be attributed to genetics. Genes involved in peptic ulcers may influence [R, R, R]:

- Stomach acid levels (IL1B)
- Stomach lining (PSCA)
- Inflammation (IL1B, TNF)
- Drug metabolism (CYP2C19)



Typical likelihood of peptic ulcers based on 113,543 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
LY6K	rs2976397	GG
CD151	rs78459074	AA
PSCA	rs2976388	GG
/	rs687621	AA
GUCY2F	rs1205531	T
FAM160A2	rs10500661	TC
FUT2	rs681343	TC
/	rs371481926	CC
FUT2	rs1047781	AA
MUC1	rs147048677	CC
URAD	rs9581957	CC
JUP	rs34074411	CC
EPB41L4A	rs112868245	AA
/	rs114480379	AA
SRBD1	rs112982103	TT
PAPLN	rs112556267	GG
/	rs114374460	AA
/	rs113280140	CC
VIPR2	rs113752094	AA

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

Indigestion

Key Takeaways:

- Genes affecting indigestion may influence nerve function, gut muscle movements, and pain sensitivity.
- Risk factors: age, overweight, smoking, stress, poor diet, gut conditions, medications, and lying down after eating.
- Up to 40% of people in Western countries may experience indigestion.
- If you are at high genetic risk, take action now to lower your overall risk. If your risk is low and you have symptoms, take action now to improve symptoms.

Indigestion (also called dyspepsia) is pain or discomfort in the upper abdomen. Other symptoms may include [\[R\]](#), [\[R\]](#):

- Bloating
- Feeling full after only eating a small amount
- Feeling full for a long time after eating
- Nausea
- Hot or burning feeling

Up to 40% of people in Western countries may experience indigestion.

Contributing factors include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

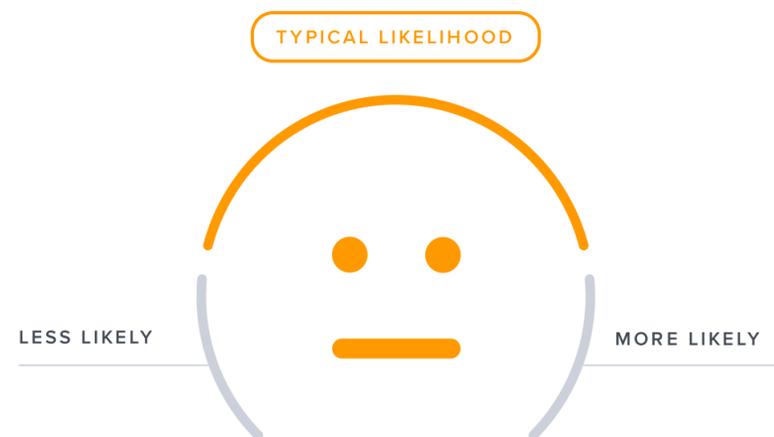
- Older age
- Being overweight
- Smoking
- Stress and anxiety
- Certain medications (e.g., NSAIDs)
- Other gut conditions (e.g., ulcers, chronic acid reflux, *H. pylori* infection)
- Poor food choices and eating habits
- Lying down after eating
- Wearing tight clothes
- **Genetics**

Indigestion usually doesn't have serious complications. However, if left untreated, it can progress to serious medical problems. Contact a doctor if you have severe or ongoing symptoms [\[R\]](#), [\[R\]](#).

Indigestion may be treated with medication and diet changes [\[R\]](#).

Genetics seems to play a role in indigestion. Genes involved in indigestion may influence [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Nerve function (NFASC, CNTN2, NXPH1)
- Gut muscle movements (ADRB2)
- Pain sensitivity (SCN10A)



Typical likelihood of indigestion based on 226 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
EPS8L3	rs190178166	TC
EPS8L3	rs78018756	TC
GRIN3A	rs182276014	TT
GZMH	rs190749747	CC
FZD1	rs182267037	CC
/	rs72683482	GG
RALGPS2	rs6675656	TT
IGF1R	rs144880784	CC
/	rs56252721	AA
BTG1	rs141884556	GG
CWF19L2	rs79224501	AA
MXRA8	rs112044473	GG
/	rs145439079	CC
AMN1	rs569208093	GG
PPM1F	rs34639823	CC
IGF1R	rs118021991	AA
COX7C	rs114575486	TT
PLPPR4	rs115008227	AA
CNTNAP5	rs78037681	CC

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

Acid Reflux

Key Takeaways:

- About **40%** of differences in people's chances of developing GERD may be attributed to genetics. It affects about **1 in 5** people in the U.S.
- GERD affects about **1 in 5** people in the U.S.
- Risk factors include: obesity, smoking, pregnancy, slow stomach emptying, hiatal hernia, certain foods, and genetics.
- If you have a high genetic risk, you may reduce overall risk by taking action on risk factors that you can change.
- Click the **next steps** tab for relevant labs and lifestyle factors.

Have you ever had heartburn after a meal? If so, you're already familiar with **acid reflux**.

The stomach is full of acid that helps it digest food. Normally, a muscle (sphincter) above the stomach keeps the acid from moving up into the esophagus. If the muscle relaxes at the wrong time or becomes weak, it can allow stomach acid to flow up. This is called acid reflux [\[R\]](#).

In addition to heartburn, other signs and symptoms of acid reflux include [\[R\]](#):

- A sour taste
- A constant cough or hiccups
- A hoarse voice
- Bad breath
- Bloating

Factors that can trigger or worsen these symptoms include [\[R\]](#):

- Eating large meals
- Eating late at night
- Lying down or bending over after eating
- Consuming certain foods or drinks (e.g., fried or spicy foods, chocolate, coffee, and alcohol)

Many people have occasional acid reflux. However, if it is frequent, severe, or long-term, it may be a sign of [gastroesophageal reflux disease](#) (GERD). GERD is one of the most common gut disorders in the US. It affects about 1 in 5 people in North America [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Risk factors for GERD include [\[R\]](#), [\[R\]](#):

- Obesity
- Smoking
- Pregnancy
- Slow stomach emptying
- Hiatal hernia (bulging of stomach tissue into the chest)
- **Genetics**

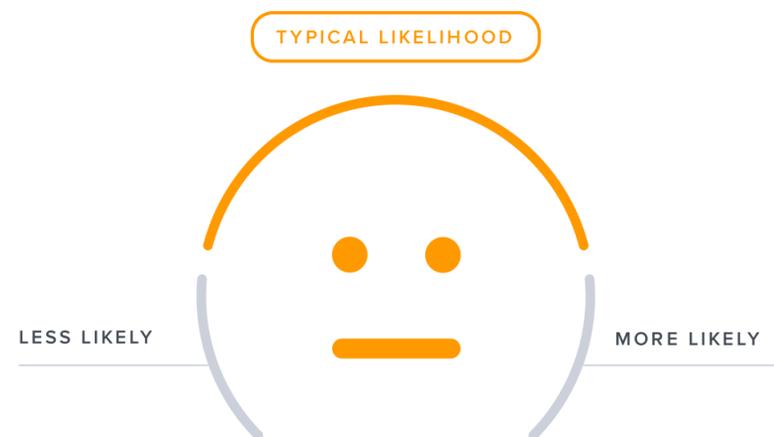
GERD is commonly treated with medications that help neutralize stomach acid or reduce its production [\[R\]](#).

If left untreated, GERD may lead to chronic inflammation in the esophagus. This may cause [\[R\]](#), [\[R\]](#):

- Difficulty swallowing
- Open sores (ulcers) in the esophagus
- Changes in the lining of the esophagus (Barrett's esophagus)
- Cancer of the esophagus

About 40% of differences in people's chances of developing GERD may be attributed to genetics. Genes involved in GERD may influence [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Detoxification (DPYD)
- Inflammation (MST1R, PDE4B)
- Muscle function (LAMA2)



Typical likelihood of GERD based on 222,102 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
/	rs9372625	GG
REX1BD	rs2023878	CC
PGPEP1	rs9636202	GG
BTN2A2	rs2145318	TT
AFF3	rs4851239	CC
PPP1R17	rs215614	GG
MRM2	rs11762636	AC
PPP3CA	rs920559	GC
CELF4	rs12967855	GA
VCAN	rs72771256	GG
KNDC1	rs761777	GA
HLA-B	rs9266237	CC
TSKU	rs7942368	CT
HIVP2	rs9373363	GA
FAM160A2	rs12792379	AA
MAML3	rs809955	GG
REX1BD	rs12974777	CC
PGPEP1	rs1363119	AA
AFF3	rs7609078	GG

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

Constipation

Key Takeaways:

- Genetic research indicates that genes involved in constipation are likely similar to those influencing IBS.
- Other risk factors include dehydration, a low-fiber diet, lack of exercise, intestinal blockages, certain nerve, muscle, or hormone issues, older age, being female, and certain medications.
- Constipation is very common, with about **1 in 4 people** having it at any given time.
- If your genetic risk is high or you have symptoms, you may lower your overall risk by taking action on those factors that you can change.

Constipation is difficulty passing stools. It presents as few bowel movements a week, generally less than three. People with constipation may also have [\[R\]](#):

- Difficult or painful bowel movements
- Stools that are hard, dry, or lumpy
- A feeling that more stool needs to be passed

Constipation is very common; **about 1 in 4 people may have it at any time** [\[R\]](#), [\[R\]](#).

The following may contribute to constipation [\[R\]](#):

- Dehydration
- A low-fiber diet
- A lack of exercise
- Something blocking the intestine
- Problems with certain nerves, muscles, or hormones
- Older age
- Female sex
- Some medications

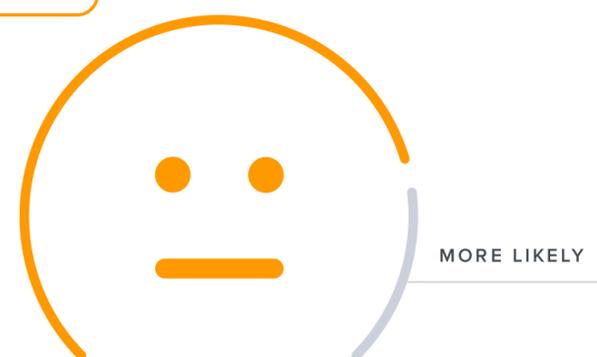
To support healthy bowel movements, experts recommend [\[R\]](#):

- Eating lots of fiber
- Drinking lots of water
- Staying active
- Managing stress
- Passing stool as soon as you feel the urge

Some people may need laxatives or other medications to help with constipation. In some cases, surgery may be required to remove a blockage [\[R\]](#).

Some of the differences in people's bowel movements may be attributed to genetics [\[R\]](#), [\[R\]](#).

TYPICAL
LIKELIHOOD



Typical likelihood of constipation based on 1,687 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
MORC2	rs55694472	CC
FZD4	rs182200829	GG
/	rs574648890	AA
HORMAD1	rs150782165	GG
KATNIP	rs149014823	CC
/	rs140085457	AA
MCUR1	rs562047350	AA
/	rs560797967	TT
TRAPPC9	rs116380351	CC
LRRC31	rs564587334	AA
SEC62	rs551839727	CC
CXCR4	rs146493009	TT
CALM1	rs113878265	CC
PPP6R2	rs188272551	CC
ST18	rs144859003	CC
KCTD9	rs79700501	TT
SLITRK1	rs113428943	TT
MTRES1	rs116465542	GG
ATP8B2	rs144890977	CC

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

Gallstones

Key Takeaways:

- In the United States, up to **8%** of men and **17%** of women have gallstones.
- Risk factors include pregnancy, obesity, rapid weight loss, excessive fasting, a diet heavy in bad fats, and lack of exercise.
- Up to **30%** of differences in people's chances of developing gallstones may be due to genetics. If you are at high genetic risk, you may benefit by addressing factors like diet and exercise.
- Environmental and lifestyle factors may play a bigger role, so make sure to address them.
- Click the **next steps** tab for relevant labs and lifestyle factors.

The gallbladder is a small, pear-shaped organ under your liver. Together with the pancreas and ducts, they make up *the biliary system*.

As part of this system, the liver makes a substance called bile. Bile works together with pancreatic enzymes to digest fats in the gut. The gallbladder stores bile until the gut needs it [\[R, R\]](#).

Bile isn't just for digesting fat. It also helps your body remove cholesterol and even helps protect against infection [\[R\]](#).

Sometimes, the contents of bile can build up and harden in the gallbladder, forming gallstones. These stones can be as small as a grain of sand or as big as a golf ball [\[R, R\]](#).

There are two major types of gallstones [\[R\]](#):

- **Cholesterol stones.** As their name suggests, these stones are made of hardened cholesterol.
- **Pigment stones.** These stones are made of bilirubin, a yellow pigment found in bile and blood.

In the United States, **up to 8% of men and 17% of women have gallstones.** Besides gender, other risk factors include [\[R, R\]](#):

- Pregnancy
- Obesity
- Rapid weight loss
- Fasting for long periods
- Gut surgeries
- Inflammatory bowel disease (IBD)

Oftentimes, people with gallstones have no signs or symptoms. But in some cases, gallstones can cause serious damage. They can block the ducts that connect the biliary system to the gut. Blocked ducts can lead to inflammation in the gallbladder or pancreas. They can also cause a **gallbladder attack** [\[R, R, R, R, R, R\]](#).

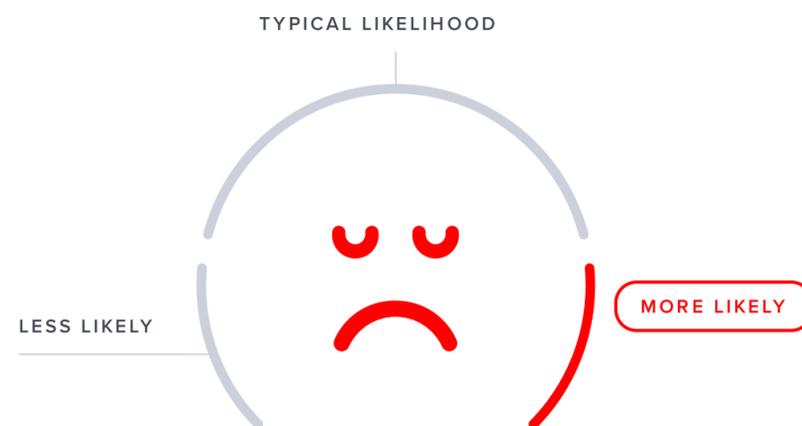
Experts recommend seeing a doctor if you have any signs and symptoms of a gallbladder attack, including [\[R\]](#):

- Gut pain lasting several hours
- Nausea and vomiting
- Fever or chills
- Yellowish color in the skin or whites of the eyes
- Dark urine or light-colored stool

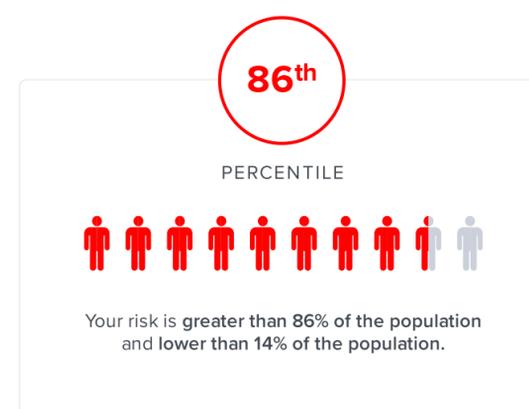
Once gallstones have been diagnosed, your doctor will develop a treatment plan. The most common treatment for symptomatic gallstones is surgery to remove the gallbladder [\[R\]](#).

Up to 30% of differences in people's chances of developing gallstones may be attributed to genetics. Genes involved in gallstone formation may influence [\[R, R, R, R, R\]](#):

- Cholesterol metabolism (ABCG8, GCKR, CYP7A1)
- Bile metabolism (SULT2A1, SLC10A2)
- Liver function (TM4SF4, HNF4A)



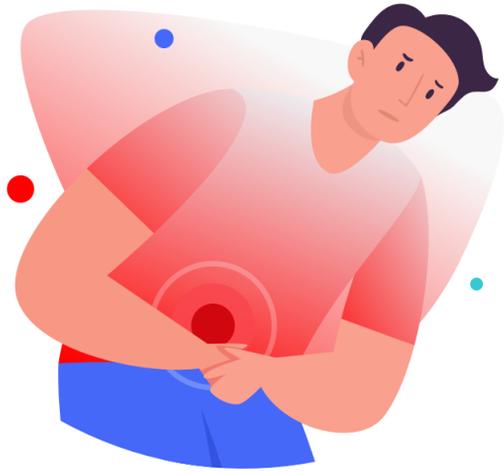
More likely to have gallstones based on 43 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
SULT2A1	rs62129966	CC
ABCB4	rs4148805	GG
CBLL1	rs714583	TT
LANCL1	rs55932961	GG
SLC10A2	rs16961277	AA
PRELID1	rs351864	CC
TMEM171	rs10462337	CC
CCDC158	rs12500824	GG
PNKD	rs2085485	GG
FUT3	rs708686	TC
ATP8B1	rs369298568	TC
SERAC1	rs12528678	TG
GCKR	rs1260326	CT
C12ORF43	rs7979473	GA
UGT1A6	rs1105880	GA
SAMM50	rs2076211	TC
FTO	rs1558902	TA
CPLANE2	rs1497406	AG
TRIB1	rs2954021	GA

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



Infections And Inflammation

Foreign microbes, from viruses to parasites to bacteria, invade our gut all the time. Anyone who has had stomach flu or eaten bad seafood will tell just how bad the effects can be. Some infections like *H. pylori* can have chronic unpleasant symptoms and even lead to ulcers and other complications.

Our immune system and gut microbiome are intertwined, which means imbalances in our own microbes can throw off our immune system—and vice versa. That's why **inflammatory gut conditions** are tightly linked to our microbiome and influenced by infections.

Your genetics plays an important role in gut inflammation and related disorders.



TYPICAL LIKELIHOOD

Gut Inflammation

Typical likelihood of IBD



TYPICAL LIKELIHOOD

Appendicitis

Typical likelihood of appendicitis



MORE LIKELY

Pancreas Inflammation

More likely to get pancreas inflammation



MORE LIKELY

C. difficile Infection

More likely to get a C. difficile infection



TYPICAL LIKELIHOOD

H. pylori

Typical likelihood of H. pylori infection



TYPICAL LIKELIHOOD

EBV Infection

Typical likelihood of getting EBV infection



TYPICAL LIKELIHOOD

Gastrointestinal Infection

Typical likelihood of a GI infection

Gut Inflammation

Key Takeaways:

- Up to **75%** of differences in people's chances of developing IBD may be due to genetics.
- Risk factors include being under age 30, European ancestry, and smoking.
- IBD may cause: diarrhea, fatigue, abdominal pain, bloody stool, weight loss, inflammation, liver damage, and colon cancer.
- IBD only affects about **3 in 1000** people worldwide. So, even with high genetic risk, your overall risk is actually low.
- Click the **Recommendations** tab for potential dietary and lifestyle changes and **next steps** for relevant labs.

Our intestines do much more than absorb food. They can impact our immune system, mood, and more [\[R\]](#)!

[Inflammatory bowel disease](#) (IBD) is a group of gut diseases affecting **about 0.3% of people worldwide**. It's most common in North America, Europe, and Australia [\[R\]](#).

The exact causes of IBD are unknown. Possible risk factors include [\[R\]](#):

- Age (most people develop IBD before the age of 30)
- European ancestry
- Cigarette smoking
- **Genetics**

There are two major types of IBD: [ulcerative colitis](#) and Crohn's disease. Ulcerative colitis involves [inflammation](#) in the large intestine, while Crohn's disease often affects both the large and small intestines [\[R, R, R\]](#).

In both types of IBD, the immune system reacts to normal gut bacteria as if they're dangerous. These immune reactions cause inflammation and damage to the gut lining [\[R\]](#).

This gut damage can cause signs and symptoms like [\[R, R, R\]](#):

- Diarrhea
- Fatigue
- Abdominal [pain](#) and cramping
- Blood in the stool
- Low appetite
- [Weight loss](#)

Untreated IBD can have serious complications, including [\[R\]](#):

- Skin, eye, and joint inflammation
- Bile duct and liver damage
- Blood clots
- Colon cancer

People with IBD typically need anti-inflammatory medications to control their disease [\[R, R\]](#).

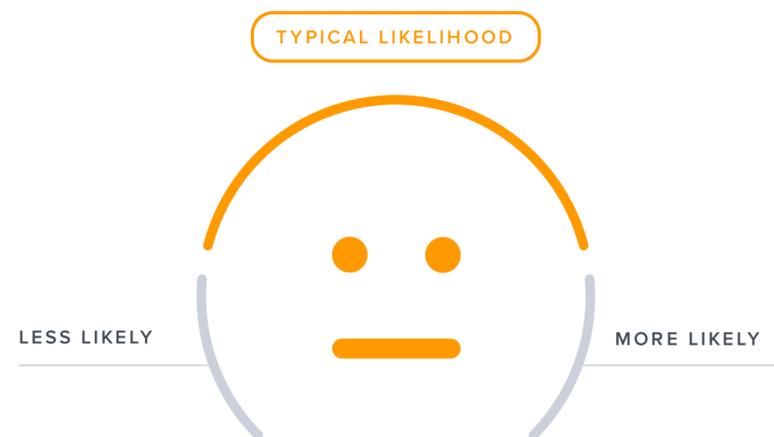
Many people with IBD take supplements because their damaged guts have trouble absorbing certain nutrients. Some people may need to adhere to special diets as well [\[R, R\]](#).

IBD can be a disabling condition, and many turn to alternative and complementary strategies to help them manage their symptoms. Your DNA may help determine which of these strategies is likely to work best for you.

Up to 75% of differences in people's chances of developing IBD may be attributed to genetics. Genes involved in IBD may influence [\[R, R, R, R\]](#):

- Inflammation (JAK2, TNFSF15, SLAMF8)
- Immune response (TLR9, UBE2L3, BCL3)

Moreover, genetically high betaine levels may be causally associated with a high risk of Crohn's disease. In contrast, genetically high levels of omega-3s may be causally associated with a lower risk [\[R, R, R, R\]](#).



Typical likelihood of IBD based on 1,671 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
JAK2	rs10758669	AC
ADO	rs10761659	GA
HNF4A	rs6017342	CC
NCR3	rs1799724	CC
STAT3	rs744166	AG
SLC22A5	rs12521868	GT
IL23R	rs11209026	GG
PDGFB	rs2413583	CC
PTGER4	rs11742570	CC
ETS2	rs2836878	GG
INAVA	rs7554511	CC
IRF8	rs10521318	CC
CRTC3	rs7495132	CC
PHACTR2	rs12199775	AA
CARD9	rs10781499	AG
NKX2-3	rs4409764	GT
IL12B	rs6871626	CA
SLC22A5	rs2188962	CT
NRIP1	rs2823286	GA

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

Appendicitis

Key Takeaways:

- Up to **56%** of differences in people's chances of developing appendicitis may be due to genetics.
- Other risk factors include being young and male.
- Appendicitis is not rare, happening to about 7-8% of people in their lifetime.
- If your genetic risk is high, know the symptoms and seek medical attention if you have them.
- Click the **Recommendations** tab for potential dietary and lifestyle changes and **next steps** for relevant labs.

The **appendix** is a small, finger-shaped pouch near the beginning of the large intestine. It is in the lower right of your abdomen [\[R\]](#), [\[R\]](#).

The function of the appendix has been debated for many years. More recent studies suggest that the appendix is a "safe house" for good bacteria that live in the gut. If an illness wipes out large numbers of these bacteria in the gut, the ones from the appendix can help replace them [\[R\]](#).

Appendicitis is inflammation of the appendix. It is likely caused by something blocking the lining of the appendix, leading to an infection. If left untreated, the appendix can rupture and the infection can spread. This can be life-threatening [\[R\]](#).

Although anyone can develop appendicitis, it most often occurs in people between 10 and 30 years old. Men are slightly more likely to experience it than women [\[R\]](#), [\[R\]](#).

The symptoms of appendicitis include [\[R\]](#):

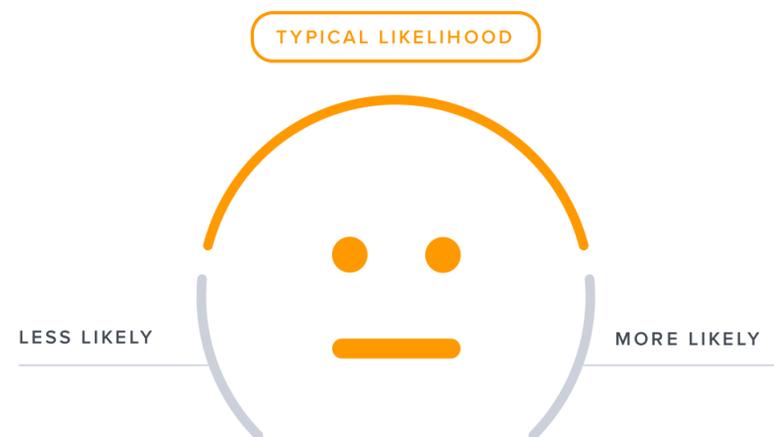
- Sudden pain in the lower right abdomen
- Sudden pain around the belly button that shifts to the lower right abdomen
- Pain that worsens if you move suddenly
- Nausea and vomiting
- Loss of appetite
- Fever
- Gut issues

The standard treatment for appendicitis is surgery to remove the appendix [\[R\]](#).

Up to 56% of differences in people's chances of developing appendicitis may be attributed to genetics. Involved genes may influence [\[R\]](#), [\[R\]](#):

- Gut development
- Gut function
- Inflammation

Genetically predicted higher levels of fasting insulin may be associated with appendicitis [\[R\]](#).



Typical likelihood of appendicitis based on 809,853 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
ENPEP	rs2129979	TG
PITX2	rs7697491	AA
PITX2	rs13121924	AA
MTARC1	rs3738182	GG
LTBR	rs10849448	GG
DLEU7	rs201768	CC
NKX2-3	rs41290504	AC
NKX2-3	rs7095491	CT
/	rs77114860	TT
TUB	rs72848490	CC
KRT73	rs146783619	AA
OSR1	rs56259011	CC

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

Pancreas Inflammation

The **pancreas** is an organ located behind the stomach that releases crucial enzymes for carbs and fats digestion. **Pancreatitis** is inflammation of the pancreas, which can be acute or chronic.

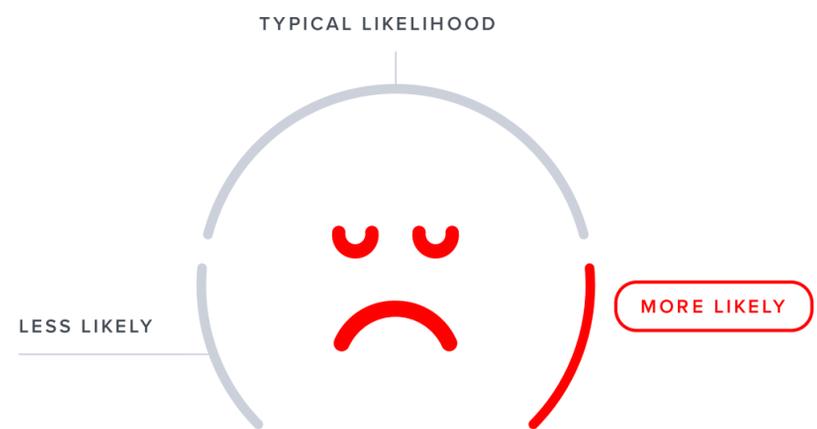
Potential risk factors for pancreatitis include [\[R\]](#), [\[R\]](#), [\[R\]](#):

- **Alcohol**
- Cigarette smoking
- Obesity
- High blood lipids
- Certain medications
- Genetics

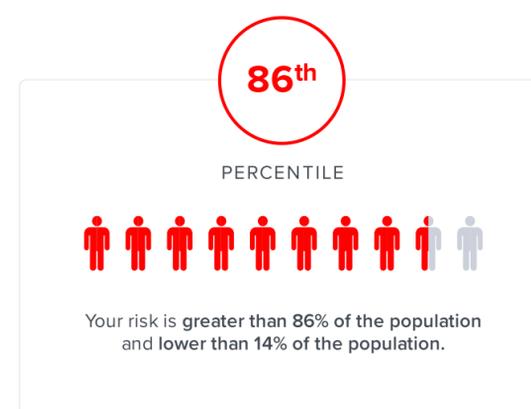
Genetically predicted higher fasting insulin may be associated with acute and chronic pancreas inflammation. In contrast, genetically high testosterone levels may be causally associated with a lower risk of pancreas inflammation [\[R\]](#), [\[R\]](#).

Health conditions that may contribute to pancreas inflammation include [\[R\]](#), [\[R\]](#):

- Gallstones
- Diabetes
- Infections
- Injury or trauma



More likely to get pancreas inflammation based on 1,669 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
MORC4	rs12688220	T
PRSS1	rs10273639	CC
SLC25A34	rs60816621	CG
NUP62CL	rs12688091	A
TBC1D8B	rs12689287	A
JCAD	rs2995271	TC
RNF128	rs66491909	A
RADX	rs5916761	G
PWWP3B	rs67184230	C
JAKMIP2	rs17107296	AA
JAKMIP2	rs150261364	CC
SPINK5	rs112861203	TT
STK32A	rs148849032	CC
JAKMIP2	rs146303903	AA
CTRC	rs497078	CC
STK32A	rs142623619	AA
/	rs150176211	GG
ADRB2	rs17640347	GG
ABCG5	rs75331444	GG

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

C. difficile Infection

C. difficile is a type of bacteria that may cause colitis, meaning inflammation of the large intestine or colon. It can be found in **contaminated** [R, R, R]:

- Water
- Food (e.g., retail meat, vegetables)
- Human and animal feces
- Hospital surfaces

Recent antibiotic use is the main risk factor for C. difficile infection. Antibiotics alter the gut microbiome and make it susceptible to infection. Other risk factors include [R, R, R, R]:

- **Hospital or nursing home stay**
- Malnutrition
- Being 65 or older
- Drugs to reduce stomach acid (e.g., [omeprazole](#))
- Inflammatory diseases (e.g., [inflammatory bowel disease](#))
- Chronic kidney or liver disease
- Chemotherapy
- Previous *C. difficile* infection
- **Genetics**

C. difficile produces toxins, which contribute to the following infection symptoms [R, R, R]:

- Diarrhea
- Belly pain and cramps
- Nausea and vomiting
- Fever

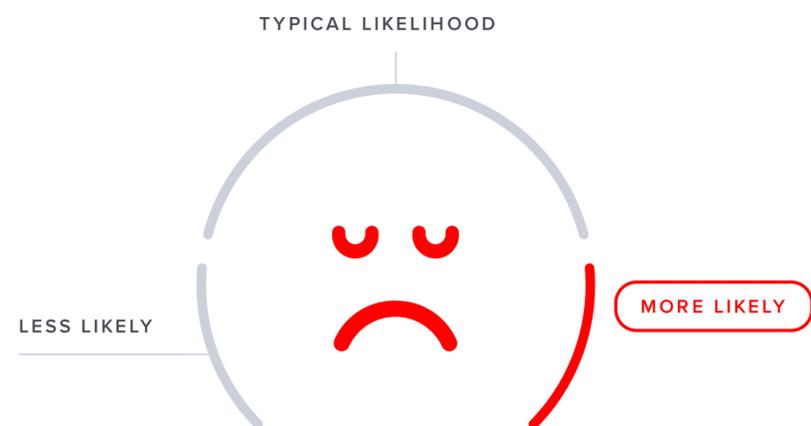
C. difficile infection may cause severe colon inflammation and even death if left untreated [R].

On the other hand, some people may not have symptoms at all, but they may still pass *C. difficile* on to others [R, R].

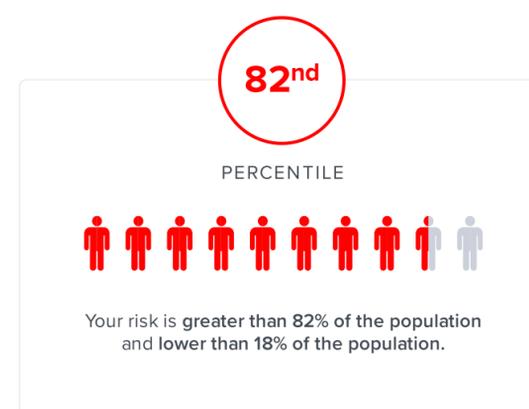
Medications for C. difficile help kill the bacteria. To prevent *C. difficile* infections, doctors also recommend [R, R, R]:

- Hand hygiene with soap and water
- Avoiding antibiotic misuse
- Taking probiotics

Some strains of *C. difficile* are becoming more difficult to kill with antibiotics. This makes them harder to treat and calls for new treatment approaches. One such treatment is *fecal microbiota transplantation* (FMT), or the transfer of a healthy person's feces into a patient's colon [R, R, R, R].



More likely to get a C. difficile infection based on 2,751 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
PRSS37	rs17719655	AC
TCF19	rs149917912	TC
PDE5A	rs72672568	TC
SORCS2	rs12641357	TA
/	rs867720	CT
/	rs1434351	GT
/	rs11617974	AC
CDH8	rs141932469	CC
CNOT4	rs117373257	GG
NWD2	rs116838950	TT
TRIM37	rs73321289	CC
DAP	rs13181507	GG
CSMD3	rs80176672	AA
USP25	rs192418381	TT
KCTD1	rs57118264	CC
CSMD1	rs890001	GG
NECTIN2	rs138769755	GG
C6ORF47	rs115062572	CC
LRRN1	rs139959052	GG

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

H. pylori

Key Takeaways:

- Genes involved in H.Pylori affect stomach acid production and the stomach's mucous barrier.
- Risk factors include an unsanitary environment, poverty, eating at restaurants, eating meat, and smoking.
- If you have a high genetic risk, you may reduce overall risk by taking action on risk factors that you can change.
- Click the **next steps** tab for relevant labs and lifestyle factors.

Helicobacter pylori (*H. pylori*) is a type of bacteria that can live in the stomach. About half of all people may be infected with *H. pylori*. Developing countries have higher infection rates [R, R, R].

Most people don't have any symptoms of infection. In some, however, the bacteria can start to break down the protective mucous barrier of the stomach wall. This can cause serious problems [R, R, R].

H. pylori may contribute to [R, R]:

- [Gastritis](#) (stomach inflammation)
- Peptic ulcers (sores in the stomach or upper small intestine lining)
- Stomach cancer

Symptoms arise when a person develops gastritis or ulcers. These can include [R, R, R]:

- Nausea
- Stomach pain
- Vomiting
- Low appetite
- Weight loss
- Indigestion

People usually become infected with *H. pylori* in childhood. Growing up around a lot of people or in unsanitary conditions may play a large role. Other risk factors for *H. pylori* infection include [R, R]:

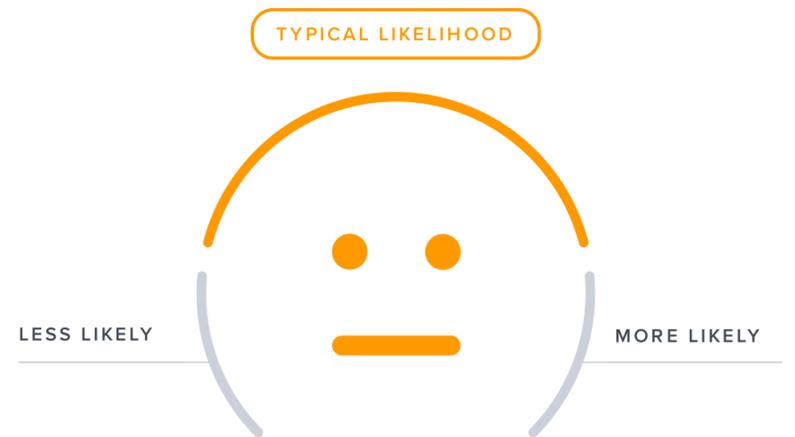
- Lower socioeconomic status
- Eating out at restaurants
- Eating meat
- Smoking cigarettes

Medications for *H. pylori* help kill the bacteria and heal the stomach. They are usually prescribed in different combinations [R, R, R].

Some strains of *H. pylori* are becoming more difficult to kill with antibiotics. This makes them harder to treat [R, R].

Genetics seems to play a role in the risk of ulcers due to *H. pylori*. Genes involved in *H. pylori* infection and related diseases may influence [R, R]:

- Stomach acid production (*GAST*)
- The mucous barrier in the stomach (*MUC1*, *FUT2*, *ABO*)



Typical likelihood of *H. pylori* infection based on 86,987 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
DOCK10	rs10201967	CC
IKZF2	rs10194411	GG
AKR1E2	rs112501331	CC
VMP1	rs111821451	GG
FBXO21	rs111576798	GG
RAP2B	rs112013042	CC
SIPA1L3	rs113428378	AA
NFE2	rs11170954	CC
HPCAL1	rs10929658	AA
PDSS1	rs112022787	GG
METTL14	rs112991781	TT
PCDH15	rs11004038	TT
PDZD2	rs10472790	TT
FGD4	rs11052023	TT
/	rs11059054	CC
LGSN	rs1020805	GG
PCDH15	rs11004387	TT
/	rs10008115	GG
GAREM2	rs1019972	CC

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

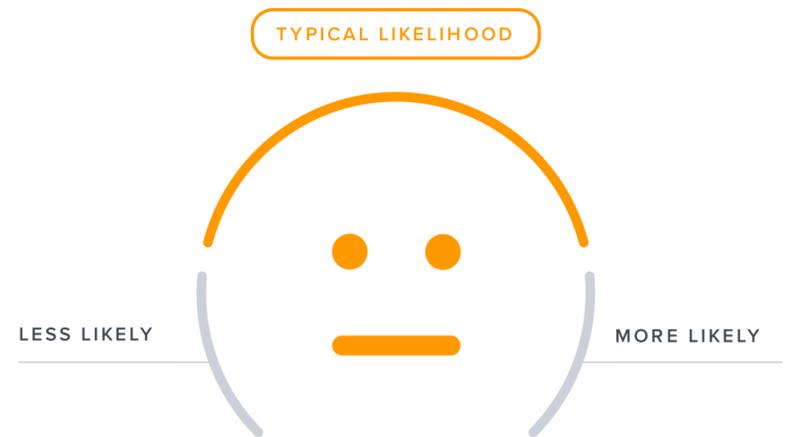
EBV Infection

Epstein-Barr virus (EBV) is one of the most common human viruses. It mainly spreads via saliva and may cause mononucleosis or “the kissing disease”.

Although almost everyone will come into contact with the virus, only a fraction of people will develop EBV infection. Risk factors for EBV infection include [\[R\]](#):

- Contact with infected person or objects
- Spending time in unventilated, crowded spaces
- Compromised immune system
- **Genetics**

Genetics also seems to play a role in mononucleosis, the main condition caused by EBV [\[R\]](#).



Typical likelihood of getting EBV infection based on 1,667 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
PHF14	rs73067509	CC
SUGCT	rs186721582	GG
P2RY12	rs67886110	GG
H3C12	rs34034915	TI
RHBDD3	rs138870856	CC
SLC24A4	rs4900130	GG
UTP20	rs78440807	GG
S1PR4	rs61731111	CC
PHKB	rs56257827	GG
SIDT1	rs34023543	AA
SVEP1	rs74597491	TT
GBE1	rs28763904	AA
SPATA6	rs77303590	CC
CPXM1	rs41310169	CC
MS4A13	rs55756397	GG
CEP63	rs114108011	GG
FANCI	rs117125761	CC
GCNT1	rs11546569	GC
MST1	rs142690032	GA

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

Gastrointestinal Infection

Gastrointestinal (GI) infections are diseases of the digestive system. They are caused by the invasion of microbes that do not usually live there.

Many different microbes may cause GI infections. Some examples are [R](#), [R](#), [R](#):

- Parasites (e.g., *Giardia lamblia*)
- Bacteria (e.g., *Salmonella*, *Shigella*, *Campylobacter*, *E. coli*)
- Virus (e.g., rotavirus, norovirus)

In developed countries, most cases are due to viruses [R](#).

The main sources of infection include [R](#):

- Person-to-person contact
- Consumption of contaminated food (e.g., undercooked or poorly stored meat, raw milk)
- Consumption of contaminated water (e.g., river or swimming pool water)
- Contact with contaminated objects (e.g., soil, work tools)
- Contact with animals or their feces (e.g., contact with farm animals and pets, visiting petting zoos)

Risk factors for GI infections include [R](#), [R](#), [R](#), [R](#), [R](#), [R](#).

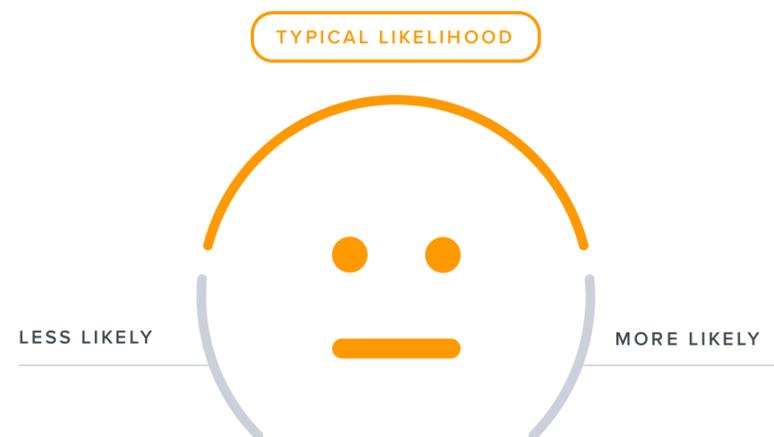
- Malnutrition
- A recent visit to an endemic area
- Recent use of antibiotics
- Drugs to reduce stomach acid (e.g., [omeprazole](#))
- Chronic stress
- Weakened immunity
- Recent abdominal surgeries
- **Genetics**

The symptoms of GI infections depend on the causing microbe. They usually include [R](#), [R](#):

- Diarrhea
- Fever
- Belly cramps
- Nausea and vomiting
- Headache
- Muscle pain
- Dehydration (weakness, confusion, dizziness)

In most cases, the symptoms will disappear within 7 days. In rare cases, the GI infection can last more than 30 days and turn chronic [R](#), [R](#).

Mild cases usually don't require treatment. Proper hydration and rest are crucial for recovery. Make sure to seek medical care if your symptoms are severe [R](#).



Typical likelihood of a GI infection based on 49,910 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
MFHAS1	rs11995244	TT
FCHO2	rs3010256	TT
NPC1	rs1652362	TT
BHLHE41	rs3825165	TT
/	rs369614251	CC
CNTN5	rs7112253	AA
SESN3	rs75887387	GG
ATXN1	rs3793102	AC
MGA	rs7183231	CA
/	rs143538360	TT
RBMS3	rs115249766	TT
/	rs376479926	AA
FLNB	rs1866164	CC
PRICKLE1	rs117347473	CC
ABO	rs41302673	TT
PIK3R1	rs12517727	GG
ABO	rs635634	CC

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



Food Intolerance

There are some people, quite a few in fact, who have difficulty processing certain food products like gluten and lactose. In Western diets at least, having to limit gluten and lactose products can create some diet hardships.

This level of sensitivity, while potentially impacted by something like an infection, is heavily influenced by your DNA. Knowing your genetic predispositions can help you make smart diet choices or recognize a potential problem you didn't know that you had!



LIKELY TOLERANT

Lactose Intolerance

Likely lactose tolerant



HIGHER

Gluten Sensitivity (Celiac)

Likely higher sensitivity to gluten

Lactose Intolerance

Lactose intolerance means a person cannot digest lactose, a sugar found in dairy. To be able to digest lactose, you need an enzyme called *lactase*. People with lactose intolerance may experience symptoms such as diarrhea, stomach cramps, nausea, bloating, and gas after eating dairy [\[R\]](#), [\[R\]](#).

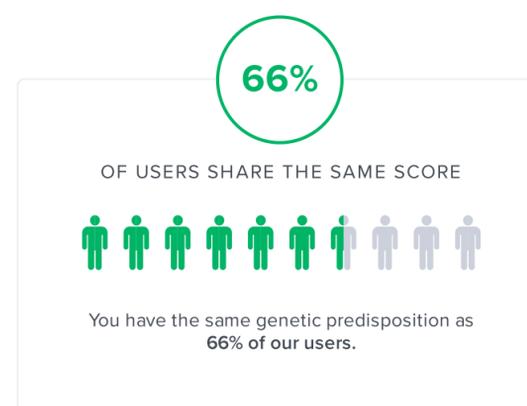
In people who are lactose intolerant, the gene that makes the enzyme lactase—LCT—gets "turned off" in adulthood. Without this enzyme, people may have trouble digesting dairy as adults [\[R\]](#), [\[R\]](#).

A common variant near the *LCT* gene (rs4988235 'A') is responsible for keeping the lactase enzyme "turned on." This variant is responsible for lactose tolerance in most people who are able to digest milk as adults [\[R\]](#), [\[R\]](#).

It's important to note that there are also other less common variants linked to lactose tolerance that we are not including in this report [\[R\]](#), [\[R\]](#). In addition, the way people respond to dairy may also depend on factors like diet, gut bacteria, and certain health conditions.



Likely lactose tolerant based on 1 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
LCT	rs4988235	AG

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

Gluten Sensitivity (Celiac)

Key Takeaways:

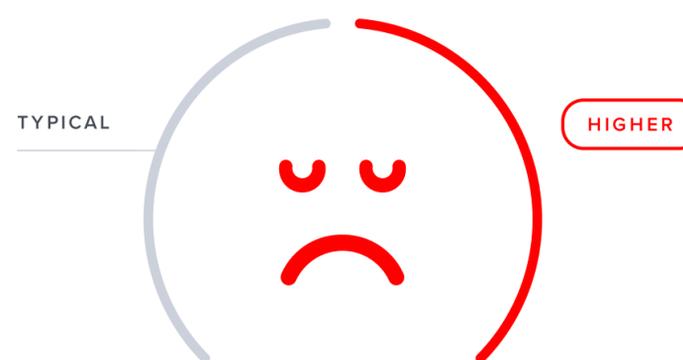
- It's estimated that 1-2% of the population has gluten sensitivity. The most likely risk factor is genetics.
- If you have symptoms, diet restriction may indicate whether you have the sensitivity or not. You should speak to a healthcare professional if symptoms persist.
- Symptoms include diarrhea/constipation, fatigue, weight loss, gut pain/bloating, and nausea.
- Celiac disease is rare, so even with high genetic risk, your overall risk is still low.
- Click the **next steps** tab for relevant labs.

Gluten is a protein found in grains such as wheat, rye, spelt, barley, and triticale. Some people cannot properly digest gluten. In fact, their immune systems may react to gluten as if it is dangerous. To make matters worse, gluten is similar to a normal protein in the intestine. Sometimes, the immune system will attack both. People with this type of reaction have celiac disease [R, R, R].

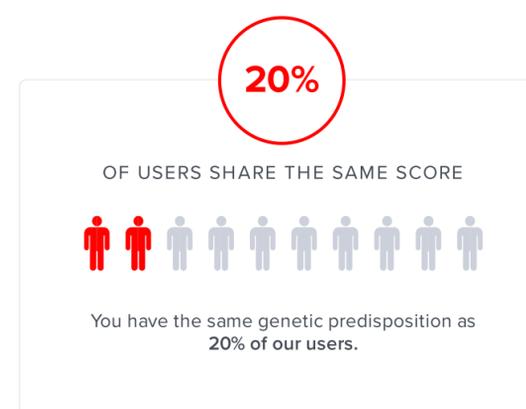
Researchers aren't completely sure why some people are sensitive to gluten. Infections in the gut may play a role. However, a major risk factor is probably genetic [R, R, R].

The most important genes involved in celiac disease are *HLA* genes. These genes help make HLA proteins, which sit on the surface of white blood cells. They help the immune system attack and remove dangerous invaders like bacteria and viruses. In people with celiac disease, HLA proteins may attack gluten by mistake and damage the gut barrier [R, R].

Moreover, genetically high testosterone levels may be causally associated with a lower risk of celiac disease in men [R].



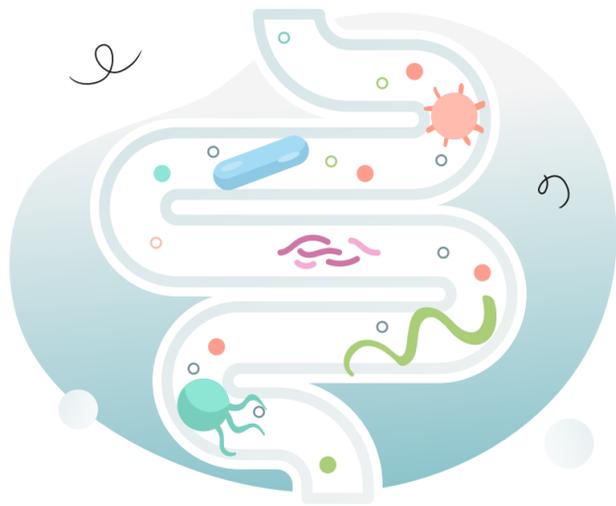
Likely higher sensitivity to gluten based on 2 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
HLA-DQA2	rs7454108	TC
/	rs2187668	CC

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



Gut Microbiome

Your gut houses somewhere between 10 and 30 trillion microbes! It is its own little world, working diligently 24-7 to keep you protected and healthy, help digest food, support brain health, and more. That's how crucial your gut microbiome is to your health!

Your genetics may affect the composition of the microbes in your gut, making you more susceptible to gut and mood disorders, allergic conditions, and more. Knowing your predisposition may help you make more informed decisions to keep your microbiome in balance.



TYPICAL

**Gut Microbiome
Diversity**

Likely typical gut microbiome diversity

Gut Microbiome Diversity

Key Takeaways:

- Genes that affect our gut bacteria are involved in nutrition, blood type, and metabolism.
- Other risk factors for reduced gut microbiome diversity include age, diet, and certain medications.
- A lack of diversity may be linked to diabetes, obesity, mood disorders, allergic conditions, IBS, and IBD. A diverse gut microbiome may improve the immune system, cognitive abilities, and mood.
- If your genetic risk is high or believe your gut microbiome may be out of balance, take action now on factors you can change.

We share our bodies with our gut microbes. They may make us thin or fat, healthy or sick, happy or depressed. The entire community of microbes (bacteria, fungi, viruses) living in your gut is called the 'gut microbiome' [R].

Gut microbes play many beneficial roles in our bodies. They [R, R, R]:

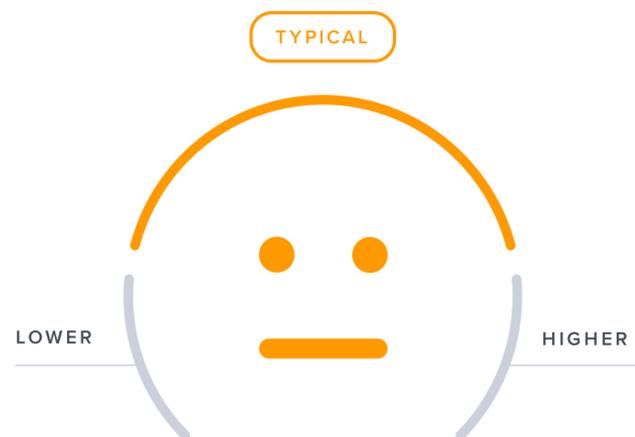
- Help harvest more energy from food
- Provide nutrients such as vitamins B12 and K
- Strengthen the gut barrier and the immune system
- Protect from harmful microbes
- Degrade toxins and cancer-causing chemicals
- Impact our mood and cognitive ability

While in perfect harmony, the gut microbiome is beneficial to our health. Off balance, these microbes can contribute to a range of issues, including [R]:

- Gut disorders (e.g., inflammatory bowel disease)
- Mood disorders (e.g., anxiety and depression)
- Allergic conditions (e.g., eczema and asthma)

Genetics influences our microbiome composition. Genes that affect our gut bacteria are involved in [R, R, R]:

- Nutrition
- Blood type
- Metabolism



Likely typical gut microbiome diversity based on 497 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
GPR158	rs71495423	CC
BRSK2	rs574686237	GG
SORCS3	rs184389714	AA
NIPSNAP3A	rs12348106	CC
NR2F2	rs6496140	TT
UBR5	rs9773443	AA
/	rs144477852	CC
MACF1	rs74786007	GG
AGPAT5	rs2928601	CC
CACNA1D	rs188274086	AA
/	rs139795364	AA
INHBC	rs145837154	GG
ISCA2	rs72730160	TT
CHL1	rs6442427	TT
GP2	rs73546249	CC
CCBE1	rs111870840	AA
RASEF	rs13284654	CC
NSG1	rs7693922	AA
OAT	rs74160914	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



Vitamin D

Helps with the following



C. difficile Infection

IMPACT



EVIDENCE



People with *C. difficile* infection may have lower vitamin D levels. In turn, those with lowest levels of this vitamin may be at increased risk of *C. difficile* infection [\[R\]](#).

Vitamin D may help by supporting the immune function [\[R\]](#).



Pancreas Inflammation

IMPACT



EVIDENCE



People with chronic pancreas inflammation may be **14-17% more likely to have low vitamin D**. It may be caused by [\[R\]](#), [\[R\]](#):

- Poor absorption of vitamin D
- Poor nutrition due to alcohol intake

Vitamin D supplementation may help correct vitamin D deficiency in people with chronic pancreas inflammation [\[R\]](#).

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* [\[R\]](#).



Gluten Sensitivity (Celiac)

IMPACT



EVIDENCE



Gut Inflammation

IMPACT 

EVIDENCE 

Experts recommend **vitamin D supplements (800 IU/day)** to some people with IBD. This is because IBD may interfere with nutrient absorption. In addition, people with IBD who follow a limited diet may not be getting enough vitamins from the food they eat [\[R, R\]](#).

Unsurprisingly, **IBD has been linked to vitamin D deficiency**. Those with low vitamin D may have worse IBD symptoms and reduced quality of life. They may also have more flare-ups [\[R, R, R\]](#).

Vitamin D supplements may boost the levels of this vitamin and prevent IBD flare-ups [\[R, R\]](#).

Vitamin D may support gut health by helping to [\[R, R, R\]](#):

- Repair and maintain the gut barrier
- Balance the immune response

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* [\[R\]](#).

 PERSONALIZED TO YOUR GENES

Your GC gene variant is linked to lower vitamin D levels [\[R\]](#). Make sure to get enough vitamin D from sunlight or supplements.

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs2282679	/	

Irritable Bowel

IMPACT 

EVIDENCE 

People lacking vitamin D may be more prone to IBS. Vitamin D supplementation improved IBS symptoms in many studies. Effective doses were **14,000-28,000 IU per week** for up to 6 months [\[R, R, R, R, R\]](#).

Vitamin D may help with IBS by [\[R, R\]](#):

- Preventing infections
- Reducing inflammation
- Balancing the immune system

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* [\[R\]](#).

 PERSONALIZED TO YOUR GENES

People with your GC gene variant may have lower vitamin D levels. Take special care to maintain optimal vitamin D levels [\[R, R, R, R, R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs2282679	/	

People with *H. pylori* infection tend to have lower levels of vitamin D. In line with this, higher levels of vitamin D are linked to better treatment outcomes [\[R\]](#).

Vitamin D may help by supporting the elimination of *H. pylori* [\[R\]](#), [\[R\]](#).

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* [\[R\]](#).



Probiotics



Helps with the following



C. difficile Infection

IMPACT

●●●●● 3 / 5

EVIDENCE

●●●●● 4 / 5

Probiotics may help prevent *C. difficile* infections and diarrhea in populations at risk such as people taking antibiotics, hospitalized patients, infants, and elderly people. However, the evidence is mixed [R, R, R].

Lactobacillus probiotics have been most widely studied. While a review of studies recommended their use to prevent *C. difficile* infections, another one found the evidence insufficient. *L. casei* may be the most effective species. Other *Lactobacillus* probiotics that may help include [R, R, R, R]:

- *L. rhamnosus* [R, R, R]
- *L. plantarum* [R, R]
- *L. acidophilus* [R, R]
- *L. paracasei* [R]
- *L. delbrueckii* [R]
- *L. helveticus* [R]

The probiotic yeast *Saccharomyces boulardii* may also reduce *C. difficile* infections and diarrhea [R, R, R].

Other studied probiotics are:

- *Bifidobacterium lactis* [R]
- *B. longum* [R]
- *Streptococcus thermophilus* [R]

However, experts don't recommend the use of probiotics due to the mixed evidence and their potential to cause harm [R, R].



Pancreas Inflammation

IMPACT

●●●●● 2 / 5

EVIDENCE

●●●●● 3 / 5

Supplementation with **probiotics (with at least 2 strains)** may help with pancreas inflammation by reducing [R, R]:

- Hospital stay
- Organ failure risk (by up to **60%**)

Probiotics **may not** provide greater benefits when combined with prebiotics [R, R].

Probiotics may help with indigestion symptoms. Some examples include:

- [Bifidobacterium bifidum](#) [R]
- [Bacillus coagulans](#) [R, R, R, R, R]
- [Bacillus subtilis](#) [R, R]

They may help by supporting normal gut function [R, R].

However, one review found that some probiotics only helped with indigestion when they were combined with **prebiotics** [R].



PERSONALIZED TO YOUR GENES

Probiotics may improve digestion more in people with your TNF gene variant [R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs1800629	/	

According to experts, probiotics may be helpful for some people with IBD. This is because people with IBD often lack “good” gut bacteria [R, R, R, R].

Probiotic supplements that contain *Lactobacillus*, *Bifidobacterium*, and *Streptococcus* species may support gut health in people with ulcerative colitis [R, R, R].

Probiotics may be less effective for Crohn's disease [R, R, R, R, R].

Please note: *Talk to your doctor before taking probiotics* [R].



PERSONALIZED TO YOUR GENES

Your IL23R gene variant is linked to IBD. It likely increases the activity of IL-23, an inflammatory protein. Probiotics may reduce gut inflammation by blocking IL-23 [R, R, R, R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
IL23R	rs11209026	/	

Probiotics may reduce IBS symptoms, such as bloating, stomach pain, and diarrhea [R]. Most supplements contained a mixture of the following probiotics:

- [Lactobacillus acidophilus](#) [R, R, R]
- [Lactobacillus rhamnosus](#) [R, R, R]
- [Bifidobacterium animalis \(B. lactis\)](#) [R, R, R]
- [Bifidobacterium longum](#) [R, R, R]
- [Streptococcus thermophilus](#) [R, R, R]

Probiotics support gut health by fighting “bad” bacteria and reducing inflammation [R].

The *American College of Gastroenterology* recommends probiotics for IBS symptom improvement [R].

 PERSONALIZED TO YOUR GENES

In people with your TNF gene variant, adding a probiotic may improve IBS symptoms [R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs1800629	/	

Probiotics may help in combination with standard treatments to eliminate *H. pylori*. They may also help heal stomach ulcers [R, R, R, R, R].

Probiotics containing *Lactobacillus* species may be especially helpful against *H. pylori*. These include:

- [L. gasseri](#) [R, R, R]
- [L. johnsonii](#) [R, R, R]
- [L. acidophilus](#) [R]
- [L. reuteri](#) [R, R]
- [L. delbrueckii](#) combined with [Streptococcus thermophilus](#) [R]
- [L. brevis](#) [R]

Other species such as [Saccharomyces boulardii](#) and [Clostridium butyricum](#) may help reduce side effects of *H. pylori* treatment [R, R, R, R, R, R, R].

Probiotics may help by [R, R, R, R, R]:

- Reducing inflammation
- Protecting the stomach barrier
- Competing with *H. pylori* in the stomach



Gastrointestinal Infection

IMPACT

3 / 5

EVIDENCE

4 / 5

Probiotics (at least 100 million CFU*), especially *Lactobacilli*, may help reduce gastrointestinal infection risk, duration, and severity. However, the evidence is mixed [R, R, R, R].

Lactobacillus probiotics that may help include:

- *L. rhamnosus* [R, R, R, R, R, R]
- *L. reuteri* [R, R]
- *L. casei* [R]
- *L. fermentum* [R]

Saccharomyces boulardii, both alone and combined with zinc, may also help reduce disease duration and severity. However, the quality of most available studies is low [R, R, R, R].

Probiotics may help by [R, R]:

- Increasing the levels of “good” bacteria
- Preventing the growth and spread of “bad” bacteria
- Enhancing the immune response

*CFU (colony forming units) = the number of active bacteria in one probiotic serving



Gut Microbiome Diversity

IMPACT

3 / 5

EVIDENCE

3 / 5

Probiotics can increase the levels of “good” bacteria, such as *Lactobacilli* and *Bifidobacteria*, in the gut. They can also decrease the levels of potentially harmful microbes [R, R, R, R, R, R, R, R, R, R].

They can be taken with or without prebiotics [R, R].

In general, probiotics that contain multiple species and higher CFU* tend to be more effective.

*CFU (colony forming units) = the number of active bacteria in one probiotic serving



Constipation

IMPACT

3 / 5

EVIDENCE

3 / 5

Probiotics may help with constipation by supporting healthy bowel movements. Blends may work better than single species probiotics [R, R, R, R].

Probiotics (at least 100 million CFU*) that may help include:

- *Bifidobacterium* [R, R, R, R, R]
- *Lactobacillus* [R, R, R, R, R, R]
- *Streptococcus thermophilus* [R]
- *Bacillus coagulans* [R, R, R, R]

However, some studies show mixed effects for certain probiotics [R, R, R, R, R].

Food products with probiotic bacteria that may help include:

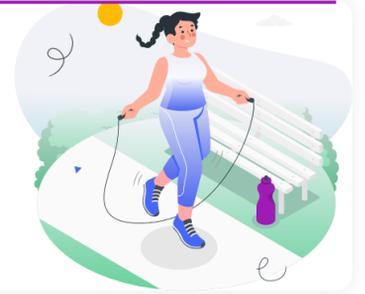
- Kefir [R]
- Yogurt [R, R]
- Cheese [R]
- Other fermented milk products [R, R, R, R]

*CFU (colony forming units) = the number of active bacteria in one probiotic serving

3



Avoid Cigarette Smoke



Helps with the following



Gallstones

IMPACT

●●●●● 3 / 5

EVIDENCE

●●●●● 3 / 5

Current and former smokers may be at an increased risk of gallstones. In fact, the risk of gallstones may **increase by 11% with every 10 cigarettes smoked per day** [R].

Smoking may increase the risk of gallstones by impairing cholesterol metabolism [R, R].



Pancreas Inflammation

IMPACT

●●●●● 4 / 5

EVIDENCE

●●●●● 5 / 5

Smoking is the most important risk factor for pancreatic disease. It may increase the risk by **87%** [R].

Smoking may contribute to **acute pancreas inflammation**. The risk may rise in [R, R, R, R, R]:

- Current smokers: by 42-75%
- Former smokers: by 30-63%

For every **10-cigarettes/day**, the risk may rise by **30-40%** [R, R].

Smoking may also increase the risk of **chronic pancreas inflammation** in current smokers by **250%**. The risk is only **27-40%** higher in former smokers, suggesting the beneficial effects of quitting [R, R, R, R, R, R].

Smoking may damage the pancreas by [R, R]:

- Promoting oxidative stress
- Increasing inflammation
- Worsening blood vessel function



Gut Inflammation

IMPACT

●●●●● 3 / 5

EVIDENCE

●●●●● 3 / 5

Experts recommend quitting smoking to support gut health [R, R, R].

People who currently smoke may have a **76%** higher risk of developing Crohn's disease. This may not be the case for ulcerative colitis [R, R].

Current smokers with Crohn's disease may have more flare-ups and need surgery more often. The same may be true for **former smokers with ulcerative colitis**. Smokers with ulcerative colitis are urged to quit under doctor supervision [R, R, R].



PERSONALIZED TO YOUR GENES

People with your EGLN2 gene variant may be at a higher risk of Crohn's disease if they smoke [R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs3733829	/	●●●●●

H. pylori

IMPACT  3 / 5

EVIDENCE  3 / 5

Experts recommend avoiding cigarettes to help protect the stomach. This is likely because smoking can damage the lining of the stomach. This lining protects the stomach from the acid that digests your food [\[R, R, R\]](#).

It is unclear if smoking increases the risk of *H. pylori* infection. Some studies have found smoking nearly doubles the risk. Other studies have found a connection only in men or no link at all [\[R, R, R, R, R, R\]](#).

Despite mixed evidence for prevention, **smoking increases the risk of *H. pylori* complications** such as [\[R, R\]](#):

- Gastritis (stomach inflammation)
- Ulcers
- Bleeding in the gut

Smokers may also have more difficulty getting rid of *H. pylori*. **Those who quit smoking may have better treatment outcomes than those who keep smoking** [\[R, R\]](#).

Peptic Ulcers

IMPACT  4 / 5

EVIDENCE  4 / 5

Smoking is a major risk factor for peptic ulcer development. It may also increase the risk of complications from ulcers [\[R, R, R, R, R\]](#).

Smoking may contribute to peptic ulcers by [\[R, R, R, R\]](#):

- Promoting stomach acid release
- Increasing oxidative stress in the gut lining
- Slowing the healing of the gut lining
- Interfering with the treatment for *H. pylori*, a common cause of ulcers



PERSONALIZED TO YOUR GENES

Avoiding cigarette smoke is one of the best things you can do to help prevent ulcers [\[R, R\]](#).

Smoking is linked to a higher risk of GERD [\[R, R\]](#).

Experts recommend avoiding cigarettes to help with GERD. Smoking can weaken the muscle that separates the stomach from the esophagus. It may also reduce the production of saliva, which helps clear stomach acid from the esophagus [\[R, R, R, R\]](#).

In line with this, **quitting smoking is linked to reduced GERD symptoms**. However, being overweight or obese may cancel out the beneficial effect of giving up smoking [\[R\]](#).

 PERSONALIZED TO YOUR GENES

Smoking may have a stronger impact on GERD complications in people with your **SLC12A6 gene variant** [\[R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs11631094	/	

Smoking may increase the risk of indigestion, especially bloating after a meal. In fact, the more you smoke, the greater the risk [\[R, R, R, R, R, R\]](#).

Smoking may contribute to indigestion by [\[R, R\]](#):

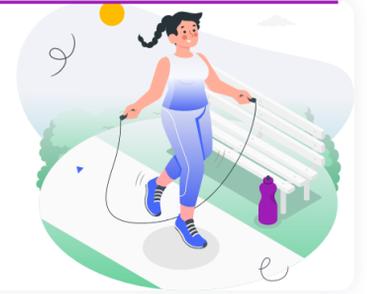
- Damaging the gut lining
- Slowing digestion

Quitting smoking and tobacco may help improve indigestion symptoms [\[R, R, R, R\]](#).



Acupuncture

Helps with the following



Pancreas Inflammation

IMPACT



EVIDENCE



According to some experts, acupuncture may help reduce pain caused by pancreas inflammation [\[R\]](#).

In combination with standard therapy, acupuncture may help with pancreas inflammation by:

- Reducing abdominal pain and swelling
- Improving gut function

However, more research is needed to confirm these benefits [\[R\]](#), [\[R\]](#).

Please note: Acupuncture is safe for most people. However, it may come with extra risks for pregnant women, people with pacemakers, and people with bleeding disorders. Consult your doctor or a licensed acupuncturist for more information [\[R\]](#).



Gallstones

IMPACT



EVIDENCE



Acid Reflux

IMPACT



EVIDENCE



Acupuncture may help relieve GERD symptoms. It may work better when combined with medication [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Acupuncture may help by decreasing inflammation [\[R\]](#).

Please note: Acupuncture is safe for most people. However, it may come with extra risks for pregnant women, people with pacemakers, and people with bleeding disorders. Consult your doctor or a licensed acupuncturist for more information [\[R\]](#).

Indigestion

IMPACT 

EVIDENCE 

In people with indigestion, acupuncture may help make symptoms less severe. Acupuncture may help alone or combined with medication. However, the quality of evidence is low [R, R, R, R, R, R].

Electroacupuncture may offer similar but smaller benefits [R, R].

Acupuncture may help by [R, R]:

- Supporting digestion
- Reducing pain sensitivity

Please note: Acupuncture is safe for most people. However, it may come with extra risks for pregnant women, people with pacemakers, and people with bleeding disorders. Consult your doctor or a licensed acupuncturist for more information [R].



PERSONALIZED TO YOUR GENES

People with your SCN10A gene variant may be more prone to indigestion and stomach pain. This gene plays a role in pain sensitivity. Acupuncture may help by reducing pain sensitivity [R, R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs57326399	/	

Constipation

IMPACT 

EVIDENCE 

Acupuncture may help with constipation. It may [R, R, R]:

- Reduce symptoms
- Support bowel movements
- Increase the quality of life

Acupuncture may help by acting on the nervous system and balancing gut hormones [R, R].

Electroacupuncture and acupressure may have similar benefits [R, R, R].

Please note: Acupuncture is safe for most people. However, it may come with extra risks for pregnant women, people with pacemakers, and people with bleeding disorders. Consult your doctor or a licensed acupuncturist for more information [R].

Irritable Bowel

IMPACT 

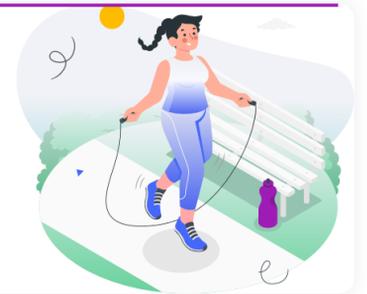
EVIDENCE 

Acupuncture may improve the symptoms and quality of life in people with IBS. Most studies of acupuncture and IBS included 3-5 weekly sessions over 4-6 weeks [R, R, R, R, R, R, R].

Acupuncture seems to help with IBS by **reducing stress and stomach pain** [R, R].

Please note: Acupuncture is generally safe for most people, but it may come with extra risks for pregnant women, people with pacemakers, and people with bleeding disorders. Consult your doctor or a licensed acupuncturist for more information [R].

5



Maintain a Healthy Weight

Helps with the following



Gallstones

IMPACT

●●●●● 5 / 5

EVIDENCE

●●●●● 4 / 5

Overweight and obese people may be at a higher risk of forming gallstones. In fact, the risk may increase **by about 60% for every 5-unit increase in BMI**. The link may be strongest for women [\[R, R\]](#).

Experts recommend eating less calories and getting more exercise to achieve and maintain a healthy weight. Weight gain, even within the normal body weight range, may cause gallstones to form [\[R, R\]](#).

The link between excess body weight and gallstones may be [insulin resistance](#) [\[R, R\]](#).

Insulin resistance may promote gallstone formation by [\[R, R, R\]](#)

- Increasing cholesterol in the bile
- Decreasing gallbladder movements
- Promoting toxic bile acid formation

If you need to lose weight, do so gradually. Rapid weight loss (more than 3 lbs or 1.5 kg/week) is also linked to gallstone formation [\[R, R, R, R\]](#).



PERSONALIZED TO YOUR GENES

Maintaining a healthy weight is the best way to prevent gallstones.



Pancreas Inflammation

IMPACT

●●●●● 4 / 5

EVIDENCE

●●●●● 4 / 5

Obesity and high body fat may be linked to pancreas inflammation. They may increase inflammation directly or by contributing to gallstones [\[R\]](#).

Obese and overweight people may have a **35-50%** higher risk of pancreas inflammation and up to **4 times** higher mortality [\[R, R, R, R, R, R, R, R, R, R\]](#).

A 1-unit increase in BMI may increase the risk of pancreas inflammation by **18%**. Abdominal obesity is also linked to this condition. For every **10-cm increase** in waist circumference, the odds of pancreas inflammation grow by **36%** [\[R\]](#).

Having a low body weight may also be unfavorable. Underweight people with acute pancreas inflammation may have **82%** higher mortality [\[R\]](#).

Excess weight is a risk factor for GERD. Even weight gain within healthy BMI ranges may cause or worsen the symptoms [\[R, R, R, R\]](#).

This is likely because **excess weight can put pressure on your stomach.** This can cause stomach acid to travel up to your esophagus. Tight clothing and belts may also contribute to GERD in this way [\[R, R, R, R, R\]](#).

To improve GERD, experts recommend weight loss to those who are overweight or obese [\[R, R, R, R, R, R, R\]](#).

However, some studies didn't find a link between weight loss and GERD improvement [\[R, R\]](#).

 PERSONALIZED TO YOUR GENES

Excess weight may have a stronger impact on GERD complications in people with your TRAPPC3 gene variant [\[R\]](#).

Obesity may have a stronger impact on GERD complications in people with your IGF1R gene variant [\[R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs491603	/	

GENE	SNP	GENOTYPE	EVIDENCE
/	rs2229765	/	

People who are underweight or have excess weight may be more prone to indigestion. However, some smaller studies didn't find a link between body weight and indigestion [\[R, R, R, R, R, R\]](#).

People with indigestion who are overweight or obese may have symptoms like pain and heartburn more often. They may also have a worse quality of life [\[R, R\]](#).

Experts thus recommend maintaining a healthy weight to help with indigestion. For those with excess weight, a loss of 7-11 lbs (3-5 kg) may help [\[R, R\]](#).

Excess weight may contribute to indigestion by increasing pressure on the abdomen. This may push stomach acid back up into the esophagus [\[R\]](#).

 PERSONALIZED TO YOUR GENES

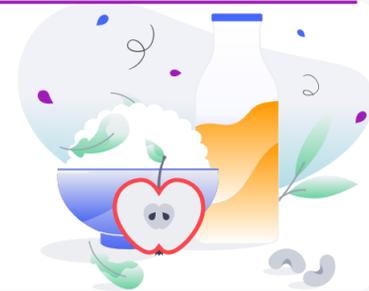
Your FTO gene variant is linked to higher odds of obesity [\[R, R\]](#). Try maintaining a healthy weight to improve digestion.

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs9939609	/	



Coffee



Helps with the following



Gallstones

IMPACT

2 / 5

EVIDENCE

3 / 5

Drinking moderate amounts of coffee may help prevent gallstones. Experts recommend limiting coffee to **4 cups per day (400 mg of caffeine)** to avoid potential side effects [\[R, R, R, R\]](#).

Drinking **more than 4 cups per day** may raise cholesterol and increase the risk of gallstones. However, the evidence is mixed [\[R, R, R, R, R\]](#).

Moderate amounts of coffee may reduce the risk of gallstones by [\[R\]](#):

- Preventing cholesterol buildup in the bile
- Boosting gallbladder function

Please note: *Too much caffeine may lead to sleep problems, high blood pressure and cholesterol, fast heart rate, and dependence. If you're pregnant, try to limit caffeine to 200 mg per day* [\[R\]](#).



Pancreas Inflammation

IMPACT

2 / 5

EVIDENCE

2 / 5

Increased coffee drinking (3-4 cups/day or more) is associated with a **30% lower risk of pancreas inflammation** [\[R\]](#).

Please note: *Too much caffeine (over 400 mg/day or 4 cups of coffee/day) may lead to sleep problems, high blood pressure and cholesterol, fast heart rate, and dependence. If you're pregnant, try to limit caffeine to 200 mg per day* [\[R, R\]](#).



Irritable Bowel

IMPACT

0 / 5

EVIDENCE

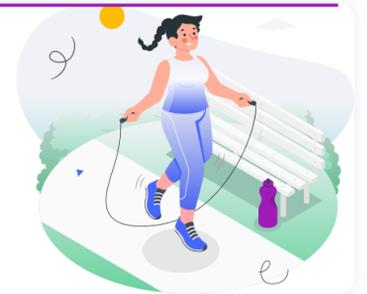
0 / 5

7



Exercise

Helps with the following



Gallstones

IMPACT

3 / 5

EVIDENCE

4 / 5

A sedentary lifestyle may increase the odds of developing gallstones. Regular exercise may prevent gallstones [R, R, R, R, R, R].

Exercise may help by [R]:

- Maintaining a healthy weight
- Preventing cholesterol buildup in the gallbladder
- Boosting gallbladder and gut function
- Reduce insulin resistance



PERSONALIZED TO YOUR GENES

Exercise may reduce cholesterol more in people with your **PPARGC1A** gene variant. Healthy cholesterol levels are crucial for gallstone prevention, so make sure to exercise regularly [R, R].

YOUR GENETIC VARIANTS

GENE

/

SNP

rs8192678

GENOTYPE

/

EVIDENCE

3 / 5



Irritable Bowel

IMPACT

4 / 5

EVIDENCE

3 / 5

IBS is more common in people who don't exercise regularly. Moderate exercise can improve your gut health and reduce IBS symptoms by [R, R, R, R, R]:

- Improving gut muscle tone
- Reducing stress
- Boosting [probiotic](#) bacteria

Types of exercise appropriate for people with IBS include **walking, mild cardio, swimming, and yoga**. On the other hand, **intense exercise may stress out your gut**, so it's important to stay within your comfort zone [R, R, R].

The *American College of Gastroenterology* recommends exercise for IBS symptom improvement [R].



Gut Inflammation

IMPACT

3 / 5

EVIDENCE

3 / 5

Exercising regularly may lower the odds of developing Crohn's disease by **37%**. This may be especially true for Europeans [R].

Experts agree that moderate exercise can support gut health in people with IBD. It likely helps by reducing inflammation. Aerobic exercise such as running or biking may also improve the composition of gut bacteria [R, R, R, R].

Some people with severe IBD may need to avoid long or intense exercise. In this case, even **low-moderate intensity exercise (2-3 times/week)** may help improve quality of life [R, R, R, R].

Indigestion

IMPACT 

EVIDENCE 

People who don't move around a lot may be more prone to indigestion. On the other hand, getting more exercise is linked to a reduced risk of indigestion [\[R, R, R\]](#).

Combined with medication, **cardio exercise (30 minutes, 5 times/week)** may help make symptoms less severe [\[R\]](#).

Exercise may help by supporting digestion. It also makes it easier to maintain a healthy weight [\[R, R, R\]](#).

 PERSONALIZED TO YOUR GENES

People with your ADRB2 gene variant may be more prone to indigestion. This gene plays a role in gut muscle movements. Exercise may help by supporting gut muscle movements [\[R, R, R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs1042714	/	

Constipation

IMPACT 

EVIDENCE 

People who are more active tend to get constipated less often [\[R\]](#).

Exercise, especially cardio, may help improve constipation [\[R, R\]](#).

Exercise may help by making the gut muscles more active [\[R\]](#).

Gut Microbiome Diversity

IMPACT 

EVIDENCE 

Exercise may increase the number of "good" bacteria and enrich gut microbiome diversity [\[R, R, R, R\]](#).

However, keep in mind that while low- to moderate-intensity exercise appears beneficial, high-intensity endurance exercise may have a negative effect [\[R, R\]](#).



Saccharomyces Boulardii



Helps with the following



C. difficile Infection

IMPACT

0 / 5

EVIDENCE

0 / 5



Gut Inflammation

IMPACT

0 / 5

EVIDENCE

0 / 5



Indigestion

IMPACT

0 / 5

EVIDENCE

0 / 5



H. pylori

IMPACT

3 / 5

EVIDENCE

3 / 5



Gut Microbiome Diversity

IMPACT

2 / 5

EVIDENCE

2 / 5



Irritable Bowel

IMPACT

1 / 5

EVIDENCE

1 / 5



Lactobacillus Casei



Helps with the following



C. difficile Infection



Gastrointestinal Infection



Gut Microbiome Diversity



Gut Inflammation



Irritable Bowel



Constipation



10



Curcumin



Helps with the following



Gallstones

IMPACT



EVIDENCE



Gut Inflammation

IMPACT



EVIDENCE



In people with **ulcerative colitis**, curcumin may help relieve symptoms. It may be most helpful when combined with medication. However, the evidence is mixed [R, R, R, R].

Curcumin may help by reducing inflammation [R].

Note that curcumin is hard to absorb. Look for supplements with *bioavailable* curcumin, which is easier to absorb. Combining curcumin with [piperine](#) (a compound in black pepper) may also help [R, R].



PERSONALIZED TO YOUR GENES

Your NFKB1 gene variant is linked to ulcerative colitis. It likely increases the levels of NF-kB, a protein that causes inflammation. Curcumin may reduce gut inflammation by blocking NF-kB [R, R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs3774959	/	

Powdered turmeric (750 mg/day for 2-4 weeks) may help improve symptoms of indigestion after a meal [\[R\]](#).

Curcumin (500 mg/day for 1 month) may help make symptoms less severe when combined with standard treatment [\[R\]](#).

Curcumin may help by [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Reducing inflammation
- Blocking the growth of *H. pylori* bacteria
- Making nerves in the gut less sensitive to pain
- Strengthening the gut lining

Note that curcumin is hard to absorb. Look for supplements with *bioavailable* curcumin, which is easier to absorb. Combining it with [piperine](#) (a compound in black pepper) may also help [\[R\]](#), [\[R\]](#).

 PERSONALIZED TO YOUR GENES

People with your SCN10A gene variant may be more prone to indigestion and stomach pain. This gene plays a role in pain sensitivity. Curcumin may help reduce pain sensitivity in the gut [\[R\]](#), [\[R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs57326399	/	

Curcumin (3 g/day for 4 weeks) may help heal peptic ulcers [\[R\]](#), [\[R\]](#).

It may help by reducing inflammation [\[R\]](#), [\[R\]](#), [\[R\]](#).

Note that curcumin is hard to absorb. Look for supplements with *bioavailable* curcumin, which is easier to absorb. Combining it with [piperine](#) (a compound in black pepper) may also help [\[R\]](#), [\[R\]](#).

 PERSONALIZED TO YOUR GENES

Your TNF gene variant may be linked to peptic ulcers. This gene plays a major role in inflammation. Curcumin may help by reducing inflammation [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs1800630	/	



Irritable Bowel

IMPACT

●●●●● 0/5

EVIDENCE

●●●●● 0/5



Psyllium



Helps with the following



Gallstones



Gut Inflammation



Irritable Bowel



Constipation

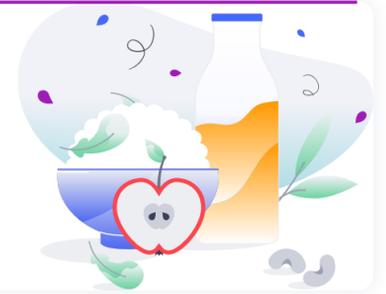


Acid Reflux





Stay Hydrated



Helps with the following



C. difficile Infection

IMPACT

4 / 5

EVIDENCE

3 / 5

C. difficile infection can cause mild to severe diarrhea. This causes considerable fluid loss and increases the risk of dehydration. Experts recommend generous hydration to replenish the lost fluids. Drinks that may help include [\[R, R, R\]](#):

- Water
- Clear soft drinks
- Dilute juices
- Clear broths
- Non-caffeinated sports drinks
- Oral rehydration solutions



Constipation

IMPACT

4 / 5

EVIDENCE

4 / 5

Low water intake is linked to an increased risk of constipation [\[R, R, R\]](#).

Experts recommend drinking up to 50-60 oz. (1.5-2.0 L) more water per day, in combination with a high-fiber diet, to help improve constipation [\[R, R, R, R, R\]](#).

Drinking more water may help by supporting healthy bowel movements [\[R\]](#).



PERSONALIZED TO YOUR GENES

People with your AHR gene variant tend to drink less water [\[R, R\]](#). Make sure to stay hydrated to maintain healthy bowel movements.

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs4410790	/	4 / 5



Gastrointestinal Infection

IMPACT

4 / 5

EVIDENCE

5 / 5

Diarrhea and vomiting are common symptoms of gastrointestinal infections. They both cause considerable fluid loss and increase the risk of dehydration. Drinking is essential to replenish the lost fluids. Drinks that may help include [\[R\]](#):

- Water
- Clear soda
- Dilute juices
- Clear broths
- Non-caffeinated sports drinks
- Oral rehydration solutions

Certain groups of people are at especially high risk of dehydration from gastrointestinal infections. These include [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Children
- Elderly people
- People with a weakened immune system
- People engaged in intense physical activity

People with moderate to severe dehydration may require hospitalization to receive oral or intravenous rehydration therapy [\[R\]](#), [\[R\]](#), [\[R\]](#).



EBV Infection

IMPACT

2 / 5

EVIDENCE

4 / 5

In people with EBV infection, drinking lots of fluids (e.g., water and fruit juices) can prevent dehydration and relieve a fever and sore throat [\[R\]](#), [\[R\]](#), [\[R\]](#).



Irritable Bowel

IMPACT

0 / 5

EVIDENCE

0 / 5



Lactobacillus Rhamnosus



Helps with the following



C. difficile Infection



Constipation



Indigestion



Irritable Bowel



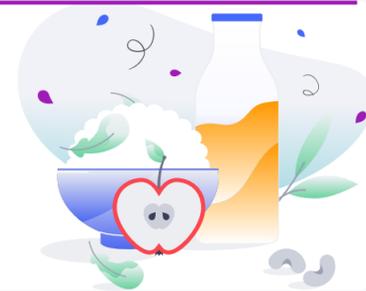
Gastrointestinal Infection





Limit Alcohol Intake

Helps with the following



Pancreas Inflammation

IMPACT

4 / 5

EVIDENCE

5 / 5

Drinking alcohol is linked to both acute and chronic pancreas inflammation. Heavy alcohol intake (above 4 drinks/day) may raise the risk of pancreas inflammation by **37%** [R, R, R, R, R, R].

Moreover, drinking alcohol may increase the risk of progression from acute to chronic pancreas inflammation [R].

Experts advise people with pancreas inflammation to stop drinking alcohol even if their condition is not due to alcohol [R, R].



Peptic Ulcers

IMPACT

2 / 5

EVIDENCE

3 / 5

Heavy drinking may be linked to a higher risk of peptic ulcers [R, R, R].

Alcohol may contribute to peptic ulcers by [R, R]:

- Irritating and breaking down the gut lining
- Increasing inflammation
- Increasing the production of stomach acid



PERSONALIZED TO YOUR GENES

People with your KLB gene variant tend to drink more alcohol [R]. Try limiting your alcohol intake to potentially help with peptic ulcers.

YOUR GENETIC VARIANTS

GENE

/

SNP

rs11940694

GENOTYPE

/

EVIDENCE

2 / 5

 **Acid Reflux**

IMPACT 

EVIDENCE 

Drinking alcohol is associated with an increased risk of acid reflux and GERD. In fact, the more alcohol consumed, the greater the risk [\[R, R, R, R\]](#).

Alcohol may relax the muscle that separates the stomach from the esophagus. It may also make it harder for the esophagus to move food toward the stomach. Both of these effects may contribute to GERD [\[R\]](#).

 PERSONALIZED TO YOUR GENES

People with your KLB gene variant tend to drink more alcohol [\[R\]](#). Try limiting your alcohol intake to potentially help with GERD.

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs11940694	/	

 **Indigestion**

IMPACT 

EVIDENCE 

Heavy drinking may trigger or worsen indigestion. This may be especially true for those who have irritable bowel syndrome (IBS) [\[R, R\]](#).

Experts recommend drinking less alcohol to help with indigestion [\[R, R\]](#).

Drinking a lot may contribute to indigestion by increasing [\[R, R\]](#):

- Stomach acid levels
- Oxidative damage to the stomach lining

 PERSONALIZED TO YOUR GENES

People with your KLB gene variant tend to drink more alcohol [\[R\]](#). Try limiting your alcohol intake to potentially improve digestion.

YOUR GENETIC VARIANTS

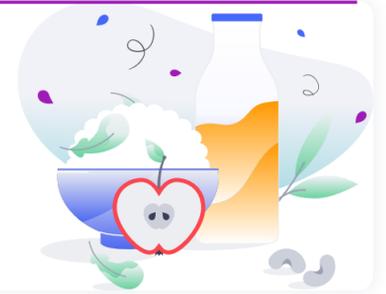
GENE	SNP	GENOTYPE	EVIDENCE
/	rs11940694	/	

15



Fiber

Helps with the following



Gallstones

IMPACT

3 / 5

EVIDENCE

4 / 5

Experts agree that eating foods high in fiber may help prevent gallstones. They recommend eating more fiber-rich fruits and vegetables [R, R, R].

Fiber-rich foods and supplements like **wheat bran (10-32 g/day)** and **psyllium husk (15 g/day)** may help by:

- Reducing toxic bile acids [R, R, R]
- Boosting beneficial bile acids [R]
- Reducing cholesterol [R, R, R]



PERSONALIZED TO YOUR GENES

Fiber supplementation may reduce cholesterol more in people with your CYP7A1 gene variant [R, R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs3808607	/	4 / 5



Gut Inflammation

IMPACT

2 / 5

EVIDENCE

3 / 5

Experts recommend fiber as part of a healthy diet for people with IBD, unless it is triggering their symptoms [R].

Dietary fiber is linked to lower odds of **Crohn's disease**. The risk may decrease by **13% for every 10 g increase in fiber intake per day**. However, dietary fiber may not protect against ulcerative colitis [R, R].

In some people with IBD, **fiber-rich foods** and supplements like **oat bran (60 g/day for 3 months)** may [R, R, R]:

- Support "good" gut bacteria
- Reduce hospital visits
- Improve quality of life

Please note: People with IBD who follow a low-FODMAP diet should avoid some types of fiber. Consult your doctor or dietitian for more information [R, R].



Irritable Bowel

IMPACT

4 / 5

EVIDENCE

4 / 5

Dietary fiber supports healthy bowel movements. Most types of fiber are *prebiotics*, which means they feed [probiotic](#) bacteria [R, R].

Fiber supplementation may improve IBS with constipation or diarrhea. Tested supplements include:

- [Psyllium](#) (20 g/day) [R, R]
- [Inulin](#) (1.8-8 g/day for 2 weeks) [R, R, R]
- Fructo-oligosaccharides (300 mg-5 g/day for 4-12 weeks) [R]
- Guar gum (5-6 g/day for 4-12 weeks) [R, R, R]

Fiber (up to 35 g/day) may help reduce pain and relieve constipation. It may be best to increase fiber intake slowly over the course of a few weeks to minimize gas and bloating [\[R, R, R, R, R, R, R, R, R\]](#).

High-fiber foods that may help include:

- Rye bread [\[R\]](#)
- Wheat bran [\[R, R\]](#)
- Flaxseed [\[R, R\]](#)
- Kiwifruit [\[R, R, R, R\]](#)
- Mango [\[R\]](#)
- Prunes [\[R, R, R\]](#)
- Figs [\[R, R\]](#)

Fiber supplements that may help include:

- Psyllium [\[R, R, R\]](#)
- Partially hydrolyzed guar gum [\[R, R\]](#)
- Inulin [\[R, R, R\]](#)
- Oligosaccharides [\[R, R, R\]](#)

However, there is some mixed evidence for the benefits of some supplements [\[R\]](#).

Fiber may help by [\[R, R, R, R, R\]](#):

- Making stool easier to pass
- Increasing “good” bacteria in the gut
- Supporting gut function

16



Bacillus Subtilis



Helps with the following



Pancreas Inflammation



Indigestion



Irritable Bowel



H. pylori





Lactoferrin



Helps with the following



C. difficile Infection

IMPACT



EVIDENCE



Lactoferrin may help prevent antibiotic-associated diarrhea caused by *C. difficile* and other germs [\[R\]](#).

Lactoferrin may prevent infectious germs from invading the gut [\[R\]](#), [\[R\]](#).



H. pylori

IMPACT



EVIDENCE



Lactoferrin (400 mg/day for 1 week) in combination with standard treatment may help to eliminate *H. pylori*. However one study did not find this benefit [\[R\]](#), [\[R\]](#), [\[R\]](#).

Lactoferrin may help by reducing *H. pylori* growth. It may also decrease inflammation [\[R\]](#).



Gastrointestinal Infection

IMPACT



EVIDENCE



High doses (600 mg/day) of lactoferrin may reduce digestive symptoms in nursery school workers [\[R\]](#).

Similarly, eating yogurt containing lactoferrin (100 mg/day) for 15 weeks reduced school absence due to gastrointestinal infections in a study [\[R\]](#).

Lactoferrin may prevent infectious germs from invading the gut [\[R\]](#), [\[R\]](#).



Bifidobacterium Breve



Helps with the following



Gluten Sensitivity (Celiac)



Irritable Bowel



Gut Microbiome Diversity



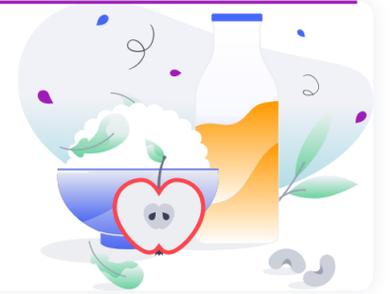
Gut Inflammation





Chinese Rhubarb

Helps with the following



Pancreas Inflammation

IMPACT



EVIDENCE



In combination with standard therapy for acute pancreas inflammation, **rhubarb (10-90 g/day for 1-2 weeks)** may help [\[R, R\]](#):

- Reduce abdominal pain
- Shorten hospital stay
- Reduce mortality

Please note: Be careful with rhubarb if you are prone to allergies. High doses of rhubarb may cause diarrhea and abdominal cramps. Avoid long-term use due to dependence risk. Rhubarb is not safe for people with gut conditions, women who are pregnant or breastfeeding, and children under 12 years of age. Make sure to consult your doctor before taking rhubarb [\[R, R\]](#).



Constipation

IMPACT



EVIDENCE



Please note: Be careful with rhubarb if you are prone to allergies. High doses of rhubarb may cause diarrhea and abdominal cramps. Avoid long-term use due to dependence risk. Rhubarb is not safe for people with gut conditions, women who are pregnant or breastfeeding, and children under 12 years of age. Make sure to consult your doctor before taking rhubarb [\[R, R\]](#).



Gut Microbiome Diversity

IMPACT



EVIDENCE

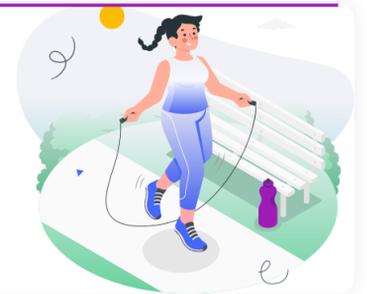


Please note: Be careful with rhubarb if you are prone to allergies. High doses of rhubarb may cause diarrhea and abdominal cramps. Avoid long-term use due to dependence risk. Rhubarb is not safe for people with gut conditions, women who are pregnant or breastfeeding, and children under 12 years of age. Make sure to consult your doctor before taking rhubarb [\[R, R\]](#).



Good Hygiene Practices

Helps with the following



C. difficile Infection

IMPACT

4 / 5

EVIDENCE

5 / 5

Because contact with infected people is the main source of *C. difficile* transmission, healthcare workers and visitors should be especially careful with their hand hygiene. Experts recommend using soap and warm water over alcohol-based hand sanitizers because alcohol doesn't effectively destroy the spores [R, R, R].

Healthcare workers attending infected patients should also use disposable equipment such as gloves, stethoscopes, and thermometers to prevent spreading the infection [R, R].

Importantly, hard surfaces, towels, clothes, and bedsheets are sources of transmission because they may contain *C. difficile* spores. Thorough disinfection with products that kill the spores helps prevent disease spreading in hospital and long-care settings [R, R, R, R].

People with *C. difficile* infection should wash their hands frequently and minimize close contact with others. This also includes [R]:

- Not sharing towels or toilets
- Not cooking or handling food for others



Gastrointestinal Infection

IMPACT

4 / 5

EVIDENCE

5 / 5

Hand washing is probably the most effective strategy to prevent the spread of gastrointestinal infections. Experts recommend washing hands with soap and warm water [R, R]:

- Before eating
- Before preparing or manipulating food
- After visiting the toilet or cleaning it
- After attending to any person with diarrhea or vomiting
- After changing a baby's diaper
- After handling or cleaning dirty clothes or bedding
- After handling pets, cattle, or wild animals

Infection-causing microbes can live in hard surfaces, towels, clothes, and bedsheets for up to several months. For this reason, it is important to clean them regularly and thoroughly [R].

People with gastrointestinal infections should minimize close contact with others. This also includes [R]:

- Not sharing towels or toilets
- Not cooking or handling food for others



EBV Infection

IMPACT

5 / 5

EVIDENCE

5 / 5

To help prevent EBV infection, you should avoid the following activities involving people with active or recent EBV infection [R, R, R, R, R]:

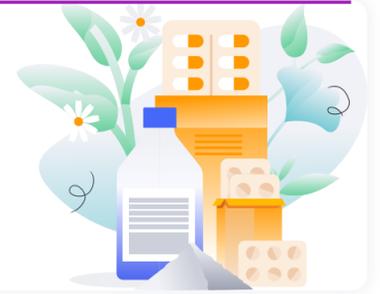
- Kissing
- Sharing personal objects (e.g., toothbrush, drinking glasses, dishes)
- Sharing drinks and food
- Sexual contact
- Blood transfusions

If you are infected with EBV virus [R, R, R]:

- Wash your hands regularly to prevent spread of the virus
- Use a mouthwash (20 mL, 2x/day for 8 weeks) to reduce the viruses in your mouth



Prebiotics



Helps with the following



C. difficile Infection

IMPACT

2 / 5

EVIDENCE

2 / 5

Oligofructose (12 g/day for 30 days) may reduce diarrhea recurrence in people with *C. difficile* infection [R].

In hospitalized patients receiving antibiotics, lactulose (20 g, 3x/day) may reduce the risk of *C. difficile* infection [R].

Synbiotics with fructo- and galacto-oligosaccharides may help reduce the abundance of *C. difficile* in infants and surgical patients. However, prebiotics alone may fail to prevent *C. difficile* infections in infants [R, R, R, R].

Prebiotics may help by favoring the growth of “good” bacteria over *C. difficile* in the gut [R, R].



Gut Inflammation

IMPACT

2 / 5

EVIDENCE

2 / 5

Prebiotics may improve quality of life in people with IBD. They may reduce stomach cramps, improve diarrhea and boost “good” gut bacteria [R, R, R, R, R].

Studied prebiotics include:

- **Germinated barley foodstuff:** 20-30 g/day for 1-6 months [R, R, R]
- **Psyllium seeds:** 20 g/day for 12 months [R]
- **Psyllium husk:** 7 g/day for 2 months [R]
- **Oligofructose-enriched inulin:** 12 g/day for 2 weeks [R]

Prebiotics may help with IBD by reducing inflammation [R, R].

Please note: People with IBD who follow a low-FODMAP diet should avoid some fiber-based prebiotics. Consult your doctor or dietitian for more information [R, R].



Gut Microbiome Diversity

IMPACT

3 / 5

EVIDENCE

3 / 5

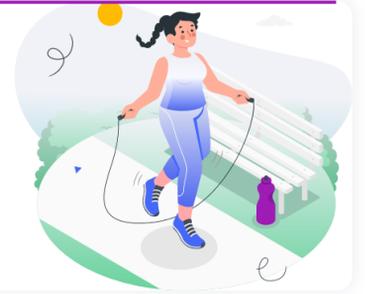
Prebiotics are non-digestible plant fibers that nourish the gut microbiome. They [R]:

- Are resistant to stomach acidity and digestive enzymes
- Reach the colon undigested
- Are fermented by gut microbiome in the colon
- Promote the growth and activity of “good” bacteria

Getting more fiber from food or prebiotics may [R, R, R, R, R, R, R, R, R]:

- **Increase overall microbiome richness and stability**
- **Promote the growth of beneficial bacteria**, such as *Bifidobacteria* and *Lactobacilli*

Yoga



Helps with the following



Pancreas Inflammation

IMPACT

● ● ● ● ● 1 / 5

EVIDENCE

● ● ● ● ● 2 / 5

According to some experts, yoga may help reduce pain caused by pancreas inflammation [\[R\]](#).

Practicing **yoga (2-3x/week for 12 weeks)** may help people with chronic pancreas inflammation by [\[R, R\]](#):

- Reducing pain
- Improving mood and anxiety
- Increasing appetite



Irritable Bowel

IMPACT

● ● ● ● ● 0 / 5

EVIDENCE

● ● ● ● ● 0 / 5



Constipation

IMPACT

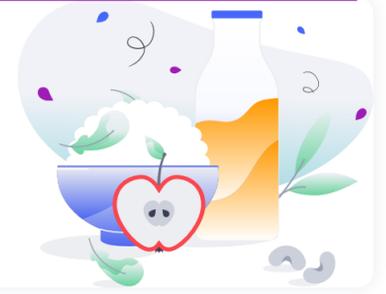
● ● ● ● ● 0 / 5

EVIDENCE

● ● ● ● ● 0 / 5



Wheat Bran



Helps with the following



Gallstones



Irritable Bowel



Constipation





Fructooligosaccharides (FOS)



Helps with the following



C. difficile Infection



Irritable Bowel

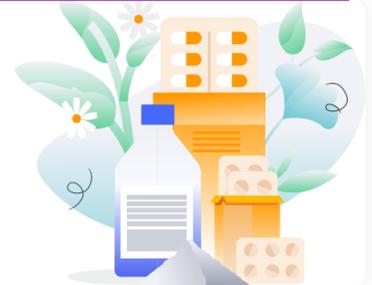


Constipation





Lactobacillus Plantarum



Helps with the following



C. difficile Infection



Constipation



Irritable Bowel





Zinc



Helps with the following



C. difficile Infection

IMPACT

●●●●● 2 / 5

EVIDENCE

●●●●● 2 / 5

People with low zinc levels may be at increased *C. difficile* infection after treatment with fecal microbiota transplant. Supplementation with zinc (25-40 mg/day for 1-2 months) may help reduce infection recurrence [R, R, R].

Zinc may help by reducing diarrhea and promoting the growth of “good” gut bacteria [R, R].

Please note: A high intake of zinc may cause stomach pain and gut irritation. Medical bodies recommend against taking more than **40 mg** of zinc per day [R, R].



Gastrointestinal Infection

IMPACT

●●●●● 3 / 5

EVIDENCE

●●●●● 4 / 5

Supplementation with zinc (5-40 mg/day) may reduce diarrhea duration, stool frequency, and hospital stay length in children. Studied forms include [R, R, R]:

- Zinc sulfate
- Zinc gluconate
- Zinc acetate
- Zinc bisglycinate

However, zinc may only help in case of zinc deficiency.

Products combining zinc with *Saccharomyces boulardii* or smectite may be most effective for childhood gastrointestinal infections, but only in low- and middle-income countries [R].

Zinc may help by supporting gut lining repair and enhancing the immune response [R].

Please note: A high intake of zinc may cause stomach pain and gut irritation. Medical bodies recommend against taking more than **40 mg** of zinc per day [R, R].

People with peptic ulcers may have lower levels of zinc, which may worsen their treatment response [\[R, R\]](#).

Supplementing with zinc may help improve peptic ulcers [\[R, R, R, R\]](#).

Zinc may help with peptic ulcers by supporting gut lining repair [\[R\]](#).

Please note: A high intake of zinc may cause stomach pain and gut irritation. Medical bodies recommend against taking more than **40 mg** of zinc per day [\[R, R\]](#).



PERSONALIZED TO YOUR GENES

People with your PSCA gene variant are more prone to peptic ulcers. This gene may play a role in gut lining damage. Zinc may help by supporting gut lining repair [\[R, R, R\]](#).

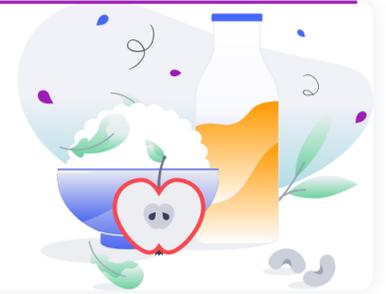
YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
/	rs2294008	/	



Gluten-Free Diet

Helps with the following



Gluten Sensitivity (Celiac)

IMPACT

5 / 5

EVIDENCE

5 / 5

Experts agree that a strict gluten-free diet is the best way to help with celiac disease. It can improve symptoms and the quality of life in those with the condition. The sooner a person starts a gluten-free diet, the more it may help. People with non-celiac gluten sensitivity may also benefit from a gluten-free diet [\[R, R, R, R\]](#).

Some people with IBS may be sensitive to gluten. If you are one of them, following a gluten-free diet may improve your IBS symptoms. According to a recent study, a gluten-free diet may also lower the risk of IBS [\[R, R, R, R, R, R\]](#).

Some foods are naturally gluten-free (i.e. fruits, vegetables, dairy). The following grains are gluten-free alternatives [\[R\]](#):

- Rice
- Corn
- Buckwheat
- [Quinoa](#)
- Amaranth
- Teff

Oats may also be a safe alternative for most gluten-sensitive people [\[R\]](#).

In addition to naturally gluten-free options, some foods may be made in such a way to avoid gluten. Products labeled as “gluten-free” are made to be safe for those with gluten sensitivity [\[R\]](#).

Consult with a healthcare professional to determine how best to follow a gluten-free diet [\[R\]](#).



Irritable Bowel

IMPACT

4 / 5

EVIDENCE

3 / 5

Some people with IBS may be sensitive to gluten. If you are one of them, following a gluten-free diet may improve your IBS symptoms [\[R, R, R, R, R\]](#).

According to a recent study, a gluten-free diet may also lower the risk of IBS [\[R\]](#).

Gluten may contribute to “leaky gut” in sensitive people and thus worsen IBS symptoms. Even if you don’t have celiac disease, a gluten-free diet may help with IBS-related diarrhea [\[R, R\]](#).



Indigestion

IMPACT

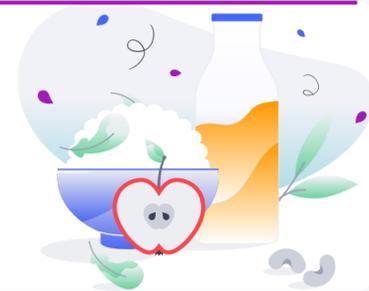
0 / 5

EVIDENCE

0 / 5



Low-FODMAP Diet



Helps with the following



Gluten Sensitivity (Celiac)

IMPACT



EVIDENCE



Gut Inflammation

IMPACT



EVIDENCE



Experts suggest a low-FODMAP diet to help with some symptoms of IBD. This is because FODMAPs tend to irritate the gut [R, R].

For example, fructans may worsen pain, bloating, gas, and bathroom urgency in people with IBD. Other FODMAPs such as [sorbitol](#) may not have the same effects [R].

Following a low-FODMAP diet for 1-2 months may improve IBD symptoms. It may decrease pain, bloating, flatulence, and diarrhea [R, R, R, R].

A low-FODMAP diet may also reduce inflammation and boost “good” gut bacteria. However, the evidence is mixed [R, R, R].



Irritable Bowel

IMPACT



EVIDENCE



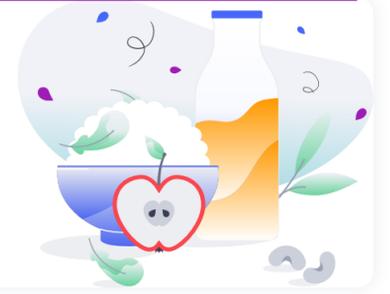
A low-FODMAP diet helps eliminate food triggers that can disturb your gut. **In some people with IBS, a low-FODMAP diet may reduce stomach pain and bloating** [R, R, R, R].

Work with your doctor or dietitian to test specific FODMAPs and figure out which ones to avoid.

The *American College of Gastroenterology* recommends a low-FODMAP diet for IBS symptom improvement [R].



Low-Fat Diet



Helps with the following



Pancreas Inflammation

IMPACT

●●●●● 3 / 5

EVIDENCE

●●●●● 3 / 5

Eating a lot of fat, especially saturated fat, is linked to a **higher risk of both acute (25-45%) and chronic (55-110%) pancreas inflammation** [R, R].

Consuming a high-fat diet is also associated with [R]:

- Earlier onset of pancreas inflammation (by up to 9 years)
- Higher risk of abdominal pain (nearly 3 times)

Hence, **people with pancreas inflammation may benefit from eating a low-fat diet** [R, R, R, R].



Indigestion

IMPACT

●●●●● 0 / 5

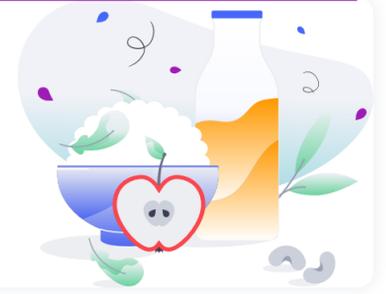
EVIDENCE

●●●●● 0 / 5

30



Fruits And Vegetables



Helps with the following



Gallstones

IMPACT



EVIDENCE



Indigestion

IMPACT



EVIDENCE



31



Panax Ginseng



Helps with the following



Gallstones



Constipation



Recommendation References: [\[R\]](#)



Omega-3 (Fish Oil)



Helps with the following



Pancreas Inflammation

IMPACT

●●●●● 2 / 5

EVIDENCE

●●●●● 2 / 5

Supplementation with **omega-3 fatty acids** may help with acute pancreas inflammation by reducing [\[R, R\]](#):

- Disease complications (e.g., infections)
- Hospital stay
- Mortality

Please note: *Omega-3s can interact with blood thinners (like aspirin, Plavix, Coumadin). Consult your doctor before taking omega-3s* [\[R\]](#).



Gut Inflammation

IMPACT

●●●●● 0 / 5

EVIDENCE

●●●●● 0 / 5

Lactulose



Helps with the following

 C. difficile Infection

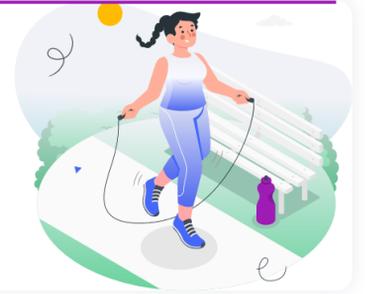


 Constipation





Chewing



Helps with the following



Pancreas Inflammation

Recommendation References: [\[R\]](#)



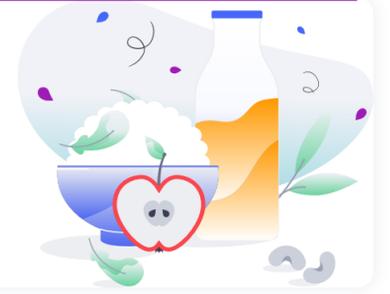
Acid Reflux

Recommendation References: [\[R\]](#), [\[R\]](#)





Plant-Based Diet



Helps with the following



Pancreas Inflammation

IMPACT

●●●●● 4 / 5

EVIDENCE

●●●●● 3 / 5

Experts advise people with pancreas inflammation to eat fresh fruits and vegetables, whole grains, and lean protein [\[R\]](#).

Following a diet rich in fruits and vegetables may reduce the risk of pancreas disease, especially acute pancreas inflammation [\[R, R\]](#). In contrast, the risk may be higher in people who eat a lot of [\[R, R, R, R\]](#):

- Red meat (2.5 times higher risk of acute pancreas inflammation)
- Processed meat
- Eggs

A high intake of **dietary protein** may also be detrimental. The risk may be **5-20%** higher for acute and **45-130%** higher for chronic pancreas inflammation [\[R\]](#).



Acid Reflux

IMPACT

●●●●● 0 / 5

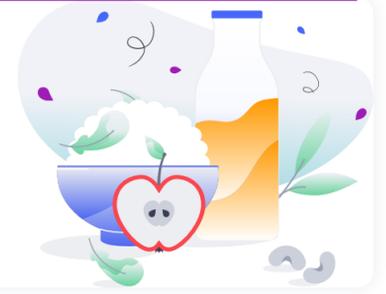
EVIDENCE

●●●●● 0 / 5

36



Nuts



Helps with the following



Gallstones



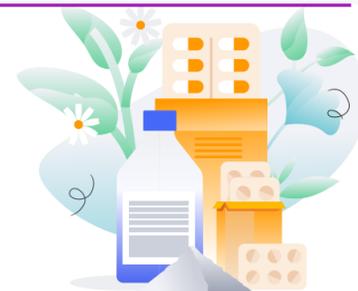
Gut Microbiome Diversity



37



Glutamine



Helps with the following



Irritable Bowel

IMPACT

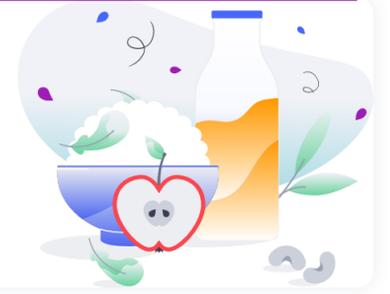


EVIDENCE





Choose Healthy Fats



Helps with the following



Gallstones

IMPACT

4 / 5

EVIDENCE

4 / 5

Higher intake of trans and saturated fats is linked to gallstones. This is because these fats are more likely to raise blood cholesterol [\[R, R, R, R, R\]](#).

High blood cholesterol may raise the amount of cholesterol in the bile. Elevated cholesterol in the bile is a major cause of gallstone formation [\[R, R, R\]](#).

On the other hand, a diet rich in healthy fats may help reduce cholesterol and prevent gallstones. To achieve this, experts recommend **eating less meat and more nuts** [\[R, R, R, R, R, R\]](#).



H. pylori

IMPACT

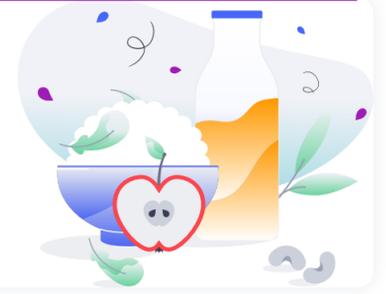
0 / 5

EVIDENCE

0 / 5



Polyunsaturated Fatty Acids (PUFAs)



Helps with the following



Gallstones

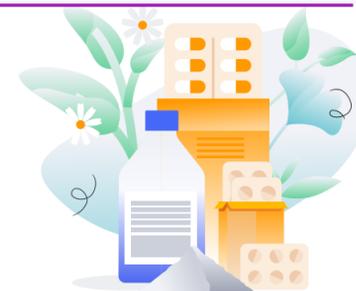


H. pylori





Antioxidant Supplements



Helps with the following



Pancreas Inflammation

IMPACT

2 / 5

EVIDENCE

3 / 5

Supplementation with antioxidant blends (e.g., selenium, β -carotene, vitamin C, vitamin E, and methionine) may help **relieve pain due to chronic pancreas inflammation** [R, R, R, R].

It may help the most in middle-aged and older people and those with heavy alcohol intake. However, **it may also increase the risk of adverse effects**, such as [R, R, R, R]:

- Allergies
- Headache
- Nausea
- Constipation
- Diarrhea

In people with **acute pancreas inflammation**, antioxidant supplements may reduce [R, R]:

- Hospital stay
- Complications
- Mortality

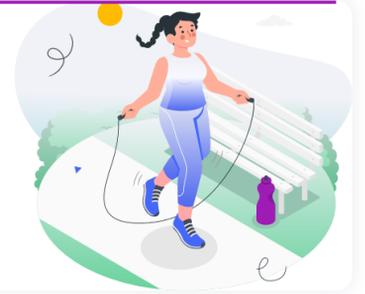
Antioxidant supplements **may not help with pancreas inflammation caused by pancreas imaging** [R, R].

Please note: While dietary vitamin E is generally considered safe, vitamin E supplements have been linked to prostate cancer. They may also not be the best option for pregnant people. Those who have heart disease, bleeding disorders, or other conditions may also need to avoid them. Consult your doctor before taking vitamin E supplements [R].

41



Avoid Cannabis



Helps with the following



Pancreas Inflammation

IMPACT



EVIDENCE



Both **recreational and therapeutic cannabis use** is associated with pancreas inflammation. The link may be stronger in men and those under 30 years of age [[R](#), [R](#), [R](#)].

42



Bacillus Subtilis And Enterococcus Faecium



Helps with the following



Pancreas Inflammation

IMPACT



EVIDENCE



43



Enterococcus Faecium



Helps with the following



Pancreas Inflammation

IMPACT

0 / 5

EVIDENCE

0 / 5



Pancreatic Enzymes



Helps with the following



Pancreas Inflammation

IMPACT



EVIDENCE



45



Red Peony



Helps with the following



Pancreas Inflammation

IMPACT



EVIDENCE



In people with acute pancreas inflammation, red peony may speed up recovery from [\[R, R\]](#):

- Fever
- Abdominal pain and swelling
- Uncontrolled bowel movement

Studied red peony preparations include:

- Extract (2x/day for 7 days)
- Decoction (1x-2x/day)

46



Salvia Miltiorrhiza



Helps with the following



Pancreas Inflammation

Recommendation References: [\[R\]](#), [\[R\]](#)

IMPACT



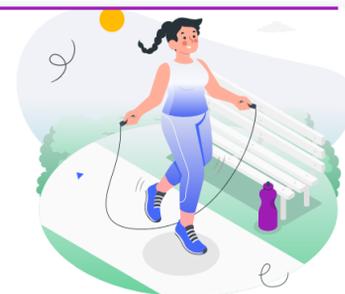
EVIDENCE



47



Avoid Prolonged Sitting



Helps with the following



Gallstones

IMPACT



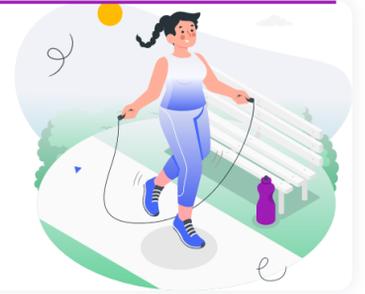
EVIDENCE



48



Avoid Selenium Supplements



Helps with the following



Gallstones

IMPACT



EVIDENCE



Recommendation References: [\[R\]](#)

Bile Salts

Helps with the following



Gallstones

IMPACT

●●●●● 4 / 5

EVIDENCE

●●●●● 4 / 5

Experts recommend bile salts to help prevent gallstones in people undergoing weight loss surgery [\[R, R, R, R\]](#).

Prescription bile salts may help dissolve gallstones and prevent additional ones from forming. They may also reduce the need for gallbladder removal [\[R, R, R, R, R\]](#).

Ask your doctor about bile salts.

50



Bile Supplements



Helps with the following



Gallstones

IMPACT



EVIDENCE

