SelfDecode™

Food Allergies

DNA Health Report

REPORT CATEGORIES

ALLERGIES

FOOD SENSITIVITIES

Sample Client

Report date: 03 September 2025

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Personal information

NAME

Sample Client

SEX AT BIRTH

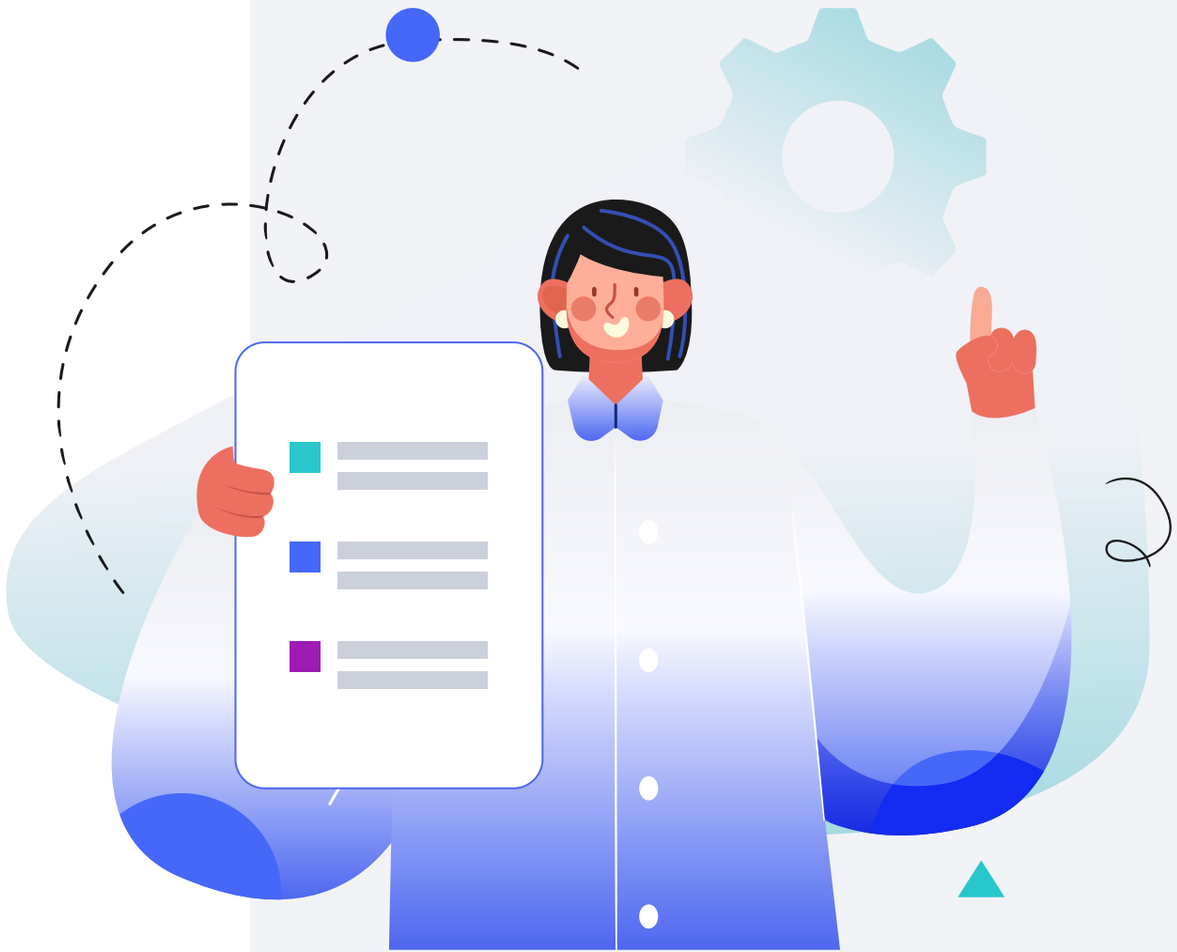
Male

HEIGHT

5ft 9" 175.0cm

WEIGHT

165lb 75.0kg



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.

Introduction

An *allergy* is an immune reaction to a trigger that is normally harmless. This allergy trigger is called an *allergen*. The best-known food allergens are peanuts. However, people can be allergic to just about anything [R, R].

Some of the most common food allergies include [R]:

- Peanuts
- Tree nuts
- Seafood
- Milk
- Eggs

Many allergies start in childhood and go away before adulthood. However, peanut, nut, and seafood allergies often continue through a person's lifetime [R].

An allergic reaction begins when the body recognizes an allergen. White blood cells release **histamine** and other chemicals that cause inflammation. This inflammation can be mild or very dangerous [R, R].

Some foods cause a dangerous reaction that can stop your breathing. Others may cause [R, R]:

- Stomach upset
- Sneezing
- Tingling in the mouth
- Rashes

Allergies are difficult to treat. Instead, people try to prevent an allergic reaction from happening in the first place. The most important step is to avoid the allergen when possible. For example, people with peanut allergies should not eat food that contains peanuts [R, R].

Genetics of Food Allergies

PERSONALIZED TO GENES

Based on the variants that we looked at, you are more likely to be sensitive to certain foods, such as peanuts, seafood, milk, and eggs. You may be more likely to have digestive, respiratory, or other symptoms after consuming these foods.

Consider talking to your doctor about further allergy testing if you feel like you have symptoms of food allergies.

MORE LIKELY

More likely to have food allergies based on 16,808 genetic variants we looked at

95th

PERCENTILE

Your risk is **greater than 95% of the population** and **lower than 5% of the population.**

Key Takeaways:

- Up to 80% of differences in people's chances of having food allergies may be attributed to genetics.
- Many allergies come and go through childhood, but common ones that linger into adulthood include nuts, seafood, milk, and eggs.
- Reducing risk for allergies involves avoiding the various food triggers.
- Click the **Recommendations** tab for potential dietary and lifestyle changes.

An *allergy* is an immune reaction to a trigger that is normally harmless. This allergy trigger is called an *allergen*. Food allergies are allergies triggered by foods. The best-known food allergens are peanuts. However, people can be allergic to just about anything [R, R].

Up to 80% of differences in people's chances of having food allergies may be attributed to genetics [R].

Many of the genes that influence food allergies affect the immune system [R, R].

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
HLA-DPA1	rs9277630	AC
SPINK6	rs9325071	AG
RBFOX1	rs59325236	AG
HLA-DQA2	rs9275596	CT
HLA-DRA	rs7192	GT
LRRC32	rs7936434	GC
BMPR1B	rs17023017	TG
SLC22A5	rs2243250	CC
LRRC32	rs2212434	CT
TLR1	rs2101521	GA
FHIT	rs142617341	CC
IQCE	rs1036504	CC
GSTP1	rs1871042	CC
MS4A2	rs556917	AA
FLG	rs1933064	AG
STAT6	rs4759044	CT
STAT6	rs324015	CT
LINGO4	rs12123821	CC
HLA-DQA1	rs2187668	CC
HLA-DQA2	rs9271588	CT

GENE	SNP	GENOTYPE
KIZ	rs17664036	TT
SERPINB10	rs12964116	AA
SERPINB10	rs1243064	TT
SLC22A5	rs1295686	CC
GVQW3	rs11236809	TT
DIPK2A	rs115529815	TT
TSC22D1	rs147507729	AA
DIPK2A	rs147539730	TT
CTSO	rs147666089	CC
DIPK2A	rs187491414	GG
OR52I2	rs145735233	AA
SREK1IP1	rs72756857	TT
NRSN1	rs77470907	GG
CFAP300	rs149958938	TT
/	rs146702717	TT
RCHY1	rs138784094	AA
ENPP6	rs139241737	AA
RPRD2	rs191802974	GG
/	rs572847817	AA
FLG	rs61816761	GG
IL19	rs1800872	GG
STAT6	rs12307379	CC
TMEM243	rs6942407	GG

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

Your Recommendations

Your recommendations are prioritized according to the likelihood of it having an impact for you based on your genetics, along with the amount of scientific evidence supporting the recommendation.

You'll likely find common healthy recommendations at the top of the list because they are often the most impactful and most researched.

		DOSAGE
1	Avoid Food Triggers	
2	Elimination Diet	
3	Niacin Supplements	20 mg
4	Butyrate	300 mg
5	Vitamin C	2000 mg
6	Dietary Omega-3 Fatty Acids	
7	Probiotics	30 billion CFU
8	Dietary Sphingolipids	
9	Tryptophan	500 mg
10	Resistant Starch	40 g
11	Sunlight Exposure	20 minutes
12	TUDCA (Tauroursodeoxycholic Acid)	250 mg
13	Dietary Vitamin A	
14	Maintain Optimal Vitamin D Levels	1000 iu
15	Lactobacillus Rhamnosus GG	10 billion CFU

1

Avoid Food Triggers

IMPACT 5 / 5

EVIDENCE 5 / 5

How to implement

Identify foods that trigger negative reactions in your body, such as digestive issues, allergies, or headaches, and eliminate them from your diet entirely. This may require keeping a food diary for a few weeks to observe patterns and might involve cutting out common triggers like dairy, gluten, soy, or certain additives. Continuously monitor and adjust your diet to avoid these triggers as long as the symptoms persist.

Description

Food triggers are specific substances or ingredients in one's diet that can exacerbate or induce adverse reactions, such as allergies, sensitivities, or digestive issues, often leading to symptoms like inflammation, bloating, or discomfort.

A "trigger" is something that prompts or worsens the symptoms of a health condition.

Food triggers can lead to a wide range of symptoms in people who are sensitive to them. These may include [R, R, R, R]:

- Gut problems
- Skin problems
- Migraines

How it helps

For those with confirmed food allergies, experts agree that avoiding known allergens is the best way to prevent symptoms. This means avoiding both the food (i.e., peanuts) and products or meals in which the allergen is a known ingredient (i.e., stir fry with peanut sauce) [R, R].

For some people, other foods may also trigger symptoms. This may be due to *cross-contamination* or *cross-reactivity.*

In cross-contamination, a small amount of the allergen may be unknowingly present in the triggering food. For example, a chocolate bar may be made using equipment that also processes peanuts. Cross-contamination can also occur at restaurants or even at home [R].

In cross-reactivity, a triggering food may have a similar structure to a food that you are allergic to. For example, someone allergic to shrimp may also have symptoms when eating crab [R].

For these reasons, it’s best to work with a healthcare professional to determine which foods you should avoid. Once you have a list of food triggers, taking the following steps may help [R, R, R]:

- Consider wearing a medical ID bracelet that identifies any allergies
- Always read food labels carefully
- When dining out, discuss food allergies with those who are preparing the food
- Clean cookware and utensils thoroughly or have a separate set for those with an allergy
- Carry any prescribed medications with you

2

Elimination Diet

IMPACT 4 / 5

EVIDENCE 4 / 5

How to implement

Begin by removing foods you suspect might be causing adverse reactions for 2-3 weeks. These often include dairy, gluten, soy, nuts, eggs, corn, and processed sugars. After this period, reintroduce each food group one at a time every 3 days, while noting any symptoms that may reappear. This process helps identify food intolerances or sensitivities.

Description

An elimination diet involves removing specific foods or food groups from the diet to identify and address potential food sensitivities or allergies. It can help alleviate symptoms such as digestive issues, skin problems, and allergic reactions by pinpointing trigger foods.

An elimination diet omits foods that can cause your body to have a reaction. Foods are removed for a period of time and then added back in. This helps figure out what foods are causing symptoms or making them worse [R].

Salicylates are compounds naturally found in many foods and drinks. These include wine, tea, beans, and tomatoes [R, R].

One form (*salicylic acid*) is found in aspirin. People who are sensitive to salicylates may have a reaction to aspirin and other NSAIDs [R, R].

How it helps

To identify and manage food sensitivities, doctors and nutritionists may recommend an elimination diet. During an elimination diet, foods are strategically removed from the diet and reintroduced to determine whether symptoms disappear and appear in response. The process of reintroducing a food item and watching for a sensitivity reaction is called an *oral challenge* [R, R].

For eosinophilic esophagitis, an allergy-test-driven elimination diet may help with symptom remission and improved quality of life. This approach allows for the reintroduction of foods that do not trigger symptoms, offering a personalized treatment plan [R].

3

Niacin Supplements

IMPACT 4 / 5

EVIDENCE 4 / 5

How to implement

Take a 20 mg niacin supplement daily, preferably with a meal to aid in absorption and minimize potential stomach upset.

TYPICAL STARTING DOSE

20 mg

Description

Niacin is an essential B vitamin that plays a vital role in metabolism, supporting heart health, maintaining healthy cholesterol levels, and promoting overall cellular function when included in a balanced diet or as a supplement.

Niacin (vitamin B3) is found in many foods. It supports your nervous system, skin, gut, and more [R].

Adults should get **16 mg** of niacin a day, and most people get enough from their diets [R].

Experts recommend getting niacin from food rather than supplements [R, R].

How it helps

Niacin, or vitamin B3, helps the body turn food into energy, supports the digestive system, and can aid in managing inflammation. Hence, it could potentially be beneficial for people with food allergies and sensitivities, as they may experience digestive issues and inflammation.

4

Butyrate

IMPACT 4 / 5

EVIDENCE 3 / 5

How to implement

Take butyrate supplements orally with a full glass of water, typically starting with a dose of 300 to 600 mg per day. It can be taken with or without food, but if stomach upset occurs, try taking it with meals. The specific dosage and duration of use should be based on the guidance of a healthcare professional, tailored to individual health needs.

TYPICAL STARTING DOSE

300 mg

Description

Butyrate is a short-chain fatty acid produced by gut bacteria during the digestion of dietary fiber. It plays a crucial role in maintaining gut health, supporting the integrity of the intestinal lining, and contributing to overall digestive well-being.

Butyrate is a short-chain fatty acid produced when the gut bacteria ferment indigestible fibers. It prevents inflammation in the gut and is essential for maintaining a healthy barrier between the large bowel and the bloodstream [R].

People take butyrate to support gut health, improve insulin sensitivity, and promote weight loss.

How it helps

Butyrate is a short-chain fatty acid that can help restore the gut barrier and decrease inflammation, in addition to supplying energy to colon cells. If you have food allergies or sensitivities, consuming supplementary butyrate can reduce the damage caused by food triggers and improve overall gut health [R, R].

5

Vitamin C

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

Take 500-2000 mg of vitamin C supplement daily. It can be taken at any time of the day, with or without food, according to personal preference or tolerance.

TYPICAL STARTING DOSE

2000 mg

Description

Vitamin C is an essential nutrient. This means that our bodies can't produce it on their own, so we have to get it from food or supplements [R].

Foods rich in Vitamin C include: [R]

- Citrus Fruits
- Peppers
- Brussel sprouts
- Kiwi
- Broccoli
- Tomato
- Cantaloupe
- Cauliflower
- Spinach

Vitamin C has antioxidant properties. It supports immunity, heart health, and wound healing [R, R].

Vitamin C deficiency is called *scurvy.* In the past, many sailors suffered from it [R].

How it helps

Vitamin C may influence food allergies and sensitivities through several mechanisms. It helps neutralize free radicals, thereby reducing oxidative stress and potentially mitigating inflammatory responses associated with allergic reactions. Additionally, vitamin C has been observed to decrease histamine levels in the blood, which may alleviate allergy symptoms. Adequate intake of vitamin C supports overall immune function, potentially enhancing the body's ability to manage allergic reactions [R].

6

Dietary Omega-3 Fatty Acids

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

Incorporate foods high in omega-3 fatty acids into your diet daily. This includes eating fish such as salmon, mackerel, and sardines at least twice a week. Alternatively, include a tablespoon of flaxseed oil or chia seeds in your daily diet.

Description

Omega-3 fatty acids are some of the healthiest fats we can eat. They help lower inflammation and protect the heart, brain, and eyes. Our bodies produce less omega-3s than we need for optimal health, so it's important to get enough through food or supplements [R, R, R].

There are three major types of omega-3s: ALA, EPA, and DHA. **EPA and DHA are vital for mental and heart health** [R, R, R].

Fatty fish are rich in EPA and DHA. They include [R]:

- Salmon
- Tuna
- Herring
- Sardines

For optimal health, try to get at least **two servings of fatty fish per week.** Fish oil supplements are available for those who don’t eat fish regularly [R].

How it helps

Dietary omega-3 fatty acids can help alleviate food sensitivities by reducing inflammation and promoting a healthier gut lining. They work by modulating immune responses and decreasing the production of pro-inflammatory compounds that can be triggered by lectins. Additionally, omega-3s support cell membrane health, which helps maintain the integrity of the gut barrier and prevent food triggers from causing irritation or increasing intestinal permeability [R, R].

Interestingly, a study of 40 children found that those with resolving food allergies had increased levels of certain omega-3 metabolites (hydroxydocosahexaenoic acids) compared to those with persistent allergies [R].

7

Probiotics

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

Take a probiotic supplement containing 10 billion or more live cultures once daily, preferably with a meal or as directed by the packaging or a healthcare provider.

TYPICAL STARTING DOSE

30 billion CFU

Description

Probiotics are live beneficial bacteria and yeasts that can support gut health and digestive function when consumed as supplements or found in fermented foods like yogurt and sauerkraut. They may be beneficial to gut health, immune function, blood sugar, and mood.

Probiotic bacteria are "good" bacteria found mainly in the large intestine. They support your body and mind by [R, R, R, R, R, R, R, R]:

- Maintaining gut health
- Supporting a healthy immune system
- Improving your mood
- Helping to maintain healthy blood sugar

Prebiotics are certain types of fiber and other complex carbs that serve as food for gut bacteria. **They support gut health by helping boost the activity and growth of "good" bacteria** [R, R].

Prebiotics are also added to foods and supplements. Common prebiotic ingredients are [R, R]:

- Oligo-fructose
- Oligo-galactose
- Inulin

Mixtures of probiotics and prebiotics are known as **synbiotics** [R].

How it helps

Probiotics can play a beneficial role in managing food allergies and sensitivities by promoting a balanced gut microbiome, which in turn supports immune regulation, reduces inflammation, and strengthens and protects the gut barrier. Studies suggest that specific strains, like *Lactobacillus rhamnosus GG* and *Bifidobacterium lactis*, are particularly effective in modulating immune responses and might be beneficial for individuals with food allergies or sensitivities [R].

8

Dietary Sphingolipids

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

Aim to include foods like eggs, dairy products (such as cheese, yogurt, and milk), and soy-based foods in your meals regularly. These foods naturally contain sphingolipids, which can help support cell health and maintain a strong intestinal barrier. For those looking to increase their intake, consider consuming fermented dairy products, as they may provide additional gut benefits alongside sphingolipids. If you have dietary restrictions or prefer additional support, sphingolipid supplements are also available.

Description

Dietary sphingolipids are essential lipids that play a key role in maintaining cell health and supporting gut function. They help strengthen the intestinal barrier, reduce inflammation, and protect against potential irritants like lectins. While our bodies produce some sphingolipids, dietary sources can help ensure we have an adequate supply for optimal health and gut resilience.

Foods rich in sphingolipids include:

- Eggs
- Dairy products (like milk and cheese)
- Soybeans

For those with lectin sensitivity or aiming to support their gut health, incorporating sphingolipid-rich foods into the diet is beneficial. Supplements are also available for those who need an extra boost in their intake.

How it helps

Dietary sphingolipids such as sphingomyelin, sphingosine, ceramide, sphingosine-1-phosphate, and ceramide-1-phosphate may help mitigate food sensitivity by modulating gut health and reducing inflammation. Sphingolipids can influence cell membrane integrity and support the gut's mucosal barrier. By strengthening cell membranes and promoting healthy lipid signaling, sphingolipids can contribute to better gut resilience, potentially reducing adverse reactions like inflammation or gastrointestinal discomfort [R, R, R].

9

Tryptophan

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

Take 500 mg of tryptophan supplement daily. This dosage can be taken all at once, preferably before bedtime to support sleep, or as directed by a healthcare professional.

TYPICAL STARTING DOSE

500 mg

Description

Tryptophan is an essential amino acid found in various protein-rich foods. It serves as a precursor for serotonin, a neurotransmitter that plays a role in mood regulation. Tryptophan is used in dietary supplements to potentially support mood and sleep disorders, although its effectiveness can vary among individuals.

Tryptophan is an amino acid. Your body uses it to make proteins and some hormones. **Humans can't make tryptophan, so we need to get it from protein-rich foods** [R, R].

Your body uses tryptophan to make serotonin and melatonin. **These brain chemicals are important for mood and sleep** [R, R].

An average adult needs at least **250-425 mg** of tryptophan per day, which is the amount you can get from [R]:

- A pound of turkey or chicken
- Two cups of milk
- An ounce of canned tuna
- Two cups of oatmeal

Other foods high in tryptophan include **cheddar cheese, peanuts, pumpkin seeds, and seafood**. Most people get enough tryptophan from their diets, but supplements are also available [R, R].

How it helps

Tryptophan is an essential amino acid that plays a significant role in the body's production of serotonin. In the gut, serotonin plays a role in motility, gut health, and immune responses. Tryptophan's metabolism also produces metabolites such as kynurenine and indole derivatives, which can interact with gut microbiota and modulate immune responses. Finally, some other metabolites may have anti-inflammatory properties [R, R].

10

Resistant Starch

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

Incorporate 40g of Jo's resistant starch into your daily diet. This can be done by adding it to smoothies, yogurt, or baked goods. Ensure to spread the intake throughout the day for better tolerance.

TYPICAL STARTING DOSE

40 g

Description

Resistant starch is a type of starch that resists digestion in the small intestine, making it a prebiotic fiber that can benefit gut health. It can be found in foods like green bananas, legumes, and certain grains.

Resistant starch is starch that doesn't get digested in the small intestine [R, R].

Some types of resistant starch include [R]:

- **Type 1** occurs naturally in foods such as whole grains
- **Type 2** can be isolated from foods such as corn and green banana
- **Type 3** is created during the cooking and cooling process of starchy foods like potatoes

Resistant starch doesn't increase blood sugar like typical digestible starches do [R, R].

Instead, it feeds good bacteria in the colon that [R, R]:

- Support healthy gut function
- Support immunity
- Reduce inflammation

How it helps

Resistant starch acts as a prebiotic, feeding the beneficial bacteria in your gut which can improve gut health, a common issue in food sensitivity. It also assists in maintaining the integrity of the gut lining, potentially reducing the likelihood of food triggers crossing into the bloodstream and eliciting an immune response [R, R].

11

Sunlight Exposure

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

Expose your skin to direct sunlight for about 10-30 minutes several times per week, preferably during midday when the sun is strongest. Adjust duration based on your skin sensitivity and local climate to avoid sunburn.

TYPICAL STARTING DOSE

20 minutes

Description

Sunlight exposure provides the body with essential vitamin D when the skin is exposed to UVB rays. Vitamin D is crucial for bone health, immune function, and mood regulation. It can also help regulate circadian rhythms.

Sunlight or bright light during the day can benefit your body and mind. It may [R, R, R]:

- Boost your mood
- Boost your performance and energy
- Improve sleep quality

Experts recommend getting **at least 5-15 minutes of midday sun, 2-3 times per week**. People with darker skin and those living at high latitudes may need longer periods of sun exposure [R, R].

However, **excessive sun exposure may lead to sunburn, skin aging, and skin cancer**, so make sure to find the right balance [R, R].

Light therapy is an option when you can't get sufficient sunlight. It typically involves placing a "light box" nearby for 30 minutes each morning. A light therapy box should [R, R, R]:

- Provide 10,000 lux of light
- Filter out UV light

How it helps

Sunlight exposure, particularly through its role in synthesizing vitamin D in the skin, may help in managing food allergies and sensitivities by supporting immune regulation and enhancing tolerance to allergens. Vitamin D is crucial for activating regulatory T cells (Tregs), which are immune cells that help maintain immune tolerance to harmless substances, including food proteins [R].

Interestingly, vitamin D deficiency is linked to food allergies. Factors such as increased latitude or birth during winter time increase the risk [R, R, R, R].

12

TUDCA (Tauroursodeoxycholic Acid)

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

Take 250 to 1500 mg of TUDCA (tauroursodeoxycholic acid) per day, divided into two or three doses with meals. This recommendation is based on general guidelines from clinical studies; for specific conditions or as directed by a healthcare professional, dosages may vary.

TYPICAL STARTING DOSE

250 mg

Description

TUDCA is a bile acid derivative naturally produced in small quantities in the human body and also found in the bile of bears. It is often used as a supplement due to its potential to support liver health, reduce inflammation, and protect against bile acid buildup, making it valuable in managing liver conditions like cholestasis and certain liver diseases.

TUDCA, short for tauroursodeoxycholic acid, is a bile acid that naturally occurs in the body. It consists of ursodeoxycholic acid (UDCA) and taurine [R].

TUDCA is known for its liver-protective effects. People often use it as a dietary supplement to support liver health and promote overall well-being [R].

How it helps

TUDCA is beneficial for liver health particularly in improving bile acid flow and reducing liver inflammation. Some emerging research also points to potential benefits in immune modulation, inflammation, and gut barrier support, which could theoretically have an indirect effect on food allergies and sensitivities [R, R].

PERSONALIZED TO YOUR GENES

People with your *SLCO1B* gene variant may absorb TUDCA better [R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
SLCO1B1	**rs4149056**	TC	

13

Dietary Vitamin A

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

Include foods high in vitamin A in your daily diet, such as sweet potatoes, carrots, spinach, and fortified foods like milk. Aim for 700-900 micrograms (mcg) of vitamin A per day for adults, depending on your age and sex, with a slightly higher intake recommended for women who are pregnant or breastfeeding.

Description

Vitamin A is essential for maintaining healthy vision, immune function, and skin integrity. It also plays a role in cell differentiation and growth, supporting various bodily functions.

How it helps

Vitamin A-derived retinoic acid promotes the differentiation of naive T cells to Treg cells while inhibiting the induction of Th17 cells [R, R, R].

In line with this, vitamin A deficiency increases the risk of diarrhea due to inappropriate immune cell trafficking and functions in the gut. Moreover, vitamin A supplementation during pregnancy helps prevent food allergies and deficiency is commonly found in allergic patients [R, R, R].

14

Maintain Optimal Vitamin D Levels

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

Check your vitamin D levels, they should ideally be in the 30-66 ng/mL range. If your levels are lower than that, take a vitamin D supplement, 1000-4000 IU daily, to reach an optimal range.

TYPICAL STARTING DOSE

1000 iu

Description

Vitamin D, often referred to as the "sunshine vitamin," can be synthesized by the skin when exposed to sunlight, as well as being found in fish, eggs, and fortified milk. It helps regulate calcium absorption, promoting strong bones and a healthy immune system. Vitamin D deficiency can lead to conditions like rickets in children and osteoporosis in adults.

Your body needs vitamin D for strong bones. Vitamin D also plays a role in [R]:

- Mood
- Immunity
- Heart health
- Blood sugar control

Sunlight is our main source of vitamin D. Experts recommend getting at least **5-15 minutes of midday sun, 2-3 times per week**. People with darker skin and those living at high latitudes may need longer periods of sun exposure [R, R].

Foods like fish, eggs, and fortified milk provide small amounts of vitamin D. **People lacking vitamin D should consider taking a supplement** [R].

How it helps

Sunlight exposure, particularly through its role in synthesizing vitamin D in the skin, may help in managing food allergies and sensitivities by supporting immune regulation and enhancing tolerance to allergens. Vitamin D is crucial for activating regulatory T cells (Tregs), which are immune cells that help maintain immune tolerance to harmless substances, including food proteins [R].

Interestingly, vitamin D deficiency is linked to food allergies. Factors such as increased latitude or birth during winter time increase the risk [R, R, R, R].

15

Lactobacillus Rhamnosus GG

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

TYPICAL STARTING DOSE

10 billion CFU

Description

Lactobacillus rhamnosus GG (LGG) is a probiotic that has been shown to have a number of health benefits, including reducing the risk of diarrhea, improving gut health, and boosting the immune system. LGG can be taken as a supplement or found in some yogurts and other fermented foods.

How it helps

L. rhamnosus GG is a well-studied probiotic known for its potential to support gut health and reduce the severity of food allergies and sensitivities. One of its beneficial effects is linked to its production of indole-3-propionic acid (IPA), a metabolite derived from tryptophan. IPA is a potent antioxidant that can protect intestinal cells and strengthen the gut barrier. Additionally, IPA can support immune regulation by promoting anti-inflammatory responses in the gut. Furthermore, *L. rhamnosus* GG has been shown to promote a balanced microbiome [R].

In a placebo-controlled trial of 100 infants with cow milk protein allergy, supplementation with *L. rhamnosus* GG (10^9 cfu/day) for 4 weeks improved bloody or mucousy stool, diarrhea, restiveness, abdominal distension, and vomiting. Its combination with extensively hydrolyzed casein formula reduced the incidence of allergic manifestations in a placebo-controlled trial of 220 children with this condition. In another placebo-controlled trial of infants with this condition, *L. rhamnosus* GG increased IFN-gamma levels [R, R, R].