

Toothache

DNA Health Report

REPORT CATEGORIES —



PAIN



DENTAL & MOUTH
HEALTH

Sample Client

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DISCLAIMER

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

Personal information

NAME

Sample Client

SEX AT BIRTH

Male

HEIGHT

5ft 5" 165cm

WEIGHT

137lb 62kg



How this works

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



Similarly, our Trait Reports look at how your DNA influences your traits.



Your DNA is like an instruction manual — it contains a lot of information.
You can think of it as a blueprint for your body.

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



We use artificial intelligence and machine learning to analyze all this information.
We then summarize your results as a risk score or display it on a gauge.

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

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



Genotype color info:

AA

You don't have any risk alleles

AA

You have 1 risk allele

AA

You have 2 risk alleles

Your risk is also displayed as a percentile. This will tell you how your risks compare to our sample population. The lower your percentile number, the lower your risk. The "50th percentile" would be an average risk.

Similarly, the gauge tells you your relative risk score compared to our sample population, or it indicates a specific trait or haplotype you are more likely to have based on your genetic variants.

When applicable, we also list top evidence-based recommendations that may help lower your risk. The focus is on recommendations that may be of benefit to you, based on your genetics.

Our recommendations come in four categories: lifestyle, diet, supplements and drugs.
The following icons tell you which category a recommendation falls into:



Our team of scientists also ranks each recommendation.
We rank based on impact and the strength of evidence in the medical literature.

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



Impact

Impact scores range from 1-5. These scores reflect how much of an effect each recommendation can have. An impact score of 5 predicts the biggest effect.

When a recommendation affects something we can measure, we use those measurements to assign the impact score. For example, a recommendation that decreases cholesterol by 20% will have a higher impact score than one that decreases it by 5%.

Some recommendations affect things that we cannot directly measure, like stress or mood. For these, the impact score is based on how well they work relative to other recommendations and standard treatments. The best ones get the highest scores.

If there is a lot of research that shows a recommendation works especially well for your genotype, the impact score gets increased.

Recommendation Evidence

5 / 5

Recommendations that are considered effective and generally recommended by experts and medical bodies.

4 / 5

Recommendations that are considered likely effective and that have multiple independent meta-analyses and a great many studies supporting them.

3 / 5

Recommendations that are considered possibly effective and have many studies supporting them

2 / 5

Recommendations that have insufficient evidence, with two or several clinical trials supporting them, or many studies but with ambiguous results.

1 / 5

Recommendations that have insufficient evidence, with a single clinical trial, or with many studies most of which didn't find support for the recommendation.

0 / 5

No evidence in humans.

Genotype-specific Evidence

High-quality

Direct evidence that a recommendation helps more in people with your gene variant (many clinical trials, a few large clinical trials, or a meta-analysis).

Medium-quality

Direct evidence that a recommendation helps more in people with your gene variant (a few clinical trials or one large clinical trial).

Low-quality

Direct evidence that a recommendation helps more in people with your gene variant (a single clinical trial or more trials with inconsistent results).

Indirect

A recommendation may help more in people with your gene variant because it targets a specific gene or protein affected by your variant (e.g., MTHFR, dopamine).

In theory

A recommendation may help more in people with your gene variant because it targets a specific mechanism affected by your variant (e.g., inflammation, oxidative stress).

Some things to keep in mind:

- Genetics doesn’t play a considerable role in a condition or a trait.
- There is not enough research available to estimate a genetic predisposition.
- There are technical limitations to estimating or presenting a genetic predisposition.
- The topic is sensitive, and a genetic predisposition should only be estimated and presented by a healthcare professional.

Introduction

Toothache refers to pain in and around the teeth and jaws that's usually caused by tooth decay. It can be a sharp, throbbing, or constant pain, and it might be accompanied by swelling, headache, fever, and a foul-tasting drainage from the infected tooth.

The severity of a toothache can range from mild to excruciating, and it may be aggravated by eating or by hot or cold temperatures. Once tooth decay advances to the point where it affects the nerve of the tooth, the discomfort generally escalates, necessitating prompt medical attention to resolve the underlying issue.

Treatment

Treatment for a toothache depends on the cause, but may include a dental filling, extraction, or root canal therapy if the problem is due to deep decay or a damaged tooth nerve. Preventative measures such as maintaining good oral hygiene through regular brushing and flossing, utilizing fluoride treatments, and getting regular dental checkups are key in avoiding the onset of toothache.

If left untreated, toothache can lead to more serious health complications, including jaw bone infections and even systemic conditions like sepsis, especially if an infection from the tooth spreads beyond the oral cavity.



TYPICAL LIKELIHOOD

Typical likelihood of toothache based on 2,192 genetic variants we looked at



Your Recommendations

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

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

DOSAGE		DOSAGE			
1	Low-Level Laser Therapy (LLLT)	30 seconds	2	Binaural Beats	30 minutes
3	Topical Aloe Vera		4	Avoid Carbonated Beverages	
5	Good Oral Hygiene	2 minutes	6	Topical Chamomile	
7	Topical Clove Oil		8	Topical Tea Tree Oil	
9	Avoid Sugary Foods & Drinks		10	Cold Applications	15 minutes
11	Green Tea Extract	250 mg			

1



Low-Level Laser Therapy (LLLT)

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Use a low-level laser therapy device, as directed by its manual or a healthcare professional, on the affected area. Generally, treatment involves applying the laser for a specified duration, often between 30 seconds to several minutes, per treatment area. Sessions can be conducted 2-3 times per week for a period of 4-12 weeks, depending on the condition being treated and the device used.

TYPICAL STARTING DOSE

30 seconds

Description

Low-level laser therapy (LLLT), also known as photobiomodulation, is a type of light therapy that uses low-intensity lasers to promote healing. It has been shown to be effective in treating a variety of conditions, including pain, inflammation, and wound healing.

How it helps

- A meta-analysis of six studies (four on ibuprofen, two on LLLT) with 315 patients found both ibuprofen and LLLT effective in reducing orthodontic pain. Ibuprofen showed significant relief within 6-24 hours, while LLLT showed significance at 2 hours and 3-7 days. More research is needed [\[R\]](#).
- A systematic review and meta-analysis assessed low-level laser therapy (LLLT) for orthodontic pain management, finding it reduced pain incidence by 24% and brought forward the most painful day. Limited evidence exists due to methodological shortcomings [\[R\]](#).
- A meta-analysis of six studies examined the efficacy of low-level laser therapy (LLLT) for pain after separator placement. LLLT showed significant pain reduction at 6h, 1d, 2d, 3d post-placement. More rigorous RCTs are needed due to high heterogeneity [\[R\]](#).

2



Binaural Beats

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Listen to binaural beats through headphones for 30 minutes to 2 hours daily. Choose frequencies that match your goal, such as relaxation or focus, and ensure a quiet, comfortable environment for the best experience.

TYPICAL STARTING DOSE

30 minutes

Description

Binaural beats are audio recordings that use specific sound frequencies to create a perception of a beating or pulsing sound in the brain. Some people use binaural beats for relaxation, meditation, and potential cognitive benefits.

[Binaural beats](#) are an **auditory illusion** perceived by the brain when two slightly different frequencies of sound are played into each ear (*bi* – two, *aural*- ear). When wearing earphones that are playing slightly different notes in each ear, our brain perceives the volume to pulse (oscillate) at a fixed rate. This is called a ‘beat.’

People use binaural beats to improve cognition, mood, and anxiety [\[R, R, R, R, R\]](#).

How it helps

Binaural beat music (BBM) significantly reduced both sensory and psychological aspects of pain in orthodontic patients after the 5th day, with similar pain reduction as the placebo. No difference was observed between BBM and placebo groups, suggesting BBM's potential as a pain management tool [\[R\]](#).

3



Topical Aloe Vera

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Apply a thin layer of pure aloe vera gel extracted directly from the aloe plant or an aloe vera-based product directly to the affected area. Gently rub it in until it is absorbed. Repeat this application 2-3 times daily until the symptoms improve.

Description

Aloe vera is a plant-derived gel known for its skin-soothing and healing properties. Topical applications of aloe vera are commonly used to relieve sunburn, minor burns, and skin irritation, promoting faster healing and reducing discomfort.

[Aloe vera](#) lives in the desert, and its thick leaves store water in the form of a gel [\[R\]](#).

Topical aloe vera may help soothe burns and skin conditions [\[R\]](#).

Oral aloe vera may help with blood sugar and gut health [\[R\]](#).

How it helps

Aloe Vera has soothing and anti-inflammatory properties. Applying it topically to the gums can help ease the pain and inflammation associated with toothaches.

4



Avoid Carbonated Beverages

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Stop consuming drinks like soda, sparkling water, and other carbonated beverages. If you're used to drinking these regularly, gradually reduce your intake by replacing one carbonated drink with a non-carbonated alternative, such as still water or herbal tea, each day until you no longer consume them.

Description

Avoiding carbonated beverages, particularly those high in sugar or artificial additives, can support dental health by reducing the risk of tooth decay and enamel erosion, and avoid potentially irritating the bladder.

How it helps

Carbonated beverages, including sodas, can contribute to tooth enamel erosion. Acidic drinks weaken the enamel, making teeth more susceptible to decay and leading to toothaches. Avoiding these beverages can help protect your teeth.

5



Good Oral Hygiene

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Brush your teeth at least twice a day for two minutes each time using fluoride toothpaste. Floss daily to remove plaque from places your toothbrush can't reach and consider using mouthwash. Visit your dentist at least twice a year for professional cleanings and checkups.

TYPICAL STARTING DOSE

2 minutes

Description

Good oral hygiene, which includes regular brushing, flossing, and dental check-ups, is crucial for preventing tooth decay, gum disease, and maintaining overall oral health. A healthy mouth contributes to overall well-being and can prevent dental issues that may impact systemic health.

Oral hygiene refers to practices that keep the mouth healthy. Good habits include [R](#), [R](#):

- Gently brushing the teeth and tongue for two minutes, at least twice a day
- Flossing daily
- Using a toothpaste with fluoride and a soft toothbrush
- Replacing a worn toothbrush at least every 3 months

To help maintain good oral hygiene, it is also important to regularly see dental professionals. They can help prevent and address issues with your teeth and gums.

How it helps

Maintaining good oral hygiene is essential for preventing toothaches. This includes regular brushing, flossing, and dental checkups to remove plaque, prevent cavities, and detect problems early.

6



Topical Chamomile

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Apply a chamomile cream or ointment directly to the affected area of the skin 2-3 times daily. Ensure the skin is clean before application. Continue use for as long as symptoms persist or according to the product's specific instructions.

Description

Chamomile extract, obtained from the flowers of the *Matricaria chamomilla* plant, is used topically for its anti-inflammatory and calming properties. It is commonly applied to soothe irritated skin and alleviate conditions like dermatitis.

How it helps

Chamomile has anti-inflammatory properties, which can help soothe the discomfort and inflammation of a toothache when applied to the affected area.

7



Topical Clove Oil

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Apply a small amount of clove oil, diluted with a carrier oil such as coconut or olive oil (a 2% solution, which is about 12 drops of clove oil per ounce of carrier oil), directly to the affected area up to three times per day. Avoid contact with eyes and mucous membranes, and do not use on broken skin.

Description

Clove oil, extracted from the cloves of the *Syzygium aromaticum* tree, contains eugenol and is used topically for its analgesic and antiseptic properties. It is applied to alleviate toothaches and can be found in some skincare products for its potential antimicrobial benefits.

Clove is a tropical plant native to Indonesia. The flower buds are often used as a spice [\[R\]](#) [\[R\]](#).

Clove oil is made from clove flower buds. Its active ingredient *eugenol* may help with toothaches and heavy sweating [\[R\]](#) [\[R\]](#) [\[R\]](#).

How it helps

Clove oil contains eugenol, a natural antiseptic and pain reliever. It helps by numbing the area around the toothache and reducing inflammation, providing temporary relief from pain.

8

Topical Tea Tree Oil

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Apply a few drops of 100% tea tree oil to a cotton swab or ball and gently dab onto the affected area of the skin. Do this 1-2 times daily until improvements are noticeable, usually for a period of 1-4 weeks. Avoid applying tea tree oil to large areas of the skin and test on a small patch of skin first to ensure no allergic reaction occurs.

Description

Tea tree oil is used topically for its antimicrobial and antifungal properties, commonly applied to treat skin conditions like acne, fungal infections, and insect bites. Its main chemical compound of interest is terpinen-4-ol, and it is sourced from the leaves of the tea tree, *Melaleuca alternifolia*.

[Tea tree oil](#) is derived mostly from steaming the leaves of *Melaleuca alternifolia*, a tree native to Australia [\[R\]](#).

It’s used to treat a number of conditions, such as [\[R\]](#):

- Acne
- Dandruff
- Nail fungus
- Lice
- Athlete's foot

How it helps

Tea tree oil has antibacterial and anti-inflammatory properties. Applied topically, it can help reduce the bacteria causing toothache and soothe inflammation.

9



Avoid Sugary Foods & Drinks

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

To avoid sugary foods, eliminate or significantly reduce consumption of foods and beverages high in added sugars such as sodas, candies, baked goods, and sugary cereals from your diet. Instead, opt for natural sugar sources like fruits. Aim to do this daily for ongoing health benefits.

Description

High-sugar foods like baked goods, sweets, and sugary drinks, can spike your blood sugar levels. Consuming a lot of these types of foods can contribute to health issues like diabetes, obesity, insomnia, and heart disease.

High-sugar foods and refined carbs have a high glycemic index (GI). This means they tend to spike your blood sugar levels. They include [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Sugary drinks
- Baked goods
- Sweets
- White bread
- White rice
- Pasta

Eating a lot of sugary foods can contribute to:

- Diabetes [\[R\]](#), [\[R\]](#), [\[R\]](#)
- Weight gain and obesity [\[R\]](#), [\[R\]](#)
- Insomnia [\[R\]](#)
- Heart disease [\[R\]](#)

You may also want to avoid processed sugars and sugary drinks. They may have a role in increasing IL-1B [\[R\]](#), [\[R\]](#).

How it helps

Eating sugary foods can lead to tooth decay, which is a major cause of toothaches. Bacteria in your mouth feed on sugar, producing acids that damage tooth enamel and can result in cavities. Reducing sugar intake helps prevent cavities and tooth pain.

10



Cold Applications

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Apply a cold pack or a bag of frozen peas wrapped in a towel to the affected area for 15-20 minutes, every 2-3 hours during the first 48 hours of experiencing pain or swelling.

TYPICAL STARTING DOSE

15 minutes

Description

Cold applications, such as ice packs, can help reduce inflammation, alleviate pain, and promote muscle recovery after injuries or intense physical activity. Applying cold can provide temporary relief from discomfort and support the body's natural healing processes.

People use cold applications to relieve pain, reduce inflammation, and more [\[R\]](#) [\[R\]](#).

Types of cold applications include [\[R\]](#) [\[R\]](#):

- Ice packs
- Ice baths
- Cryotherapy

How it helps

Applying a cold pack or a bag of frozen peas wrapped in a towel to the outside of your cheek can help reduce toothache pain by numbing the area and reducing swelling.

11



Green Tea Extract

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take a green tea extract supplement containing 250-500 mg of EGCG (the active compound in green tea) daily, preferably with a meal to enhance absorption. This dosage is typically split into two separate doses, taken in the morning and later in the day. Continue this regimen for at least three months to observe potential health benefits.

TYPICAL STARTING DOSE

250 mg

Description

Green tea extract is a concentrated form of the beneficial compounds found in green tea, such as catechins. It is used in dietary supplements for its potential to enhance metabolism, aid in weight management, and provide antioxidant protection.

[Green tea](#) is made from the same plant as black tea (*Camellia sinensis*). However, the leaves and buds are processed differently [\[R\]](#).

Green tea contains **catechins**. These are antioxidants that help prevent [oxidative stress](#) [\[R\]](#).

EGCG is the main catechin found in green tea. It may help reduce inflammation and support weight loss [\[R\]](#).

How it helps

Green tea extract has antibacterial and anti-inflammatory properties. It can aid in alleviating pain and in fighting infections that might be causing the toothache.