

Gum Disease

DNA Health Report

REPORT CATEGORY —



DENTAL & MOUTH
HEALTH

Sample Client

Report date: 15 January 2026

Powered by

omicsedge

Table of Contents

03 How this works

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

07 Introduction

08 Your genetics

10 Your recommendations

80 Next Steps

- 80 Your Lab Results

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

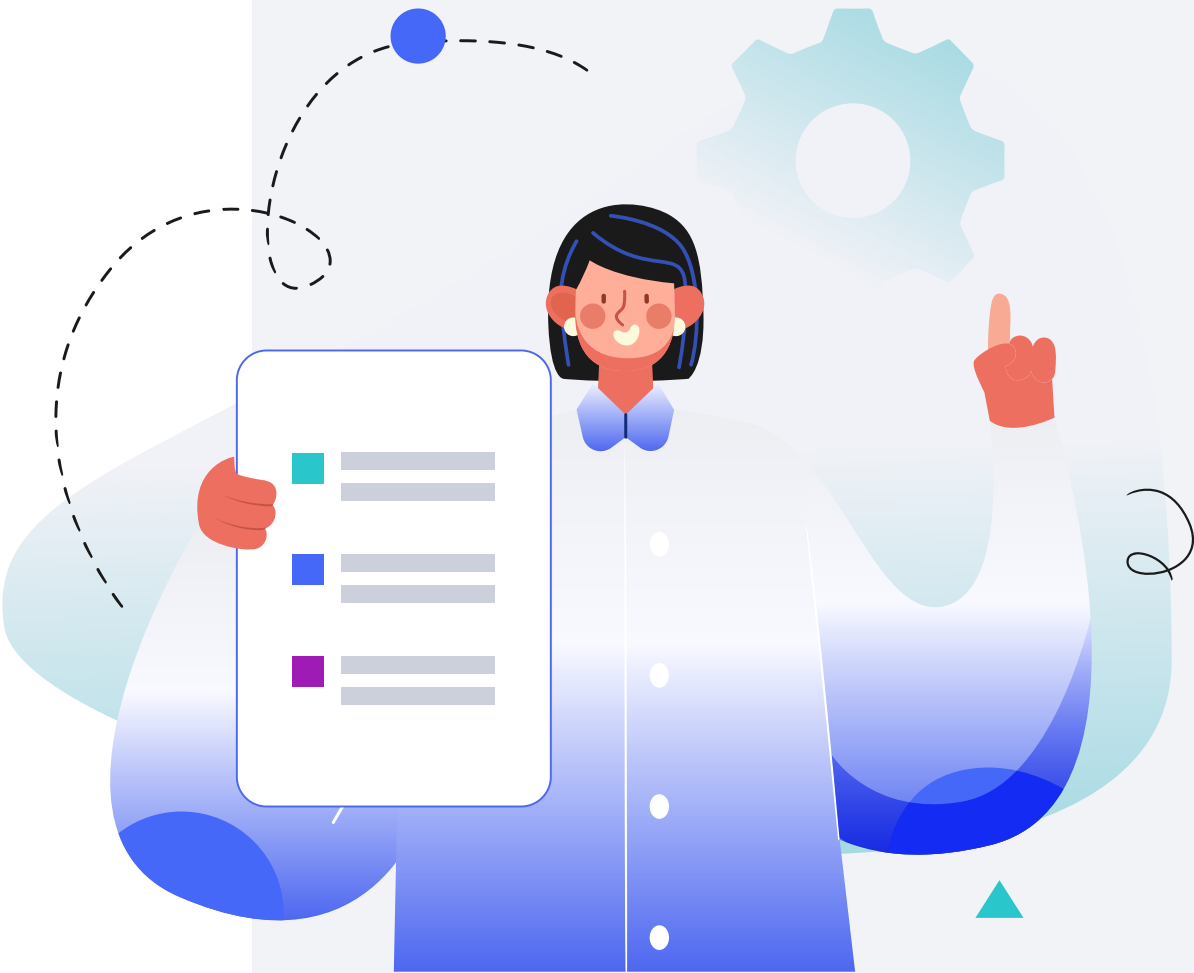
Male

HEIGHT

5ft 5" 165cm

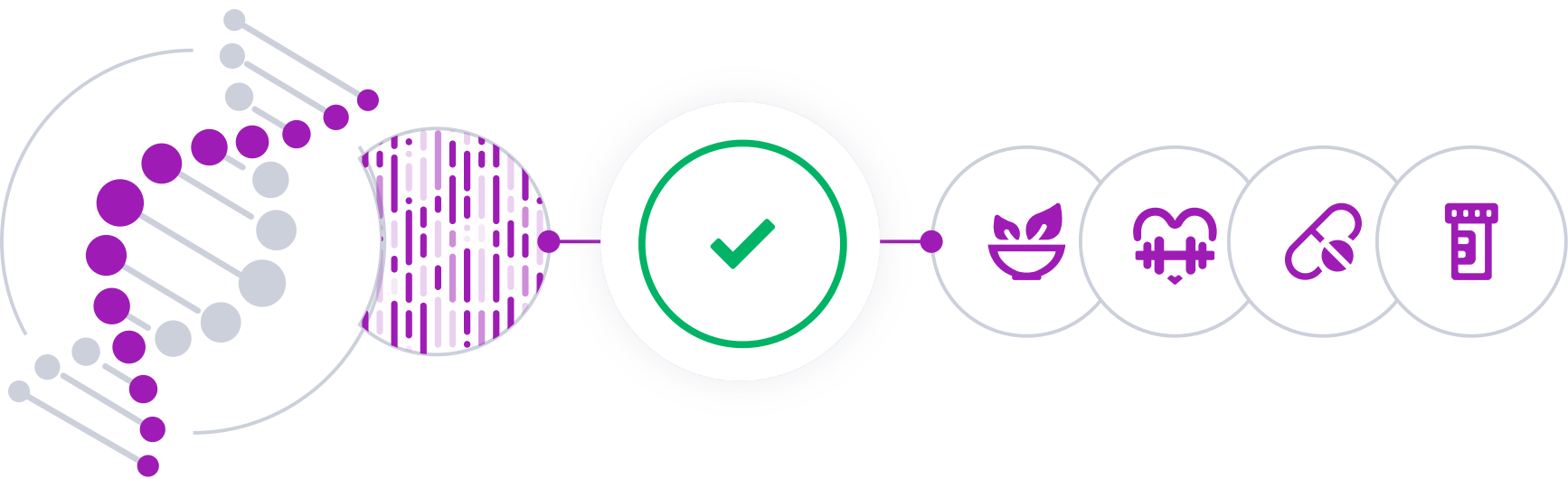
WEIGHT

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

Red gums? Sensitive teeth? Bad breath? It could be gum disease.

A lot of us avoid visiting the dentist, so we do our utmost to maintain good dental hygiene.

Despite this, **about 4 in 10 American adults over 30 have some form of gum disease** [\[R\]](#). That’s not surprising, considering our mouths contain over 6 billion bacteria [\[R\]](#)!

Some of these bacteria contribute to gum disease [\[R\]](#), [\[R\]](#).

The best way to avoid gum disease at the hands of these bacteria is to brush your teeth twice a day and floss daily.

But did you know that your DNA can also contribute to your risk of gum disease [\[R\]](#)?

Fortunately, you can identify the ways in which your DNA is increasing your risk of gum disease and take action.

One example of this is the [IL1B](#) gene. A particular variant of this gene may put you at an increased risk of gum disease, likely **by increasing gum inflammation**. The good news is that **curcumin supplements and green tea mouthwashes** may help reduce gum inflammation [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

There are a few ways you can use your DNA to potentially improve your gum health and reduce those dreaded trips to the dentist!

Read on to find out more about:

- **How your genetics play a role in gum disease**
- **Your genetic risk score based on over 130,000 genetic variants**
- **Personalized recommendations based on your genetics**

About Gum Disease

Key Takeaways:

- About **30%** of the differences in people's chances of developing gum disease may be attributed to genetics.
- Risk factors include: poor oral hygiene, smoking, diabetes, hormonal changes in females, and some infections and medications.
- 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 lifestyle factors.

Gum disease affects the tissue surrounding the teeth. It includes *gingivitis* (milder form) and *periodontitis* (more severe form) [R, R, R, R].

Gum disease is caused by a buildup of plaque on the teeth. Dental plaque is a sticky white film of bacteria. The presence of bacteria in the mouth is normal. However, if you don't brush and floss regularly, these bacteria can start to cause problems [R].

Gum disease is one of the most common diseases of the mouth. At any given time, about **4 in 10** adults over the age of 30 have some form of gum disease. Up to **9 out of 10** people will have some form of gum disease at some point in their lives [R, R, R]!

Early gum disease may not cause any symptoms. Later, symptoms may include [R, R]:

- Bleeding during brushing or flossing
- Bad breath
- Gum pain or tenderness
- Sensitive or loose teeth
- Receding gums

Risk factors for gum disease include [R, R]:

- **Poor oral hygiene**
- **Smoking**
- Diabetes



MORE LIKELY

More likely to have gum disease based on 127,977 genetic variants we looked at



Your risk is greater than 99% of the population and lower than 1% of the population.

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
ADAMTS8	rs12792526	AA
KMT5C	rs140900046	GG
ZNF579	rs149546760	GG
PDCD6IP	rs145744974	AA
HMX3	rs61862032	TT
SS18	rs9966832	AA
USP14	rs57440971	CC
HSBP1	rs149740259	GA
NRSN1	rs146696563	CT
SS18	rs8097810	AA
DKK1	rs112125027	AA
SS18	rs11877878	AA
SHISA9	rs729876	TT
PLG	rs1247559	CC
/	rs9984417	TT
PTPRT	rs7345986	AA
BCL2A1	rs36035742	CT
HUNK	rs2833579	GG
YBEY	rs9982623	TC
BTG1	rs11829373	CG
SEC61A2	rs3780866	AG
SIGLEC14	rs11084095	AG
BCORL1	rs2361405	A
/	rs7086701	GT

- Hormonal changes (in women and girls)
- Some medications
- Some infections (e.g., AIDS)
- **Genetics**

Professional dental cleaning is the first step of treating gum disease. After this cleaning, **improved brushing and flossing habits are essential**. A dentist may also recommend using a gentle antiseptic [\[R\]](#).

Besides cleaning, it's important to manage the risk factors of gum disease. Many health professionals recommend [\[R\]](#):

- Avoiding cigarettes
- Managing blood sugar if you have diabetes

Persistent gum disease may require antibiotics [\[R\]](#).

Left untreated, gum disease can cause tooth loss [\[R, R, R\]](#).

About 30% of the differences in people's chances of developing gum disease may be attributed to genetics.

Genes involved in gum disease tend to influence the immune system and inflammation. They include [\[R, R, R, R, R\]](#):

- [ORM1](#)
- [PLG](#)
- [SIGLEC5](#)
- [IL1A](#)
- [IL1B](#)

GENE	SNP	GENOTYPE
GYPC	rs6725179	AG
POLG2	rs111854052	AA
BIRC5	rs17879146	TT
KLLN	rs149784093	CC
LRRC25	rs78015699	CC
MTHFS	rs75598935	GG
NKAIN2	rs13204086	CC
ETS2	rs9979250	CC
WNT5A	rs1875110	TT
NKAIN2	rs77490164	CC
TOMM7	rs73082373	TT
DMRTA1	rs7031401	AA
MBD2	rs1995138	GG
RPAP3	rs886431	AA
PITX2	rs9992954	CC
ACTN1	rs12050161	CC

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

Your Recommendations

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

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

DOSAGE		DOSAGE	
1	Good Oral Hygiene	2 minutes	
2	Probiotics	10 billion	
3	Anti-Inflammatory Diet		
4	Avoid Secondhand Smoke		
5	Oil Pulling		
6	Green Tea Mouthwash		
7	Lactobacillus Reuteri	10 billion CFU	
8	Aloe Vera	50 mg	
9	Infrared Light Therapy		
10	Vitamin C	500 mg	
11	Dairy Products		
12	Chewing		
13	Omega-3 (Fish Oil)	500 mg	
14	Green Tea	400 mg	
15	Relaxation Techniques	30 minutes	
16	Yoga	30 minutes	
17	Mangosteen	500 mg	
18	Extra Virgin Olive Oil (EVOO)		
19	Lactobacillus Salivarius	10 billion CFU	
20	Bloodroot		
21	Vitamin E	200 iu	
22	Melatonin	500 mcg	
23	Papaya	500 mg	
24	Bifidobacterium Animalis Subsp. Lactis	10 billion CFU	
25	Hyperbaric Oxygen Therapy	90 minutes	
26	Propolis		
27	Pomegranate Extract	250 mg	
28	Holy Basil (Tulsi)	300 mg	
29	Magnolia Bark		
30	Low-Level Laser Therapy (LLLT)	30 seconds	
31	Pomegranate		
32	Mastic Gum	350 mg	

33	Neem	300 mg	34	Coenzyme Q10 (CoQ10)	100 mg
35	Curcumin	500 mg	36	Bifidobacterium Lactis HN019	10 billion CFU
37	Guava		38	Lactoferrin	100 mg
39	Tomato		40	Lycopene	10 mg
41	Maintain Optimal Vitamin D Levels	1000 iu	42	Chitosan	500 mg
43	Avoid Cadmium Exposure		44	Gotu Kola and Pomegranate	
45	Thyme		46	Topical Silica	
47	Borage Oil	2 g	48	Emoxypine	
49	Ginkgo	120 mg	50	Garlic Supplement	200 mg
51	Cashews		52	Rehmannia	250 mg
53	Avoid Mercury Exposure		54	Blackberries	
55	Avoid Workplace Exposure To Cobalt		56	Rosemary	400 mg
57	Chamomile	300 mg	58	Brown Seaweed	500 mg
59	Microneedling		60	Topical Calendula	
61	Chinese Skullcap	300 mg	62	Kiwifruit	
63	Avoid Lead Exposure		64	Theaflavins	
65	Kimchi		66	Lettuce	
67	Reduce Molybdenum Exposure		68	Clove	500 mg
69	Avoid Exposure to Heavy Metals		70	Chicory	
71	Avoid Formaldehyde Exposure		72	Cranberry	

73	Resveratrol	150 mg	74	Spirulina	500 mg
75	Cinnamon	500 mg	76	Amla	
77	Collagen Peptides	10 g	78	Star Anise	300 mg

1



Good Oral Hygiene

IMPACT

5 / 5

EVIDENCE

5 / 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

Not brushing the teeth regularly can increase the risk of gum disease [\[R\]](#), [\[R\]](#), [\[R\]](#).

Experts recommend good oral hygiene to prevent and improve symptoms of gum disease [\[R\]](#), [\[R\]](#), [\[R\]](#).

Electric toothbrushes may be better than manual toothbrushes at improving gum health [\[R\]](#), [\[R\]](#), [\[R\]](#).

The following may further improve gum health [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Floss or water flosser
- Brushes that can reach between the teeth (interdental brushes)
- Mouthwash

2



Probiotics

IMPACT

4 / 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
10 billion

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 may help improve gum disease when used with dental treatment [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Probiotics that may help include:

- [Lactobacillus reuteri](#) [\[R\]](#), [\[R\]](#), [\[R\]](#)
- [Lactobacillus salivarius](#) [\[R\]](#), [\[R\]](#), [\[R\]](#)
- [Bifidobacterium animalis](#) [\[R\]](#), [\[R\]](#)

Probiotics may help by fighting harmful bacteria in the mouth [\[R\]](#), [\[R\]](#), [\[R\]](#).

 PERSONALIZED TO YOUR GENES

People with your **IL6** gene variant may have more harmful bacteria in the mouth. Probiotics may help with gum disease by fighting these bacteria [\[R\]](#), [\[R\]](#), [\[R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
IL6	rs1800795	GG	

3



Anti-Inflammatory Diet

IMPACT3 / 5

EVIDENCE4 / 5

How to implement

Incorporate foods rich in omega-3 fatty acids, such as salmon and flaxseeds, fruits, vegetables, nuts, and whole grains into your daily meals. Avoid processed foods, red meats, and refined sugars. Aim for a balanced diet consisting mostly of plant-based foods and lean protein sources, adjusting portions sizes to meet your individual nutritional needs and health goals.

Description

An anti-inflammatory diet focuses on reducing inflammation in the body by emphasizing foods rich in anti-inflammatory compounds, such as fruits, vegetables, fatty fish, nuts, and seeds, while minimizing processed foods and those high in added sugars and trans fats.

Anti-inflammatory diets use healthy foods to reduce inflammation. These diets are generally high in [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Colorful fruits and vegetables
- Nuts and seeds
- Fish
- Olive oil
- Tea

They also tend to restrict [\[R\]](#), [\[R\]](#):

- Processed food
- Sugar and refined carbs
- Red meat

The [Mediterranean diet](#) and the DASH diet are good examples of anti-inflammatory diets [\[R\]](#), [\[R\]](#).

How it helps

Eating a lot of inflammatory foods is linked to a higher risk of gum disease and worse symptoms in people who have it. These include foods high in sugar and saturated fat. However, one study found this link only in people who are obese [\[R\]](#), [\[R\]](#), [\[R\]](#).

In line with this, anti-inflammatory diets may help reduce the risk of gum disease. Foods and drinks that may help include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Water
- Fruits
- Vegetables
- Seafood
- Whole grains
- Olive oil

Eating 5 or more servings of fruit and vegetables can help with gum disease and prevent tooth loss [\[R\]](#).

4



Avoid Secondhand Smoke

IMPACT3 / 5

EVIDENCE4 / 5

How to implement

Implementing a smoke-free lifestyle involves communicating your needs to family, friends, and coworkers, requesting they respect your choice by smoking away from you. At home, establish strict no-smoking policies indoors. When out, choose smoke-free venues and accommodations. Advocate for smoke-free environments in your community and support legislation that promotes public health by reducing exposure to secondhand smoke. Utilize air purifiers at home to reduce any residual particles.

Description

Avoiding secondhand smoke is crucial for maintaining good health. Exposure to secondhand smoke can lead to respiratory problems, cardiovascular disease, and an increased risk of lung cancer, even in non-smokers. Protecting oneself from secondhand smoke involves staying away from smoking areas, ensuring smoke-free environments at home and work, and advocating for smoke-free policies in public spaces.

How it helps

Smoking is linked to a higher risk of gum disease. Even exposure to secondhand smoke may make gum disease more severe [\[R, R, R\]](#).

In line with this, **experts recommend avoiding cigarette smoke to help with gum disease** [\[R, R, R\]](#).

Those who smoke may experience [\[R, R, R, R, R\]](#):

- Increased need for root canal surgery
- Decreased treatment success for gum disease
- Tooth loss

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

- Weakening the gums
- Increasing oxidative stress

Quitting may help prevent gum disease and tooth loss. It may also improve the outcomes of dental treatment [\[R, R, R, R\]](#).

5



Oil Pulling

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

Swish 1 tablespoon of a high-quality, unrefined oil such as coconut, sesame, or olive oil in your mouth for 15-20 minutes. Do this first thing in the morning before eating or drinking anything. Spit the oil out into the trash (not the sink to avoid clogging pipes) and rinse your mouth with warm water afterwards. Repeat this daily for at least 3-4 weeks to see potential benefits.

Description

Oil pulling is an ancient practice involving swishing oil in the mouth, which is believed to improve oral health by reducing harmful bacteria and promoting fresher breath.

How it helps

Oil pulling can benefit gum disease by reducing the amount of harmful bacteria in the mouth, potentially helping to improve oral hygiene and gum health. However, it should not replace traditional dental care - regular brushing, flossing, and dentist visits.

In multiple non-placebo-controlled trials, oil pulling therapy using sesame or coconut oil demonstrated effectiveness comparable to chlorhexidine in reducing plaque, gingival index scores, bacterial counts, and improving oral hygiene indices in both adolescent boys with gingivitis and healthy volunteers. Additionally, oil pulling caused less tooth staining than chlorhexidine in some studies [[R](#), [R](#), [R](#), [R](#), [R](#), [R](#)].

6



Green Tea Mouthwash

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

To use green tea as a mouthwash, brew 1-2 teaspoons of green tea leaves in 8 ounces of hot water for 3-5 minutes. Allow the tea to cool to a warm or room temperature before using it to rinse your mouth for 30 seconds to 1 minute. Repeat this process 2-3 times daily after brushing your teeth.

Description

Green tea mouthwash contains the natural antibacterial properties of green tea catechins and may help improve oral hygiene and reduce the risk of gum disease and cavities. It offers a natural alternative to traditional mouthwash.

[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 may help fight bacteria. **Green tea mouthwash** may help reduce plaque, gum bleeding, and gum inflammation [\[R, R, R, R, R\]](#).

However, **drinking green tea or applying it to the gums may not help with gum disease** [\[R\]](#).

Please note: polyphenols from green tea may bind to iron and form insoluble complexes, which reduces iron absorption in the gut. If you have anemia, consult your healthcare provider before using green tea [\[R\]](#).

7



Lactobacillus Reuteri

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

Take a supplement containing *Lactobacillus reuteri* daily, ideally choosing a product that specifies CFU (colony-forming units) to ensure you receive an effective dose. Dosage can vary depending on the specific product, but it's typically around 10 billion CFUs. Continue taking the supplement for at least 4 to 8 weeks to evaluate its benefits for your gut health.

TYPICAL STARTING DOSE
10 billion CFU

Description

Lactobacillus reuteri is a beneficial probiotic strain that can support digestive health and contribute to a balanced gut microbiome. It may help improve gut function, enhance nutrient absorption, and bolster the immune system, promoting overall well-being.

Lactobacillus reuteri is a [probiotic](#) bacterium that is part of the normal [microbiome](#) of the gut, skin, urinary tract, and, occasionally, the stomach [\[R\]](#).

L. reuteri is also used as a probiotic. People take it to help with [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- High cholesterol
- Gut diseases
- Constipation
- Helicobacter pylori infections

In the 1960s, **30-40 percent** of people had *Lactobacillus reuteri* as a part of their microbiome. Today, estimates suggest it is found in only **10-20 percent** [\[R\]](#), [\[R\]](#).

How it helps

Lactobacillus reuteri as an add-on to standard therapy may reduce periodontitis [\[R\]](#), [\[R\]](#).

8



Aloe Vera

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Take a 50 mg Aloe vera supplement daily, with a glass of water, preferably at the same time each day to maintain consistency.

TYPICAL STARTING DOSE

50 mg

Description

Aloe vera is a succulent plant native to arid regions and contains a gel-like substance in its leaves that is rich in vitamins, minerals, and antioxidants, making it beneficial for soothing skin irritations, promoting wound healing, and providing relief from conditions such as sunburn and minor burns. The primary active compounds in aloe vera gel include polysaccharides, vitamins like vitamin C and E, and minerals such as zinc, which contribute to its healing and anti-inflammatory effects.

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

People use aloe gel to help soften the skin and soothe burns [\[R\]](#).

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

How it helps

Aloe vera appears effective in improving gum health. Studies suggest *Aloe vera* mouthwash is comparable to chlorhexidine for reducing gum inflammation. Aloe vera formulations like gel, mouthwash, and toothpaste show promise in enhancing periodontal parameters. However, *Aloe vera* toothpaste wasn't more effective than fluoride toothpaste in some trials [\[R, R, R, R, R, R\]](#).

Aloe vera has anti-inflammatory and antimicrobial properties. This may help reduce gum inflammation and eliminate bacteria that cause gum disease.

9



Infrared Light Therapy

IMPACT

3 / 5

EVIDENCE

3 / 5

Description

Infrared light therapy is a type of light therapy that uses infrared light to improve circulation, reduce pain, and promote healing. It has been shown to be effective in treating a variety of conditions, including arthritis, chronic pain, and wound healing.

How it helps

A meta-analysis of 28 studies found that infrared laser therapy modestly improves clinical attachment level and probing depth in patients with moderate to severe periodontitis [\[R\]](#).

10



Vitamin C

IMPACT

3 / 5

EVIDENCE

2 / 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

500 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

Low vitamin C is linked to the development and progression of gum disease [\[R\]](#).

In line with this, **supplementing with vitamin C (200 mg/day)** may help prevent gum inflammation. It may also help improve gum bleeding in people with mild gum disease. However, it may not help improve severe gum disease [\[R\]](#), [\[R\]](#), [\[R\]](#).

Please note: *Supplementing with vitamin C is linked to a slightly higher risk of kidney stones in men. Talk to your doctor before taking vitamin C* [\[R\]](#), [\[R\]](#).

 PERSONALIZED TO YOUR GENES

People with your [SLC23A1](#) gene variant may be more prone to gum disease. This variant is linked to lower vitamin C levels [\[R\]](#), [\[R\]](#). Take special care to get enough vitamin C.

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
SLC23A1	rs6596473	CC	

11



Dairy Products

IMPACT

3 / 5

EVIDENCE

2 / 5

How to implement

Incorporate 2-3 servings of low-fat or fat-free dairy products into your daily diet. One serving could be 8 ounces of milk, 1 cup of yogurt, or 1.5 ounces of cheese. Choose options that are low in added sugars and consume as part of balanced meals or snacks throughout the day.

Description

Dairy products, such as milk, yogurt, and cheese, are rich sources of calcium and protein. They are essential for bone health, providing nutrients that support strong bones and teeth, as well as overall nutritional well-being.

Dairy products are made from milk. They include [\[R\]](#):

- Cheese
- Yogurt
- [Kefir](#)
- Butter
- Cream

Dairy products contain high levels of [calcium](#). Calcium helps build strong bones [\[R\]](#).

How it helps

Consuming dairy products is linked to a lower risk of gum disease [\[R\]](#), [\[R\]](#).

This may be because many dairy products are good sources of calcium and protein. These nutrients are important for oral health [\[R\]](#).

12



Chewing

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Incorporate chewing thoroughly into your daily eating habits by ensuring each bite is chewed 20-30 times before swallowing. Practice this technique at every meal and with snacks to improve digestion and satiety.

Description

Chewing can help to reduce the tendency to overeat by keeping your mouth busy and providing a sense of fullness. It can also help to improve your metabolic rate and increase your energy levels. Additionally, chewing can help to improve your attention span and reduce stress levels.

How it helps

A meta-analysis of 12 studies concluded that sugar-free chewing gum with green tea and xylitol reduces plaque [\[R\]](#).

Regular chewing stimulates saliva production, which naturally cleanses the mouth and neutralizes acidic bacterial byproducts. If you're chewing sugarless gum, it can flush out food particles, further preventing gum infections.

13



Omega-3 (Fish Oil)

IMPACT2 / 5

EVIDENCE3 / 5

How to implement

Take 1-2 g of omega-3 (fish oil) supplement daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

500 mg

Description

Omega-3 fatty acids are essential fats found in fatty fish like salmon, flaxseeds, and walnuts. They are known for their potential cardiovascular and brain health benefits, including reducing the risk of heart disease and supporting cognitive function.

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

Fatty fish are rich in EPA and DHA. They include [\[R\]](#):

- Salmon
- Tuna
- Herring
- Sardines

For optimal protection, 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

Adding **omega-3 supplements** to dental treatment may help with gum disease. It may help by decreasing gum inflammation [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

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

14



Green Tea

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Consume 400 mg of green tea extract daily. This can be taken in the form of capsules or tablets available that specify the amount of green tea extract. Ensure the supplement is taken according to the product's specific instructions, usually once a day with water.

TYPICAL STARTING DOSE

400 mg

Description

Tea is a beverage made by steeping the leaves of the *Camellia sinensis* plant in hot water. It comes in various types, including black, green, white, and herbal teas, and is known for its diverse flavors and potential health benefits due to antioxidants and other bioactive compounds.

[Green](#) and black tea are made from the same plant (*Camellia sinensis*). This plant is processed in different ways to make each type of tea [\[R\]](#), [\[R\]](#).

Tea contains antioxidants called **flavonoids**, which may help prevent [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Heart disease
- Cancer
- Diabetes

How it helps

Regular intake of green tea may be associated with a lower risk of periodontal disease [\[R\]](#).

A study showed that daily green tea intake as an adjunct to standard therapy improved gum health compared to control groups [\[R\]](#).

The intake of green tea may help by reducing salivary levels of nitric oxide, which is involved in the inflammatory processes of chronic periodontitis [\[R\]](#).

Please note: polyphenols from green tea may bind to iron and form insoluble complexes, which reduces iron absorption in the gut. If you have anemia, consult your healthcare provider before using green tea [\[R\]](#).

15



Relaxation Techniques

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Incorporate relaxation techniques such as deep breathing exercises, meditation, or yoga into your daily routine. Spend at least 15-30 minutes each day practicing one of these techniques, preferably in a quiet, comfortable space without interruptions.

TYPICAL STARTING DOSE

30 minutes

Description

Relaxation techniques encompass various methods like deep breathing, yoga, meditation, and progressive muscle relaxation, aimed at reducing stress and promoting mental and physical relaxation. Practicing these techniques regularly can help manage stress, improve mental clarity, and enhance overall emotional well-being.

We all get stressed from time to time.

[Stress](#) can help you deal with a challenge or avoid danger. However, **it’s not healthy to be stressed for a long time** [\[R\]](#), [\[R\]](#).

Relaxation techniques such as [yoga](#) and [meditation](#) can relieve stress in different ways. Most of them focus on breathing and help you get rid of negative thoughts and emotions [\[R\]](#).

People use relaxation techniques to improve conditions like [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Anxiety
- Depression
- Chronic pain

Progressive muscle relaxation is another relaxation technique. In this technique, you focus on tensing and relaxing different parts of your body. It is common to start with the toes and slowly work your way up to the neck and head [\[R\]](#), [\[R\]](#).

Autogenic training is a relaxation technique that a person may carry out on their own. It uses exercises that take the mind’s attention to bodily sensations such as warmth and heaviness [\[R\]](#), [\[R\]](#).

How it helps

Stress is linked to an increased risk of gum disease and more severe symptoms [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Relaxation techniques like yoga may help. Practicing yoga is linked to a reduced stress response and better gum health. It may also support gum disease treatment outcomes [\[R\]](#), [\[R\]](#), [\[R\]](#).

16



Yoga

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Practice yoga for at least 20 to 30 minutes a day, most days of the week. Choose a style that matches your fitness level and goals, and consider attending a class or using online resources to guide your practice.

TYPICAL STARTING DOSE

30 minutes

Description

Yoga is a mind-body practice that combines physical postures, breathing exercises, and meditation. It enhances flexibility, strength, and mental well-being and is used for stress reduction, relaxation, and overall health improvement.

[Yoga](#) combines breathing, stretching, and relaxation techniques. Practicing yoga may help [\[R, R, R\]](#):

- Reduce [stress](#)
- Improve fitness
- Lower blood pressure and heart rate
- Manage pain

How it helps

Stress is linked to an increased risk of gum disease and more severe symptoms [\[R, R, R, R, R, R\]](#).

Relaxation techniques like yoga may help. Practicing yoga is linked to a reduced stress response and better gum health. It may also support gum disease treatment outcomes [\[R, R, R\]](#).

17



Mangosteen

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 500-1000 mg of mangosteen extract daily, in capsule form, with meals. It is typically advised to start at the lower end of the dosage range and adjust based on tolerance and effect. Continue this regimen for at least 3-6 months to evaluate its benefits.

TYPICAL STARTING DOSE

500 mg

Description

Mangosteen is a tropical fruit rich in antioxidants and phytonutrients, potentially offering various health benefits, including anti-inflammatory and immune-supporting properties. It is commonly consumed for its potential to promote overall well-being.

How it helps

Applying a gel with 4% mangosteen pericarp in the gums as an add-on to standard therapy improved gum inflammation, plaque, and bacterial growth better than standard therapy alone in 2 studies of 81 people [\[R\]](#), [\[R\]](#).

Taking a capsule with mangosteen and propolis extracts (194 mg/day for 8 weeks) also helped in a study of 104 people with gingivitis or early-stage periodontitis [\[R\]](#).

18



Extra Virgin Olive Oil (EVOO)

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate 1-2 tablespoons of extra virgin olive oil into your daily diet. Use it as a dressing for salads, vegetables, or incorporate it into cooking, but avoid using it at high temperatures to preserve its health benefits.

Description

Extra virgin olive oil is a high-quality olive oil obtained from the first pressing of olives. It is rich in monounsaturated fats and antioxidants, like polyphenols, and is associated with various health benefits, including heart health and anti-inflammatory properties.

[Olive oil](#) is fat from the olive, a traditional tree of the Mediterranean Basin [\[R\]](#).

Olive oil has anti-inflammatory and antioxidant properties. It may also reduce the risk of [\[R\]](#), [\[R\]](#):

- Heart disease
- Diabetes
- Cancer

Olive oil is also the primary fat source in the [Mediterranean diet](#), which may improve brain and heart health [\[R\]](#).

How it helps

In a study of 20 people with periodontitis, topical ozonated olive oil (both alone and as an add-on to standard therapy) improved bacterial growth and gum inflammation. However, its use as an add-on increased dental hypersensitivity [\[R\]](#).

Similarly, a mouthwash with ozonated olive oil used as an add-on to standard therapy reduced inflammation and bleeding better than standard therapy alone in a study of 96 people with periodontitis [\[R\]](#).

19



Lactobacillus Salivarius

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take a probiotic supplement containing Lactobacillus salivarius daily, preferably with a meal to enhance absorption. The exact dosage can vary, but a common amount is around 10 billion CFUs (colony forming units). It is generally recommended to continue taking the probiotic for at least four weeks to observe benefits.

TYPICAL STARTING DOSE
10 billion CFU

Description

Lactobacillus saliverius is a beneficial probiotic strain that can support digestive health and contribute to a balanced gut microbiome. It may help improve gut function, enhance nutrient absorption, and bolster the immune system, promoting overall well-being.

How it helps

In various trials, supplementation with *L. salivarius* strains improved periodontal health. *L. salivarius* WB21 reduced clinical parameters and plaque index, particularly benefiting smokers. Tablets with *L. salivarius* WB21 and xylitol reduced the presence of harmful bacteria. *L. salivarius* SGL03 supplementation decreased pocket depth in patients with stage-I or -II periodontitis. *L. salivarius* NK02 mouthwash improved multiple periodontal parameters in patients with moderate to severe chronic periodontitis. Lozenges containing *L. salivarius* ssp. *salicinius* AP-32, *L. paracasei* ET-66, and *L. plantarum* LPL28 reduced plaque, modulated oral microbiota, and increased IgA levels in healthy volunteers [R, R, R, R, R, R, R].

L. salivarius competes with harmful bacteria in your mouth and helps reduce their numbers, potentially preventing gum disease.

20



Bloodroot

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

For use as a supplement, bloodroot should be taken in capsule form, usually available in doses ranging from 100mg to 400mg. It is recommended to start with the lowest dose and gradually increase if necessary, not exceeding 400mg per day. This supplement should be taken with water, once daily, and after consulting a healthcare provider to ensure it is safe for individual use.

Description

Bloodroot has been used in traditional medicine for various purposes, including its potential as an anti-inflammatory and antimicrobial agent.

How it helps

Toothpastes and mouth rinses with bloodroot extract (0.03-0.075% or 150-300 ug/mL for 3-28 weeks) reduced bleeding (by 26-43%), inflammation, and plaque severity while improving gum health in 6 studies of over 300 people [R, R, R, R, R, R].

21



Vitamin E

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 200 IU of Vitamin E daily as a supplement, preferably with a meal that contains fat to enhance absorption.

TYPICAL STARTING DOSE

200 iu

Description

Vitamin E is a fat-soluble antioxidant found in various foods, such as nuts and seeds. It is known for its ability to protect cells from oxidative damage, support immune function, and may play a role in skin health. Vitamin E supplements are used to bolster antioxidant defenses and may be beneficial for conditions related to oxidative stress.

[Vitamin E](#) is an antioxidant important for the immune system and for heart health [\[R\]](#).

Plant-based foods have the most vitamin E. These include [\[R\]](#):

- Wheat germ
- Sunflower seeds
- Almonds
- Plant oils

Adults need about **15 mg** of vitamin E per day [\[R\]](#).

How it helps

Vitamin E acts as a powerful antioxidant, reducing inflammation in your gums caused by gum disease. It also assists in building and repairing tissues, promoting faster healing of inflamed or damaged gums.

Dietary vitamin E supplementation has shown potential benefits in the management of periodontitis, particularly when combined with standard periodontal treatments like scaling and root planing (SRP). Vitamin E, known for its antioxidant properties, may help reduce the inflammatory process of periodontitis and improve clinical indices such as attachment loss. However, the specific regimen details, including the optimal dosage and duration of vitamin E supplementation, are not well-established in the literature.

Key points from clinical trials [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Vitamin E may enhance the effectiveness of standard periodontal treatments.
- Antioxidant properties of vitamin E can help reduce inflammation in periodontal tissues.
- The clinical improvement observed with vitamin E supplementation includes reduced attachment loss and improved periodontal healing.

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 [\[R\]](#).

22



Melatonin

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 500 mcg of melatonin orally, about 30 minutes before bedtime, to help with sleep. It can be taken daily as needed.

TYPICAL STARTING DOSE

500 mcg

Description

Melatonin is a natural hormone produced by the pineal gland in the brain that helps regulate the sleep-wake cycle. It plays a crucial role in promoting sleep onset and maintaining a consistent sleep pattern, making it a commonly used supplement for managing sleep disorders and jet lag.

[Melatonin](#) is an important sleep hormone. Bright light at night may prevent your body from making enough melatonin [\[R, R, R\]](#).

Your body makes melatonin on its own. However, some people take melatonin supplements to help them sleep. It may help with jet lag in particular [\[R, R, R\]](#).

How it helps

A meta-analysis of 14 studies found that people with periodontitis may have lower melatonin levels (by 3.26 pg/mL). However, the authors warned about the low quality of the included studies. Supplementation with melatonin (especially at doses of 3-10 mg/day) may improve probing depth, clinical attachment loss, and gingival index in patients with periodontitis according to a meta-analysis of 7 trials and 412 participants [\[R, R\]](#).

Melatonin may help by reducing inflammation and oxidative stress in the gum tissue.

23



Papaya

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 500 mg of papaya extract daily for at least one month to observe potential health benefits. If using powdered form, it can be mixed with water or juice for easier consumption.

TYPICAL STARTING DOSE

500 mg

Description

Papaya is a tropical fruit native to Central America and Mexico that is rich in vitamins A and C, folate, and dietary fiber. It has a long history in traditional medicines as a digestive aid and promoting skin health. Papaya's extract, papain, is used as a dietary supplement for digestive support.

Papaya is a tropical orange fruit. It originates from Central America, but today it’s most widely grown in India.

People enjoy the great taste of papaya. It’s also rich in healthy nutrients that may support the immune system.

How it helps

In a study of 100 healthy volunteers, a toothpaste with papaya extract reduced gum bleeding and inflammation as much as standard toothpaste [\[R\]](#).

Applying fermented papaya gel (7 g, 15 min/day for 10 days) in the gums as an add-on to conventional therapy further reduced bleeding, plaque, and gum inflammation in a study of 84 people with moderate-to-severe periodontitis [\[R\]](#).

24



Bifidobacterium Animalis Subsp. Lactis

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take a supplement containing Bifidobacterium animalis subsp. lactis at a dose of 10 billion colony-forming units (CFU) daily, with or without food. Joe's preferred strain is *B. lactis* HN019 (10B CFU). Continue this regimen daily for at least 2 weeks to 4 weeks to observe potential benefits.

TYPICAL STARTING DOSE

10 billion CFU

Description

Bifidobacterium animalis lactis is a specific strain of probiotic bacteria known for its potential to support digestive health and immune function.

[Bifidobacterium animalis](#) is a [probiotic](#) bacterium that can be found in the healthy gut of most mammals, including humans. *B. lactis* was previously considered to be a separate species but was shown to be a subspecies of *B. animalis* [\[R\]](#), [\[R\]](#).

People mainly take *B. animalis* to support gut health [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

How it helps

Bifidobacterium Animalis Subsp. Lactis is a probiotic that helps maintain oral health by countering harmful bacteria in the mouth. Regular intake can reduce the progression of gum disease by limiting the growth of harmful bacteria which cause gum inflammation.

In a study with 30 patients, one group received SRP and B. lactis HN019 probiotics, while the other received SRP and a placebo for 30 days. The test group had improved oral health, including lower plaque and gingival bleeding, increased BD-3, TLR4, and CD-4 expressions in gingival tissues, reduced P. gingivalis adhesion, and antimicrobial potential. This suggests that B. lactis HN019 may be a beneficial probiotic for non-surgical periodontal therapy in patients with GCP, and a similar trial confirmed these findings [\[R\]](#), [\[R\]](#).

In an RCT, 60 patients had supragingival scaling and received probiotic or placebo lozenges for 8 weeks. Both groups reduced PI similarly, but the test group had lower BoP, better GI scores, fewer cases of generalized gingivitis, and lower inflammatory markers in GCF [\[R\]](#).

In a randomized trial, individuals with specific oral health criteria received either placebo or B. animalis yogurt for 28 days after professional prophylaxis. The probiotic group showed significantly better outcomes ($P < 0.001$) in PI, GI, BOP, GCF volume, and IL-1 β levels after plaque accumulation [\[R\]](#).

In a trial with 30 periodontitis patients, one group consumed yogurt with Bifidobacterium animalis subsp. lactis DN-173010, while the other had natural yogurt for 28 days. The test group showed significant improvements in PI, GI, and BOP, but no significant differences in PD and CAL changes compared to the control group [\[R\]](#).

25



Hyperbaric Oxygen Therapy

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Schedule and attend sessions in a hyperbaric oxygen therapy chamber as your doctor prescribes, typically for about 60 to 90 minutes per session. The exact number of sessions required can vary based on the condition being treated, but it often ranges from 20 to 40 sessions, which may be conducted daily or a few times a week.

TYPICAL STARTING DOSE

90 minutes

Description

Hyperbaric oxygen therapy increases the amount of oxygen in the blood and tissues, which can help to improve circulation, reduce inflammation, and promote healing.

How it helps

In 6 non-placebo-controlled trials of over 150 patients with periodontitis, oxygen therapy (especially hyperbaric oxygen combined with supragingival and subgingival scaling) improved pocket depth, bacterial count, and other measurements of periodontal health [R, R, R, R, R, R].

Hyperbaric oxygen therapy increases oxygen supply to the gums, boosting healing and reducing inflammation associated with gum disease.

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

26



Propolis

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take a propolis supplement in capsule or tablet form, typically ranging from 500mg to 1000mg per day. It's best to follow the dosage instructions on the product label or a healthcare provider's advice. Propolis can be taken continuously, but consult a healthcare provider for specific durations especially if it exceeds three months.

Description

Propolis is a resinous substance collected by bees from tree buds and used to seal their hives. It has been traditionally used in natural medicine for its potential antimicrobial properties and as a source of antioxidants that may support oral and immune health.

Propolis is a waxy compound, also known as “bee glue.” Honeybees make it from plants and use it to build, repair, and protect their hives [\[R\]](#).

People use propolis to potentially help [\[R\]](#):

- Reduce the appearance of acne
- Maintain oral health
- Support the immune system

How it helps

Toothpaste and mouthwash with propolis may help reduce plaque and gum bleeding [\[R\]](#), [\[R\]](#).

Propolis supplements may also help with gum disease [\[R\]](#), [\[R\]](#).

Similarly, **applying propolis to the gums** may help make gum disease less severe. It may help alone or when added to dental treatment [\[R\]](#), [\[R\]](#).

Propolis may help by fighting “bad” bacteria [\[R\]](#), [\[R\]](#).



PERSONALIZED TO YOUR GENES

People with your [IL6](#) gene variant may have more harmful bacteria in the mouth. Propolis may help with gum disease by fighting these bacteria [\[R\]](#), [\[R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
IL6	rs1800795	GG	

27



Pomegranate Extract

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 250 to 500 mg of pomegranate extract once daily, preferably with a meal to enhance absorption. This should be continued consistently for at least 4 weeks to observe potential health benefits.

TYPICAL STARTING DOSE

250 mg

Description

Pomegranate extract is derived from the fruit of the pomegranate tree, a plant that has been used traditionally for thousands of years, from the Mediterranean to Asia. Pomegranate extract is often used today in supplements due to its high levels of antioxidants like punicalagins and anthocyanins, which may support heart health and reduce inflammation.

[Pomegranates](#) are red fruits that contain seeds covered by edible sweet coats. They are rich in antioxidants [\[R, R\]](#).

Pomegranate may reduce inflammation and support heart health. People use pomegranate seed oil and peel in cosmetics and traditional medicine [\[R, R\]](#).

How it helps

Mouthrinses with pomegranate used for 5 days reduced plaque, bleeding, and bacterial counts, changed salivary measures relevant to oral health, and improved antioxidant status in 4 placebo-controlled trials of 177 healthy participants [\[R, R, R, R\]](#).

Pomegranate extract contains potent antioxidants and anti-inflammatory properties, which aid in reducing gum inflammation and bleeding. Its antimicrobial properties can also help to kill and inhibit the growth of bacteria that cause plaque.

28



Holy Basil (Tulsi)

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take 300-600 mg of a holy basil extract daily, divided into two doses, with meals. Continue this supplementation for at least one month to observe benefits.

TYPICAL STARTING DOSE
300 mg

Description

Holy basil, also known as Tulsi, is an adaptogenic herb traditionally used in Ayurvedic medicine for its potential to reduce stress, boost immunity, and support overall well-being. It contains compounds believed to have anti-inflammatory and antioxidant properties.

How it helps

In a study of 30 healthy people instructed to discontinue oral hygiene for 4 days, a mouthwash with holy basil reduced bacterial growth as much as standard therapy. A mouth rinse with another basil species (*O. gratissimum*) offered similar benefits [R, R].

In a study of 40 children, the essential oil of holy basil also reduced bacterial growth. However, standard therapy offered greater benefits [R].

29



Magnolia Bark

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take a magnolia bark supplement containing 200-400mg of magnolol and honokiol, the active compounds, once or twice daily. It is best taken with food to improve absorption. Usually, magnolia bark supplements are taken for several weeks to months to experience the full benefits.

Description

Magnolia bark is used in traditional medicine for its potential to reduce stress and anxiety due to its compounds that interact with the brain's neurotransmitters. Incorporating magnolia bark supplements or herbal preparations may support mental well-being and relaxation.

How it helps

In a study of 120 people with bleeding gums, using a sugar-free chewing gum with magnolia bark extract (for 30 days) reduced plaque, bacterial growth, and gum bleeding [R].

Similarly, using a toothpaste with 0.3% magnolia bark extract (for 6 months) reduced gingivitis better than a control toothpaste in a study of 94 participants [R].

30



Low-Level Laser Therapy (LLLT)

IMPACT2 / 5

EVIDENCE2 / 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

Low-Level Laser Therapy can help treat gum disease by encouraging cell growth and speeding up wound healing, which aids in restoring your gums' health. Furthermore, it can reduce inflammation and discomfort, two common symptoms of gum disease.

In a meta-analysis of 7 randomized controlled trials (RCTs), low-level laser therapy (LLLT) combined with scaling and root planing (SRP) showed short-term benefits for pocket depth and interleukin-1 β levels, but no significant intermediate-term effects. Long-term impact remains uncertain due to methodological weaknesses; more robust studies are needed [\[R\]](#).

31



Pomegranate

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate pomegranate into your diet by consuming fresh pomegranate seeds, drinking pure pomegranate juice, or adding pomegranate extract to smoothies or yogurts. Aim for at least one serving per day, which could be about half a cup of seeds or a glass (8 ounces) of juice, to gain its health benefits.

Description

Pomegranate is a fruit native to regions of the Middle East and Mediterranean. It is rich in antioxidants and nutrients such as vitamin C, vitamin K, and dietary fiber. It contains punicalagins, anthocyanins, and ellagic acid, which give it anti-inflammatory effects and potential heart health benefits.

[Pomegranates](#) are red fruits that contain seeds covered by edible sweet coats. They are rich in antioxidants [\[R\]](#), [\[R\]](#).

Pomegranate may reduce inflammation and support heart health. People use pomegranate seed oil and peel in cosmetics and traditional medicine [\[R\]](#), [\[R\]](#).

How it helps

Punicalagin, a component of pomegranate, has been shown to improve clinical parameters in people with chronic periodontitis by reducing inflammation when used with standard therapy [\[R\]](#).

Studies have found that pomegranate mouthwash may reduce dental plaque and improve gingival status, suggesting its effectiveness in managing gingival diseases and maintaining oral hygiene [\[R\]](#).

Pomegranate extract may help by reducing the growth of bacteria such as Porphyromonas gingivalis, which is implicated in periodontitis [\[R\]](#).

32



Mastic Gum

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take 350-1000 mg of mastic gum in capsule form daily, usually divided into two doses - morning and evening, with a glass of water. Follow these instructions for at least two weeks to see improvements in digestive health.

TYPICAL STARTING DOSE

350 mg

Description

Mastic gum is a natural resin with potential digestive health benefits. It's believed to support gastrointestinal comfort and may help alleviate symptoms of conditions like indigestion and acid reflux.

[Mastic](#) is a resin from the mastic tree. The mastic tree is native to the Greek island of Chios [\[R\]](#), [\[R\]](#).

Mastic is consumed as a chewing gum, used in cosmetics, and added to foods and drinks as a sweetener. People also take it to potentially help with gut problems [\[R\]](#).

How it helps

In a study of 20 healthy volunteers, chewing gum with mastic gum reduced the total number of plaque bacterial colonies [\[R\]](#).

A systematic review of 14 studies identified mastic gum among the ingredients with beneficial effects on plaque [\[R\]](#).

33



Neem

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 300-500 mg of neem extract daily with water, preferably after a meal. Do this for up to 10 weeks to help manage conditions like gastric ulcers and skin health. Always consult with a healthcare provider before starting any new supplement regimen.

TYPICAL STARTING DOSE

300 mg

Description

Neem is a medicinal plant from the mahogany family of trees, known for its antibacterial and anti-inflammatory properties, often used in skincare and herbal remedies to alleviate skin conditions, support oral health, and promote overall well-being.

Neem (*Azadirachta indica*) is a member of the mahogany family of trees. It is native to parts of Asia [\[R\]](#).

Neem may help support gum health and improve ulcers [\[R\]](#).

How it helps

Using toothpaste with neem may improve oral health. It may help reduce plaque, gum inflammation, and gum bleeding [\[R, R, R\]](#).

Mouthwashes with neem may have similar benefits. However, one study didn't find significant benefits for gum disease [\[R, R, R, R, R, R\]](#).

34



Coenzyme Q10 (CoQ10)

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take a 100 mg Coenzyme Q10 (CoQ10) supplement once daily with a meal that contains fat for better absorption.

TYPICAL STARTING DOSE

100 mg

Description

Coenzyme Q10 (CoQ10) is a naturally occurring antioxidant that plays a crucial role in cellular energy production. It is often taken as a supplement to support heart health, improve energy levels, and provide antioxidant protection, especially for individuals with certain medical conditions or as they age.

[Coenzyme Q10](#) (CoQ10) is a compound that helps enzymes work better. By doing so, CoQ10 helps improve [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Energy levels
- Antioxidant protection
- Heart health
- Muscle strength
- Blood sugar control

The amount of CoQ10 made by your body decreases as you get older. Luckily, you can also get it from food or supplements. Good sources of CoQ10 include [\[R\]](#), [\[R\]](#):

- Organ meats
- Fatty fish
- Whole grains

How it helps

A study demonstrated that CoQ10, when delivered subgingivally along with standard therapy, improved gum inflammation in smokers with chronic periodontitis. This suggests that CoQ10 may enhance the healing process in periodontal tissues [\[R\]](#).

A review of the beneficial effects of CoQ10 on periodontal health supports its use in managing periodontitis, particularly due to its antioxidant properties, which may help combat oxidative stress involved in periodontal disease [\[R\]](#).

35



Curcumin

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take a 500 mg curcumin supplement daily with food. To enhance absorption, take it with a meal that contains fats or oils since curcumin is fat-soluble.

TYPICAL STARTING DOSE

500 mg

Description

Curcumin is a compound found in turmeric known for its anti-inflammatory and antioxidant properties. It has been studied for its potential to reduce inflammation, support joint health, and contribute to overall well-being.

[Turmeric](#) is a yellow spice from India. It may reduce inflammation and [oxidative stress](#) [\[R\]](#).

The most important active compound in turmeric is **curcumin**. People use curcumin for [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Joint pain
- Hay fever
- Mood
- High blood sugar
- Gut health
- Liver health

How it helps

A **mouthwash with curcumin** may help when added to dental treatment for gum disease [\[R\]](#), [\[R\]](#).

Nanocurcumin supplements (80 mg/day for 28 days) may decrease gum inflammation and bleeding in people with mild gum disease. However, they may not reduce plaque [\[R\]](#).

Note that curcumin is hard to absorb. Nanocurcumin and other types of *bioavailable* curcumin may be easier to absorb. Combining it with [piperine](#) (a compound in black pepper) may also help [\[R\]](#), [\[R\]](#).

Please note: *curcumin may interfere with iron absorption due to its iron-chelating properties, potentially exacerbating anemia or making it harder to manage. If you have anemia, consult your healthcare provider before using curcumin or turmeric supplements* [\[R\]](#), [\[R\]](#), [\[R\]](#).

36



Bifidobacterium Lactis HN019

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

TYPICAL STARTING DOSE

10 billion CFU

Description

[Bifidobacterium animalis](#) is a [probiotic](#) bacterium that can be found in the healthy gut of most mammals, including humans. *B. lactis* was previously considered to be a separate species but was shown to be a subspecies of *B. animalis* [\[R, R\]](#).

People mainly take *B. animalis* to support gut health [\[R, R, R, R, R, R\]](#).

B. lactis HN019 is a strain known for its resilience to stomach acid and bile, which allows it to survive the harsh conditions of the gastrointestinal tract and colonize the gut effectively. It may help improve gastrointestinal function, alleviate symptoms of irritable bowel syndrome, enhance immune response, and reduce the risk of certain infections.

How it helps

In 2 placebo-controlled trials of 30 patients with chronic periodontitis, supplementation with *Bifidobacterium lactis* HN019 for 30-90 days reduced plaque index, probing pocket depth, and the number of oral pathogens while increasing clinical attachment, and the expression of BD-3, TLR4, and CD-4. Similarly, this strain reduced plaque index and inflammatory markers (IL-1α, IL-1β, and MCP-1) in a placebo-controlled trial of 60 patients with generalized gingivitis [\[R, R, R\]](#).

37



Guava

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate fresh guava into your diet by consuming 1-2 whole fruits daily or adding sliced guava to salads, smoothies, or yogurts. This can be continued as a regular part of your daily dietary intake to obtain its nutritional benefits.

Description

Guava is a nutritious fruit rich in vitamins, minerals, and dietary fiber. Consuming guava can support immune health, digestive regularity, and overall well-being.

Guava (*Psidium guajava* L.) is a tropical fruit found from India to Indonesia, and the Caribbean to Latin America. The fruit and leaves of the guava plant have been used medicinally for centuries.

People use guava fruit and leaf extracts to potentially help with [\[R\]](#), [\[R\]](#):

- Diabetes
- Digestive issues
- Weight control
- Joint health

How it helps

Guava, rich in vitamin C, strengthens your gums and the soft tissue in your mouth, reducing the likelihood of gum disease. The anti-inflammatory and antibacterial properties of guava can also help prevent bacteria from sticking to teeth, lessening plaque build-up and warding off gum diseases.

In a non-placebo-controlled trial of 48 young nonsmoking adults, consuming guava (200 g/day) prevented the development of experimental gingivitis. In a placebo-controlled trial of 60 patients with chronic gingivitis, using a mouthrinse with 0.15% guava leaf extract for 30 days reduced gingival index, plaque index, and microbial counts. Similarly, a mouthwas with guava extract (15 mL, 2x/day) for 7 days reduced oral streptococci in a non-placebo-controlled trial of 40 schoolchildren [\[R\]](#), [\[R\]](#), [\[R\]](#).

38



Lactoferrin

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 100-200 mg of lactoferrin supplement per day, preferably on an empty stomach to enhance its absorption. Continue this regimen daily for 8 to 12 weeks to observe beneficial effects.

TYPICAL STARTING DOSE

100 mg

Description

Lactoferrin is a protein found in milk and other bodily fluids that has been studied for its potential health benefits, including immune system support and antimicrobial properties. It plays a role in promoting gut health.

Lactoferrin is a protein found in milk. It can bind to iron and travel all around the body [R].

Lactoferrin may help support [R, R]:

- Immunity
- Iron status

How it helps

Lactoferrin, an iron-binding protein found in cow and human milk, combats gum disease by hindering bacterial growth. It also possesses anti-inflammatory properties, reducing swelling and bleeding in your gums.

In a randomized, double-blinded, placebo-controlled parallel group study with 47 elderly people, a lactoferrin and lactoperoxidase-containing tablet (after every meal for 8 weeks) improved the oral hygiene status of older individuals. It **reduced the total number of bacteria in the tongue coating, the number of Porphyromonas gingivalis and Fusobacterium nucleatum, the total number of bacteria and the number of P. gingivalis in the supragingival plaque** [R].

A randomized, double-blind, placebo-controlled clinical trial with 150 healthy adults found that high-dose tablets containing lactoferrin (LF) and lactoperoxidase (LPO) (LF 60 mg/d, LPO 7.8 mg/day for 12 weeks), **improved gingival health and oral health-related quality of life. They reduced the gingival index, plaque index, and the Oral Health Impact Profile (OHIP)** [R].

39



Tomato

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Incorporate fresh or cooked tomatoes into your daily diet. This can be achieved by adding them to salads, sandwiches, pastas, and sauces or simply eating them on their own. Aim for at least one serving (approximately 1 medium-sized tomato or 1/2 cup of chopped or cooked tomatoes) per day.

Description

Tomatoes are a fruit grown widely in numerous varieties, and are rich in vitamins C and K, as well as the antioxidant lycopene, which may contribute to heart health and protect against certain chronic diseases when incorporated into a balanced diet.

Tomato (*Solanum lycopersicum*) is a fruit originally from the Andes in South America. It is usually consumed as a vegetable in juices, sauces, or fresh. Tomato is an important source of [R]:

- [Vitamin C](#)
- Potassium
- Antioxidants (e.g., [lycopene](#))
- Vitamin B9 ([folate](#))

Tomato is traditionally used for [R, R]:

- High cholesterol
- High blood pressure

How it helps

Tomatoes are high in vitamin C, which promotes dental health by strengthening your gums and protecting them against disease. Its antioxidant properties also aid in fighting off damaging free radicals, reducing gum inflammation.

In a [non-placebo-controlled trial of 20 patients with periodontal disease](#), supplementation with lycopene (4 mg/day) as an add-on to oral prophylaxis **improved clinical attachment loss in those with mild to moderate periodontitis better than oral prophylaxis alone** [R].

Similarly, solid lipid microparticles encapsulating lycopene **decreased oxidative stress in the periodontal tissue** in a [non-placebo-controlled trial of 16 patients with chronic periodontal disease](#) [R].

40



Lycopene

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Take a lycopene supplement of 10 to 30 mg per day. It can be consumed with a fat-containing meal to enhance absorption. This supplementation can be ongoing daily to support overall health benefits such as heart health and antioxidant protection.

TYPICAL STARTING DOSE

10 mg

Description

Lycopene is a powerful antioxidant found in tomatoes and other red or pink fruits and vegetables. Consuming lycopene-rich foods may help reduce the risk of chronic diseases and support heart and prostate health.

[Lycopene](#) is a bright red substance that gives color to a number of fruits such as [R](#), [R](#):

- Tomato
- Watermelon
- Papaya
- Apricot

Lycopene has antioxidant properties. It may help support [R](#), [R](#), [R](#):

- Heart health
- Prostate health
- Cognition

How it helps

Lycopene, a powerful antioxidant, can help in treating gum disease by reducing gum inflammation and the damaging action of bacteria responsible for the disease. It also boosts immunity, accelerating the repair of affected gum tissues.

In a study with 20 gingivitis patients, those receiving 8 mg lycopene daily for 2 weeks (OP-lycopene) showed a significant decrease in gingival inflammation (GI) compared to the placebo groups [R](#).

In a double-blinded trial, 42 subjects with chronic periodontitis received lycopene or a placebo alongside scaling and root planing. The Lycopene group exhibited superior results in plaque, gum health, bleeding, and some biomarkers compared to the placebo group. Other parameters showed improvement but weren't statistically significant [R](#).

The study developed solid lipid microparticles (SLMs) containing lycopene (LP) to combat oxidative stress in chronic periodontitis. LP-loaded SLMs showed controlled drug release and reduced oxidative damage, supporting their potential as a treatment adjunct alongside scaling and root planing [R](#).

How to implement

TYPICAL STARTING DOSE

1000 iu

Description

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

People with chronic gum disease tend to have lower blood levels of vitamin D [R].

Adding vitamin D supplements to dental treatment may help make gum disease less severe. However, supplements may help only in people with low vitamin D levels [R, R].

Vitamin D may help by reducing 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].

How to implement

TYPICAL STARTING DOSE

500 mg

Description

Chitosan is a dietary supplement derived from the shells of crustaceans like shrimp and crabs. It's sometimes used to support weight management by potentially reducing fat absorption in the digestive tract

Chitosan is made from chitin, a compound found in shellfish, fungi, and insects. Doctors mainly use products with chitosan to heal wounds [R].

Chitosan may help [[R](#), [R](#), [R](#), [R](#)]:

- Lower blood pressure
- Promote weight loss
- Control cholesterol levels
- Support oral health

How it helps

Using a mouthwash with chitosan may help reduce bacteria buildup and plaque. It may help alone or in combination with dental treatment [R, R, R].

Please note: *Be cautious when using chitosan if you are allergic to shellfish. Some products may contain shellfish proteins.*

43



Avoid Cadmium Exposure

IMPACT1 / 5

EVIDENCE2 / 5

How to implement

To avoid cadmium exposure, refrain from smoking or exposure to secondhand smoke, reduce consumption of foods high in cadmium like shellfish, liver, kidney meats, and certain leafy vegetables, and use ceramic or glass containers instead of plastic when microwaving food. Limit intake of cadmium-contaminated workplace air by using protective gear if you work in battery manufacturing, welding, or metal refining industries.

Description

Avoiding cadmium exposure is essential to prevent potential health risks associated with this heavy metal, such as kidney damage and increased cancer risk. Reducing exposure to cadmium-containing products and contaminated foods is crucial.

Heavy metals are elements naturally found in the environment. They are also used for agricultural, industrial, and medicinal purposes. Some can even be found in small amounts in your body [\[R\]](#), [\[R\]](#).

Long-term exposure to high amounts of heavy metals can be harmful to your health [\[R\]](#), [\[R\]](#).

Heavy metals that are most often linked to health problems include [\[R\]](#), [\[R\]](#):

- Lead
- Cadmium
- Arsenic
- Chromium
- Mercury

How it helps

A study of 1,966 participants over 19 years old associated cadmium exposure and periodontitis. Those with high cadmium levels had a 57% higher risk of periodontitis. The association varied by gender and smoking status [\[R\]](#).

Another study of 5,586 adults associated high urinary cadmium, cobalt, and polyaromatic hydrocarbons with an increased risk of gum disease [\[R\]](#).

Cadmium can weaken the immune system, making it harder to resist bacterial attacks that cause gum disease. Additionally, cadmium is known to cause bone damage.

44



Gotu Kola and Pomegranate

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take a supplement containing gotu kola and pomegranate extract once daily, typically in the morning with a glass of water. It is recommended to follow the specific dosage instructions provided on the product's packaging, as concentrations can vary between brands.

Description

Gotu kola is an herb used in traditional medicine for its potential to improve cognitive function, reduce inflammation, and support skin health. Pomegranate is a nutritious fruit rich in antioxidants and vitamins. Consuming pomegranate may support heart health, reduce inflammation, and offer various health benefits due to its high nutritional content.

How it helps

Gotu Kola encourages gum tissue repair while its anti-inflammatory capabilities help reduce swelling and discomfort. Pomegranate, with its strong antibacterial and antiviral qualities, aids in fighting bacteria to prevent and treat gum disease.

A mouthrinse with gotu kola and pomegranate used as an add-on to scaling and root planing for 6 months improved pocket depth, attachment level, and gingival index, and reduced IL-1beta and IL-6 levels in 2 placebo-controlled trials of 35 patients with periodontal disease [\[R\]](#), [\[R\]](#).

45



Thyme

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take thyme supplements in the form of capsules or pills, following the dosage instructions on the product label, usually once or twice a day with meals. It is important to consult with a healthcare provider before starting any new supplement regimen.

Description

Thyme is an aromatic herb used in cooking and herbal remedies. It contains essential oils and antioxidants and is known for its potential antibacterial and anti-inflammatory properties, supporting respiratory health.

How it helps

In a non-placebo-controlled trial of 60 patients with gum disease, using a mouthwash with thyme **reduced the gingival index and the levels of compounds associated with bad breath (volatile sulfur compounds)** [\[R\]](#).

Thyme has antifungal and antibacterial properties that can help combat the microbes causing gum disease.

46



Topical Silica

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Apply a silica gel or cream directly to the skin area in question, using enough to thinly cover the entire affected area. Do this twice daily, in the morning and before bed, for at least 4 to 8 weeks to see improvements.

Description

Topical silica typically refers to products containing silicon dioxide, a compound commonly found in skincare formulations. It's used for its absorbent properties to help control oiliness, mattify the skin, and improve the texture of cosmetic products.

How it helps

In a [non-placebo-controlled trial of 110 participants](#), using a whitening toothpaste with a special grade of silica **reduced supragingival plaque and gingivitis** [\[R\]](#).

A toothpaste with 0.3% triclosan, 2.0% PVM/MA copolymer, 0.243% sodium fluoride, and specially-designed silica **improved Plaque Index, Plaque Severity Index, Gingival Index, and Gingivitis Severity Index scores** in a [non-placebo-controlled trial of 115 participants](#) [\[R\]](#).

47



Borage Oil

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 2-3 grams of borage oil daily, in divided doses, with meals to help with inflammation or skin conditions. It is available in capsule form. This supplementation can be ongoing but consider a break or evaluation after 6 months.

TYPICAL STARTING DOSE

2 g

Description

Borage oil, derived from the seeds of the borage plant, is rich in gamma-linolenic acid (GLA), an omega-6 fatty acid. It is believed to have potential anti-inflammatory properties and may be used as a dietary supplement to support skin health and overall well-being.

Borage oil contains between 180-260mg of GLA per gram.

How it helps

In a study of 30 people with periodontitis, supplementation with borage oil (1,500-3,000 mg/day for 12 weeks) improved gum inflammation and plaque [\[R\]](#).

48



Emoxypine

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Emoxypine is typically available in oral capsules, tablets, or injectable forms, with the dosage depending on the condition being treated. For general antioxidant or neuroprotective purposes, the oral dose ranges from 125–250 mg taken 2–3 times daily, while more intensive treatments may require higher doses or injectable administration under medical supervision. It is usually recommended to take Emoxypine with meals to minimize gastrointestinal discomfort. Treatment duration can vary from a few weeks to several months, depending on the therapeutic goal.

Description

Emoxypine (2-ethyl-6-methyl-3-hydroxypyridine succinate) is a synthetic antioxidant and nootropic compound primarily used in Russia and some Eastern European countries. It is derived from pyridoxine (vitamin B6) and known for its neuroprotective, anti-stress, and anti-inflammatory properties.

Emoxypine can reduce anxiety, stress, and symptoms of depression by normalizing neurotransmitter levels and protecting brain cells from oxidative stress. Additionally, it has applications in managing cognitive impairment, improving memory, and protecting against age-related neurodegeneration. Emoxypine is also used for cardiovascular health, as it can improve blood flow and protect tissues from ischemia-reperfusion injuries.

Emoxypine works by scavenging free radicals, enhancing membrane fluidity, and improving the body's antioxidant defenses.

How it helps

The combination of Metrogil Denta gel and Emoxypine toothpaste improved chronic gingivitis in a trial [\[R\]](#).

A placebo-controlled trial comparing different antioxidants (including 1% Emoxypine) for chronic periodontitis found that all antioxidants improved the simplified oral hygienic index, papillary-marginal-alveolar index, and sialometry index. However, 1.5% reamberin was more effective than Emoxypine [\[R\]](#).

49



Ginkgo

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 120 mg of Ginkgo supplement daily, preferably with meals to aid absorption. This dosage is typically split into two 60 mg doses taken in the morning and evening for best results.

TYPICAL STARTING DOSE

120 mg

Description

[Ginkgo](#) (*Ginkgo biloba*) is an ancient tree used in traditional Chinese medicine [\[R\]](#), [\[R\]](#).

According to limited evidence, ginkgo leaf extract may help with [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Anxiety
- Dementia
- Eye problems
- Blood vessel problems
- Vitiligo

How it helps

Ginkgo promotes better blood circulation, and this includes circulation to your gums, which crucially can help strengthen them and fight against gum disease. Moreover, Ginkgo’s natural antioxidant and anti-inflammatory properties can protect your gums from damage and inflammation associated with gum disease.

In a [non-placebo-controlled trial of 60 patients with moderate to severe periodontitis](#), supplementation with ginkgo extract for 4 months **decreased the detection rate of all 4 pathogens, probing depth, and attachment loss** [\[R\]](#).

50



Garlic Supplement

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a garlic supplement, such as a garlic extract or aged garlic supplement, in a dosage of 600-1,200 mg per day, divided into separate doses. This should be taken with meals to minimize digestive issues. Continue daily for at least 8-12 weeks to evaluate its effects on health markers like blood pressure or cholesterol.

TYPICAL STARTING DOSE

200 mg

Description

Garlic is a pungent herb known for its potential health benefits, including cardiovascular support and immune system enhancement. It contains bioactive compounds that may help reduce the risk of chronic diseases and support overall well-being.

[Garlic](#) is a delicious aromatic herb that adds flavor to your food. But did you know that garlic has been a part of traditional medicine for thousands of years? **From ancient Egypt and Rome to China, people have praised garlic for its many health benefits.** Today, we can trace many of those benefits to sulfur-rich compounds found in garlic. People take garlic to help control their blood pressure and cholesterol [\[R\]](#).

Please note: *Garlic can interact with blood thinners (like aspirin, Plavix, Coumadin). If you are on blood thinners, consult your doctor before supplementing with garlic [\[R\]](#).*

How it helps

In a study of 200 people with periodontitis, supplementation with aged garlic extract (300 mg, 8x/day for 18 months) improved periodontitis [\[R\]](#).

Please note: *Garlic can interact with blood thinners (such as aspirin, Plavix, and Coumadin). In addition, garlic can irritate the stomach in some people. Talk to your doctor before taking garlic [\[R, R\]](#).*

51



Cashews

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate a handful of cashews (about 1 to 2 ounces) into your daily diet. You can eat them as a snack, or add them to meals like salads, stir-fries, or oatmeal for added texture and nutritional benefits.

Description

Cashews are a nutrient-rich nut known for their healthy fats, vitamins, and minerals. They are a versatile snack option that can support heart health, provide energy, and contribute to overall well-being.

Cashews are actually seeds and a rich source of omega-6s, and minerals including magnesium, manganese, zinc, iron, and selenium. A 1-ounces serving provides 2300 mg of omega-6.

How it helps

Cashews are packed with high levels of antioxidants, which are known to fight bacteria that lead to gum disease. Furthermore, these nuts stimulate saliva production, helping flush out any potential bacteria or food particles to prevent gum disease.

In a placebo-controlled trial of 30 healthy volunteers, using a mouthwash with 10% cashew for 30 days was as effective as chlorhexidine at reducing plaque and gingivitis [\[R\]](#).

52



Rehmannia

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take rehmannia in capsule form, with the usual dose being between 250 to 500 mg daily. It's best consumed with water, after meals to minimize digestive discomfort. Consult with a healthcare professional for personalized advice, especially if you have pre-existing conditions or are on other medications.

TYPICAL STARTING DOSE

250 mg

Description

Rehmannia (*Rehmannia glutinosa*) is a medicinal plant native to East Asia and the root of the plant has been used traditionally for centuries in China and Korea for various health purposes. Rehmannia contains various compounds, including iridoid glycosides and catalpol, which may provide benefits for kidney and gland health.

How it helps

In a non-placebo-controlled trial of 120 patients with chronic periodontal disease, supplementation with rehmannia (6 pills/day for 6 months) as an add-on to scaling and root planning reduced probing depth (by 0.43 mm) and increased gain in attachment level (by 0.22 mm) [R].

Rehmannia has anti-inflammatory properties that may help reduce gum inflammation, a common symptom of gum disease. Additionally, it assists in strengthening the immune system, which can help fight off bacteria that cause gum infections.

53



Avoid Mercury Exposure

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Limit consumption of large fish such as shark, swordfish, king mackerel, and tilefish, which are known to have higher mercury levels. Opt for smaller fish like salmon, shrimp, pollock, and catfish, and limit seafood intake to 8-12 ounces (two to three servings) per week. Check and follow local advisories regarding the safety of fish caught by family and friends in your local lakes, rivers, and coastal areas.

Description

Avoiding exposure to mercury, a toxic heavy metal found in certain seafood and environmental sources, is essential to prevent adverse health effects, including neurological damage and developmental issues.

Mercury and other [heavy metals](#) are found in the soil, water, food, and some commonly-used household products. They adversely affect the environment and living organisms. According to some studies, mercury is considered **the most toxic heavy metal** in the environment [\[R\]](#), [\[R\]](#).

A major source of mercury exposure is seafood, especially large fish such as [\[R\]](#):

- Tuna
- Shark
- Swordfish

How it helps

In a cross-sectional study of 1,328 people, mercury exposure was associated with periodontitis and was more pronounced in men [\[R\]](#).

54



Blackberries

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate a serving of blackberries into your daily diet, which is about 1/2 to 1 cup. You can add them to your morning cereal, blend them into a smoothie, or eat them as a snack.

Description

Blackberries are a delicious and antioxidant-rich fruit packed with vitamins and fiber. They can promote immune health, support digestive regularity, and contribute to overall well-being.

How it helps

Blackberries contain anthocyanins, which are powerful antioxidants that can fight bacteria and reduce inflammation, thus promoting gum health. Regular intake of blackberries can thus help prevent gum disease by strengthening your gums and fighting harmful bacteria.

In a study with 40 participants aged 20-30, consuming a mixed berry smoothie improved cognitive performance and reduced fatigue compared to a placebo. Berry intervention maintained accuracy and led to quicker response times during the study [\[R\]](#).

55



Avoid Workplace Exposure To Cobalt

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Identify and limit your exposure to cobalt at work by wearing protective clothing, such as gloves and masks, and ensuring proper ventilation in the workspace. Avoid working directly with cobalt or cobalt-containing products without adequate safety measures. If your job involves handling cobalt, follow all occupational safety guidelines and use recommended personal protective equipment at all times.

Description

Exposure in the workplace can be reduced by improving skin protection, using respirators, and maintaining adequate personal hygiene [\[R\]](#), [\[R\]](#).

How it helps

A study of 5586 adults associated high urinary cadmium, cobalt, and polyaromatic hydrocarbons with an increased risk of gum disease [\[R\]](#).

56



Rosemary

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take rosemary in supplement form, such as capsules, with a typical dose ranging from 400 to 600 milligrams once daily. It is best taken with food to improve absorption and reduce the risk of stomach irritation. Consult with a healthcare professional before starting, especially if pregnant, nursing, or on medication.

TYPICAL STARTING DOSE

400 mg

Description

Rosemary is a fragrant herb native to the Mediterranean region. It's a source of nutrients such as vitamin C, vitamin A, and dietary fiber. It contains antioxidants and compounds that may support digestion, improve memory, and have anti-inflammatory properties.

How it helps

Rosemary shows strong antimicrobial properties that can fight the bacteria causing gum disease. It can also reduce inflammation and promote wound healing, aiding in the recovery of affected gums.

In a [clinical randomized, controlled, open, and double-blind trial with 110 volunteers](#), toothpaste made from the extract of *Rosmarinus officinalis* Linn. (rosemary, for 30 days) **improved gingival bleeding and reduced bacterial plaque**, when compared with conventional toothpaste. It reduced the risk of gingival bleeding by **38%** (control 29.3%) and bacterial plaque by **22.7%** (control 28%) [\[R\]](#).

A [randomized double-blind placebo-controlled trial with 60 patients with gingivitis](#) found that a polyherbal mouthwash containing hydroalcoholic extracts of Zingiber officinale, Rosmarinus officinalis and Calendula officinalis (5% v/w) compared with chlorhexidine (twice a day, after breakfast and dinner, for 30 s for 2 weeks) **improved Gingival and plaque indices as much as chlorhexidine** [\[R\]](#).

57



Chamomile

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take chamomile supplements in the form of capsules or tablets, usually ranging from 300 to 400 mg, up to three times daily between meals. If using chamomile tea as a supplement, drink 1 to 4 cups daily.

TYPICAL STARTING DOSE

300 mg

Description

Chamomile is an herbal remedy derived from the dried flowers of the chamomile plant. It is widely used for its calming and soothing properties

Chamomile is an herb native to Africa, Asia, and Europe. It was used as a traditional herbal remedy in ancient Greece, Rome, and Egypt. Today, chamomile is used in cosmetics, aromatherapy, tea, and supplements. It may help with [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Skin problems
- Period cramps
- Gut problems
- Sleep quality
- Mood

How it helps

In a study of 75 people with chronic periodontitis, using a mouthwash with 1% chamomile as an add-on to standard therapy offered similar benefits to standard therapy. Another mouthwash with chamomile and pomegranate reduced bacterial growth [\[R\]](#), [\[R\]](#).

58



Brown Seaweed

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a supplement containing brown seaweed extract, such as *Fucus vesiculosus* or *Ascophyllum nodosum*, in capsule or powder form. Aim for a daily dosage of 500-1000 mg, preferably with meals to enhance absorption. Continue this regimen for at least 8-12 weeks to evaluate its effects on your health.

TYPICAL STARTING DOSE

500 mg

Description

Brown seaweed, such as kelp and wakame, is a nutrient-dense marine alga often used in Asian cuisine and dietary supplements. It's a natural source of essential minerals like iodine and may offer various health benefits, including thyroid support and potential antioxidant effects.

How it helps

In a 6-month study with 55 adults, using marine alga powder (ProDen PlaqueOff®) reduced calculus by 52%, improved plaque, and reduced gingival bleeding. However, it didn't affect gingivitis in 52 participants with prior calculus buildup [\[R\]](#).

59



Microneedling

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

To implement microneedling as a lifestyle recommendation for skin rejuvenation or scar treatment, use a dermaroller or microneedling device with needles of 0.2 to 1.0 mm in length, depending on the treatment area and sensitivity of your skin. Gently roll the device over the target area in a criss-cross pattern, ensuring to cover all desired areas, typically once every 2 to 4 weeks. Cleanse the skin and device before and after each use to prevent infection.

Description

Microneedling is a minimally invasive procedure that uses tiny needles to create tiny punctures in the skin. This can help to stimulate collagen production, improve skin texture, and reduce the appearance of scars.

How it helps

In a clinical trial with 24 patients having plaque-induced gingivitis, **microneedling, combined with topical coconut oil or sesame oil, significantly reduced gingival indices compared to periodontal mechanical treatment alone**. However, there was no significant difference in plaque indices among the three groups, highlighting microneedling's effectiveness in improving gingival health [\[R\]](#).

60



Topical Calendula

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Apply calendula cream or ointment to the affected area of skin 2-3 times daily. Ensure the skin is clean before application and continue using until improvement is noted, which could be from a few days to a couple of weeks, depending on the condition being treated.

Description

Calendula is an herbal remedy known for its potential anti-inflammatory and skin-soothing properties. It's often used topically in creams and ointments to promote skin health and wound healing.

How it helps

In a study of 240 people with gingivitis, using a mouthwash with calendula tincture (2 mL diluted in 6 mL distilled water for 3 months) improved gum health [\[R\]](#).

In a study of 60 people with gingivitis, a multi-herbal mouthwash with calendula, ginger, and rosemary extract improved periodontitis as much as standard therapy. However, another mouthwash with calendula extract, tea extract, and tea tree oil did not help in a study of 17 people [\[R\]](#), [\[R\]](#).

61



Chinese Skullcap

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a Chinese skullcap supplement of 300 to 500 mg, up to three times daily, with meals. Ensure to check the label for specific extract concentration and consult with a healthcare provider to adjust the dosage as needed.

TYPICAL STARTING DOSE

300 mg

Description

Chinese skullcap is an herb used in traditional Chinese medicine for its potential calming and anti-anxiety effects. It may be used to reduce stress and promote relaxation.

How it helps

In a study of 40 healthy volunteers instructed to discontinue the oral hygiene of 4 teeth for 21 days, using toothpaste with Chinese skullcap extract reduced bacterial growth and plaque [\[R\]](#).

62



Kiwifruit

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Eat one to two kiwifruits daily, either as a snack or incorporated into your meals. You can consume them for breakfast, add them to a salad for lunch, or blend them into a smoothie. Continue this practice as a regular part of your diet to gain its nutritional benefits.

Description

Kiwifruit is a vitamin C-rich fruit that supports immune health, digestion, and skin vitality. It's also a good source of dietary fiber, making it a nutritious addition to a balanced diet.

Kiwifruit are technically berries, full of vitamin E, fiber, other minerals and vitamins, particularly vitamin K and C. One kiwifruit provides 1.1 mg of vitamin E or 7%DV.

How it helps

Kiwifruit contains high levels of vitamin C, which boosts your general immunity and helps your gums fight off bacteria, reducing the chances of gum disease. Also, eating kiwifruit massages your gums due to its fiber content, stimulating them and improving overall oral health.

A randomized clinical trial with 50 people with untreated periodontal disease found that eating kiwifruit (2 units/day for 5 months) **reduced gingival inflammation, demonstrated by reduced bleeding score (by 6.67% ± 11.90%), plaque, and attachment loss after 2 months**. However, the control group did better in these same parameters after periodontal treatment [\[R\]](#).

A crossover clinical trial with 32 young adults found that an oral care tablet containing kiwifruit powder reduced volatile sulfur compounds, tongue-coating index, and the number of bacteria (including Fusobacterium nucleatum) in tongue coating more effectively than tongue brushing or dissolving the tablet naturally [\[R\]](#).

63



Avoid Lead Exposure

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Prevent lead exposure by using cold water for drinking and cooking, regularly cleaning dust from windowsills and floors, and ensuring that your home's paint is not chipping if it was built before 1978. For occupations involving potential lead exposure, use protective gear and follow safety protocols. Test your home for lead if it's old or you're concerned about contamination.

Description

Lead is a heavy metal. It is naturally found in the environment in small amounts [\[R\]](#), [\[R\]](#).

Exposure to lead can cause it to build up in the body. A buildup of lead can contribute to oxidative stress and cell damage. This is called **lead poisoning** [\[R\]](#), [\[R\]](#).

Lead is no longer used in the manufacturing of some products like gasoline and paint. However, it can still be found in some pipes, batteries, and the wall paint of older homes [\[R\]](#), [\[R\]](#), [\[R\]](#).

How it helps

In a NHANES study, higher levels of urinary lead were linked to an approximately 50% higher risk of periodontitis [\[R\]](#).

Lead can disrupt the body's response to infections and inflammation, increasing the severity of gum disease and impairing its healing.

64



Theaflavins

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a supplement containing 100-200mg of theaflavins daily, preferably with a meal to enhance absorption. This regimen should be maintained consistently for at least 3 to 6 months to evaluate its benefits on health.

Description

Theaflavins are antioxidants found in black tea, particularly after fermentation. They are associated with various potential health benefits, including supporting heart health and reducing oxidative stress.

How it helps

In a placebo-controlled trial of 56 healthy volunteers, supplementation with theaflavins for 6 weeks decreased the change ratio of *Prevotella intermedia*, suggesting protective effects on gum disease [\[R\]](#)

Theaflavins have strong antioxidant and anti-inflammatory properties. This may help reduce inflammation associated with gum disease. Additionally, they may inhibit the growth of bacteria that cause gum disease.

65



Kimchi

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate about a half cup of kimchi into one of your daily meals. This could be as a side dish or part of the meal for at least one month to observe potential health benefits such as improved digestion.

Description

Kimchi is a fermented vegetable dish commonly consumed in Korean cuisine. It's packed with probiotics and nutrients, which can promote gut health and boost the immune system.

How it helps

Kimchi, a fermented food, contains beneficial probiotics that can improve the health of your gut microbiome and also combat harmful bacteria in your mouth, potentially reducing your risk of gum disease. Its high vitamin C content can also boost gum health by promoting collagen production for healthier gums.

In a non-placebo-controlled trial of 32 patients of a long-term care hospital, using Dongchimi juice containing kimchi Lactobacillus as an oral hygiene agent 2x/day for 1 week was **at least as effective as chlorhexidine (0.12%) at improving oral health and reducing the number of oral pathogens** [\[R\]](#).

66



Lettuce

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate fresh lettuce into your diet by adding it to salads, sandwiches, and wraps. Aim for at least one serving (approximately one cup of chopped lettuce) daily for general health benefits.

Description

Lettuce is a low-calorie, nutrient-dense leafy green that can be a valuable addition to a balanced diet. It provides essential vitamins and minerals while contributing to hydration and supporting overall health.

Lettuce is a good source of the vitamins A, C, and K, and minerals like chromium, calcium, and potassium. A 5-ounce serving provides 1.8 mcg of chromium or 5%DV.

How it helps

In two placebo-controlled trials, lettuce-based interventions improved oral health. The first trial involved 44 patients with chronic gingivitis who consumed lettuce juice and resulted in a decrease in gingival index. The second study, with 37 patients experiencing gum inflammation, showed that a lettuce beverage with nitrate supplementation reduced gum inflammation and altered the gingival microbiome composition [\[R\]](#), [\[R\]](#).

Lettuce is high in vitamin C, a nutrient that promotes healthy gums and helps prevent periodontal issues. Additionally, the fiber-rich crunch of lettuce promotes saliva production, which clears away bacteria and food particles.

67



Reduce Molybdenum Exposure

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

To reduce molybdenum exposure, avoid high molybdenum foods such as legumes, grains, and nuts, especially if they are grown in soil high in molybdenum. Also, consider using a water filter that specifically reduces molybdenum content if your water supply has high levels of this element.

Description

Reducing molybdenum exposure entails minimizing contact with molybdenum compounds commonly found in industrial settings. This can help prevent potential health issues associated with molybdenum toxicity, such as digestive problems and neurological symptoms.

How it helps

A study associated high urinary lead, molybdenum, and strontium with a 73.8%, 51.5%, and 49.8% higher risk of gum disease, respectively [\[R\]](#).

Excess molybdenum can negatively affect gum health by disrupting the balance of essential minerals and interfering with copper absorption. Copper deficiency can lead to weakened connective tissues in gums.

68



Clove

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a clove supplement in capsule form, following the manufacturer's recommended dosage, usually ranging from 500 mg to 1000 mg daily with meals. Continue as long as needed or as directed by a healthcare provider.

TYPICAL STARTING DOSE

500 mg

Description

Clove is a spice known for its strong flavor and potential health benefits. It contains compounds like eugenol that have antioxidant and anti-inflammatory properties, making it a valuable addition to herbal remedies and culinary dishes.

How it helps

A randomized double-blind placebo-controlled study with 60 people with plaque and sites with gingival bleeding found that a herbal toothpaste formulated with a mixture (15% w/w) of the herbs *Acacia chundra Willd*, *Adhatoda vasica Nees.*, *Mimusops elengi L.*, *Piper nigrum L.*, *Pongamia pinnata L. Poir*, *Quercus infectoria Olivier.*, *Syzygium aromaticum L.*, *Terminalia chebula Retz.*, *Zingiber officinale Roscoe* (Sudantha for 12 weeks) reduced plaque index (PI), percentage sites with bleeding on probing (BOP), and anaerobic (SAnB) bacterial counts. However, it did not change aerobic (SAB) bacterial counts [R].

In another double-blind, randomized, placebo-controlled, parallel allocation clinical trial with 80 healthy males and non-pregnant females with chronic gingivitis, this same Ayurvedic medicinal toothpaste Sudantha® reduced Quigley Hein plaque index (PS), bleeding on probing (BOP) and probing pocket depth (PPD), and total salivary anaerobic counts [R].

Clove has antioxidant, anti-inflammatory, and antimicrobial properties. It can help alleviate gum disease symptoms by reducing inflammation and combating the bacteria causing the infection.

69



Avoid Exposure to Heavy Metals

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

To avoid exposure to heavy metals, ensure you're not using cosmetic products with heavy metals, opt for organic foods to minimize pesticide exposure, and use filters for drinking water to remove possible contaminants. Check for lead-based paints in older homes and avoid cooking or storing food in uncoated metal containers. When possible, choose glass or BPA-free plastics instead.

Description

Heavy metals are elements naturally found in the environment. They are also used for agricultural, industrial, and medicinal purposes. Some can even be found in small amounts in your body [\[R\]](#), [\[R\]](#).

Long-term exposure to high amounts of heavy metals can be harmful to your health [\[R\]](#), [\[R\]](#).

Heavy metals that are most often linked to health problems include [\[R\]](#), [\[R\]](#):

- Lead
- Cadmium
- Arsenic
- Chromium
- Mercury

How it helps

A study associated high urinary lead, molybdenum, and strontium with a 73.8%, 51.5%, and 49.8% higher risk of gum disease, respectively [\[R\]](#).

Heavy metals can cause inflammation and damage to the gums, increasing the risk of gum disease.

70



Chicory

IMPACT

1 / 5

EVIDENCE

1 / 5

Description

Chicory is a nutrient-rich vegetable that has been shown to have a number of health benefits. It is a good source of fiber, vitamin K, and antioxidants. Chicory may also help to improve digestion, lower blood sugar levels, and boost the immune system.

How it helps

Chicory leaf extract supplementation (2 g/day for 8 weeks), in conjunction with nonsurgical periodontal therapy, led to significant increases in serum total antioxidant capacity and uric acid, and decreases in malondialdehyde, triglycerides, and cholesterol in a placebo-controlled trial of 40 patients with chronic periodontitis [\[R\]](#).

71



Avoid Formaldehyde Exposure

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

To minimize formaldehyde exposure, choose household products and building materials labeled low-VOC (Volatile Organic Compounds) or formaldehyde-free. Ensure proper ventilation in your living and working spaces, especially when using products known to contain formaldehyde like certain adhesives, cleaning agents, and cosmetics. Aim to reduce use of pressed wood products and seek out alternatives when possible.

Description

Avoiding exposure to formaldehyde, a chemical commonly found in building materials and certain products, is crucial to prevent respiratory problems and potential carcinogenic effects.

How it helps

Avoiding formaldehyde exposure might not directly aid in gum disease. However, it can improve overall health, indirectly supporting your immune system's ability to fight disease, including gum disease.

A [study of 69 men with occupational exposure to formaldehyde](#) associated constant exposure to this chemical with **worse condition of the periodontal tissues** [\[R\]](#).

72



Cranberry

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Consume one to two 8-ounce servings of unsweetened cranberry juice daily, or take 500 mg of cranberry supplements twice daily. Continue this practice consistently for at least several weeks to potentially observe benefits.

Description

Cranberries are known for their high antioxidant content and potential to promote urinary tract health by preventing bacterial adhesion. Consuming cranberries or cranberry products may help reduce the risk of urinary tract infections and provide antioxidant benefits.

Cranberries are fruits rich in vitamins, minerals, and antioxidants. They are available in different forms, including [\[R\]](#):

- Dried fruits
- Juice
- Powder
- Pills

How it helps

In a [placebo-controlled trial of 50 patients with gum disease](#), consuming a cranberry beverage (750 mL/day) for 8 weeks **improved gingival and plaque indices** [\[R\]](#).

Cranberries have anti-microbial properties that may help control harmful bacteria linked to gum disease. Their anti-inflammatory properties can also soothe inflamed gums, enhancing recovery.

73



Resveratrol

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 150-500 mg of resveratrol as a supplement daily, preferably with meals to enhance absorption. This dosage range is based on studies for various health benefits, and it's advised to not exceed 500 mg per day without medical supervision.

TYPICAL STARTING DOSE

150 mg

Description

Resveratrol is a natural compound found in red grapes, red wine, and some berries. It is known for its potential antioxidant properties and its role in promoting heart health.

[Resveratrol](#) is an antioxidant found mainly in [\[R\]](#):

- Berries
- Red grapes
- Red wine
- Peanuts

It’s purported to have anti-inflammatory and antioxidant effects [\[R, R, R\]](#).

How it helps

In a placebo-controlled trial of 40 patients with chronic periodontitis, supplementation with resveratrol for 4 weeks reduced the plaque index [\[R\]](#).

Resveratrol may help by reducing the inflammation and damage to your gums caused by bacteria.

74



Spirulina

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 1-8 g of spirulina supplements daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

500 mg

Description

Spirulina is a blue-green algae. It is rich in nutrients like protein, vitamins, and minerals, particularly vitamin B12 and iron, and is a source of antioxidants, chlorophyll, and phycocyanin. It can be found in powdered or tablet form as a supplement, and is often used to boost energy, support the immune system, and enhance overall nutrition. Additionally, spirulina.

[Spirulina](#) is a supplement made from blue-green algae that grows in fresh and marine water [\[R, R\]](#).

Dried spirulina is up to 70% protein. It’s also rich in vitamins, antioxidants, and healthy fats. This makes it a great source of nutrition for both people and livestock [\[R, R, R\]](#).

People use spirulina supplements to reduce [\[R, R\]](#):

- Cholesterol
- Blood pressure
- Blood sugar

How it helps

In a study of 40 people with chronic periodontitis, the application of spirulina gel as an add-on to standard therapy improved periodontitis after 120 days better than standard therapy alone [\[R\]](#).

75



Cinnamon

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take a 1 g cinnamon supplement once daily, ideally with a meal to aid absorption. This can be in the form of a capsule or tablet. Continue this regimen as long as it aligns with your health goals and under the guidance of a healthcare provider.

TYPICAL STARTING DOSE

500 mg

Description

Cinnamon is a popular spice that may have various health benefits, including improving blood sugar control, reducing inflammation, and providing antioxidants. It's commonly used in both culinary and herbal applications.

[Cinnamon](#) is a spice made from the bark of *Cinnamomum* trees. Cinnamon can [\[R\]](#):

- Decrease inflammation
- Fight [oxidative stress](#)
- Kill microbes

Cinnamon is mainly used in cooking and fragrances. **As a natural remedy, people use cinnamon to reduce blood sugar** [\[R\]](#).

There are two main types of cinnamon [\[R\]](#):

- Ceylon or ‘true’ cinnamon (*Cinnamomum verum*)
- Chinese or Cassia cinnamon (*Cinnamomum cassia*)

How it helps

In a study of 105 healthy volunteers, using a mouthwash with cinnamon (for 30 days) reduced gum inflammation and plaque as much as standard therapy [\[R\]](#).

76



Amla

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate 1-2 teaspoons (approximately 4-8 grams) of amla powder into your daily diet. You can mix it into a glass of water, blend it into a smoothie, or sprinkle it over salads or cooked meals. Do this consistently every day for best results.

Description

Amla, also known as Indian gooseberry, is a fruit known for its high vitamin C content and antioxidant properties. It is used in traditional Ayurvedic medicine for various health benefits, including immune support and skin health.

How it helps

Amla, rich in vitamin C, helps in the formation and maintenance of collagen in gums which enhances their health. Its robust antimicrobial properties can aid in combating harmful bacteria that cause gum disease.

In a [placebo-controlled trial of 46 patients with chronic periodontitis](#), subgingival application of 10% amla gel as an add-on to scaling and root planing **reduced inflammation and periodontal destruction better than scaling and root planing alone** [\[R\]](#).

77



Collagen Peptides

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 10-20 grams of collagen peptides daily, mixing the powder into a glass of water, juice, or a smoothie. It is recommended to consume this supplement on an empty stomach to improve absorption, ideally first thing in the morning or right before bedtime for a period of at least 8-12 weeks to observe beneficial effects.

TYPICAL STARTING DOSE

10 g

Description

Collagen peptides are a form of collagen that is broken down into smaller, more easily absorbed molecules. They are commonly used in supplements and skincare products for their potential to promote skin elasticity, hair strength, and nail health.

[Collagen](#) is a protein that helps build skin, bones, and joints [\[R\]](#), [\[R\]](#).

People use collagen supplements for [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Joint pain
- Skin health
- Hair growth

How it helps

Collagen peptides support the strength and integrity of your gums by promoting the regeneration of gum tissue and reducing inflammation. In turn, this helps to fight against gum disease and prevent its progression.

After professional mechanical plaque removal (PMPR), participants were given either collagen peptide sachets or a placebo for daily consumption until reevaluation at day 90. Collagen peptides may enhance the anti-inflammatory effect of PMPR in periodontal recall patients [\[R\]](#).

78



Star Anise

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take star anise as a supplement by consuming 1-2 capsules (300-600 mg each) daily with water, preferably after meals. This should be done for up to three months before reviewing its benefits.

TYPICAL STARTING DOSE

300 mg

Description

Star anise is a spice derived from the fruit of the Illicium verum tree, native to China and Vietnam. It is also known for its essential oil, which contains compounds like anethole and estragole, which has a history of use as a traditional remedy for digestive and respiratory issues. Today, it is also utilized for its potential benefits against gum disease.

How it helps

In a double-blinded randomized clinical trial with 50 subjects, a star anise mouthwash (3%, 30 seconds mouthwashes, in the morning and before going to bed, for 21 days) reduced the gingival index, papillary bleeding index, and oral microbial count [\[R\]](#).

Star anise has antimicrobial properties that can help combat the bacteria causing gum disease. Moreover, its anti-inflammatory nature alleviates gum disease symptoms like swelling and discomfort.

Next Steps

Remember, your genes only tell one important part of your health story!

Now that you've seen your DNA-based results for this health topic, let's take a look at other contributing factors.

Your lab results

Your lab results are impacted by the combined effect of your genes, environment and lifestyle.

Lab tests will give you the best picture of your current health status, while your genes provide insight into your health predispositions and which recommendations are best for you.

✓	Zinc	17.12 umol/L	7.65 9.18 12.24 19.89	9 Nov 2025
!	Glucose, Fasting	97 mg/dL	55 65 80 95 100 126	9 Nov 2025
✓	Vitamin D, 25-Hydroxy, Total	58.59 ng/mL	10 20 30 75 150	9 Nov 2025
!	hs-CRP	1.6 mg/L	0 0.5 3 100 500	9 Nov 2025