Bristle identifies and quantifies the bacteria in your saliva related to oral health and disease. Your overall scores are based on which bacteria were present in your sample and their association with each condition.

We detected a total of **135 bacterial and fungal species** in your oral microbiome.

The scores below provide a summary of how these species may affect your oral and overall health.

Oral Health Insights

Average →
Beneficial
Score: 4.7/10

At Risk →
Gum Inflammation
Score: 8/10

Optimal →
Tooth Decay
Score: 0.6/10

YOU HAVE

- a high abundance of bacteria that cause gum inflammation.
- a low abundance of bacteria that cause tooth decay.
- an **average** abundance of beneficial bacteria.

GUM INFLAMMATION

You have an imbalance in your oral microbiome that can cause existing gum issues to progress quickly, and increase your risk of future symptoms of gum disease.
Treatment and at-home oral hygiene changes are recommended to help balance the oral microbiome and reduce the risk of worse disease.

TOOTH DECAY

Given the levels of beneficial bacteria and bacteria that cause tooth decay, any early cavities **are likely to be stable, and can be remineralized with at home care.**

Additional Health & Wellness Insights

Average →
Halitosis (Bad Breath)
Score: 6.6/10

The Halitosis score measures the levels of oral bacteria that cause bad breath by producing foul smelling chemicals in the mouth. **Your halitosis score needs improvement.**
If you experience bad breath, it could be due to high levels of microbes that were detected in your mouth.
If you don't experience bad breath, other factors such as your diet, environment, and beneficial bacteria in your mouth may be helping reduce or eliminate symptoms.

Average →
Gut Impact
Score: 5/10

The Gut Impact score measures the bacteria and fungi in the mouth that can cause issues in the gut. These microbes have been associated with conditions including IBS, IBD, Crohn's, and colorectal cancer.
Your Gut Impact score is average. If you suffer from gut health issues, your oral bacteria may be a contributing factor. Improving your oral health and balancing your mouth's microbiome may help improve your gut health.

Needs Improvement →
Nitric Oxide
Score: 2.4/10

Certain species of oral bacteria help metabolize nitrate from our diets into nitric oxide, which is crucial for heart, brain, and immune health.
The Nitric Oxide score captures your oral microbiome's ability to metabolize nitrate into nitric oxide, and **yours needs improvement**.
Increasing your intake of nitrate through diet (e.g., beets, leafy greens) or supplements can help improve your Nitric Oxide score and in turn, your oral & overall health.

Within Range →
Diversity
Score: 7/10

The Diversity score accounts for the total number of species and their abundance levels.
Your Diversity is within range and no action is recommended.

Key Microbial Species & Oral And Systemic Health Associations

View your abundances of oral microbes and their associations with diseases & health conditions, based on existing scientific research. The scores found in the Oral Health Report Card take into account all microbes related to a given condition to provide a more accurate, comprehensive view into risk and status.

Note: several other microbes impact the progression and severity of oral diseases. The species below are the most well characterized for their role in oral health conditions. Presence or elevated levels of these species does not mean it will cause the disease.

Associations between the key microbes and diseases & health conditions

NAME	Level ↓	PERCENTILE ABUNDANCE	ORAL HEALTH °	SYSTEMIC HEALTH ASSOCIATIONS ⓘ
Prevotella intermedia	High	8.4	Gum Disease	Cognitive Disorders Cardiovascular Diseases Musculoskeletal Disorders
Fusobacterium nucleatum	High	7.0	Gum Disease	Diabetes Cognitive Disorders Cardiovascular Diseases Adverse Pregnancy Outcomes Various Cancers
Parvimonas micra	High	6.8	Gum Disease	Various Cancers
Eikenella corrodens	Moderate	6.2	Gum Disease	Diabetes Cardiovascular Diseases Adverse Pregnancy Outcomes Musculoskeletal Disorders Various Cancers
Eubacterium nodatum	Moderate	4.4	Gum Disease	
Treponema denticola	Low	3.2	Gum Disease	Diabetes Cognitive Disorders Cardiovascular Diseases
Campylobacter rectus	Low	1.5	Gum Disease	Cognitive Disorders Adverse Pregnancy Outcomes
Porphyromonas gingivalis	Low	1.1	Gum Disease	Diabetes Cognitive Disorders Cardiovascular Diseases Adverse Pregnancy Outcomes Musculoskeletal Disorders Various Cancers
A. actinomycetemcomitans	Undetected	0.0	Gum Disease	Diabetes Cardiovascular Diseases Adverse Pregnancy Outcomes Various Cancers
Tannerella forsythia	Undetected	0.0	Gum Disease	Diabetes Cardiovascular Diseases Adverse Pregnancy Outcomes
Streptococcus mutans	Undetected	0.0	Tooth Decay	Diabetes
Streptococcus sobrinus	Undetected	0.0	Tooth Decay	

At Risk	Optimal	Average
Gum Inflammation	**Tooth Decay**	**Beneficial**
Score: 8/10	**Score: 0.6/10**	**Score: 4.7/10**

* These are recommended therapies to be determined by healthcare provider

Description

Given high levels of periodontal pathogens, we recommend using more aggressive antimicrobial and adjunctive therapies. These therapies can help adjust the trajectory of the oral microbiome towards a healthy state.

In Office Care

Antibiotics
Due to the high abundance of periodontal pathogens and signs of disease, antibiotics may be useful as an adjunctive therapy to any in-office treatment **if other adjunctive treatments have not been successful** in reducing symptoms and pathology.

- A combination of Metronidazole + Amoxicillin is recommended. Research shows that a combination of Metronidazole + Amoxicillin is the most effective antibiotic for this type of dysbiosis.
- Avoid using clindamycin. Rising rates of clindamycin resistance in both Porphyromonas gingivalis and Aggregatibacter actinomycetemcomitans may limit its efficacy.

Other adjunctive therapies
In addition to traditional periodontal therapy such as scaling and root planing, we recommend adding multiple additional adjunctive therapies to reduce the abundance of periodontal pathogens.

Perio protect
Scaling and root planing
Laser-assisted new attachment protocol (LANAP)
Ozone insufflation or trays
Laser assisted periodontal therapy (LAPT)
Ultrasonic scaling

To see a comprehensive guide to in-office care, please visit: the Bristle in-office care guide

Caries

We recommend home-care using nanohydroxyapatite, arginine, and xylitol. Early caries can be remineralized with improved oral care.

Home Care

Here are the high impact home care additions for you to improve:

Waterflossing
Oral probiotics

To see a comprehensive guide to home care, please visit: the Bristle home care guide

Recall

We recommend re-testing in 3 months to monitor progress and prevent worsening clinical signs.

Beneficial

Commensal microbes, also known as beneficial microbes, are essential to a healthy oral microbiome. This score summarizes the abundance of commensal microbes in your oral microbiome. The oral commensal microbes are critically responsible for oral microbiome stability and homeostasis. People with a lower commensal scores may be more prone to changes in the oral microbiome, which can lead to dysbiosis. By contrast, people with high commensal scores may have more stable microbiomes, preventing new pathogenic microbes from invading the niches in the mouth and causing disease.

High commensal scores can help balance out other scores. For example, the commensal species Streptococcus gordonii and sanguinis directly compete with the cavity-causing Streptoccocus mutans. Similarly, high levels of commensal bacteria can help dampen the immune response to periodontal pathogens, preventing gum inflammation. People with low commensal scores may have worse symptoms than those with high commensal scores.

[Click here to learn more about how to interpret this score.](#)

	Average
	Beneficial
	Score: 4.7/10

NAME	Score ↓	ATTRIBUTES			
Haemophilus parainfluenzae	9.4/10	Gram negative	Variable	Facultative	Insensitive
Haemophilus haemolyticus	9.1/10	Gram negative	Rod	Facultative	Insensitive
Streptococcus sanguinis	8.3/10	Gram positive	Chained Cocci	Facultative	Insensitive
Rothia aeria	7.7/10	Gram positive	Rod	Aerobic	Insensitive
Streptococcus mitis	7/10	Gram positive	Chained Cocci	Facultative	Insensitive
Streptococcus gordonii	6.3/10	Gram positive	Chained Cocci	Facultative	Insensitive
Capnocytophaga granulosa	5.5/10	Gram negative	Rod	Aerobic	Insensitive
Streptococcus infantis	5.3/10	Gram positive	Chained Cocci	Facultative	Insensitive
Streptococcus parasanguinis	5.1/10	Gram positive	Chained Cocci	Facultative	Insensitive
Neisseria mucosa	5/10	Gram negative	Cocci	Aerobic	Insensitive
Streptococcus cristatus	3.9/10	Gram positive	Chained Cocci	Microaerophile	Insensitive
Neisseria flavescens	3.9/10	Gram negative	Cocci	Aerobic	Insensitive
Rothia mucilaginosa	3.5/10	Gram positive	Rod	Aerobic	Insensitive
Neisseria subflava	1.3/10	Gram negative	Cocci	Aerobic	Insensitive
Streptococcus salivarius	1.3/10	Gram positive	Chained Cocci	Facultative	Insensitive
Veillonella atypica	0.8/10	Gram negative	Cocci	Anaerobic	Insensitive
Prevotella salivae	0.8/10	Gram negative	Rod	Anaerobic	Insensitive

Gum Inflammation

Specific species in the oral microbiome cause gum inflammation, and these species contribute to the gum inflammation score. The microbes cause inflammation in a number of different ways. First, some species can cause damage to your gum and tooth tissues. Second, microbes can produce molecules, such as virulence factors, that promote inflammation. Some symptoms of gum inflammation may include red, sore, or bleeding gums.

The gum inflammation score can indicate the severity of gum inflammation, and also how quickly it can progress. In general, healthy people have 4-6 unique gum inflammation species, while people with gum disease have more than 6. You can read more about the data behind this score at our blog here.

Click here to learn more about how to interpret this score.

At Risk

Gum Inflammation
Score: 8/10

NAME	Score ↓	ATTRIBUTES			
Porphyromonas endodontalis	8.7/10	Gram negative	Rod	Anaerobic	L. reuteri sensitive
Prevotella intermedia	8.4/10	Gram negative	Rod	Anaerobic	L. reuteri sensitive
Eubacterium brachy	7.8/10	Gram positive	Chained Rod	Anaerobic	L. reuteri sensitive
Fusobacterium nucleatum	7/10	Gram negative	Chained Rod	Anaerobic	L. reuteri sensitive
Parvimonas micra	6.8/10	Gram positive	Cocci	Anaerobic	S. salivarius sensitive
Filifactor alocis	6.5/10	Gram positive	Chained Rod	Anaerobic	Insensitive
Eubacterium nodatum	4.4/10	Gram positive	Chained Rod	Anaerobic	L. reuteri sensitive
Treponema denticola	3.2/10	Gram negative	Spirochete	Anaerobic	L. plantarum sensitive
Centipeda periodontii	2.4/10	Gram negative	Rod	Anaerobic	Insensitive
Porphyromonas gingivalis	1.1/10	Gram negative	Rod	Anaerobic	L. reuteri sensitive

Tooth Decay

The tooth decay score is calculated from the abundance of species in the oral microbiome that are known to be acid producers, or can influence the microbes that create acid. These bacteria ferment sugar (usually leftover from your diet), which results in acid production. The tooth decay score is an indicator of how quickly cavities can worsen if left alone.

For instance, an early stage cavity that has not penetrated beyond the enamel layer may be reversible through remineralization. However, once the cavity grows past the enamel into the dentin, it cannot be reversed and must be filled to prevent infection. Pathogenic cavity-causing bacteria can thrive in these early cavities. People with a high tooth decay score may progress to a severe cavity more quickly than those with a lower score.

Click here to learn more about how to interpret this score.

Optimal

Tooth Decay
Score: 0.6/10

NAME	Score ↓	ATTRIBUTES			
Candida sp	2.1/10	None	Cocci	Facultative	L. reuteri sensitive
Candida albicans	2/10	None	Cocci	Facultative	L. reuteri sensitive
Leptotrichia wadei	1.2/10	Gram negative	Chained Rod	Anaerobic	Insensitive

Halitosis (Bad Breath)

The Halitosis score measures the levels of oral bacteria that cause bad breath by producing foul smelling chemicals in the mouth. **Your halitosis score needs improvement.**

If you experience bad breath, it could be due to high levels of Gum liners microbes that were detected in your mouth.

If you don't experience bad breath, other factors such as your diet, environment, and beneficial bacteria in your mouth may be helping reduce or eliminate symptoms.

Click here to learn more about how to interpret this score.

Average	
Halitosis (Bad Breath)	
Score: 6.6/10	

Halitosis type: **Gum liners**

35.2% of Bristle users share your halitosis type.

Your halitosis score is driven by anaerobic bacteria living at your gum-line. They ferment debris, protein, and sugar in your saliva, creating volatile sulfur and other smelly organic compounds like putrescine and cadaverine that cause bad breath. This is one of the most common types of bad breath - and fortunately one of the easiest to solve.

NAME	Score ↓	ATTRIBUTES			
Granulicatella adiacens	8.9/10	Gram negative	Rod	Facultative	Insensitive
Porphyromonas endodontalis	8.7/10	Gram negative	Rod	Anaerobic	L. reuteri sensitive
Prevotella intermedia	8.4/10	Gram negative	Rod	Anaerobic	L. reuteri sensitive
Eubacterium brachy	7.8/10	Gram positive	Chained Rod	Anaerobic	L. reuteri sensitive
Fusobacterium nucleatum	7/10	Gram negative	Chained Rod	Anaerobic	L. reuteri sensitive
Prevotella nigrescens	6.4/10	Gram negative	Rod	Anaerobic	Insensitive
Granulicatella elegans	6.3/10	Gram negative	Variable	Facultative	Insensitive
Eikenella corrodens	6.2/10	Gram negative	Variable	Anaerobic	Insensitive
Dialister invisus	5.4/10	Gram negative	Short Rod	Anaerobic	S. salivarius sensitive
Solobacterium moorei	5/10	Gram positive	Rod	Anaerobic	S. salivarius sensitive
Eubacterium nodatum	4.4/10	Gram positive	Chained Rod	Anaerobic	L. reuteri sensitive
Treponema denticola	3.2/10	Gram negative	Spirochete	Anaerobic	L. plantarum sensitive
Atopobium parvulum	2.6/10	Gram positive	Rod	Anaerobic	S. salivarius sensitive
Centipeda periodontii	2.4/10	Gram negative	Rod	Anaerobic	Insensitive
Candida dubliniensis	2.4/10	None	Cocci	Facultative	L. reuteri sensitive
Candida sp	2.1/10	None	Cocci	Facultative	L. reuteri sensitive
Candida albicans	2/10	None	Cocci	Facultative	L. reuteri sensitive
Candida glabrata	1.6/10	None	Cocci	Facultative	L. reuteri sensitive
Leptotrichia wadei	1.2/10	Gram negative	Chained Rod	Anaerobic	Insensitive
Porphyromonas gingivalis	1.1/10	Gram negative	Rod	Anaerobic	L. reuteri sensitive

Gut Impact

The Gut Impact score measures the bacteria and fungi in the mouth that can cause issues in the gut. These microbes have been associated with conditions including IBS, IBD, Crohn's, and colorectal cancer.

Your Gut Impact score is average. If you suffer from gut health issues, your oral bacteria may be a contributing factor. Improving your oral health and balancing your mouth's microbiome may help improve your gut health.

Average

Gut Impact
Score: 5/10

Click here to learn more about how to interpret this score.

NAME	Score ↓	ATTRIBUTES			
Fusobacterium nucleatum	7/10	Gram negative	Chained Rod	Anaerobic	L. reuteri sensitive
Campylobacter showae	6.9/10	Gram negative	Curved Rod	Anaerobic	L. plantarum sensitive
Campylobacter concisus	3.9/10	Gram negative	Curved Rod	Facultative	L. plantarum sensitive
Campylobacter rectus	1.5/10	Gram negative	Curved Rod	Facultative	L. plantarum sensitive
Porphyromonas gingivalis	1.1/10	Gram negative	Rod	Anaerobic	L. reuteri sensitive

Nitric Oxide

Certain species of oral bacteria help metabolize nitrate from our diets into nitric oxide, which is crucial for heart, brain, and immune health.

The Nitric Oxide score captures your oral microbiome's ability to metabolize nitrate into nitric oxide, and **yours needs improvement**.
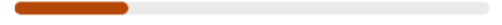
Increasing your intake of nitrate through diet (e.g., beets, leafy greens) or supplements can help improve your Nitric Oxide score and in turn, your oral & overall health.

[Click here to learn more about how to interpret this score.](#)

Needs Improvement

Nitric Oxide
Score: 2.4/10

NAME	Score ↓	ATTRIBUTES			
Haemophilus parainfluenzae	9.4/10	Gram negative	Variable	Facultative	Insensitive
Neisseria flavescens	3.9/10	Gram negative	Cocci	Aerobic	Insensitive
Rothia mucilaginosa	3.5/10	Gram positive	Rod	Aerobic	Insensitive
Veillonella dispar	2.3/10	Gram negative	Cocci	Anaerobic	Insensitive
Veillonella atypica	0.8/10	Gram negative	Cocci	Anaerobic	Insensitive

Diversity

The Diversity score accounts for the total number of species and their abundance levels.

Your Diversity is within range and no action is recommended.

Click here to learn more about how to interpret this score.

Within Range

Diversity
Score: 7/10

NAME	Score ↓	ATTRIBUTES
Microbacterium sp	10/10	
Prevotella aurantiaca	9.8/10	
Haemophilus parainfluenzae	9.4/10	Variable Gram negative Insensitive Facultative
Fusobacterium periodonticum	9.4/10	
Prevotella nanceiensis	9.3/10	

My primary goal: Reduce gum inflammation bacteria

>90% of people who followed these recommendations for 6 months saw improvement in their microbiome.

Phase One: Reset

Reset your oral microbiome by removing harmful bacteria through the following daily routine. Follow phase 1 for 2 weeks, then move onto the next phase.

Daily routine

Brush twice per day

Brush in the morning and evening with an electric toothbrush

Floss twice per day

Remove pathogens that live between the teeth and gumline.

Tongue scrape once per day

The tongue is an important reservoir of potential pathogens.

Use mouthrinse twice per day

Smartmouth for two weeks will help reduce species that cause gum inflammation and halitosis.

No probiotics are recommended

No probiotics are recommended during phase 1 of your care plan.

Diet & supplements

Nitrate

Nitrate is a powerful pre-biotic that can improve the oral microbiome and reduce gum inflammation.

Arginine

Take one arginine supplement after each meal.

Xylitol

Xylitol can help improve and balance the oral microbiome.

Products

Bristle Oral Health Probiotic	**Smartmouth**	**CloSYS**	**Waterpik**	**Fygg Toothpaste**

My primary goal: Reduce gum inflammation bacteria

>90% of people who followed these recommendations for 6 months saw improvement in their microbiome.

Phase Two: Improve

Re-establish a healthy microbiome by building a robust foundation and maintaining healthy habits. Follow phase 2 for at least 12 weeks, then re-test to monitor your improvements.

Daily routine

Brush twice per day

Brush in the morning and evening with an electric toothbrush

Floss twice per day

Remove pathogens that live between the teeth and gumline.

Tongue scrape once per day

The tongue is an important reservoir of potential pathogens.

Use mouthrinse twice per day if symptoms persist

Mouthrinse with chlorine dioxide is clinically effective at limiting growth of bacteria that cause halitosis and gum inflammation.

Use oral probiotics twice per day

Probiotics can help repopulate the mouth with beneficial species, and reduce the abundance of pathogenic species

Diet & supplements

Nitrate

Nitrate is a powerful pre-biotic that can improve the oral microbiome and reduce gum inflammation.

Arginine

Take one arginine supplement after each meal.

Xylitol

Xylitol can help improve and balance the oral microbiome.

Products

| Bristle Oral Health Probiotic | Smartmouth | CloSYS | Waterpik | Fygg Toothpaste |