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Natural Health Response
WITH DR. RICHARD GERHAUSER M.D.

Exposing the TRUTH Behind the Vitamin B3 Controversy

Is Niacin Friend or Foe for Heart Health?

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Headlines have been everywhere recently warning…

"Vitamin B3 May Increase Risk of Cardiovascular Disease!"

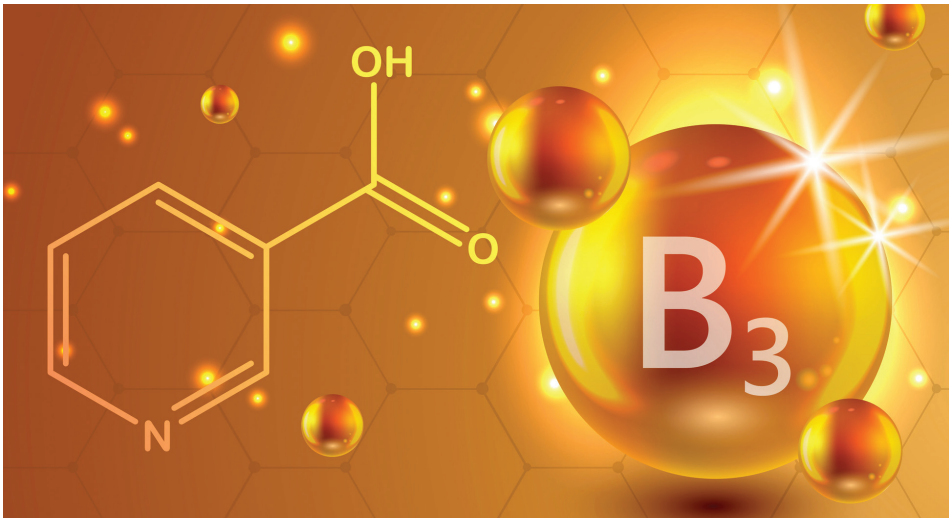
Alarmist claims like these have made many people (maybe you among them) wonder if they should toss their B3 supplements into the trash.

Some experts have even suggested we stop fortifying food with this nutrient.

Please *don't fall for the mass hysteria* over vitamin B3.

The evidence is clear that vitamin B3 is one of the *best* treatments for reducing heart disease risk.

In fact, I've *personally* been prescribing vitamin B3 to my patients for the past 30 years as a treatment for heart disease with remarkable results and an impressive safety record.



The evidence is clear that vitamin B3 is one of the best treatments for reducing heart disease risk.

So, let's go beyond the headlines with a deeper dive into this bogus study. And then I'll show you the real science backing B3's impressive heart health—*and even life-extending*—benefits.

Taking A Closer Look

Despite past positive studies and my history of successful vitamin B3 (niacin) use with my own patients, I still took a closer look at this latest research to decide how valid it might be.

The study was published *in Nature Medicine*.[1] The goal was to identify possible risk factors for heart disease that don't include the usual suspects, like high blood pressure, cholesterol, or diabetes.

Instead, researchers looked for compounds in the blood that could potentially contribute to a future heart event.

They found that patients in the highest quartile of the compounds, 2PY and 4PY, had higher vascular inflammation, which can lead to atherosclerosis and increase the risk of future cardiovascular events.

Both 4PY and 2PY are breakdown metabolites of **nicotinamide adenine dinucleotide** (NAD). And NAD is a breakdown product of niacin.

You probably noticed that this study **didn't include niacin *or* NAD**. I'll repeat: No one in this study was given niacin to assess its effects—and NAD levels were not measured.

WHAT'S INSIDE

Besides that, this study looked at associations—NOT cause and effect.

It's quite a jump to say that excess niacin is the culprit behind the increased heart risks in a study that *didn't actually include niacin*.

In my opinion, this conclusion was pulled out of thin air.

To truly know whether excess niacin was the original cause, you would need a randomized, controlled study in which patients are given either niacin or a placebo and then to track those results.

But we don't have to wait for a *future* study to determine these effects. This study was already done **nearly 50 years ago**—and when you see the results, you'll stock up on B3 instead of tossing it in the trash.

Niacin's *Remarkable* Heart Benefits

In 1975, a landmark study called the Coronary Drug Project directly evaluated the use of niacin on lipid levels and cardiovascular disease risk.[2]

Volunteers took either 3 grams of generic niacin daily or a placebo for five to six years. The study participants had *already* had a previous heart attack.

Fifteen years later, those who had taken niacin experienced…

- 27 percent reduction in **heart attacks**, a
- 25 percent reduction in **strokes**, and an
- 11 percent reduction in **total mortality**.

Niacin is also one of the most effective compounds for increasing beneficial HDL cholesterol.

These impressive benefits were seen even though most patients stopped taking the niacin at year six!

Since then, other studies have shown that the potential benefits of niacin for reducing cardiovascular disease risk include…

- lowering LDL cholesterol levels by 10 to 15 percent,
- lowering triglyceride levels by 20 to 50 percent, and
- significantly reducing LP(a), an independent risk factor for coronary disease that statins actually *raise*![3]

Niacin is also one of the most effective compounds for increasing beneficial HDL cholesterol.

In addition to its effects on lipid levels, niacin has antioxidant and anti-inflammatory properties (which are beneficial for heart health), and it increases serum adiponectin (a hormone that improves glucose metabolism).

Combing Through Conflicting Results

Based on studies like these, it seems like using niacin for heart health would be a no-brainer.

However, not all of the research *has* been positive.

Since this landmark study, scores of clinical trials have used different forms of the nutrient—and often combined with other drugs—but none have surpassed the results of plain old generic niacin.

I believe this is because most subsequent studies used niacin formulations engineered to reduce niacin's notorious *flushing* effect.

See, when someone takes a niacin supplement, they experience a "flush" that involves the skin

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turning warm and red as capillaries widen and blood flow to the skin increases.

Although the flush is harmless, scientists have developed other formulations to reduce this effect.

This was accomplished with time-released niacin, but this type caused more serious side effects, such as liver damage.

One study looked at taking a flush-blocking drug, laropiprant, combined with niacin/simvastatin, but this combo increased myopathy (muscle) side effects.[4]

This makes me wonder… *is the flush the key to niacin's benefits?*

This flush occurs because of the activation of the GRP109A pathway. Studies show that stimulating this pathway is beneficial to the central nervous system.[5]

One study found that niacin treatment promotes synaptic plasticity (the connections between neurons) and neuronal axon growth through this pathway. It also decreased the pain response.

Prescription drugs like dimethyl fumarate (used to treat multiple sclerosis) and beta alanine (which increases muscle performance) act through this SAME pathway.

But they're not nearly as safe (or inexpensive!).

Niacin's Anti-Aging Potential

Besides its impact on heart health, niacin has impressive anti-aging potential because it increases a compound called **nicotinamide adenine dinucleotide**, or NAD.

A *decline* in NAD is a critical feature in aging and some age-related diseases. In addition, a reduction in NAD+ affects *all* of the hallmarks of aging.[6]

It's easy to see why. NAD is…

- involved in the transfer of hydrogen ions to create energy in the mitochondria
- needed for many NAD-consuming enzymes and mechanisms
- a sirtuin activator, which play a key role in aging, metabolism, and DNA repair
- involved in many biological functions, such as gene expression and apoptosis

A list of conditions that benefit from NAD/niacin in research include arthritis, Alzheimer's, Huntington's, schizophrenia, amyotrophic lateral sclerosis, muscular atrophy, chronic kidney disease, Parkinson's, and certain cancers—like skin and brain.

Several NAD precursors are available that can boost NAD levels. These include nicotinamide riboside, niacinamide, tryptophan, and nicotinamide mononucleotide.

These tend to cost more than generic niacin, yet none of these expensive precursors outperformed the generic version.

So, whether your goal is to avoid heart disease or fight aging, niacin may be the most effective, least expensive option.

Of course, no treatment is one size fits all. And no matter how beneficial niacin could be, it's not for everyone.

Contraindications for high-dose niacin include active peptic ulcer disease, active liver disease, people with hypersensitivity to niacin, and people with arterial bleeding.

The 11 Cent Treatment for Heart Health

When you see such a major campaign maligning a well-documented, natural treatment for heart disease, you have to ask yourself who stands to gain from such misinformation.

As always, *follow the money*.

Niacin therapy used to be a common choice in mainstream medicine for treating heart disease—until statins arrived on the scene.

Mainstream medicine would prefer you take a statin—or even better, the latest, greatest cholesterol reducer, the PCSK9 inhibitor—to reduce heart disease risk because *it brings in more money*.

Niacin is dirt cheap, while the statin industry has been a $1 trillion boon for pharmaceutical companies.

Dangers of Niacin Deficiency

Niacin has a long list of benefits in your body, including promoting healthy cholesterol levels, reducing blood pressure, boosting brain function, improving skin health, and more.

And since your body can't make niacin, you must obtain it through dietary sources like chicken, turkey, brown rice, peanuts, and baked potatoes.

But maintaining healthy levels is about more than its benefits… it's about avoiding the significant health problems caused by a *deficiency*.

At the turn of the century, niacin deficiency often led to pellagra, particularly among poor people who depended on corn as the staple of their diet.

Pellagra's symptoms are the four D's: diarrhea, dermatitis, dementia, and death. Neurologic manifestations of pellagra included nonspecific symptoms like confusion, hallucinations, irritability, psychomotor unrest, ataxia, and depression.

It was eventually discovered that pellagra was a **niacin deficiency disease**.

Ultimately, this widespread deficiency led to mandatory niacin fortification of cereal grains and rice to prevent widespread pellagra.

When you buy into this system, you're left paying thousands of dollars per dose—even though these drugs have shown *no difference* in overall mortality when comparing the treatment group with the control group.

Regular ol' grocery store niacin (500 mg) costs about 11 cents per tablet and, as I mentioned above, it has the potential to reduce heart attacks, strokes, *and* total mortality.

Niacin (500 mg) costs about 11 cents per tablet and it has the potential to reduce heart attacks, strokes, and total mortality.

Bottom Line

I'm **not going to change how I use niacin** based on the latest mainstream medicine scare tactic.

My experience with niacin therapy is that it works *best* in people with adequate redox potential (electric charge) on their cellular and mitochondrial membranes.

If you've been hiding from the sun, not grounding to earth, and/or being overexposed to artificial light and electromagnetic radiation from tech devices, you may *not* tolerate niacin well.

I often recommend that my patients fix their circadian mechanism and environment **before** considering high-dose niacin therapy.

Lastly, gut microflora modulates the availability of niacin once it's ingested. This reveals the importance of correcting dysbiosis (gut imbalances) to benefit most from niacin supplementation.

Beware of the Osteoporosis SCAM: Part 2

4 Steps to Building Stronger Bones at *Any* Age

Last month, in the April issue of the newsletter, I warned you about how often osteoporosis is ***misdiagnosed***.

Health agencies push patients to get a bone mineral scan (DEXA) whether they need it or not. Then they base their diagnosis on how an older person compares to someone ***half their age!***

This method diagnoses countless people with a condition *they don't have*—and has them taking risky drugs *they don't need*.

I learned long ago not to line my patients up like a herd of cattle for the DEXA scan.

But in patients who *do* get the scan, I have a BETTER, more accurate way to interpret the results. And then I take a radically different approach to improving bone health.

Health agencies push patients to get a bone mineral scan (DEXA) whether they need it or not. Then they base their diagnosis on how an older person compares to someone half their age!

Here, I'll share my **4-step protocol** for building stronger bones, whether you have "osteoporosis" or not.

To Test or Not to Test?

The first thing I do to determine if someone is a good candidate for a DEXA screening is to look at the *individual*.

I do a detailed physical exam, consider their medical history, and

order basic laboratory studies to determine someone's *individual risk* of brittle bones.

First, general lab tests will show if there are any underlying possible diseases like kidney or liver problems or nutritional deficiencies that would warrant screening.

The most critical findings include low 25(OH) vitamin D levels, high blood sugar, high thyroid hormones, or high hsCRP.

However, your medical history will provide the **most *significant* insight into your risk for osteoporosis.**

The biggest red flags include losing one to two inches of height, a previous fracture, early menopause, having had a total hysterectomy, or being over 65.

All of these significantly raise your risk.

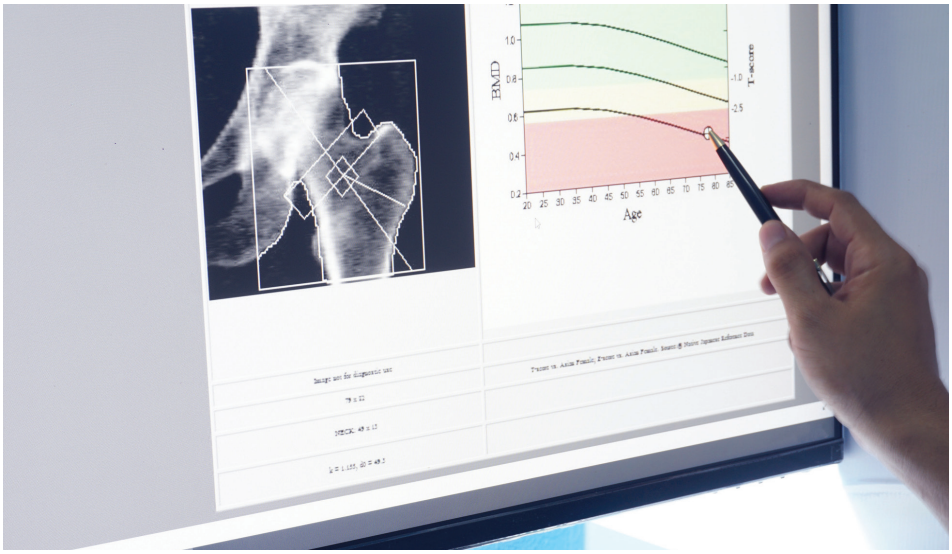
Prolonged intake of certain medications can *also* impact bone density.

These can include glucocorticoids (like prednisone), proton pump inhibitors, antidepressants, insomnia medications, thyroid hormone treatments, some antipsychotic medications, certain seizure medications, certain blood thinners, or certain hormones like the synthetic hormone medroxyprogesterone that's in some birth control pills.

Some diseases raise the risk of osteoporosis and would warrant screening for.

These include rheumatoid arthritis, gastrointestinal diseases like celiac disease, Crohn's disease, lactose intolerance, inflammatory bowel diseases, chronic kidney disease, endocrine diseases like hyperthyroidism, Cushing's disease, hyperparathyroidism, Turner syndrome, and Klinefelter syndrome.

Certain lifestyle factors that could increase risk include drinking too much alcohol, a history of smoking, a history of anorexia or binge eating disorder, poor nutrition, a history of low vitamin D levels, low dietary calcium, a history of frequent falls, low physical activity, and a family history of osteoporosis.



Because bone density naturally declines with age, it makes FAR more sense to base the results on your Z-score, which is determined by how your bone mineral density compares to your peers.

How to Interpret Your Results

I would possibly recommend the DEXA scan ONLY after considering ALL of the factors listed above.

But even then, I would interpret the results differently than how mainstream medicine interprets them.

See, the World Health Organization (WHO) has decided that a diagnosis of osteoporosis should be based on your T-score. Your **T-score** is determined by the difference between your bone mineral density and the bone mineral density of a healthy young adult.

Because bone density naturally declines with age, it makes FAR more sense to base the results on your **Z-score**, which is determined by how your bone mineral density compares to your *peers*.

If someone was in the lower tail of the bell curve for **Z-score** on a DEXA (**-2** standard deviations) or had a fragility fracture, I would consider treating with options such as bioidentical hormone replacement, vitamin K2, and correcting lifestyle issues.

I would *also* give them the option of drugs after full disclosure of the risks vs. benefits.

(See Part 1 for more details about the risks associated with these drugs.)

4 Steps to Stronger Bones

Regardless of whether my patients choose to do the DEXA screening or not, I put *everyone* on the following **bone-building protocol**.

1. Increase calcium in your *diet*:

The first step is to eat a calcium-rich *diet*. This does NOT mean taking calcium *supplements*. (See the sidebar on page 6 for an explanation of *why*).

Calcium is vital because it hardens and strengthens bones. However, since the body doesn't make its own calcium you **must** obtain it through food.

The top calcium-rich foods include dairy (yogurt, milk, cheese), spinach, turnip greens, and sardines.

2. Boost vitamin K2:

Vitamin K2 is equally crucial to calcium. This nutrient is like an air traffic controller, making sure calcium travels where it needs to.

In this case, K2 makes sure that the calcium moves into your bones (where it makes them stronger) and stays out of your arteries (to help avoid atherosclerosis).

Vitamin K2 is abundant in dairy… **but only if raw and unpasteurized**.

Big agriculture zaps our dairy with homogenization and pasteurization, killing the live bacteria in dairy that produce vitamin K2.

You can get K2 back into your diet by eating cheese from raw dairy or by drinking raw milk.

Cheese made from raw dairy is available in most grocery stores. It's often imported from Europe, although lately, I've noticed that some are also made here in the United States as well.

I've been drinking raw milk for the past 30 years. However, this route could be riskier overall because you have to find a clean source you trust, usually from a small-scale dairy.

Unlike calcium supplements, vitamin K2 supplements have been shown to **safely** increase bone mineral density.[7]

Ultraviolet B light from mid-day sunshine stimulates the production of vitamin D, explaining research showing that sun exposure is correlated to higher bone density.

Life Extension makes a high-quality product called **Super K with K2 Complex**.

3. Boost vitamin D with sunlight:

While vitamin K2 helps direct calcium into your bones, vitamin D helps your bones absorb the calcium once it gets there.

This makes **calcium**, **vitamin K2**, **and vitamin D** the BIG 3 for bone strength.

Ultraviolet B light from mid-day sunshine stimulates the production of vitamin D, explaining research showing that sun exposure is correlated to higher bone density.

This also explains why night-shift workers tend to have lower bone density and a greater risk of fractures.[8]

If you can't spend enough time in the sun to make a meaningful impact on your vitamin D levels, consider purchasing a **UVB light**.

A study of seniors who were confined indoors showed that exposure to artificial UVB light increased their bone mineral density.[9]

A good quality UVB light called the **Sperti** can be found at www.sperti.com.

4. Exercise:

Weight-bearing and resistance exercises can improve bone density.

Part of the evidence confirming this came from a major study I was involved in at the University of Arizona.

The BEST (bone estrogen strength training) study found that in women aged 45 to 65, strength training plus adequate calcium intake allowed the women to maintain or ***increase*** their bone mineral density after four years.[10]

The exercise program consisted of doing weight-bearing or resistance training three days per week.

Skip the Calcium Supplements

In addition to prescription drugs, most mainstream recommendations include supplementing with calcium and vitamin D. This makes sense in theory because calcium is the main mineral that makes up bone mass, and vitamin D plays a role in calcium absorption.

But recent evidence has *questioned* this approach.

Vitamin D supplementation and bone density trials have been mixed at best.

But what *really* concerns me is research suggesting that taking calcium supplements can increase the risk of myocardial infarction, stroke, and mortality.

One recent meta-analysis showed that taking calcium supplements increases the risk of myocardial infarction by about 15 percent.[11]

Fortunately, as I discussed in the first article in this issue, there are other (better) ways to boost both nutrients in your body.

Go Beyond Brushing and Flossing to SAVE Your Teeth

Two *Surprising* Ways to Tackle Dangerous Gum Disease

If you want to know how healthy someone truly is, *peek inside their mouth*.

Nearly half of U.S. adults over 30 have some form of gum disease, and it only worsens with age.

In fact, the incidence of periodontal disease in adults 65 and older is **over 70 percent**.

In addition to increasing your risk of tooth loss, severe periodontitis is tied to diabetes, cardiovascular disease, chronic obstructive pulmonary disease, and chronic kidney disease.[12]

Standard treatments like debridement, antibiotics, and teeth cleaning are a good start, *but they're not the only factors that go into maintaining gum health*.

Today, I'll reveal two **unconventional methods** for treating and preventing gum disease. Together, they tackle *all* angles of gum health.

The Vitamin C Connection

Periodontal disease—which includes gingivitis and periodontitis—is a gum infection that damages the soft tissue around your teeth and can even destroy your jawbone.

Focusing on oral hygiene as prevention or treatment is a sensible first step. But there's much more to maintaining gum health than just flossing or brushing alone.

One of the most surprising ways to reduce plaque and protect against gum disease is to increase **vitamin C intake**.

Studies confirm vitamin C deficiency is a risk factor for periodontitis. They *also* reveal that people with the most *severe* cases of periodontitis tend to have significantly lower levels of C.

Nearly half of U.S. adults over 30 have some form of gum disease, and it only worsens with age. In fact, the incidence of periodontal disease in adults 65 and older is over 70 percent.

And, in patients who *already have* periodontitis, those who get more vitamin C tend to have a lower plaque index value. This is the amount of plaque *visible* on teeth, a sign of gingivitis.

Prevent Harmful Inflammation and Gum Damage

Vitamin C addresses three key factors underlying gum disease: infection, inflammation, and tissue integrity.

1. **Infection:** Gum disease is a *bacterial* infection of your gums that occurs when plaque builds up and hardens into tartar.

Vitamin C enhances your immune system's ability to fight off these bacterial infections.

It inhibits bacteria like *Streptococcus mutans*, which are linked to gingivitis.

2. **Inflammation:** Bacterial infection drives the *next* contributor to gum disease—*inflammation*.

Vitamin C is a powerful antioxidant that protects the gums from oxidative stress and inflammation, both common in gingivitis.

It also *directly* reduces gum inflammation by lowering the inflammatory response and reducing gum bleeding.

3. **Tissue Integrity:** In gingivitis, infection and inflammation damage gum tissue, ultimately leading to tooth loss.

Vitamin C supports the structure of the gums by boosting collagen formation. Collagen is a fundamental protein that aids in maintaining the strength and integrity of your gums. It supports the periodontal ligament and helps to repair and regenerate gum (gingival) tissues.

This reduces the **risk and severity of gingivitis.**

Vitamin C encourages the healing of mouth tissues. It can be *particularly* beneficial following dental procedures and to treat periodontal diseases.

The best way to obtain vitamin C is from a balanced diet rich in fruits and vegetables.

Top food sources of C include red peppers, oranges, broccoli, Brussels sprouts, and kiwi.

But, if you're susceptible, too much vitamin C, particularly in supplement form, can lead to gastrointestinal disturbances and kidney stones. So be sure to speak with your healthcare provider to ensure you're getting the right amount.

Good Bugs SLASH Bad Mouth Bacteria

Your mouth contains normal good flora (bacteria) whose job is to limit the pathogens (*bad* bacteria).

In the same way **probiotics** and **prebiotics** enhance intestinal flora, they *also* boost the good bugs in your *mouth*.

So, taking supplements gives your mouth the tools it needs to manage harmful bacteria.

In fact, promising research reveals that oral probiotics and prebiotics can help prevent or treat gingivitis and periodontitis.

For example, in one review, researchers identified **specific** probiotic strains that reduce harmful *Streptococcus mutans* counts.[13] The good bugs also reduced probing depth in chronic periodontitis (the deeper the probe, the worse the disease) and the volatile sulfur compounds that cause bad breath (halitosis).

These beneficial strains are *Lactobacillus paracasei* SD1, *Bifidobacterium animalis*, and *Lactobacillus reuteri*.

Research also found that probiotics like *Lactobacillus reuteri* improve microbial composition and fight gum inflammation.

Another study using *Lactobacillus plantarum* MK06 (isolated from traditional dairy products) showed the probiotic significantly reduced symptoms associated with gingivitis.[14] It also significantly reduced gum inflammation compared to the control group.

More research is necessary to establish the *long-term* benefits and *best* way to use probiotics and prebiotics to fight gum disease. However, the safety profile of these supplements and the promising research means there's no reason to wait for those results. And some good products are already available.

Life Extension offers a supplement called **Florassist Probiotic Oral Hygiene**, which is a type of probiotic lozenge that supports oral health by inhibiting bad bacteria. It's available at www.lifeextension.com.

In addition, boosting good bacteria in your mouth, you can limit harmful bacteria by avoiding sugar and processed food (which feeds the bad bacteria), not using antibacterial mouthwashes (which are detrimental to the good bacteria), and avoiding antibiotics when possible.

As usual, I have no financial relationship with any product mentioned in this issue.

8 MORE *Natural* Ways to Treat Gingivitis

1. **Turmeric**. Turmeric, known for its anti-inflammatory properties, can be used as a paste or mouthwash to reduce gingivitis symptoms. Studies suggest that turmeric mouthwash effectively treats plaque and gingivitis.[15]
2. **Sage**. The herb sage has anti-inflammatory properties that are beneficial for treating gingivitis. Sage leaves can be brewed in boiling water and used as a mouthwash or applied directly to your gums.
3. **Aloe vera**. Studies show that aloe vera mouthwash can be a helpful step in treating plaque-induced gingivitis. Compared to a placebo, it significantly reduces gum bleeding and plaque index scores.
4. **Raw honey**. Raw honey, especially Manuka honey, is known for its antibacterial and anti-inflammatory properties. Raw honey can be applied directly to your gums to combat gingivitis.
5. **Garlic**. The allicin in garlic gives the herb antibiotic benefits. Garlic is effective against oral pathogens associated with cavities and periodontitis.
6. **Oils**. Oils like coconut, vitamin E, olive, and neem have antibacterial and anti-inflammatory properties. They can be applied to the gums to improve gingivitis symptoms. Additionally, studies show that a traditional method called *oil pulling* can reduce plaque and gingivitis. This involves swishing oil in the mouth to remove bacteria and promote oral hygiene.
7. **Healthy diet**. A nutrient-rich, whole-foods diet supplies the optimal antioxidants, vitamins, and minerals to support oral health and reduce inflammation.
8. **Circadian control**. Animal studies show circadian rhythm controls saliva production, which is critical for oral health. To reset yours, get plenty of blue light from the sun during the day and avoid blue-light-emitting electronics in the evening.