



DR. HYMAN+

# Functional Dentistry

And Why It's Crucial for Overall Health

**Mark Burhenne DDS**

**“The truth is so rare that it is a true  
delight to tell it.”**

# Nasal vs. mouth breathing

CO<sub>2</sub> is not toxic

CO<sub>2</sub> / O<sub>2</sub> mix is key

Nasal Breathing Optimizes This Ratio

Brain Looks at CO<sub>2</sub> Concentration (not O<sub>2</sub>)!

Nasal breathing prevents overbreathing of CO<sub>2</sub>





DR. HYMAN+

# Airway Health

How you **breathe** at night determines your  
entire **health destiny**

# What's your **mallampati**?

The size of your airway while awake is not the size of your airway while asleep

There is a qualitative difference between breathing between through one's mouth as opposed to one's nose

Breath, by James Nestor

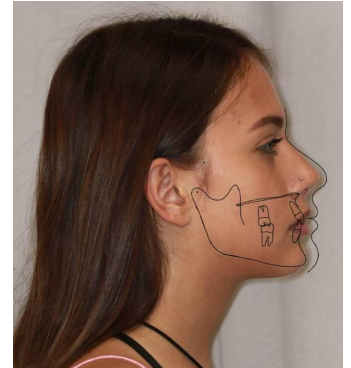
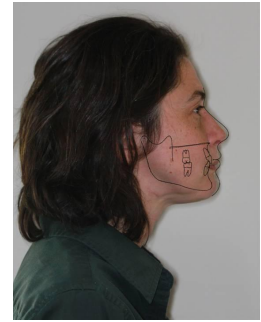
Dentists can recognize OSA decades before a physician can



@ASKTHEDENTIST

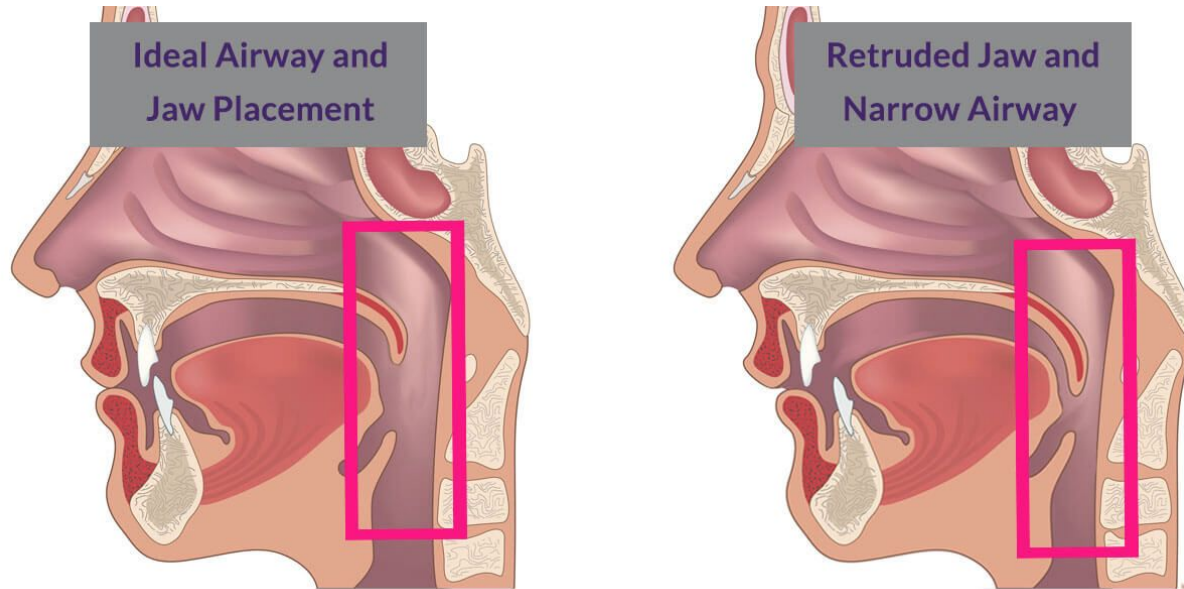
# Facial development

- ❑ The size of your airway while awake is not the size of your airway while asleep
- ❑ There is a qualitative difference between breathing between through one's mouth as opposed to one's nose
- ❑ *Breath* by James Nestor
- ❑ Dentists can recognize OSA decades before a physician can



Source: Ariana Ebrahimian, DDS  
Ebrahimian Integrative Dentistry  
@ebrahimianintegrativedentistry on Instagram

# What does a **small airway** look like?



# Is there an optimal dental diet?

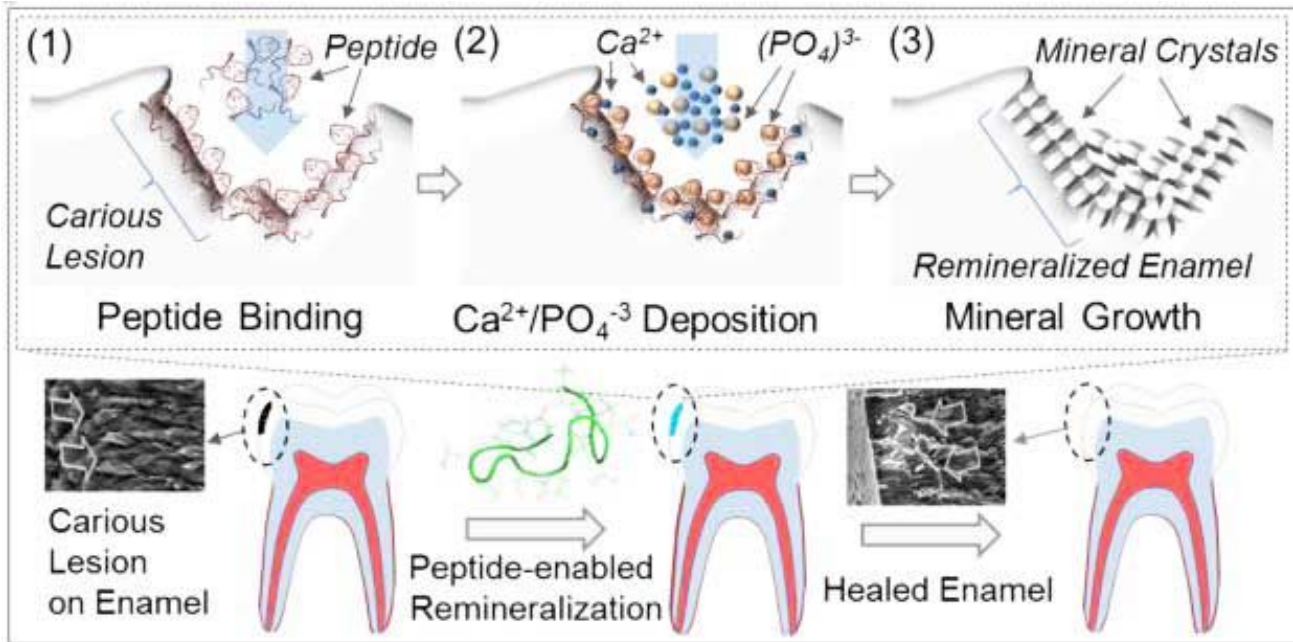
The **Western Diet** wreaks havoc on genetic expression, resulting in **weak jaws** and **small airways**



# So, **what** should I eat?

!	!	!
<b>PHYTIC ACID FOODS</b>	<b>SIMPLE STARCHES</b>	<b>DRIED FRUIT</b>
wheat	bread	raisins
beans	pasta	
rice	crackers	
!	!	
<b>SUGARY FOODS AND DRINKS</b>	<b>ACIDIC FOODS AND DRINKS</b>	
cookies	soda	
fruit juice	coffee	
candy	alcohol	

✓	✓
<b>CALCIUM FOODS</b>	<b>VITAMIN D FOODS</b>
raw, grass-fed milk	mushrooms
salmon	egg yolks
broccoli	sardines
✓	✓
<b>VITAMIN K2 FOODS</b>	<b>MAGNESIUM FOODS</b>
cod liver oil	cacao
chicken liver	blackstrap molasses
grass-fed beef	avocado
✓	
<b>PHOSPHOROUS FOODS</b>	
grass-fed meat and dairy	
eggs	



# The **root cause** of **tooth decay**...

1. Dry mouth
2. Diet
3. Biofilm management
4. Genetics (plus epigenetic expression)

*Did you think I was going to say brushing and flossing?* 🙄

# Oral disease is a disease of **diet**, not **hygiene**

❌ It's not how much fluoride you ingest.

❌ And not even your access to good dentistry

❌ It's not brushing and flossing (although that's still important)

It's all about **acknowledging** the **root cause**



**“You can’t outbrush diet.”  
—Mark Burhenne, DDS**

# Oral disease is a disease of **diet**, not **hygiene**

As it is for overall health, the **western diet** is the greatest contributor to **chronic systemic disease**.

Chronic disease is now the **single biggest threat** to global economic development.

One question that needs to be addressed is **how much** does oral health **contribute** to the overall equation?



## Causes of cavities that are **not** hygiene-related

1. Mouth breathing
2. Goldfish crackers (processed foods)
3. Alcohol-based mouthwash
4. Insufficient Vitamin K2
5. Insufficient minerals
6. GI disorders
7. No buffer with acidic meals
8. Grinding (bruxism)
9. Not replacing brush heads/over brushing
10. Mouth-drying medicines



**Dr. Mark Burhenne** ✓  
@askthedentist

When you get a cavity and they tell you to “brush and floss more” with no mention of the oral microbiome, nasal breathing, and diet ▶▶▶▶▶▶▶▶

# What to do when you have a cavity...

Make sure you discuss these with your dentist:

1. Diet/diet of our ancestors compared to the modern diet
2. Lifestyle
3. Breathing habits



Dr. Mark Burhenne ✓

@askthedentist

The conventional dentist says,  
“You didn’t brush and/or floss enough.”

The functional dentist says,  
“Let’s talk about how your nutrition, lifestyle, and dental hygiene have changed since we last saw each other.”



# Supplements for Oral Health

**Vitamin C:** Essential in production collagen. Deficiency results in inflamed, bleeding, and painful gums, and loss of teeth. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6678404/>

**Omega-3s:** Any source of DHA and EPA (Fermented cod-liver oil). Those who took the supplement and after SRP experienced significantly greater improvements than control group in connective tissue attachment and the gingival index (bleeding upon provocation) <https://pubmed.ncbi.nlm.nih.gov/32436902/>

**Probiotics (and prebiotics)?** Swish with spore or chew on pro and prebiotic tablets. SEED FEED and WEED. FEED seems to most effective

**Melatonin:** Participants had higher levels of the antioxidant enzymes superoxide dismutase and glutathione peroxidase and decreased markers of inflammation compared with participants who underwent periodontal therapy alone. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7090208/>

# Supplements for Oral Health

**Vitamin D:** 2020 review of 16 studies, those with low Vit D levels are more likely to suffer from periodontal disease. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7468917/>

B complex vitamins

**Zinc:** 2019 study looked at low zinc levels in 300 people with and without type 2 diabetes and its effect on chronic gum disease. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6334553/>

**CoQ10** Those who took 120 mg of CoQ10 for 3 months in addition to undergoing scaling and root planing experienced significant reductions in gum inflammation compared with people who received a placebo <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4576635/>

# Supplements for Oral Health

**Curcumin:** 2021 study looked at the effects of curcumin in 48 people with **gingivitis and periodontitis**. Those who took 80 mg of curcumin per day for 4 weeks had decreased gum inflammation and bleeding compared with those who took a placebo. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7853903/>

Green tea: Those that drink green tea have **healthier gums** and helps with tooth **remineralization**. **Phenols** in tea may help balance the oral microbiome. Polyphenols inside green tea are proven to **impede tumor cells**  
<https://www.sciencedaily.com/releases/2009/03/090305183128.htm>

**Iodine:** A trace mineral, Iodine helps the body to **absorb calcium**

Bonus Supplement: Spermadine (Primadine) <https://oxfordhealthspan.com/discount/ASKTHEDENTIST15>

# Let's talk about the F-word... **Fluoride**

- Topical vs. ingestion
- Damage to the brain, fetus and infant
- Filter your water
- Alternatives to Fluoride
- Lawsuit against the EPA/Historical application of TSCA. On November 22, 2016, a Citizens Petition under Section 21 of TSCA was presented to the U.S. EPA requesting that they exercise its authority to prohibit the purposeful addition of fluoridation chemicals to U.S. water supplies

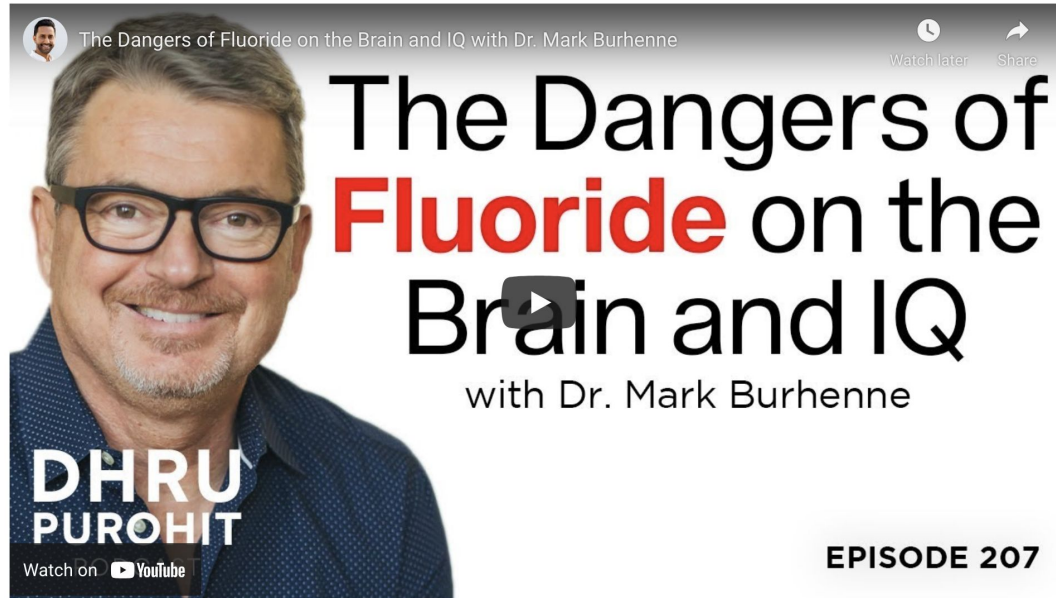


**Dr. Mark Burhenne** ✓

@askthedentist

We will soon see fluoride the way we now see lead.

## Further listening: The **Dhru Purohit Podcast**



# What to know about metal fillings...

- The U.S. Food and Drug Administration (**FDA**) **says dental amalgam is safe** for everyone older than 6.
- The Centers for Disease and Prevention (**CDC**) **admits amalgam restorations account for low levels of mercury exposure.**
- The Environmental Protection Agency (**EPA**) **admits that dental offices disposing of dental amalgam are the number one source of mercury in sewage treatment plants.**
- The World Health Organization (WHO) claims that the small amount of mercury from dental amalgam doesn't result in health problems. Yet [another page](#) on their site claims, “**Exposure to mercury – even small amounts – may cause serious health problems.**”
- The European Union has banned the use of mercury fillings in children under 15, as well as pregnant or breastfeeding women. Several European countries are set to ban mercury fillings completely in the coming years.

## The ADA affirms that amalgam is “valuable, viable, and safe.”

It is worth noting that the ADA’s research arm used to hold **two patents** for **dental amalgam**.

**“Dental amalgam is safe for everyone older than six.”**

Source: U.S. Food and Drug Administration  
**(FDA)**



**“Amalgam restorations account for low levels of mercury exposure.”**

Source: Centers for Disease and Prevention  
(**CDC**)

**“Dental offices disposing of dental amalgam are the number one source of mercury in sewage treatment plants.”**

Source: The Environmental Protection Agency  
(EPA)

**“The small amount of mercury from dental amalgam doesn’t result in health problems.”**

But another page on their site claims:

**“Exposure to mercury—even small amounts—may cause serious health problems.”**

Source: The World Health Organization (**WHO**)



*Meanwhile, in Europe...*

**The European Union has banned the use of mercury fillings in children under 15, as well as pregnant or breastfeeding women.**

Several European countries are set to ban mercury fillings completely in the coming years.



# Your metal fillings: **Remove** or **Replace**?

- IAOMT
- [International Academy for Biologic Dentistry and Medicine \(IABDM\)](#)
- SMART method of removal
- vapor released when mixing in capsules
- Throw away capsules
- Removing silver fillings/vapor and wastewater
- Wastewater is processed —) off gases in landfill / incinerators / fertilizer
- Cremation

# Another **forever chemical** causing **chronic disease**

Scientific evidence has linked amalgam fillings to the following health conditions:

- Allergies
- [Alzheimer's disease](#)
- Amyotrophic lateral sclerosis (AKA Lou Gehrig's Disease)
- Anxiety
- [Appetite loss](#)
- [Autism spectrum disorders](#)
- [Autoimmune disorders](#)
- [Cardiovascular issues](#)
- [Chronic fatigue syndrome](#)
- Depression
- [Endocrine disruption](#)
- [Gingivitis](#)
- Hallucinations
- Headaches
- Hearing loss
- [Insomnia](#)
- Kidney issues
- Liver issues
- Memory loss
- Mood changes
- [Multiple sclerosis](#)
- Nervous system issues
- [Oral cancer](#)
- [Oral lichen planus](#)
- Parkinson's disease
- [Miscarriage](#) or newborn death
- [Periodontal disease](#)
- Reproductive dysfunction/[infertility](#)
- Respiratory issues
- [Restless leg syndrome](#)
- Suicidal ideation
- [Thyroid disorders](#)
- Tremors
- Weight loss

# What to do about amalgam fillings

- When to remove and when not to remove?
  - Prenatal / pregnancy / immune system compromised
- How to remove / IAOMT
- Testing / Quicksilver TriTest
  - Avoid challenge testing
- Alternative filling material
  - Gold / Excellent biocompatibility
  - Ceramics / Issues but sometimes
  - Composites / Issues but recommended
  - Current Safest Composite Admira Fusion
- What I did as a dentist



# We want a restorative filling that is...

- ✓ easy to use
- ✓ technique sensitive materials lead to less efficacy and longevity of the restoration
- ✓ shrinkage is a big deal with plastic fillings
- ✓ cosmetics are important, but successful aesthetics is more in the hands of the operator
- ✓ sealants are also in the same category



# Preferred filling material: **Admira Fusion**

## Admira Fusion

Universal nano-hybrid ORMOCER restorative material

Like Share

» Instructions for use

- The worldwide first purely ceramic-based restorative material
  - Pure Silicate Technology, i.e., fillers and resin matrix based purely on silicon oxide
  - contains no classic monomers
- Thanks to the most innovative ORMOCER technology
  - by far the lowest polymerisation shrinkage (1.25 % by volume) and particularly low level of shrinkage stress in comparison to all conventional restorative composites
  - inert, so excellent biocompatible and extremely resistant to discolouration



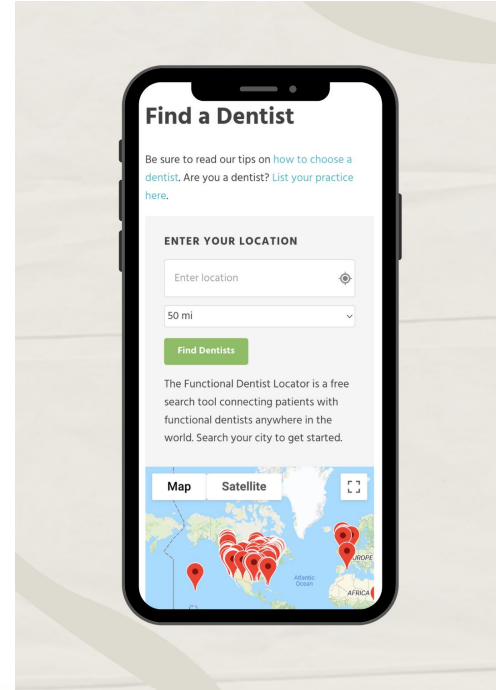
Text



# Where can I find a **functional dentist**?

Free search tool for our global network  
of hundreds of dental health  
practitioners, including functional  
hygienists and myofunctional therapists

**[askthedentist.com/directory](https://askthedentist.com/directory)**



# You **can't** be healthy without a **healthy mouth**

You deserve a dentist who not only recognizes the mouth-body connection, but also, who is your **partner** in investigating **root causes** and partnering with you to help you achieve oral and overall health...for a lifetime

[askthedentist.com/directory](https://askthedentist.com/directory)



Dr. Mark Burhenne ✓

@askthedentist

A good dentist doesn't drill, fill, and bill. They are your partner in creating long-lasting whole body wellness.

# Resources: Where to go from here

- Make the connection between any systemic issues you have to oral involvement
- Mouth Tape
- Diet / Paleo Diet / double check all of your food choices
- Mercury Fillings / get baseline test and see your Functional Physician
- Filter drinking water, specifically for fluoride
- Consider taking supplements
- Find / See a functional dentist
- Get your CRP Letter filled out
- Test your oral microbiome
- Read!! <https://fluoridealert.org/researchers/government-reports/timeline-the-tsca-law-suit-against-u-s-epa/>

# Stay in touch

Get my weekly **newsletter**: Mondays with Mark

Weekly **Podcast**: Ask the Dentist

Website: [askthedentist.com](http://askthedentist.com)

Instagram and Twitter: **@askthedentist**



**“Reading is essential for those who seek to  
rise above the ordinary.”  
—Jim Rohn**

# Further Reading

