

# ORAL INFLAMMATION:

## THE TIPPING POINT OF HEALTH CARE

BY DANIEL L. SINDELAR, DMD

I'm going to let you in on a secret. We are entering the greatest era of opportunity dentistry has ever seen — the era of health and wellness.

Don't get me wrong. We still address pain, restorations, and esthetics. But as Bradley Bale, MD, of the Bale/Doneen Method, states, "Don't ever forget; dentists are saving lives every day." How? By addressing oral inflammation and overall health.

By addressing these issues:

1. Our care is elevated
2. Patients' lives improve drastically
3. Dentists succeed like never before

The "tipping point" for health care and the dental profession is undeniable. Oral inflammation causes and increases inflammatory disease, such as heart attack, stroke, diabetes, rheumatoid arthritis, kidney disease, sleep apnea, Alzheimer's disease, dementia, pneumonia, preterm births, and birth defects, just to name a few.

It doesn't take "trench mouth" to initiate the inflammatory response.

When you compile the research by leading health-care institutions on oral inflammation, dentistry's role in overall health and disease prevention is remarkable. At the Second Annual AAOSH Scientific Session, the "rubber hit the road." Some of the world's leading health-care experts and institutional representatives presented just how important the influence of oral inflammation is on major diseases.



**TIPPING POINT:**

“Periodontal disease is now considered a medical disease,” Dr. Marc Penn, MD, PhD, former director of Cardiac ICU at Cleveland Clinic.

Fifty percent of heart attacks and strokes occur in people with normal cholesterol levels. Inflammation is the key contributor to heart disease and cardiac events.

**TIPPING POINT:**

Dr. Yiping Han’s research shows that the traditional view of periodontal disease is insufficient to address the effects of the oral apparatus on overall health. Dr. Han’s research determined the cause of death of a fetus was oral bacteria *Fusobacterium nucleatum* from the mother’s mouth.

Though the mother lived a healthy lifestyle and had no visual signs of periodontal disease, she had a microbial burden and tested as a hyper-responder to inflammation. She lost her baby in the 36<sup>th</sup> week. This rarely happens. It’s not just what we see visually; it’s the bacteria present.

“Periodontal disease is an inflammatory disease caused by specific or groups of specific microorganisms.”—*Clinical Periodontology*, 9th Edition; Carranza 2002

I still practice what is considered traditional dentistry. Every week, we reduce pain in patients and restore their teeth. We restore their smiles. But I have added four health centers that launch dentists into the future of health care. They include:

- Oral Inflammation Reduction Center
- Sleep Center
- Malocclusion Center
- Wellness Center

The centers are organized, operational, and effective. Best of all, my patients love the fact that we help them protect not only their teeth, but also their overall health.

How many times have you thought that patients just want to get their six-month recall, freshen up, and leave? In the era of health and wellness, your of-

fice is no longer just a cleaning station. It’s part of a heart attack, stroke, and diabetes prevention center.

Dental professionals have always been “prevention specialists,” with recall visits, prophies, radiographs, fluoride treatments, sealants, and more. It’s time now for us to be “disease prevention specialists.”

**TIPPING POINT:**

At a time when most of the country is buried in fear of the economy and rising health-care costs, dentistry is positioned to benefit from whatever health-care agenda is followed. Oral biofilm-associated diseases are now the largest health-care cost of this nation.

The fact is that dentists today are facing serious problems:

- At age 64, only 4% can retire comfortably
- Health care is being commoditized
- Insurance companies are reducing compensation by 20% to 30%
- Cosmetic dentistry is down 30% to 50%
- Malpractice lawsuits occur because of supervised neglect

You will either become obsolete, or you will change and greet the greatest opportunity of your lifetime!

**TIPPING POINT:**

“Genetics are the future of all health care.” (Dean Ornish, MD)

Dentists have a unique role in testing and treating genetics. Yes, I said dentists.

**AT A TIME WHEN MOST OF THE COUNTRY IS BURIED IN FEAR OF THE ECONOMY AND RISING HEALTH-CARE COSTS, DENTISTRY IS POSITIONED TO BENEFIT FROM WHATEVER HEALTH-CARE AGENDA IS FOLLOWED.**

Genetic diseases such as cystic fibrosis and neurofibromatosis are present from birth. The key to reduction in disease involves genetic variations, which do not cause disease on their own. They influence susceptibility and the clinical severity of our worst diseases. Genetic variations affect the inflammatory pathway and release cytokines — a key player in inflammatory disease.

“Periodontitis is a complex genetic disease.” (Yoshe, Kobayashim, Tai, Galicia; *Perio* 2000, Vol. 43, 2007, 102-132)

**TIPPING POINT:**

One out of three people are IL-1 positive. This means they are hyper-responders to all inflammation — especially oral inflammation — and have the same risk for heart disease as smokers. Every patient should now be tested for the genetic variation IL-1. It’s a simple 30-second rinse test that needs to be done only once. Patients are either positive or negative.

**TIPPING POINT:**

We are finding that traditional periodontal therapy is not enough. Periodontal disease needs to be defined by pathogens. Bad bacteria enter our bloodstream through periodontal pockets and release toxins. After this, our bodies trigger an inflammatory response to both. The only way to have success is to treat early and effectively, and to address the microbial burden.

“No clinical parameters are able to predict the progression of periodontal disease; salivary diagnostics can!” (Dr. Thomas Nabors, a leading authority in molecular analysis and genetic risk assessment)

When we simply use traditional therapy (SRP), oral biofilm and microbial levels return to their pretreatment levels in just three to seven days. So traditional care is ineffective. We need to treat with antimicrobial therapy. (Petersilka et al. *Perio*. 2000 Vol 28, 2002)

Think of it this way. If one of your patients is IL-1 positive and has PG, that person had better get his or her affairs in order, because that person *will* die prematurely. When *Porphyromonas gingivalis* is present,



the risk for heart attack increases by 13.6 times — more than twice the risk of a heavy smoker. (Stein JM et al., *Journal of Periodontology*) Yes. Dentists are saving lives.

An intensive antimicrobial approach reduces systemic inflammatory markers and systolic blood pressure, and improves lipid profiles with subsequent changes in cardiovascular risk. (D'Aiuto et al, *Amer Heart Journal*, May 2006)

According to John Tucker, DMD, we now have “dental solutions for medical problems.”

#### TIPPING POINT:

Oral biofilm is the largest cause of oral inflammation, and oral inflammation is the No. 1 source of inflammation in humans.

“Don't ever forget to look at periodontal disease as an important source of inflammation in reference to cardiovascular disease.” (Dr. Marc Penn, MD, PhD)

When the walls of coronary vessels get hot, we have a problem — heart attacks or strokes. Oral inflammation has a direct effect on vascular walls getting hot.

Lp-PLA<sub>2</sub> tells us how hot the walls are becoming. Lp-PLA<sub>2</sub> levels are measured with the PLAC-test, a revolutionary blood panel being performed by preventive cardiologists across the country. The only factor to increase Lp-PLA<sub>2</sub> is periodontal disease and oral inflammation. When you eliminate periodontal disease, you lower Lp-PLA<sub>2</sub>.

I am involved in case studies across the country where dentists, in conjunction with physicians, are lowering Lp-PLA<sub>2</sub> by addressing oral inflammation. This helps get at-risk patients out of risky territory for cardiovascular disease.

“Lp-PLA<sub>2</sub> is frequently associated with high levels of causative oral bacteria. I've watched countless Lp-PLA<sub>2</sub> levels plummet by simply implement-

ing an effective strategy to reduce oral infection and inflammation.” (Charles Whitney, MD, VP of American Academy of Private Physicians)

Every dental professional needs to be aware of the relationship between Lp-PLA<sub>2</sub> and oral health.

Also, by addressing oral inflammation and periodontal disease, we can lower A1c levels more than medications can in many diabetic patients.

Dental professionals are being asked to:

1. Determine IL-1
2. Determine microbial burden
3. Coordinate risk

So how do we start? Treatment is the last step on the list. First, discover the “why.” One of my favorite quotes is from Mark Twain — “The two most important days in our lives are the day we are born and the day we discover WHY.”

This is the “why” for dentists. The pur-



WORTH: **20**  
CONT.ED.  
CREDITS

These are the MD's and Researchers  
from the Cleveland Clinic and the  
Nation's Top Dentists that Understand

# THE ORAL SYSTEMIC CONNECTION... YOU NEED TO HEAR THEIR STORY!

(this will change everything you think you know about gum disease and your profession)



**Michael Roizen MD**  
ORAL-SYSTEMIC & CONTROLLING YOUR GENES & ENVIRONMENT



**Caldwell Esselstyn MD**  
YOUR MOUTH & YOUR HEART- NUTRITION & CORONARY ARTERY DISEASE



**Brad Bale MD**  
UNDERSTANDING THE LINK BETWEEN PERIODONTAL HEALTH TO HEART ATTACK & STROKE PREVENTION



**Amy Doneen MSN, ARNP**



**Mark Penn MD, PhD**  
LIPIDS, INFLAMMATION & ORAL SYSTEMIC HEALTH



**DMD, PhD Anthony Iacopino**  
PERIODONTAL-SYSTEMIC CONNECTION THROUGHOUT THE LIFESPAN



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pose for dentists is to assist in patients' overall health.

- Get it into your DNA! We save lives every day.
- Get your team on board, and team members will love their new purpose. Hire the inspired and inspire the hired.
- Learn the basics of oral-systemic health. That's why AAOSH was founded.
- Become a leader of dentistry. This is your opportunity.
- Become known for health.
- Start the conversation. Patients know more about their health than you realize. Don't be discouraged if they're not used to hearing it from you. Patients will look forward to your leadership in this area.
- People love hearing about themselves; nothing is more personal than one's health.
- Everyone needs to hear something about five times before recognizing it. So start the conversation immediately.

## HERE ARE SOME KEYS TO THE CONVERSATION:

- The conversation starts well before patients are in the chair.
  - My practice has produced a reception area video loop that is invaluable. It can be customized for any practice.
  - Oral-systemic health is newsworthy for your community. I have developed a system with the founder of PRWeb for getting press releases out to the community.
  - My practice uses infographics, which helps patients understand our discussions easily.
- When confirming an appointment, confirm just how important this visit is for the patient.
- Make sure the importance of oral health and overall health is in your practice communications.
- Make sure your website, social media, recall cards, appointment cards, and mailings reflect oral-systemic health.
- My practice uses MyDentalETC, a system to communicate oral health and its importance to overall health.
- My practice has "health risk calculators" from MyDentalETC on our website with links to videos and research.
- My practice has a physician newsletter through MyDentalETC.
- Use posters, brochures, and anything else that will help people understand just how important oral-systemic health is, and that you can be a solution to potential problems.
- Make sure health is on your telephone's on-hold message.
- Intraoral cameras are not just for broken teeth.
- Everyone has a Facebook page. By including reviews on Facebook and placing articles about overall health on Facebook, you can build up your social media.
- Patients at the end of recall visits at my practice are handed a tag line card with risks about the lack of oral health, and most importantly, how it can affect them.
- Meet patients where they are and always simplify the conversation.
- Always celebrate the victories.

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### TREATMENT LIST:

In my practice, I have found that once patients value the importance of the care they receive, they seek it. There is no greater value than improved overall health. With that as a baseline, here are some options and actions.

First, perform a “customized full wellness visit.”

- Screen patients for risks and current conditions
- Have a four-tiered program in addition to traditional dentistry, including:
  - Oral inflammation reduction
  - Sleep assessment and care
  - Wellness programs that supplement the care we give
  - Malocclusion

### ORAL INFLAMMATION REDUCTION CENTER

First determine a patient’s genetic and microbial risk via salivary diagnostics with OralDNA Labs.

- Take an antimicrobial approach — treat the bugs
- Coordinate care with patients’ physicians, according to their health and risks
- Traditional scaling and root planing
- Treat mechanically by removing biofilm but taking an antimicrobial approach
- Precondition with lasers
- Precondition with antimicrobials
- Microbial-specific treatments, as per their bacterial load
- Systemic antibiotics, when appropriate
- Localized antibiotics
- Periostat, Periogard
- Arestin
- Oxygenate
- Perio Protect
- Advanced home-care systems
- Nutritional and diet programs (Cleveland Clinic Wellness) customized to a patient’s health and risk factors
- Smoking cessation programs (Cleveland Clinic Wellness)
- Stress reduction programs (Cleveland Clinic Wellness) customized to a

patient’s health and risk factors

- Sleep programs (Cleveland Clinic Wellness) customized to a patient’s health and risk factors
- Traditional recalls, customized to the patient’s needs
- Restorative dentistry customized to the integrity of the dentition and the patient’s overall health needs
- Periodontal restorations
- CAMBRA, CariFree
- Xylitol regimens
- Appropriate TMD treatments, customized with stress reduction programs (Cleveland Clinic Wellness)
- Alignment and crowding issues addressed with Invisalign, Six Month Smiles, and orthodontic referrals
- Removal of third molars that may be the focus of infection and inflammation

### SLEEP CENTER

- As obesity becomes pandemic, sleep disorders are skyrocketing
- Add a sleep center to your existing practice
- Coordinate and work with sleep physicians and sleep center
- Home sleep studies
- Prescribe oral sleep appliances when appropriate
- Offer customized sleep programs (Cleveland Clinic Wellness)

Of course, the most important point to the whole program is to treat in conjunction with physicians and coordinate care.

### MALOCCLUSION CENTER

Research indicates that more than 45 million Americans suffer from chronic headaches and migraines. Experts estimate that 80% of these symptoms could be dental-force related.

### WELLNESS CENTER

- Wellness is the future of health care
- Become a disease prevention specialist
- Screen for cancer with one of the advanced systems
- Scan for antioxidant levels, and offer pharmaceutical-grade nutritionals

**BY ADDRESSING ORAL INFLAMMATION, WE ARE REVOLUTIONIZING HEALTH CARE.**

Don’t be afraid to initiate conversations with referring physicians. Recently, a new patient came to the office. She did not see our website, did not receive anything in the mail about our practice, did not see any of our social media, and did not hear about the practice in the news. She was referred by one of our inner circle physicians. This happens regularly in my practice. This is the cheapest, most practical, and most effective marketing that I have found.

By addressing oral inflammation, we are revolutionizing health care. The answer is simple. We now can and must identify genetics, quantify the bacterial load, and coordinate care. I am sure you *will* improve your care, improve your patients’ lives, and succeed. **DE**



**DANIEL L. SINDELAR, DMD**, practices full-time in St. Louis, Missouri. As president of the American Academy for Oral Systemic Health, he is

involved in expanding the awareness of the link between oral health and overall health to healthcare professionals and the public. For more information on the Four Centers of Oral Systemic Health and how oral-systemic health research can be harnessed to make your patients healthier and your practice more successful, visit [www.drDansindelar.com](http://www.drDansindelar.com) or call (314) 394-1920.



**DR. DAN SINDELAR** will be presenting “The Practice of the Future.”