THE ADA'S TAKE

How the world's leading dental organization views the growing connections between a healthy mouth and a healthy body.

DANIEL M. MEYER, ASSOCIATE EXECUTIVE DIRECTOR OF THE DIVISION OF SCIENCE AT THE AMERICAN DENTAL ASSOCIATION, SPEAKS WITH SCIENTIFIC AMERICAN ABOUT ORAL HEALTH, ETHICS, AND THE STATE OF THE SCIENCE LINKING GUM INFECTION WITH OTHER SERIOUS DISEASES.

SCIENTIFIC AMERICAN: What is the ADA's (American Dental Association) position on the science behind the possible links between periodontal disease and other systemic conditions?

DANIEL M. MEYER: The ADA is a science-based organization. It's had a rich history of basing its policies, clinical recommendations and guidance for providers, patients and the public on sound scientific principles. Oftentimes, the science is there and clearly sets a sense of direction, but at times we need more information. As far as oral-systemic relationships, we're dealing with new discoveries and new scientific information. The burden of proof of a causal relationship is not yet met; but research is ongoing and it looks promising. Inflammatory processes in the oral cavity could play a role in causing problems in other parts of the body.

It's important that we distinguish between sound science and pseudoscience—and between causal relationships and casual relationships. We want to make sure that everyone has the best scientific information to make good treatment and clinical care decisions that will improve the quality of life and health for our patients.

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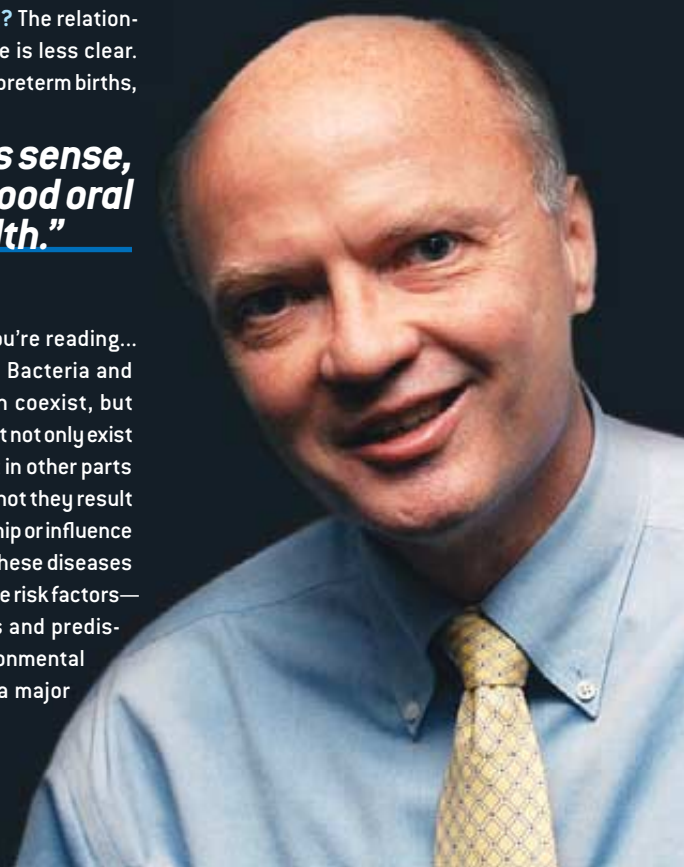
Do you feel that it's too early for there to be clinical implications or do you feel that the evidence is solid enough in any of these areas to change either medical or dental care? Obviously there is a relationship between oral health and general health. Other relationships need to be clarified. It would be naive of us to think that the mouth is separate from the rest of the body; the mouth is an excellent location to diagnose, prognose, treat and intervene on a whole host of disease processes. Oral health has to be a part of general health care, so it's not too early.

Which of the possible links do you feel are stronger and which do you feel will need considerably more research before there are any strong conclusions either way? The relationship to cardiovascular disease is less clear. Regarding the relationships to preterm births, depending on what studies you're reading... we're getting varying results. Bacteria and various health conditions can coexist, but we're talking about bacteria that not only exist in the oral cavity but may exist in other parts of the body as well. Whether or not they result in a cause-and-effect relationship or influence relative risk remains unclear. These diseases are complex. Some have multiple risk factors—behaviors, genetic conditions and predisposing factors, including environmental issues. So oral health can be a major component of some of these conditions, or it may be a minor component.

Whether or not treating oral health conditions will affect systemic health depends on the disease—and we'll know more about that as future research unfolds. Until we have [intervention] studies, where we can measure results in consideration of other variables that may influence health, I think we have to be guarded in treatment recommendations. But treating oral conditions such as periodontal disease has its own undisputed benefits and may have broader systemic health outcomes.

I think it's going to be decades before we fully understand cardiovascular diseases. And again, I think we have to be very cautious about any of the oral health relationships, because they may pale in comparison to other risk factors. But good oral health makes sense, is appropriate to all cases, and contributes to good general health.

You make a good point. Regardless of periodontal health's relation to your heart, it still is important for your mouth and your teeth. We want patients to be focused on good oral-health and oral hygiene, but we also want them to take care of their bodies. »



As more evidence links the health of the mouth to the health of the body, do you feel the role of the dentist needs to change, and if so, how? I do. I think the role of the dentist, as well as any health care provider, needs to evolve as research evolves, expanding as information becomes available. In all of medicine and dentistry, the role of the provider has changed considerably over the last several decades. I see the dentist becoming much more integral to the general health care team. Dentists generally treat healthy, ambulatory patients rather than afflicted or debilitated patients so they can be involved in early intervention, early diagnosis, risk assessment and disease management of many diseases, and [they can] refer those individuals to appropriate health care providers. For example, to help detect cardiovascular conditions it would be beneficial for dentists to do blood pressure screenings, and we're looking at new technologies like salivary diagnostics. The chemicals that you see in blood should also be detected in saliva, and although this technology needs to be refined, it allows dentists to be part of the early diagnostic team. We need to take more of a medical approach to some of these conditions, and to align ourselves with other health care providers to address them.

Is the ADA promoting a closer relationship with the medical community? We are. We're working very closely with the American Medical Association, a variety of health organizations including the American College of Obstetricians and Gynecologists, the American Academy of Periodontology, and various professional and research organizations to address these issues collectively.

Specifically, the AMA and ADA had co-organized a press event on periodontal disease. What prompted that? The concern is that there is a lot of misinformation. We were receiving many requests from the public about these relationships and were concerned that they be put into proper perspective. We saw this as an opportunity to work together with the AMA, to share information, to update the public and the profession on where we are at this time. We didn't want to overstate relationships, but we didn't want to understate them, either.

You mentioned that there is a lot of misinformation. What are some examples? There are those that would say that some of these are causal relationships, that there is a direct relationship between oral bacteria, and, for example, cardiovascular disease. That hasn't been demonstrated yet. There are still conflicting studies that call into question the strength of some of these relationships. Our concern is to keep things in the proper perspective—so when someone goes to a physician or a dentist, that the level of care is consistent with the quality and strength of scientific evidence.

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Are there any other obvious myths around periodontal disease and general health that come to mind? There are misconceptions that need to be addressed. We've had patients calling up thinking that they can prevent or treat heart conditions by simply going in and having their teeth cleaned or scaled and root planed.

Getting your teeth cleaned wouldn't be the magic bullet there. No, it wouldn't be. We've had people call up asking, "If I brush my teeth with this certain toothpaste, will that help cure my heart disease?" No. Could utilizing an appropriate toothpaste improve oral health? Yes. Is oral health a component of general health? Yes. We do know how proper oral hygiene, proper lifestyles can influence health—and oral health; but to make huge extrapolations? We're very concerned about that.

I've heard a number of researchers use the expression "floss or die," and I've wondered where it originated. That mentality does frighten me a bit because some things that are said facetiously are taken to heart by some people and by the media at times. I don't know who coined the phrase, but it does lend itself to the misconception that all you have to do is floss and you won't die.

If the role of the dentist does indeed need to shift to incorporate risk for—let's choose pregnancy outcomes—what would that mean regarding liabilities for dentists? We will have to wait and see. We're treating individuals, often with a host of prior medical conditions. People are living longer now, taking a variety of medications, many of which interact or cause dry mouth—which can cause other oral and health complications. So with care comes the concern for side effects and risks. You have to weigh the benefits against the risks. We are treating patients for complex diseases, but perhaps we don't fully understand all of the health implications, or all of the side effects, or all of the interactions. Along with that there certainly are medical and legal risks.

Which in the U.S. is a big issue. We are perhaps the most litigious society in the world. Right. And so, are dentists preyed upon? Yes. Are health care providers preyed upon? Are patients preyed upon? Yes. And so that's always a concern.

Do you think this new data could create a more complex legal matrix? It's already been brought to our attention. There are lawyers' Web sites saying, "If you've ever had a history of periodontal disease... and if you have any of the following conditions, then you may be eligible for legal action." Does concern us? Obviously we don't want harm done to patients, but we also recognize that there are individuals who may take advantage of the fact that some of these issues are still evolving. We don't yet know everything that we need to, and with that comes a level of risk and a real need to enlighten the public and the profession on relevant care—and the need for more research.

Does the ADA have a specific program or regimen approving dental care/dental procedures for specific problems? Yes. If you go to ada.org, you'll see that we do provide guidance on a whole host of topics related to patient/provider safety—including oral-systemic relationships.