

## **The Mouth is the Mirror to the Body:**

### **Oral-Systemic Health**

Roopali Kulkarni, DMD, MPH

Assistant Professor, Oral Medicine, School of Dental Medicine, Assistant Director of Postdoctoral Oral Medicine Program, University of Pennsylvania; Section Chief, Oral Medicine, ChristianaCare

Teeth do not just float about like objects in space. They are in fact attached to a person: a person with a unique background, experiences, and story. Although a clear division between dentistry and medicine has been created, the social determinants of health argue otherwise. Oral health and systemic health are intertwined, and all the various parts that make us who we are contribute to our health. Let's discuss this, keeping in mind two of the most important dental instruments: the mirror and the explorer, with a reflection of our past and an excitement to venture into the future. The mouth is the mirror to the body and can reveal signs of underlying health issues. Thus, a team-based approach to care is needed to optimize patient health as we move into the next era.

This concept is not a new one. For over a century, healthcare has explored the relationship between periodontal disease and cardiovascular health, diabetes, among other conditions. Fast forward: in recent times, the Surgeon General's report in 2000 called for more extensive research exploring the connection between oral health and systemic diseases and emphasized the importance of oral health. And now, as we collectively work towards Healthy People 2030, there are several goals surrounding oral conditions, with the understanding that a healthy mouth contributes to a healthy body.

Nowadays, there are unique threats to maintaining a healthy body. People are living longer, and with our "aging" population, we have challenges we never faced before. Through the years, we have noticed a stark rise in chronic diseases, everything from dental caries to heart disease to cancer. Chronic diseases pose significant social, economic, and political burdens on society. Just as the mouth is the mirror to the body, healthcare is the mirror of society. How healthy a community is reflects closely on how that community is functioning. As the focus of public health is protecting and improving the health of communities, oral healthcare professionals focus on prevention to protect and improve the oral health of people. Although in existence for decades, oral medicine is now one of the newly recognized American Dental Association specialties. The field specifically focuses on chronic disease management, the diagnosis and management of medically related diseases affecting the oral and maxillofacial region, and dentistry for medically complex patients. Every day, we encounter the connection between oral and systemic health, seeing its effects on the patients we treat.

Many times, the mouth is the first sign of a systemic condition or even the only manifestation. In a traditional sense, we see systemic conditions that manifest orally, such as ulcerations in Crohn's disease, dry mouth in Sjogren's syndrome, or tissue inflammation in systemic lupus erythematosus. But we also see how oral and systemic health are connected through other parts of health, such as sleep, nutrition, and mental health. Oral healthcare professionals can help treat patients with sleep-related breathing disorders, such as obstructive sleep apnea. They may act on interdisciplinary teams to provide patients the ability to chew, swallow, and obtain adequate

nutrition. They also work to create healthy smiles, which can correlate to reduction in mental illness.

Healthy mouths can also be negatively impacted by other conditions. Viruses, like human papillomavirus and COVID-19, can manifest orally. With the advent of vaccinations, we can work to lower the risk of certain cancers related to human papillomavirus, including oropharyngeal cancers, and lower the risk of mortality associated with COVID-19. Oral healthcare professionals are moving to the forefront of educating patients and increasing awareness of the importance of vaccination.

As we use our mirror to reflect, it is even more important to use our explorer to ask the question, how can we move forward? I believe in the power of integration, innovation, and interdisciplinary care. Integration of medicine and dentistry is key, with more open dialogue on patient care. Innovation comes in all forms, from research to the creation of clinical practice guidelines to technological advancements. Interdisciplinary approaches to care allow all expertise to be included. Collaboration, creativity, and community will push patient-centered care to the forefront. These tenants will also allow us to better explore how the health of the mouth and the health of the body are truly connected.

Dr. Kulkarni may be contacted at [roopalik@upenn.edu](mailto:roopalik@upenn.edu).

---

Copyright (c) 2023 Delaware Academy of Medicine / Delaware Public Health Association.

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<https://creativecommons.org/licenses/by-nc-nd/4.0/>) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.