Tongue microbiome research underscores key role of oral health

Elderly individuals with fewer teeth, people with poor dental hygiene and people with more cavities constantly ingest more dysbiotic microbiota, which could be harmful to their respiratory health, according to new research published in the journal mSphere. The findings come from a large, population-based study that identified variations in the tongue microbiota among community-dwelling elderly adults in Japan.

“Fewer teeth, poorer dental hygiene and more dental caries experience are closely related to dysbiotic shift in the tongue microbiota composition, which might be harmful to the respiratory health of elderly adults with swallowing problems,” said corresponding author Yoshihisa Yamashita, PhD, DDS, Section of Preventive and Public Health Dentistry, Division of Oral Health, Growth and Development, Faculty of Dental Science, Kyushu University, Fukuoka.

Prior to this study, researchers knew that constant aspiration of saliva can lead to pneumonia, a major cause of death among elderly adults with swallowing impairments, and that tongue microbiota are a dominant source of oral microbial populations that are ingested with saliva. Previous research has also shown that in institutionalized frail elderly adults, the dysbiotic shift of indigenous tongue microbiota is associated with an increased risk of death from pneumonia.

In the new study, Yamashita and colleagues set out to understand the variations in tongue microbiota composition related to oral health conditions among community-dwelling elderly adults and to identify factors associated with the dysbiotic shift in the tongue microbiota. They investigated the tongue microbiota status and dental conditions of 506 adults aged 70 to 80 years living in the town of Hisayama, Japan, who received a dental examination during a health examination of the town’s residents performed in 2016.

The scientists collected the tongue microbiota from the center area of the tongue dorsum using a modified electric toothbrush as a sampling device and used next-generation sequencing approaches to analyze the samples. The researchers found that the total bacterial density was independent of the conditions of teeth surrounding the tongue, whereas the microbiota composition, especially the relative abundances of predominant commensals, showed an association with tooth conditions.

“Commensal microbiota composition, especially the relative abundances of predominant commensals, showed an association with tooth conditions,” said Yamashita. “Two cohabiting groups of predominant commensals exist in the tongue microbiota; one of which was associated with dysbiotic shift in the tongue microbiota composition, which might be harmful to the respiratory health of elderly adults with swallowing problems.”

According to researcher Yoshihisa Yamashita, PhD, DDS: ‘Fewer teeth, poorer dental hygiene and more dental caries experience are closely related to dysbiotic shift in the tongue microbiota composition, which might be harmful to the respiratory health of elderly adults with swallowing problems.’ Photo/www.sxc.hu

• See MICROBIOME, page A2
Henry Schein launches 2018 Healthy Lifestyles, Healthy Communities program

Henry Schein Inc. has announced the launch of its 2018 Healthy Lifestyles, Healthy Communities (HLHC) program, an initiative that supports community health centers in their efforts to provide medical and oral health screenings at free health events held in underserved communities across the U.S. HLHC is a flagship initiative of Henry Schein Cares, the company’s global corporate social responsibility program.

Inheld in conjunction with National Health Center Week (Aug. 12-18), HLHC is conducted in partnership with the National Association of Community Health Centers (NACHC). The program supports 14 free community health events hosted by community health centers throughout the summer and fall, providing each with a $5,000 donation of health care products from the company and a $5,000 cash grant from the Henry Schein Cares Foundation. Since its inception 12 years ago, HLHC has supported more than 150 community health events.

According to NACHC, community health centers provide continuous primary and preventive care to millions of patients, reduce the risk of chronic disease, and produce $24 billion in annual health systems savings by, among other things, reducing unnecessary hospitalizations and emergency room visits. They also lower the cost of children’s primary care by approximately 35 percent.

HLHC is co-sponsored by state and local community health organizations and supported by Henry Schein’s supplier partners. Each HLHC-supported community health event is staffed by local physicians, nurses, dentists and community volunteers who screen for a range of health issues — including hypertension, asthma, diabetes, obesity and poor oral health — and associated risk factors that frequently affect children. Attendees at each event can also learn more about how to prevent and treat these problems, and receive assistance in finding a local community health center where they can regularly access care.

“Community health centers are a critical access point to a wide range of health care services, and we at Henry Schein are pleased to support their local outreach efforts through our Healthy Lifestyles, Healthy Communities program,” said Stanley M. Bergman, chairman and CEO of Henry Schein. “Wellness and prevention are essential to overall health, and we gladly stand with NACHC and our supplier partners to support the essential health care screenings being provided at these community health events.”

About the National Association of Community Health Centers

Founded in 1971, the National Association of Community Health Centers (NACHC) serves as the national health care advocacy organization for America’s medically underserved and uninsured and the community health centers that serve as their health care home. NACHC works in conjunction with state and regional primary care associations, health center controlled networks and other public and private sector organizations to expand health care access to all in need.

About Henry Schein Cares

Henry Schein Cares is an integral part of Henry Schein’s commitment to giving back to communities around the world. Health care advocacy organizations, health center controlled networks and other public and private sector organizations to expand health care access to all in need.

About Henry Schein

Henry Schein Inc. is a Fortune 500® company and a member of the S&P 500® and the Nasdaq 100® indexes. Henry Schein’s network of trusted advisors provides health-care professionals with the valued solutions they need to improve operational success and clinical outcomes. The company offers customers exclusive, innovative products and solutions, including practice management software, e-commerce solutions, specialty and surgical products, as well as a broad range of financial services. Henry Schein operates through a centralized and automated distribution network, with a selection of more than 120,000 branded products and Henry Schein private-brand products in stock, as well as more than 180,000 additional products available as special-order items.

Headquartered in Melville, N.Y., Henry Schein has operations or affiliates in 34 countries. The company’s sales reached a record $12.5 billion in 2017, and have grown at a compound annual rate of approximately 15 percent since Henry Schein became a public company in 1995.

For more information, visit Henry Schein at www.henryschein.com, Face book.com/HenrySchein and @HenrySchein on Twitter. (Source: Henry Schein Inc.)

The American Society for Microbiology is the largest single life science society, composed of more than 30,000 scientists and health professionals. ASM’s mission is to promote and advance the microbial sciences. ASM advances the microbial sciences through conferences, publications, certifications and educational opportunities. It enhances laboratory capacity around the globe through training and resources. It provides a network for scientists in academia, industry and clinical settings. Additionally, ASM promotes a deeper understanding of the microbial sciences to diverse audiences.

(Sources: Henry Schein Cares Foundation, American Society for Microbiology)