

# Tooth loss strongly linked to risk of esophageal, head and neck, and lung cancer

**Studying thousands of patients, Japanese researchers have found a strong link between tooth loss and increased risk of three cancers – esophageal, head and neck, and lung. They suggest that preservation of teeth may decrease risk of developing these diseases.**

In the May issue of *Cancer Epidemiology, Biomarkers and Prevention*, a journal of the American Association for Cancer Research, scientists from Aichi Cancer Center in Nagoya and Nagoya University Graduate School of Medicine speculate that bacterial infection and inflammation resulting from poor oral care that leads to tooth loss could also be driving development of these cancers. Periodontal disease is known to increase risk for stroke and heart disease.

“Tooth loss is a common consequence of chronic bacterial infection and may, therefore, serve as a surrogate for chronic infection and inflammation, which in turn may be important to the pathogenesis of cancer,” said the study’s lead author, Akio Hiraki, Ph.D., a researcher at the Aichi Cancer Center.

Researchers measured rates of 14 different cancers and rates of tooth loss in 5,240 cancer patients in Japan, and compared those rates among 10,480 matched cancer-free participants. The researchers specifically found that people with tooth loss were 136 percent more likely to develop esophageal cancer, had a 68 percent increased risk of developing head and neck cancer and a 54 percent greater chance of developing lung cancer. The researchers also found that the rate of cancer increased proportionally to the number of teeth a patient had lost.

These increased risks were seen after researchers took into account a patient’s history of smoking and alcohol use.

Smaller studies have linked tooth loss to different cancers, but this is the largest study to date, and the first conducted within an Asian population, the researchers say. This is also the first study to show a link to lung cancer, they add.

The researchers noted that age and gender affected the associations between tooth loss and cancer risk. For head and neck and esophageal cancers, there were clear associations between tooth loss and cancer risk in women and patients younger than 70 years old, but a less clear link in men and older patients.

The researchers say that while widespread inflammation could explain the link between tooth loss and cancer risk, they also note that tooth loss in the cancer patients may simply reflect unhealthy behaviors that contribute to cancer risk. Furthermore, people who have lost teeth may not be able to eat a healthy diet, and diet is also a factor in cancer development.

Whatever the mechanism, the researchers stress that oral care is critical to good health.

“The oral cavity is a gateway between the external environment and the gastrointestinal tract and acts in both food ingestion and digestion,” the researchers wrote. “Oral hygiene potentially affects gastrointestinal flora and nutritional status and may thus have implications for the development of chronic disease.”

Source: American Association for Cancer Research

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