



What the Experts Say Colonization of Dental Plaque and the Importance of Brushing for Hospitalized Patients

Dental Plaque as a Risk Factor

“Typical respiratory pathogens have been shown to colonize the dental plaque of hospitalized intensive care and nursing home patients. Once established in the mouth, these pathogens may be aspirated into the lung to cause infection.”

Scannapieco FA, “Role of oral bacteria in respiratory infection,” Journal of Periodontology. July 1999;70(7):793-802.

“Our results confirm the high prevalence of dental plaque colonization in ICU patients. Colonization was present on admission in about 40% of our patients and colonization by aerobic pathogens increased during the ICU stay. In the additional comparative study, 60% of the patients were found to be colonized... We conclude from our study that dental plaque must be considered a specific reservoir of colonization and subsequent nosocomial infection in ICU patients.”

Fourrier F, et al., “Colonization of dental plaque: a source of nosocomial infections in intensive care unit patients,” Crit Care Med. 1998;26:301-308.

“...Bacteria commonly causing nosocomial pneumonia colonize the dental plaque and oral mucosa of intensive care patients. In many cases, this colonization occurs by large numbers of bacteria. Dental plaque may be an important reservoir of these pathogens in medical ICU patients. Efforts to improve oral hygiene in medical ICU patients could reduce plaque load and possibly reduce oropharyngeal colonization.”

Scannapieco FA, “Colonization of dental plaque by respiratory pathogens in medical intensive care patients,” Crit Care Med. 1992;20(6):740-745.

“...Reduction in plaque may be particularly important because of the potential role of dental plaque as a reservoir for respiratory pathogens and the development of ventilator-associated pneumonia.”

Fitch JA, et al., “Oral care in the adult intensive care unit,” American Journal of Critical Care. September 1999;8(5):314-318.

“Many infection control professionals are taking a closer look at preventing accumulations of dental caries or plaque because they can serve as reservoirs for bacteria with the potential to cause deadly pneumonia in these patients.”

“Can improved oral care reduce the incidence of VAP?” ICP Report. May 2002;7(5):76-78.

Brushing to Remove Plaque

“Brushing a patient’s teeth should occur at a frequency of every 2 to 4 hours and as needed to prevent the formation of plaque, which can be a reservoir for respiratory pathogens.”

Schleder B, et al., “The effect of a comprehensive oral care protocol on patients at risk for ventilator-associated pneumonia,” Journal of Advocate Health Care. Spring/Summer 2002;4(1):27-30.

“Teeth should be brushed regularly to prevent dental plaque colonized with bacteria from accumulating.”

Pfeifer LT, et al., “Preventing ventilator-associated pneumonia: What all nurses should know,” American Journal of Nursing. August 2001;101(8):24AA-24GG.

“If oral care is not started upon admission, the mouth could become colonized with harmful bacteria within the first 48 hours. Plaque on the teeth can provide a breeding ground for this growth of bacteria... The most effective way to remove plaque is to use a brush.”

Campbell DL and Ecklund MM, “Development of a research-based oral care procedure for patients with artificial airways,” NTI News (a publication of AACN’s National Teaching Institute). 7 May 2002.

“Toothbrushes are more effective in plaque removal and gingival stimulation than are foam swabs, and toothbrushes are generally regarded as the best tool for oral care in healthy populations... Toothbrushing is effective in reducing the number of oral microorganisms, but toothbrushing, even though it is an independent nursing action, is not routinely performed in critically ill patients.”

Grap MJ, et al., “Oral care interventions in critical care: Frequency and documentation,” Am Journal of Critical Care. March 2003;12(2):113-118.

“Toothbrushes are the most effective means of removing plaque and stimulating mucosal tissue. The toothbrush you use should have ultrasoft bristles that clean but don’t cause further damage to inflamed tissue. These toothbrushes have tapered bristles that remove plaque at the gum line and massage the sensitive areas. If the patient can’t tolerate brushing, use an oral swab or a saline-soaked gauze pad on teeth and tongue.”

Editorial Staff, “Oral care update: From prevention to treatment,” Nursing Management. May 2003;34(5) Supplement 3.