Breast-feeding Lowers Risk of Crossbite

The World Health Organization recommends breast-feeding exclusively for the first six months of an infant’s life. This recommendation is based on benefits for both the mother and the child. Breast-feeding exclusively enhances craniofacial growth and development, and helps prevent non-nutritive sucking habits. Breast-feeding for less than six months or not at all has been shown to result in malocclusion and posterior crossbite in particular. Crossbite in deciduous teeth develops early and rarely self-corrects, so early preventive action is warranted.

Researchers in University of Sao Paulo City, in Brazil clinically examined 1,377 children from 11 public schools in Sao Paulo. The children ranged in age from three to six years. Mothers completed a questionnaire to determine breast-feeding history.

Posterior crossbites were divided into three categories: bilateral, true unilateral, and unilateral with functional deviation of the mandible. Four categories of breast-feeding were identified: never (119), less than six months (720), six to 12 months (312), and more than 12 months (226).

Crossbite was diagnosed in 16.2 percent of the entire group, with subcategories being 2.8 percent bilateral, 4.4 percent true unilateral and 9.4 percent with functional unilateral crossbite. Crossbite decreased with longer history of breast-feeding. In children who were not breast-fed, the crossbite incidence was 31.1 percent. For those breast-fed less than six months, the incidence was 22.4 percent. Much lower incidence was found for those breast-fed six to 12 months - 8.3 percent and 2.2 percent for those breast-fed more than 12 months.

Clinical Implications: Breast-feeding exclusively for at least six months and more than 12 months can reduce the potential for posterior crossbite in deciduous teeth.

Oral contraceptive use is linked to increased gingival inflammation due to an increase in the concentration of sex hormones in the gingival tissues. Newer formulations of oral contraceptives contain lower levels of hormones, however the number of years taking the drug may influence gingival conditions.

Researchers at University of Buenos Aires in Argentina evaluated the effect of oral contraceptives on periodontal health and the presence of specific bacterial and yeast species in 91 women. A group of 41 women taking oral contraceptives was compared to an age-matched control group of 51 women not taking oral contraceptives.

In the group taking oral contraceptives, more women had moderate to severe periodontitis compared to those not taking oral contraceptives.

Those taking oral contraceptives more than three years also had a higher prevalence of moderate to severe periodontitis. Periodontal pathogens were identified in subgingival samples in all but 16 women; 11 of these were in the control group. Those taking oral contraceptives had a higher prevalence of periodontal pathogens than those not taking oral contraceptives. Candida species were identified in 95 percent of those taking oral contraceptives and 78 percent of controls.

Clinical Implications: Women taking oral contraceptives and smoking are at greater risk of periodontal disease and should be advised to pay careful attention to their daily oral hygiene.

Recurrent aphthous stomatitis (RAS) is seen in 23 percent of the population, with half of these people suffering with a recurrence of RAS within three months. The Greek term “aphthai,” credited to Hippocrates, was first used to describe oral disorders. RAS is idiopathic in nature, with local trauma and stress being the most likely precipitating factors. Many treatments have been suggested including herbs, multivitamins, adhesive pastes, local antiseptics, local and systemic antibiotics, topical NSAIDs, topical and systemic corticosteroids and immunosuppressants. Vitamin B12 has been shown to provide both immediate and long-term benefits for the treatment and control of RAS.

Medical researchers at Ben-Gurion University of Negev in Beer-Sheva, Israel compared the clinical effects of taking either a sublingual vitamin B12 tablet (1,000mcg) or a sublingual placebo each evening before bed. At baseline, all subjects had a blood test for vitamin B12 and were given an “Aphthous Ulcers Diary” and instructed to keep track of outbreaks and pain levels. Subjects were seen at the clinic monthly during the six-month study to review their diary and to receive the next month’s tablets. There were 27 test subjects and 25 placebo subjects who completed the study.

Pain levels were higher in the control group in the last three months. By the last month of the study, 74 percent (20 patients) of the test group and 32 percent (8 patients) in the placebo group reached the status of no oral lesions. Initial blood levels of vitamin B12 did not influence the clinical outcomes.

Clinical Implications: Sublingual vitamin B12 is a simple, easy, inexpensive treatment for patients suffering from frequent aphthous ulcers.


Vitamin B12 for Treatment of Aphthous Ulcers

Respiratory Bacteria in Oral Biofilm and Saliva

Oral bacterial biofilm contains an estimated 700 species including oral as well as respiratory pathogens. Medically important pathogens include Enterobacter, Hemophilus and various strains of pneumoniae bacteria. Respiratory pathogens in oral biofilm can be released into the saliva and aspirated into the lungs of hospitalized patients, especially those who have a breathing tube in place.

Researchers at the Federal University of Rio de Janeiro and the Brazilian National Institute of Cardiology in Brazil evaluated the periodontal condition and the presence of six respiratory pathogens in 30 hospitalized patients before and after heart bypass surgery. Thirteen of the subjects were edentulous and 17 were dentate. Those with teeth all had moderate periodontal disease and poor oral hygiene. Most of the subjects were men with a history of both smoking and hypertension.

Bacterial species in saliva and biofilm samples were identified using either culturing or polymerase chain reaction. The most prevalent respiratory bacteria found in plaque and saliva samples both pre-operatively and post-operatively were Pseudomonas and Acinetobacter. The numbers increased post-operatively, but not significantly.

Poor oral hygiene and periodontal disease provides an inflammatory condition and biofilm environment conducive to the proliferation of respiratory pathogens. The risk of nosocomial pneumonia may be increased in hospitalized patients as the biofilm provides a reservoir for pathogenic species.

Clinical Implications: Oral hygiene for hospitalized, intubated patients should be considered not only for oral health, but also to prevent aspiration of bacteria into the lungs.