

THE NEXT WEAPON IN COSMETIC CASE PROTECTION AND ORAL HEALTH

by John Nosti, DMD, FAGD, FACE

Brush more, floss more, use automated toothbrushes, a water pik, or place sulcular antibiotics? What regimens are you currently recommending in your office for your patients' oral hygiene maintenance and prevention? What if I told you that mechanical removal of bad bacteria might not be enough to ensure optimal oral health in all of your patients. After all, if simple removal of bacteria was beneficial then mouth washes would rein supreme chemical adjunct to mechanical removal. The problem is that this chemical warfare kills all types of oral bacteria, including the good! The potential issue is that problems can become worse because good bacteria are targeted and reduced and numbers can decline to levels that allow bad bacteria to take over. What if the war on bad bacteria could be won by target warfare by out numbering them! It is time to consider adding *friendly* bacteria to the mix.

Probiotics are live microorganisms (bacteria) thought to be healthy for the host organism. According to the currently adopted definition by the World Health Organization, probiotics are: "Live microorganisms which when administered in adequate amounts confer a health benefit on the host."¹ Lactic acid bacteria (lactobacillus) (*L. acidophilus*) and bifidobacteria are the most common types of microbes used as probiotics and have been widely accepted in the medical profession. The benefits of probiotics are decreased hypertension, managing lactose intolerance, lowering cholesterol, overall GI health, and soon to be added is improved periodontal health and caries prevention.

The EvoraPlus System of oral care products contains a formulation of ProBiora¹, a probiotic blend of beneficial bacteria, found in naturally healthy human mouths, *S. oralis KJ3*, *S. uberis KJ2*, *S. rattus JH145*. ProBiora¹ was developed from basic research started more than thirty years ago at the Harvard-affiliated Forsyth Institute by Jeffrey Hillman, DMD, PhD. This body of research has shown that in diseased mouths, these three

beneficial strains had virtually disappeared. It is delivered in a form of a dissolving mint that, in addition to the probiotics, also contains xylitol – a proven bad bacteria reducer.

Dental Caries Prevention

As dentists we advise patients to avoid sugar to prevent caries. Have you ever wondered why some patients' diets are loaded with sugar, and yet they are relatively caries free, while others partake in a diet only light with sugar (substrate) and they are highly caries active? How do you respond to this patient amongst team members? "They are drinking more soda than they are telling us" or "eating more sugar-filled snacks than they let on."

Here is the truth when it comes to caries. It isn't the sugar that causes cavities but how *Streptococcus* bacteria use sugar and produce lactic acid that causes decay. Thus patients whose bacteria war is being won by the bad bacteria will have more decay than those where the bad bacteria is kept at lower levels. How can we help? *S. rattus JH145* is a unique strain of *Streptococcus* that does not produce lactic acid, and has been shown to successfully compete for nutrients and space on tooth surfaces with the native strain of *Streptococcus* that produces lactic acid.² The result is a reduction in decay despite the potential presence of sugar (substrate) in the oral environment.

What do you make of patients who brush and floss, their plaque indices are down, and yet their periodontal health continues to slump? Can the same be true of these patients? Despite their commitment to mechanically remove bacteria, chemically the bad is still winning the war. *S. oralis KJ3*, and *S. uberis KJ2* produce hydrogen peroxide, which aids in inhibition of periodontal pathogens. The ability to reduce these types of harmful bacteria in return results in a reduction of pathogenic biofilm on the teeth. The patients who suffer from refractory periodontal

disease, or who have poor results from traditional periodontal treatment now have a new conservative approach which might provide them results they were previously unable to achieve with contemporary treatments alone. Research has shown there is an unintended cosmetic benefit from this hydrogen peroxide production. Now patients can have whiter enamel from using a twice-a-day oral mint.

The benefits to probiotics in oral health care are endless. Patients who have been susceptible to health breakdown due to age related or medically induced changes can now have a conservative treatment to help reverse these issues. Patients who undergo extensive dental treatment such as implants, veneers, full mouth rehabilitations, or even are currently undergoing orthodontic therapy now have a simple treatment to aid in the protection of their dental investment.

The science and research on probiotic therapy for overall health and wellbeing is constantly advancing in new areas and uncovering new benefits. The probiotic benefits for oral health are an exciting and newly expanding area of this type of therapy.

The breath mint industries annual retail sales are approximately \$3.7 billion dollars. The obvious patient demand for fresher breath is apparent. How about introducing them to a mint that not only tastes good and freshens breath, but allows for reduction in caries and periodontal disease? ■

References

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Author's Bio

Dr. John Nosti practices full time in Mays Landing and Somers Point, New Jersey, with an emphasis on functional cosmetics, full mouth rehabilitations, and TMJ dysfunction. Dr. Nosti's down-to-earth approach and ability to demystify occlusion and all ceramic dentistry has earned him distinction among his peers. He is privileged to instruct and mentor live patient and hands on programs with the Clinical Mastery Series and Dr. David Hornbook. He has lectured nationally on occlusion, rehabilitations, and technology. He is a member of the American Dental Association, American Academy of Cosmetic Dentistry and American Academy of Craniofacial Pain. Dr. Nosti also holds fellowships in the Academy of General Dentistry and the Academy of Comprehensive Esthetics.



"Dr. Nosti has no financial interest in, nor is he a paid consultant with EvoraPlus."

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