Gingivitis is a widespread infection with interdental bleeding and most patients ignore suggestions to floss daily. Other options need to be found that make cleaning the interdental spaces easier and faster than using dental floss. A few years ago Soft Picks were introduced by the Sunstar Butler company as an alternative to dental floss. The soft, rubbery tip is flexible and easy to insert into interdental areas. The Soft Pick is used with one hand instead of two that are needed to floss. An in-and-out rubbing motion from the facial surface will disrupt the bacterial biofilm from above and just below the gingival margin.

Ten patients with no daily interdental oral hygiene were selected for this study. Baseline risk assessment and screenings were done for all the patients. They were seen for regular dental hygiene care and offered the Soft Picks as an alternative to dental floss. All agreed to participate in the study and provide feedback as to their Soft Pick usage and experience.

The group ranged in age from 20 years to 65 years, with seven women and three men. Subjects were instructed in the use of the Soft Picks and asked to record the presence or absence of bleeding after use. The dental hygienist followed-up with emails and phone calls. After two weeks of use, nine of the 10 subjects reported no more bleeding with Soft Pick use. One patient still reported bleeding. This showed a 90 percent rate of success with using Soft Picks to reduce interdental bleeding.

**Clinical Implications:** Recommend Soft Picks as an alternative to dental floss for those who can’t or won’t floss daily.

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**Xylitol Beneficial for Oncology Patients**

Oncology patients undergoing chemotherapy and radiation suffer salivary gland damage leading to reduced salivary flow and problems with dry mouth. In addition to increased caries rates, lack of saliva makes it difficult to wear dentures and partials, and difficult to chew and swallow.

Research focuses on caries rates associated with dry mouth, but more needs to be done to find solutions to the quality of life issues faced by patients undergoing oncology treatments. A two-week trial involved two support groups for survivors of head and neck cancer in the Dallas, Texas area. A total of 11 volunteers participated. They completed a pre-test survey about dry mouth symptoms. They were provided with a variety of Xlear/Spry 100 percent xylitol sweetened products to test. Products included Spry chewing gum, SparX Candies, Spry Moisturizing Tooth Gel, XyloSweet granulated sweetener and Rain Moisturizing Spray. At the end of two weeks, participants mailed in a post-test survey about product use, product preference and impact on dry mouth symptoms.

At baseline, the majority of patients reported a feeling of dry mouth, difficulty swallowing and the need to sip liquids frequently. After using the products, all of the participants reported they experienced relief from using the 100 percent xylitol-sweetened products. Spry Tooth Gel and SparX Candies provided 10-20 minutes of relief, while the RAIN Spray consistently provided the longest lasting relief, from 20-40 minutes. Product preference was influenced by effectiveness and personal preference. Some of the products were not liked as much as others. However, everyone liked the Rain Spry.

**Clinical Implications:** Oncology patients with reduced saliva will benefit from 100 percent xylitol-sweetened products, especially Rain Spray.

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**Perio Reports**

Vol. 26, No. 8

Perio Reports provides easy-to-read research summaries on topics of specific interest to clinicians. Perio Reports research summaries will be included in each issue to keep you on the cutting edge of dental hygiene science.
Straight Interdental Brushes More Effective than Angled Brushes

Daily biofilm control is an essential part of preventing caries and periodontal disease. Toothbrushing removes 40 percent of plaque biofilm. For periodontal maintenance, interdental brushes are twice as effective as dental floss. Interdental brushes are also more effective than floss for reducing inflammation and probing depths. Standard interdental brushes are straight. A new angled brush with a handle grip was recently introduced with the goal of making interdental cleaning easier and more effective.

Researchers at Witten/Herdecke University in Witten, Germany, wanted to know if the angled interdental brush was more effective than the standard straight brush. With newspaper ads they recruited 128 volunteers to participate in this two-week trial. The group was divided in half, each group receiving either the straight or the angled interdental brushes. Interdental brushes were of the same bristle stiffness and both were made by TePe. Patients were instructed to use their assigned brushes and returned after 12 days for a complete dental hygiene visit. After the prophylaxis, they were instructed to refrain from all oral hygiene for 48 hours. At that time plaque was illuminated with a fluorescent dye and an LED curing light and recorded. Subjects were then given two minutes to use their assigned interdental brush and plaque scores were again recorded.

Both interdental brushes reduced plaque scores, a mean difference of 1.0 for the angled brush compared to 1.6 for the straight brush. Comparing posterior difficult areas to reach and easy to reach anterior areas, the straight brush was significantly more effective.

Clinical Implications: Recommend straight rather than angled interdental brushes.


Tongue Coating Relates to Bad Breath

The foul smell of halitosis is due to volatile sulphur compounds (VSCs) of hydrogen sulphide, methyl mercaptan and dimethyl sulphide. It is estimated that 60 percent of VSCs come from tongue coating. The amount of tongue coating may be a good indicator for bad breath.

Researchers at the University of Tokushima, Japan, evaluated 94 subjects who complained of bad breath and sought treatment at the Clinic for Breath Odor at the university. A subgroup of 40 subjects agreed to undergo a periodontal examination. Of this group, 13 had signs of periodontitis while 27 did not.

The full group was asked about tongue cleaning and underwent both organoleptic and gas chromatography to determine their level of bad breath. Subjects blew mouth air into plastic bags that were then given to the five dentists who smelled the air to measure the bad breath level. After keeping the mouth shut for 60 seconds, a syringe was inserted between the lips and an air sample was extracted and expelled into the gas chromatography machine to measure levels of three VSCs. Tongue coating samples were also taken to measure the bacterial content.

Subjects who cleaned their tongues daily had significantly lower tongue coating scores and also had significantly lower organoleptic and VSC scores compared to those who did not clean their tongues. Periodontal pathogens counts were much higher in the group that did not clean their tongues.

Those with and without periodontitis had similar tongue coating scores while those without perio had lower organoleptic scores and those with perio had higher VSC scores.

Clinical Implications: Encourage patients to clean their tongue daily.

Interdental Cleaning Low Among Those with Diabetes

It is estimated that 371 million people worldwide have diabetes with 19 million in the U.S. These figures are growing each year. People with diabetes are at greater risk of periodontal disease. Failing to clean between the teeth on a daily basis contributes to periodontitis in adults with diabetes.

Researchers at New York University analyzed the National Health and Nutrition Examination Survey (NHANES) data to determine estimates of how many people with diabetes over the age of 30 clean between their teeth daily. They also wanted to identify characteristics of this population that would predict interdental cleaning behavior.

A group of 573 adults self-reported having diabetes was included in the data analysis. Of this group, 41 percent reported never cleaning between their teeth. This is compared to 25 percent who claimed to clean between their teeth on a daily basis. Specific to the daily interdental cleaning group were these characteristics: female, history of periodontal treatment and daily use of a mouthrinse. These findings are similar to what is known for interdental cleaning among adults without diabetes. Women are generally more likely to take better care of their oral health than men. Those who have been treated for periodontal disease have invested both time and money, which explains why this group is more likely to clean between their teeth on a daily basis.

Many people with diabetes don’t know the connection between oral health and general health. Hygienists play a key role in education and inspiring those with diabetes to do what is needed each day to protect their oral health.

Clinical Implications: Encourage those with diabetes to clean between their teeth every day.


How Much Do You Believe Your Patients Already Know?

One of the important roles of oral health professionals is to educate, motivate and inspire patients to participate in effective daily oral hygiene. The traditional approach to oral health includes brushing, flossing and fluoride, despite research showing that brushing and flossing are difficult to accomplish correctly.

Researchers at the University of Gothenburg in Sweden interviewed five focus groups with a total of 23 oral-health professionals. Their goal was to learn what these professionals thought about patient education. The full group consisted of nine dentists, four hygienists and 10 assistants. One focus group provided oral health promotion within the school system, two groups worked in public health, one group was dental directors of public health centers and one group was from private practice. They were asked questions about what they said and did for patients to prevent dental caries, with a focus on tooth-brushing and toothpaste. They especially wanted to know the groups’ attitude toward questions about proper toothpaste use.

The group interviews were recorded and later transcribed. The oral-health professionals expressed their interest in providing information in the patient’s best interest. Their primary focus was on effective plaque removal with toothbrushing. The investigators were more interested in explaining the proper use of fluoride toothpaste. The oral-health professional considered instruction in toothpaste use to be something patients already knew and didn’t need advice on how to use a toothpaste.

Clinical Implications: Patients know how to use toothpaste, but they do need advice on how to effectively remove plaque biofilm with toothbrushing.