Middle East’s Dentist Meet Recommends Power Brushes for Improved Oral Hygiene

First dental consensus agrees that electric power brushing is best for oral health; 80 per cent of children between 12-15 years have unhealthy gums, according to research by the Dubai Healthcare Authority

By Oral-B

Dubai, UAE: A group of the Middle East’s leading dentists have come together to agree on how best to promote good oral hygiene through brushing. Held in Dubai at the end of August and supported by Procter & Gamble, the first dental consensus has issued a series of proposals to help improve oral hygiene in the region. These proposals, which focused on tooth brushing habits across the Middle East, include an agreement that electric power brushes are more effective at maintaining oral health, and that Bluetooth-enabled power brushes have the potential to encourage better oral care among children.

Co-chaired by Hamdan Bin Mohammed’s College of Dental Medicine’s Professor Crawford Bain and Dr Arwa Al-Sayed, Director for the Saudi Board of Periodontics, the meeting of ten dentists from Lebanon, Oman, Saudi Arabia and the United Arab Emirates met for two days to discuss how best to promote better brushing habits among the region’s consumers. Research undertaken by the Dubai Healthcare Authority in February of this year found that 80 percent of children in Dubai between the ages of 12 and 15 have unhealthy gums.

The group agreed on the following recommendations:

1. Evidence suggests that power brushes are more effective in the short & long term compared to manual brushes. According to present data, over 80 percent of children in the ages of 12 and 15 have unhealthy gums.

2. Evidence suggests that oscillating-rotating power brushes are superior to all others in the short & long term.

3. Bluetooth enabled power brushes with interactive apps and smart guides have the potential to aid in better compliance from children. This consensus suggested that power brushing can be started at any age if parent and child are comfortable with it.

4. Power brushes with an oscillating-rotating mode of action are more effective than others at reducing and preventing gingivitis in the short & long term.

5. Power brushes with an integrated pressure feedback mechanism could have the potential of reducing soft & hard tissue abrasion.

Toothpaste app?

By Kimberly Bray, RDH, MS

What determines your level of confidence in recommending a product to your patients? My confidence level depends on doing some of my own research and coming to my own conclusions.

When I first heard about Crest Pro-Health toothpaste and the wide range of cosmetic and therapeutic benefits it provides, I have to admit I was curious. The only product I own that can do just about anything is my smartphone! It’s a phone, camera, iPad, and so much more! Then I started wondering, what if toothpaste could work that way, providing all of the key oral health benefits in a single tube? What would be the advantages? As it turns out, I could think of quite a few:

- Convenience. Many patients just don’t have time to use more than one oral care product to get a wide range of benefits. They would prefer to simply use one product.
- No trade-offs. Patients could get therapeutic benefits without trading off cosmetic benefits of extrinsic whitening, tartar control, and breath protection.
- No selection required. Unlike my smartphone, where I select the app I want, a multi-benefit dentifrice would provide all of the benefits with each use.
- Widely applicable. It would be a product that would offer benefits for both teens and adults alike.
- Provide therapeutic protection. It would provide protection against caries, plaque, gingivitis, and sensitivity.

My list of potential benefits turned out to be pretty impressive. So I decided to do some research on Crest Pro-Health toothpaste. Here are the questions I asked and what I learned.

What is the basis for Crest Pro-Health formulations? Crest Pro-Health (CPH) dentifrice is based on a unique, patented system of stabilized stannous fluoride (SnF2) and a cosmetic ingredient, sodium hexametaphosphate (NaHMP).

Fig. 1: Conventional preparation of tray. Fig. 2: Modern preparation of tray.
Stannous fluoride has a long history of use in oral products for protection against caries, sensitivity, plaque, gingivitis, and oral malodor.1 Crest with Fluoristan, introduced by Procter & Gamble (P&G) in 1955, contained SnF2 and was the first dentifrice to receive the American Dental Association (ADA) Seal of Acceptance in all five categories. After nearly three decades to overcome this multi-benefit therapeutic and cosmetic benefits, CPH dentifrice has been demonstrated in randomized, double-blind studies to provide tartar control benefits. These limitations included formula stability, an astrangent taste, and mild extrinsic staining of teeth in some patients.

One breakthrough along the line of new benefits of SnF2 as a dental therapeutic is the ability of this multi-benefit therapeutic and cosmetic benefits to work for more than three decades to overcome the early limitations of SnF2-based dentifrices. These limitations included formula stability, an astrangent taste, and mild extrinsic staining of teeth in some patients.

Independent clinical studies demonstrated the anti-bacterial activity of CPH dentifrice. Over 80 publications and research presentations support the efficacy of CPH dentifrice. The results show CPH dentifrice is:

1. Effective in preventing and reducing the incidence of caries. Use of a fluoride-containing dentifrice is known to be effective in reducing caries and reversing early carious lesions by promoting remineralization and reducing preventing demineralization.2

In addition, fluoride may also limit the production of acid associated with cariogenic bacteria.1 Stookey et al. conducted a two-year clinical trial with 955 subjects. A dual-phase prototype of CPH dentifrice provided 17% to 25% fewer caries relative to a standard sodium fluoride (NaF) dentifrice.3 The caries benefits were also demonstrated by Welef et al. in an in situ study.4

2. Effective in building protection against dentinal hypersensitivity. Laboratory studies have shown SnF2 reacts to form precipitations that include dentinal tubules and provide sensory relief. Figure 2 shows high magnification scanning electron micrographs (SEM) of dentinal tubules before and after the use of CPH dentifrice.1

Independent clinical studies, using a two-month CPH dentifrice and long-term sensitivity relief as measured by tactile and thermal methods compared to standard fluoride negative controls. Results from one clinical study showed a 44% decrease in thermal sensitivity and up to a two times greater tolerance to tactile sensitivity after eight weeks of use.5

3. Effective in reducing plaque and gingivitis. These benefits are due to the broad spectrum anti-bacterial and anti-inflammatory effects of NaHMP and an improved cleaning effect. The surface activity of NaHMP competes with plaque for surface sites, effectively preventing the buildup of new stains. Figure 4 shows the results of new studies after only two weeks of CPH use.

Four separate clinical trials, summarized in two publications, compared the stain removal efficacy of CPH dentifrice with that of a positive control whitening dentifrice at two different time points: baseline and three weeks.6 In all cases, a highly significant improvement in stain removal was observed from baseline for both the CPH and positive control whitening dentifrice. In an additional study, the benefits of the CPH dentifrice were not significantly different from the positive control.

What do patients and professionals think about CPH? The efficacy of CPH dentifrice is supported by extensive body of clinical evidence. However, its success ultimately depends upon its effectiveness and acceptability to users in the home environment. The question is the benefit measured or observed in a controlled clinical environment by clinical specialists translate to product acceptance in the home environment? Other words, are dental benefits observed by patients and dental professionals in clinical studies evident when used in the home environment? These questions have been addressed in two recent home-use studies. These studies showed that CPH dentifrice is effective for both patients and acceptable to both patients and dental professionals who used it at home as part of their normal oral hygiene routine.

Practice-based assessment. A practice-based assessment of CPH dentifrice was conducted among patients across the USA. In this study, both patients and their dental professionals answered a questionnaire at the beginning and at the end of the three- to four-week trial (up to six months in 25% of cases). Of the 1,078 patients who responded:

-88% rated the product “excellent/very good” or “good”
-77% of those who noticed improvements in their oral health planned to continue using the product
-85% rated CPH positively for reducing gingivitis
-9 out of 10 patients rated the product positively in the areas of “cleaning teeth thoroughly,” “making gums healthier,” and “freshening breath” (see Figure 5).

Of the 1,267 responses from dental hygienists and dentists:
-68% noted improvement in their patients’ gingival bleeding/inflammation and a reduction in the formation of calculus
-61% noted reduced sensitivity
-57% noticed reduced staining

Eighty percent of the dental professionals indicated they would recommend CPH dentifrice to their other patients. That jumped to 91% of dental professionals who noted improvements in their patients’ oral health or staining.

Usage study among dental professionals. Before a CPH usage experience study was conducted among dental professionals,16 after receiving a tube of Crest Pro-Health (Clinical Gum Protection variant) for their personal use, approximately 2,000 dental professionals completed an optional online survey about their experience using the product: 95% of dental professionals rated their experience with the product as “excellent/very good/good” 96% indicated they would continue the product 92% agreed that dentifrices containing SnF2 can benefit their patients more than other toothpastes 91% said they had recommended CPH dentifrice to patients in the past and 96% said they would recommend CPH to more patients now that they had experienced the product themselves (see Figure 6). When asked why they would recommend CPH to more of their patients, some responses given were:

-“I believe patients can benefit from SnF2 that CPH contains.”
-“I can only vouch for a product I have personally used and liked.”
-“I believe this is the best product on the market right now.”
-“It is the best product yet for my patients today at extra level of protection.”
-“It feels clean, and there was noticeable plaque reduction in my mouth.”
-“It helped with my sensitivity and has a nice, refreshing taste. It’s also good for the gums.”
-“I have seen a clinical improvement with Crest Pro-Health.”

Clinical studies demonstrate that CPH dentifrice puts the power and convenience of an efficacious, multi-benefit toothpaste in the palm of your hand, providing seven therapeutic and cosmetic benefits with each use. Real-world, independent demonstration of efficacy of CPH dentifrice established

Figure 2. Left: SEM shows open tubules after treatment with the fluoride toothpaste. Right: SEM shows closed tubules after treatment with CPH dentifrice. (Courtesy of Compd. Cont. Educ Dent)

Figure 3. Bacterial activity of CPH dentifrice remains after 16 hours. The CPH dentifrice (right) killed 90 to 99% of the salivary bacteria in 16 hours after use. The control product was a water control (left), which still shows virtually all live cells. Green-stained cells represent live microbial cells and red dead cells. (Courtesy of Compd. Cont. Educ Dent)
in controlled clinical trials translates into effectiveness and acceptability among both patients and dental professionals.

Recent studies have shown that dental care routines that include CPH, an Oral-B oscillating-rotating power toothbrush, and regular use of dental floss can further enhance oral care benefits to patients.

These findings show that you can be confident in recommending CPH dentifrice to your patients, knowing that the vast majority are likely to notice and appreciate benefits of a clean, healthy mouth and gums.

References

Editorial note:
The full list of references is available from the publisher.

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Prof. Bray has 24 years of clinical experience in both general and periodontal practice with research interests in patient adherence, alternative learning strategies, and product efficacy.

Figure 5. Summary of patient survey results from practice-based evaluation of CPH dentifrice. The percentage of patients rating the CPH dentifrice as “excellent/very good/good” in each category shows the high effectiveness and acceptability among patients who used the product at least three months and completed the survey. (Courtesy of Journal of Dental Hygiene)

Figure 6. Summary of in-home usage study of CPH dentifrice among dental professionals. Results showed the product is highly effective and widely accepted among dental professionals participating in the study. More study participants indicated they would recommend CPH dentifrice to their patients after using the product at home.

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comfort for patients and dental staff. Hand instruments that have only limited tissue-preserving properties can be replaced in preservation therapy by ultrasonic instruments (Piezon, EMS Electro Medical Systems, Munich) and air polishing (Air-Flow with low abrasive: erythritol-based Plus powder, EMS) for the benefit of dental staff and patients. In the following article, the classical method (Axelsson / Linne) is compared to the modern method (guided biofilm therapy) based on a patient case.

Using the example of a 20-year-old patient with braces, increased plaque deposits and a hyperplastic gingiva, the author describes the procedure, the implementation and time management of a structured, professional prophylaxis session. The upper jaw was treated with the new generation (Piezon No Pain) and air-flow technology (EMS, Air-Flow with Plus powder). The lower jaw was treated according to the classic, conventional method (hand instruments, ultrasonic technology, polishing cup, brushing, polishing paste CCS red and Proxifine, Ivoclar Vivadent, 2Bplan).

Procedure (work phases)
1. Workplace preparation
It is advisable to specifically set up basic tools and products for the effective treatment measures of the patient and to prepare them accordingly (Fig. 1-5). In that way you can save a lot of time during the prophylaxis treatment and simplify compliance with the hygiene chain.

2. Patient pick-up and repeat anamnesis (2 minutes)
A short introductory talk, in which specific needs and questions can be addressed, gives the patient a sense of having arrived, creates trust and conveys interest and professionalism. This is followed by the control and questions on the case history. This vital step has the objective of ascertaining changes in health, new risks, prevention of infections and medicines, and integrating them into the treatment process. This information helps to clarify and ensure that the right technical and material resources are available. Because the prophylaxis session without exposing the patient or dental staff to any health risk. Only after clarification can the professional cleaning session begin.

3. Disinfection of oral cavity (1-2 minutes)
In order to reduce the number of bacteria prior to further treatment, rinsing with 0.2% chlorhexidine is recommended. Another modern way is to clean the entire oral cavity (first stage treatment according to Flems) including tongue, cheek, palate and mucosal fold using air-flow technology and Plus powder in a gentle and simple manner (Fig. 6). This seemingly simple step already serves to carry out successful biofilm management (guided biofilm therapy).

4. Diagnostics (7 minutes)
After the visual inspection of the teeth, the examination of the mucous membranes in the oral cavity. This is where tongue surface, palate, base of the mouth, the mucosal fold as well as lips and inner surfaces of the cheeks are affected. After that, a re-evaluation of caries, cavities and erosion diagnostics is carried out. In the present case, the inspection of the mucous membranes is not necessary. With this new technique, injury to the soft tissue around the tooth and the gums themselves can be avoided. Another big advantage is that all restorations and prosthetics in the oral cavity are cleaned and polished at the same time without roughening or damaging the materials. Modern professional dental cleaning involves the removal of hard and soft deposits in a particularly gentle way. Biofilm management today plays an increasingly important role. With the air-polishing technology, sulcular regions of the surfaces are not only cleaned and subjected to biofilm management, but also the gingival regions and always attacked areas are treated in a painless manner and patient comfort is increased. Only in exceptional cases, periapical or hyperplastic gingiva, sulcular cleaning and polishing was necessary. This is an important step in order to carry out successful biofilm management here, too. It was deep, very precise in sulcular regions with the air-flow technology Plus (erythritol) without traumatizing the tissue. The patient thought the treatment was very pleasant.

5. Professional tooth cleaning (30 minutes)
7.1. Oral hygiene therapy (general)
Modern professional dental cleaning involves the removal of hard and soft deposits in a particularly gentle way. Biofilm management today plays an increasingly important role. With the air-polishing technology, sulcular regions of the surfaces are not only cleaned and subjected to biofilm management, but also the gingival regions and always attacked areas are treated in a painless manner and patient comfort is increased. Only in exceptional cases, periapical or hyperplastic gingiva, sulcular cleaning and polishing was necessary. This is an important step in order to carry out successful biofilm management here, too. It was deep, very precise in sulcular regions with the air-flow technology Plus (erythritol) without traumatizing the tissue. The patient thought the treatment was very pleasant.

7.2. Modern preservation therapy (patient case)
In the case at hand, the biofilm and discoloration made visible by staining were removed in the upper jaw using air-flow technology and erythritol powder (Plus, EMS) above and below the enamel cement border (Fig. 6, upper jaw). Only by using the new technology is it possible to quickly and easily achieve a perfect polish in difficult-to-reach areas, which is not possible with polishing cup and brush. In addition, when using this technology, the risk of orthodontic appliances can also be cleaned without running the risk of damaging it. Once the biofilm has been removed, tartar and any subgingival calculus becomes clearly visible and can be selectively removed with a very fine ultrasonic tip (EMS Piezon/PS tip). This development in ultrasound technology is referred to as “Piezon No Pain” in the new generation. An intelligent technology that enables lightening-fast, continuous power adjustments. The EMS instrument measures the resistance (approximately 125 times per second) provided by hard deposits and feeds the resistance value information back to the built-in module of the EMS device (continuous feedback). The intensity of the instrument tip is thus adjusted to the “difficulty” of the hard deposits that are to be removed. Once the resistance (tartar, calculus), which is detected, is exceeded, the device reduces the power automatically. This therefore enables even the most sensitive area of the teeth to be treated without fear. Exposed, hypersensitive cervical areas and root surfaces are treated in a painless manner and patient comfort is increased. Only in exceptional cases, periapical or hyperplastic gingiva, sulcular cleaning and polishing was necessary. This is an important step in order to carry out successful biofilm management here, too. It was deep, very precise in sulcular regions with the air-flow technology Plus (erythritol) without traumatizing the tissue. The patient thought the treatment was very pleasant.

7.3. Classic treatment (patient case)
The same initial situation was at hand in the lower jaw, too. Here conventional materials were now used: Supragingival ultrasonic, hand tool polishing cup, brushing, polishing paste CCS red (Proxifine) for fine. With the help of mechanical and manual instruments, regions were removed in supragingival and sulcular regions. Afterwards, a very fine polishing was followed using a polishing paste (CCS red) and various soft brushes of air-flow technology. The fine polishing was carried out with a soft polishing cup with a fine polishing paste (Proxifine) (Fig. 6, lower jaw). The difficult was compared to the air-flow polishes:

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Oral health and diabetes discussed at premier event in Singapore

By Dental Tribune International

SINGAPORE: Among developed nations, Singapore has the second-highest proportion of diabetics, according to a recent report by the International Diabetes Federation. As the condition continues to be a growing concern owing to the increasingly sedentary lifestyle and high-calorie diets of Singaporeans, the city-state was the ideal place for the Joslin-Sunstar Diabetes Education Initiative (JSDEI) to hold its first Diabetes, Oral Health and Nutrition Symposium in Asia. The one-day event took place last week at the Swissotel The Stamford. Attended by Singapore Chief Dental Officer Patrick Tseng and Japanese Ambassador Haruhisa Takeuchi as part of the SJ50 celebrations (a number of events to commemorate 50 years of diplomatic ties between Singapore and Japan), it provided the latest information on the two-way relationship between diabetes and oral health. Over 500 international leading medical and dental health care global experts, including Dr George King, Senior Vice President, Chief Scientific Officer and Director of Research at the Joslin Diabetes Center in Boston in the US, among others, presented the latest findings on the interrelationships, innovations and interactions between periodontitis and diabetes.

Future strategies on oral and systemic health, as well as how JSDEI’s efforts at strengthening the ties between the medical and dental fields were also discussed.

According to the initiative, increasing evidence supports the existence of an association between periodontal disease and diabetes. The latest research has shown that not only are people with diabetes more susceptible to serious periodontal disease, but the condition may also have the potential to affect blood glucose control and contribute to the progression of diabetes.

Recognising that early and proper treatment of periodontal disease can have a profound effect on the control of diabetes and its complications, the Sunstar Foundation established the JSDEI in April 2008 with the Joslin Diabetes Center, the world’s largest diabetes research and clinical care organisation dedicated to the prevention, treatment and cure of diabetes, affiliated with the Harvard Medical School, to engage in education and research to improve knowledge and practices in this field.

In addition to its symposium in Asia, it has organised an annual event under the same name in Europe.

Established almost 40 years ago, the Sunstar Foundation for Oral Health Promotion has achieved international recognition for the significant benefits to society gained through its efforts to improve oral care and promote dental health through various activities.
Dentine hypersensitivity protection, now in a daily mouthwash

The first Sensodyne mouthwash containing 3% potassium nitrate and fluoride, proven to provide ongoing protection from dentine hypersensitivity with twice-daily rinsing1–5*.

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PRECISION CLEAN BRUSH HEAD PROVIDES

UP TO 5x

GREATER REDUCTION

IN PLAQUE BIOFILM ALONG THE GUMLINE

5x

* vs. a regular manual toothbrush

continuing the care that starts in your chair