Enamel weakened by teeth whitening

US study has found that bleaching teeth at home has side effects

From news reports

New research has shown that human teeth can lose some enamel hardness following the application of teeth whitening products used in the home. According to lead author Sherreen Azer, Assistant Professor of Restorative and Prosthetic Dentistry at Ohio State University in the US, the average loss of enamel ranged from 1.2 to 2 nanometres on the treated teeth. Tooth bleaching products contain solutions of varying strengths of either hydrogen peroxide or carbamide peroxide, which produce free radicals that attack pigment molecules in the organic parts of enamel, to provide the whitening effect.

Several studies have sought to determine the effect of tooth whitening on tooth enamel hardness but results have been inconclusive, Azer said. He added that previous studies measured the loss of enamel hardness in microns, or millionth of a metre, while he used a nanometre scale in his study.

In his research, he used whitening strips and trays filled with whitening gel on extracted molars, as well as an atomic force microscope to observe the tiny nanometre-scale effects on the teeth. The reduction in hardness and elastic modulus amongst the different products was largely similar. However, there was a significant difference between one strip treatment method and one tray method, with the tray method reducing enamel hardness more significantly than the strip treatment. Although the study did not address methods of restoring hardness to bleached teeth, Azer noted that extensive research has indicated that fluoridation treatments, including the use of fluoride toothpaste, can promote enamel remineralisation. He suggested that, based on the study, future generations of tooth whitening products be reformulated in an effort to reduce these side effects.

Records at Hawaii meeting

Approximately 3,200 dentists have attended the American Academy of Cosmetic Dentistry’s Scientific Session in Honolulu in the US. According to the organiser, the session will generate more than US$15 million in statewide spending. Next year’s meeting will be held in May in Grapevine in the US.

Bad breath worries women

Women are more worried about having bad breath than about their partners disliking their appearance. Toothpaste manufacturer Macleans found that 79 per cent of women worry about having smelly breath, while only 4 per cent said they were concerned about what underwear to wear.

Malaysia starts oral health campaign

The Malaysian Dental Association has started a new campaign with Colgate-Palmolive to improve oral health among Malaysians. The campaign, in its sixth consecutive year, will provide free dental check-ups for at least 500,000 people at over 560 dental clinics and at road shows nationwide. Colgate will also be giving out free oral-care product samples at the various road shows, in-store venues and dental clinics throughout the month-long campaign.

Malaysia’s Oral Health Month is in line with the National Oral Health Plan 2010, which aims to create awareness of and educate the public on better oral care.

Online resources on swine flu

The Organization for Safety and Asepsis Procedures (OSAP) in the US is currently providing special online resources to help dental professionals protect themselves and their patients against swine flu. The swine flu section includes an overview of the disease, up-to-the-minute reports on the current outbreak, tips for prevention, and links to reports and updates from the US Center for Disease Control and Prevention, the American Dental Association, Pan American Health Organization, World Health Organization, and even the White House Briefing Room.

In addition, the OSAP symposium Infection Prevention: Spreading the Word, which will be held from 11 to 14 June 2009 in Plano, TX, USA, will feature courses that address this issue. Dr Michael Glick will present Emerging Diseases with special focus on Swine Flu and Dr Molly Newlon will present the 6 p’s of Emergency Preparedness, in which swine flu will be addressed.