Staining susceptibility tested

By DTI

Coffee is one of the world’s most popular beverages; however, it is known for its tooth-staining properties. A study has now tested how various CAD/CAM materials reacted to immersion in coffee.

Higher tooth loss risk

Elderly Japanese residents who were forced out of their homes by the 2011 earthquake and tsunami disaster may be at greater risk of tooth loss, a survey by Tohoku University has found. Factors negatively affecting dental health were stress, financial problems, dietary changes and a lack of opportunities to brush teeth, it found.

Dental care in MS patients

Researchers from Queensland have found that most multiple sclerosis patients perceived dental care in Australia as inflexible and not tailored to individual experiences of the disease. Among other problems, patients reported experiencing difficulties accessing dental care, including transport and financial barriers.

Detecting bacteria

LONDON, UK: A new method of detecting bacteria during root canal therapy could eradicate the need for follow-up appointments and prevent treatment failure, according to a new study. The SafeRoot device, created by a team of researchers at King’s College London Dental Institute, enables rapid bacterial detection inside the root canal through fluorescent staining and microspectroscopy, ensuring the procedure has been successful and reducing the need for tooth extraction or surgical intervention. During trials, the research team was able to successfully detect bacterial cells after just 3 minutes of testing. “SafeRoot will reduce the time for root canal completion and will increase the success rate of treatments by letting the dentist know when it’s safe to proceed with filling the tooth,” said Professor of Biomaterials and Restorative Dentistry Tim Watson from the Dental Institute.

Artificial enamel

Aiming to create a material that is able to withstand repeated stresses, such as unavoidable vibrations like those on airplanes, which cause objects with rigid structures to age and crack, researchers at the University of Michigan in the US have mimicked the structure of tooth enamel. They replicated the material by sequential growth of enamel microstructures to age and crack, reshaping the tooth,” said Professor of Biomaterials and Restorative Dentistry Tim Watson from the Dental Institute.

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Presented at the 2017 International Dental Show in Bangkok was one of the largest events to date. Find a selection of related news in the review section.

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Survey: Misconceptions about oral health practices revealed

The majority of respondents surveyed incorrectly believed that rinsing one’s mouth with water after brushing is important.

By DTI

GENEA, Switzerland: The results of an online survey, carried out in 12 countries for World Oral Health Day (WOHD) among 12,849 adults, have indicated a significant gap between what people believe to be good dental hygiene habits versus what they actually do and what is recommended by oral health experts.

In eight of the countries surveyed, 30 per cent or more of the respondents said they thought it is important to brush one’s teeth straight after every main meal. This incorrect oral health practice was worst in Brazil, Mexico, Egypt and Poland (42, 49, 42 and 42 per cent, respectively) thought that brushing one’s teeth straight after every meal is important.

“The survey results highlight an alarming discrepancy between knowledge and actual good oral health practices,” said FDI President Dr Patrick Hescox. “We want everyone to take control of their oral health this World Oral Health Day and understand that by adopting good oral hygiene habits, avoiding risk factors and having a regular dental check-up, they can help protect their mouths. A healthy mouth allows us to speak, smile, smell, taste, chew, swallow and convey a range of emotions with confidence and without pain, discomfort and disease. Good oral health matters and translates to a better quality of life.”

The respondents in the majority of the countries surveyed incorrectly believed that rinsing one’s mouth with water after brushing is important. This myth was found to be the greatest among the participants from Brazil, South Africa, Mexico, India and Canada (77, 73, 75, 67 and 67 per cent, respectively). It is actually recommended not to rinse with water straight after brushing, but rather to wait at least 30 minutes after brushing to avoid weakening tooth enamel.

Other key findings on oral health practices included the following:

• Seventy-seven per cent of people surveyed agreed that visiting a dentist once per year is a good oral health practice, but only 37 per cent actually did so.
• Only 28 per cent of respondents identified drinking alcohol in moderation as important for good oral health.

The survey was carried out by YouGov on behalf of FDI. It was undertaken between 20 and 31 January 2017. The figures were weighted and are nationally representative of all adults aged 18 and older in Great Britain (2,000), the US (1,145), Australia (1,008), New Zealand (1,055), Japan (1,006) and Canada (1,022), nationally representative, based around areas, of all adults aged 18 or older in Brazil (1,000), Mexico (1,000), Poland (1,004) and South Africa (500), representative of all adults aged 18 or older living in urban areas in India (1,001) and Egypt (1,002).

WOHD is celebrated annually on 20 March. It was initiated in 2013 by FDI to raise worldwide awareness of the prevention and control of oral disease. WOHD is supported by global partners, including FDI, the World Health Organization, World Dental Federation, and the Global Coalition for Oral Health. FDI’s website is www.worldoralhealth.org.

By DTI

The latter included one hybrid composite (CLEARFIL AP-X, Kuraray), one micro-filled composite (Durafill VS, Kulzer) and two nano-hybrid composites (ESTELITE SIOMA QUICK, Tokuyama Dental; Filtek Supreme Ultra, 3M ESPE).

They created 10 mm discs from each of the restorative materials and then calculated the discs’ initial colour measurements before placing them in an instant coffee solution, which was changed daily. Colour changes were measured after one day, one week and one month. The results showed that the coffee solution significantly discoloured all of the discs over time; however, CAD/CAM materials were generally less affected than the conventional resin materials.

After one month, the change in colour of the CAD/CAM composite resin blocks and restorative composites ranged from 1.6 to 3.7 and 1.8 to 3.8, respectively. According to the researchers, only one material, Durafill VS, was not significantly more discoloured after one month than after one day.

However, in testing whether the coffee stains were removable through polishing, the colour of all of the materials, except for the GRADIA block, was restored after polishing with prophylaxis paste for 20 seconds. Of the conventional composite resins, Durafill and Filtek Supreme Ultra still showed some noticeable discoloration after polishing.

The authors noted that, owing to the study’s in vitro design, it is unknown how external factors, including regular toothbrushing, might affect the long-term discoloration of the materials when used in patients. They further pointed out that one month of immersion might have exaggerated the results beyond what would be seen in vivo, as immersing materials in coffee for one week is the equivalent of about seven months of coffee drinking.

The study, titled “Discoloration of various CAD/CAM blocks after immersion in coffee,” was published in the February issue of the Restorative Dentistry and Endodontics journal.
Australian Child Dental Benefits Schedule remains unchanged

By DTI

CANBERRA, Australia: Amid fierce criticism from dental groups and the opposition, the Australian government has decided to retain the Child Dental Benefits Schedule (CDBS) at its full rebate amount of A$1,000. Initially, the government planned to terminate the scheme completely according to the 2016–17 budget released last May. In December, it then announced that the scheme was to be saved, but with a watered-down amount of A$700 available per child—both propositions have now been abandoned.

The CDBS, which was introduced by the former Labor Party government and commenced in January 2014, allows low-income families to claim a rebate of up to A$1,000 per child every two years for dental care. However, at about A$312 on average, most families claimed less than a third of the full rebate in the past. “In light of this, the Government had previously set the cap at A$700 per child over a two-year period, which would still allow children to visit a dentist regularly,” Minister for Health Greg Hunt said previously in a statement.

However, after both Labor and the Greens indicated that they would veto the change in the Senate, Hunt announced the reinstatement of the full rebate just hours before the motions were to be voted on in February. According to Hunt, the decision followed consultation with the Australian Dental Association.

Commenting on the move, Australian Dental Association Vice President Dr Carmelo Bonanno said it was a common sense decision by the government. “The reduction of A$700 meant that about 20 per cent of children were going to miss out if they were going to try and utilise the scheme fully,” Bonanno told ABC News.

Regarding the low amount claimed on average in the past, Bonanno reasoned this could be attributed to a lack of awareness of the scheme. “Improving people’s awareness of that means that there’ll be better utilisation of the scheme and the outcomes are going to be far better,” he said, adding that the dental association had already discussed the need for better marketing of the scheme with the government.

Estimating general dental care costs, the Australian Healthcare and Hospitals Association calculated that children with the top 10 per cent highest need would be likely to require up to A$2,050 worth of dental work over two years and children at moderate risk would need up to A$1,253 worth of work. Keeping the scheme at A$1,000 would therefore help parents to continue to provide much-needed dental health care for their children, rather than delay treatment because of a lack of money, the association stated.

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