Health labels might prevent

Consumption of sugary drinks



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Cigarette packets are labelled with warnings and graphic images to deter people from smoking. In a new study, researchers from Australia's Deakin University have investigated whether a similar labelling approach could dissuade people from buying sugary drinks. They found that young adults were less likely to purchase sugar-sweetened beverages that had health labels.

To investigate the possible effects of adding a health label to sugary drinks, an online experiment to examine the drink choices of almost 1,000 Australians of a diverse range of socio-economic status and education levels aged between 18 and 35 was conducted. Participants were asked to imagine that they were entering a shop or cafe or approaching a vending machine to purchase a drink, and should then choose between one of 15 bottles, with both sugary and non-sweetened options available. The drinks had either no label (control group) or one of four labels on sugary drinks: graphic warnings, text warnings, sugar information (including the number of teaspoons of added sugar) or a Health Star Rating—the national front-of-pack labelling system used in Australia and New Zealand.

According to the results, participants were far less likely to select a sugary drink when a front-of-pack label was displayed, regardless of their level of education, age or socio-economic background. "Our findings highlight the potential of front-of-pack health labels, particularly graphic images and Health Star Ratings, to change consumer behaviour, reduce purchases of sugar-sweetened drinks, and help people to make healthier choices," said Prof. Anna Peeters, Director of the Institute for Healthcare Transformation at Deakin University.

Source: DTI

Acupuncture could reduce

Dental anxiety

Fear of the dentist is something some people suffer from more than others. With multiple reasons for dental anxiety and its effects, there is, however, limited research on its impact and possible treatment methods. In an effort to look deeper into the topic, researchers from the University of York, UK, have recently reviewed a number of studies on treating dental anxiety with acupuncture.

For the systematic review and meta-analysis, six trials with a total of 800 patients were chosen from almost 130 eligible trials. The researchers used a points scale to measure anxiety, and in the studies included, anxiety was shown to be reduced by eight points when dental patients were given acupuncture as a treatment. According to the researchers, this level of reduction is considered to be clinically relevant, indicating that acupuncture could be a possibility for treating dental anxiety.

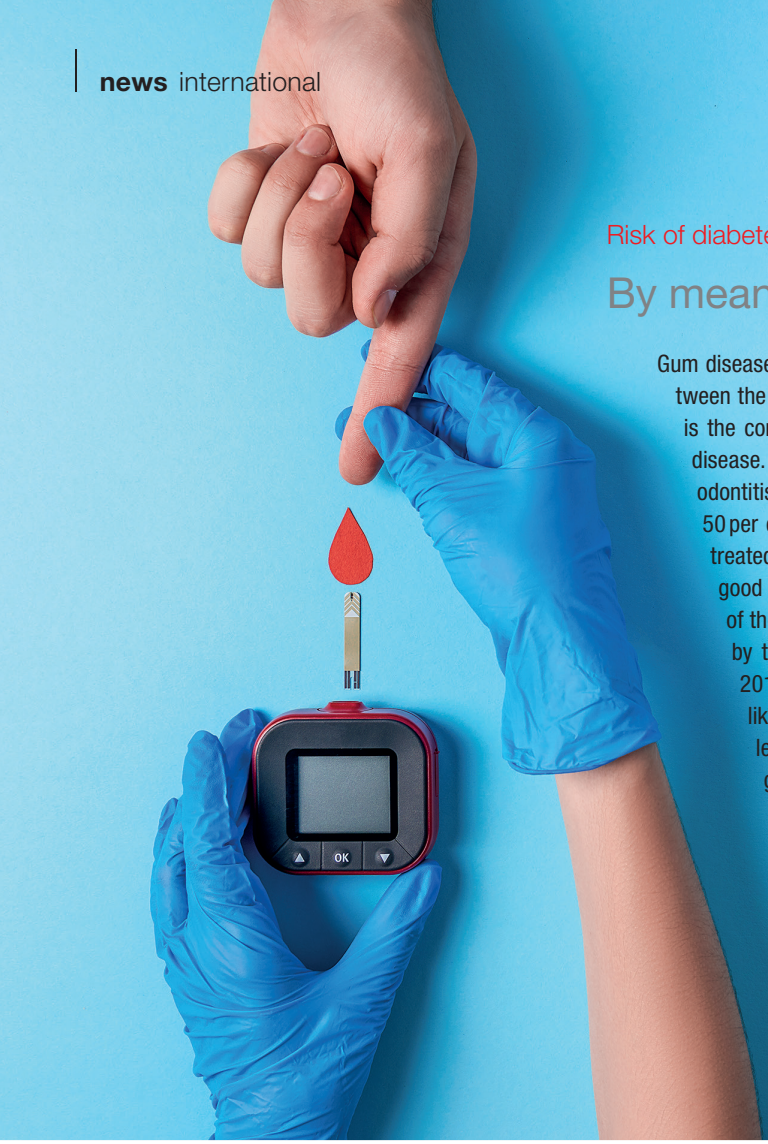
Co-author of the study, titled "Acupuncture for anxiety in dental patients: Systematic review and meta-analysis", Dr Hugh MacPherson, Professor of Acupuncture Research at the University of York's Department of Health Sciences, expressed that the scientific interest in the effectiveness of acupuncture both as a standalone and as an accompanying treatment to more traditional medications was increasing.

"If acupuncture is to be integrated into dental practices, […], then there needs to be more high-quality research that demonstrates that it can have a lasting impact on the patient. Early indications look positive, but there is still more work to be done," summarised MacPherson.

Source: DTI



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Risk of diabetes reduced

By means of good oral health

Gum disease and diabetes are chronic conditions that increase with age. The link between the two diseases goes both ways. It is thought that inflammation in the body is the connection. In fact, periodontal disease is the most common inflammatory disease. Gum (periodontal) disease includes gingivitis (inflamed gums) and periodontitis (inflammation of the gums and structures supporting the teeth). About 50 per cent of people over 30 have periodontitis, which causes tooth loss if untreated, and it is this type of gum disease that is linked with diabetes. Then again, good oral health may play a key role in reducing the risk of diabetes, which is one of the main messages of the Perio & Diabetes campaign launched just recently by the European Federation of Periodontology (EFP) on World Diabetes Day 2018. Further core messages include that uncontrolled diabetes triples the likelihood of gum disease and successful gum treatment reduces blood sugar levels. Moreover, it is stated that people with diabetes have poorer blood glucose control, more heart, brain, eye and kidney complications, and a shorter lifespan, in case they also have gum disease. In this regard, Prof. Filippo Graziani, president elect of the EFP, said: “Bleeding gums are not normal—do not just rely on a mouth rinse but go see a dentist. The earlier we catch periodontitis, the better.” Gum disease can be prevented by cleaning between your teeth every day with an interdental brush or floss, brushing your teeth for at least two minutes, twice a day, avoiding smoking and enjoying a healthy diet, controlling your blood sugar in case of diabetes, and obviously, visiting your dentist regularly.

Source: European Federation of Periodontology

Caries prevention aided by

Fluoride varnish in primary dentition

Permanent teeth may be affected by caries at an early stage in the case of caries-affected primary teeth, as the enamel has not yet fully hardened. Because oral hygiene and caries prevention can be challenging in young children, the use of fluoride varnish can be beneficial. Researchers of the Institute for Quality and Efficiency in Healthcare (IQWiG) investigated whether the application of fluoride varnish to primary dentition has advantages over standard care without fluoride application by comparing the findings of 15 randomised controlled trials. The development of caries was investigated in all 15 studies; side effects were investigated in nearly all of the studies. However, owing to a lack of conclusive data, it is unclear whether fluoride application also has advantages regarding further patient-relevant outcomes, such as tooth preservation, toothache or dental abscesses. A clear advantage of fluoride varnish was determined despite the very heterogeneous study results: The fluoride treatment could completely prevent caries in approximately every tenth child and would at least reduce progression of caries in further children. Apparently, whether the children already had caries or whether their teeth were completely intact made no difference regarding the benefit of fluoride varnish application. The report, titled “Assessment of the application of fluoride varnish on milk teeth to prevent the development and progression of initial caries or new carious lesions”, was published online by the IQWiG in April 2018.

Source: DTI



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Teeth give insights into

Feeding habits of dinosaurs



Recent research has offered a new understanding of dinosaurs' feeding behaviour by means of their tooth wear. To kill their prey, bird-like theropod dinosaurs from the Upper Cretaceous (100.5–66 million years ago) of Spain and Canada all relied on a puncture-and-pull bite strategy, in which parallel scratches formed while they bit down into prey, followed by oblique scratches as the head was pulled backwards with closed jaws. Close examination of patterns of wear and modelling of their teeth suggest that these dinosaurs were not necessarily in direct competition for their next meal. Apparently, some of the dinosaurs preyed on larger, struggling prey, while others stuck to softer or smaller fare. "All these dinosaurs were living at the same time and place, so it is important to know if they were competing for food resources or if they were aiming for different prey," said lead author Dr Angelica Torices. The evidence suggests that Dromaeosaurus and Saurornitholestes were well adapted for handling struggling prey or for processing bone as part of their diet and, furthermore, that troodontids may have preferred smaller or immobile prey that required a less powerful bite. The study, titled "Puncture-and-pull biomechanics in the teeth of predatory coelurosaurian dinosaurs", was conducted in collaboration with researchers from the Royal Ontario Museum in Toronto in Canada, the University of Alberta and the University of Zaragoza in Spain in May 2018.

Source: DTI

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Neutron tomography offers

Insights into interior of teeth

Imaging techniques based on neutron beams are rapidly developing and have become versatile non-destructive analysing tools in many fields of study. Researchers at the Helmholtz-Zentrum Berlin (HZB) have recently published a comprehensive overview of neutron-based imaging processes titled "Advances in neutron imaging". Neutron tomography has facilitated breakthroughs in diverse areas, including dentistry. The advantage of this method lies in the fact that neutrons can penetrate deeply into a sample without destroying it. In addition, neutrons can distinguish between light elements such as hydrogen and lithium, and substances containing hydrogen. Because neutrons themselves have a magnetic moment, they react to the smallest magnetic characteristics inside the material. This makes them a versatile and powerful tool for materials research. 2D or 3D images, called neutron tomograms, can be calculated from the absorption of the neutrons in the sample. The researchers described how improvements in recent years have extended the spatial resolution down to the micrometre range. This is more than ten times better than the typical medical X-ray tomography. Including the examination of teeth, applications are of a wide range: "Neutron tomography is extremely versatile. We are working on further improvements and hope that this method, which is in great demand, will also be available in modern spallation sources in the future," said lead author Dr Nikolay Kardjilov.

Source: DTI



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