

# Other journals in brief

A selection of abstracts of clinically relevant papers from other journals.  
The abstracts on this page have been chosen and edited by Reena Wadia.

## Environmental impact of interdental cleaning aids

Abed R, Ashley P, Duane B, Crotty J, Lyne A. An Environmental Impact Study of Interdental Cleaning Aids. *J Clin Periodontol* 2022; DOI: 10.1111/jcpe.13727. Online ahead of print.

### Daily cleaning with interdental cleaning aids has an environmental footprint that varies depending on the product used.

This study compared the environmental footprint of eight interdental cleaning aids. A comparative life cycle analysis was conducted based on an individual person using interdental cleaning aids every day for five years. The primary outcome was a life cycle impact assessment. This comprised of 16 discrete measures of environmental sustainability; for example, greenhouse gas emissions, ozone layer depletion, and water use. Secondary outcomes included normalised data, disability adjusted life years, and contribution analysis. Interdental cleaning using floss picks had the largest environmental footprint in 13 out of 16 impact categories. Depending on the environmental impact category measured, the smallest environmental footprint came from daily interdental cleaning with either bamboo interdental brushes (five impact categories, including carbon footprint), replaceable-head interdental brushes (four impact categories), regular floss (three impact categories), sponge floss (three impact categories) and bamboo floss (one impact category). Clinicians should consider environmental impact alongside clinical need and cost when recommending interdental cleaning aids.

<https://doi.org/10.1038/s41415-022-5154-1>

## Simultaneous versus individual-arch dental bleaching

Carneiro T S, Favoretto M W, Centenaro G G *et al.* Does simultaneous versus individual-arch at-home dental bleaching regimen influence patient satisfaction? A randomised clinical trial. *J Esthet Restor Dent* 2022; DOI: 10.1111/jerd.12962. Online ahead of print.

### A simultaneous-use protocol for customised at-home dental bleaching trays proved to be equivalent to using single arch for patient level of discomfort and bleaching efficacy.

This randomised, parallel and single-blinded clinical trial evaluated patient level of discomfort during at-home bleaching testing the equivalence between two different protocols as well as tooth sensitivity (TS), gingival irritation (GI) and bleaching efficacy (BE). One hundred patients were randomised into: simultaneous (n = 50) and single arch (n = 50) groups. At-home bleaching was performed with 10% hydrogen peroxide for two weeks for the simultaneous group and four weeks for the single arch group. Patient level of discomfort was assessed using a questionnaire. The TS and GI as well as BE using spectrophotometer and colour guide were assessed using the visual analogue scale. Only tray adaptation showed a significant effect after the second week. There was equivalence between groups for level of discomfort. No significant intergroup differences were found for the risk of TS or GI, nor BE.

<https://doi.org/10.1038/s41415-022-5179-5>

## Assessment of gingival thickness

Nik-Azis N-M, Razali M, Goh V, Shuhaimi N N A, Nazrin N A S M. Assessment of gingival thickness in multi-ethnic subjects with different gingival pigmentation levels. *J Clin Periodontol* 2022; DOI: 10.1111/jcpe.13723. Online ahead of print.

### The probe visibility method using either CBP or the UNC-15 probe is affected by the degree of gingival pigmentation.

Assessment of the thickness of gingival tissues using the probe visibility test is regarded as the method of choice during routine examinations. However, the probe visibility test has not been validated for patients with gingival pigmentation. Buccal mucosa of the maxillary right central incisor teeth of 171 participants was evaluated using four methods, which were direct measurements using calliper, transgingival probing method using an endodontic probe, and probe visibility method using Colorvue biotype probe (CBP) and UNC-15 probe. The average gingival thickness of the selected population was  $1.22 \pm 0.38$  mm with a distribution of 70% thick and 30% thin gingiva. Transgingival and calliper methods showed good agreement and significant correlation. Visual assessment using CBP and UNC-15 probe showed poor agreement with the direct measurement methods. Gingival pigmentation significantly affected the probe visibility assessment, reducing the visibility of both the CBP and UNC-15 probe.

<https://doi.org/10.1038/s41415-022-5178-6>

## Masticatory function of stroke patients

Shu X, Fan Y, Leung K C M, Lo E C M. Masticatory function of stroke patients: A systematic review with meta-analysis. *Gerodontology* 2022; DOI: 10.1111/ger.12653. Online ahead of print.

### Stroke patients have lower maximum bite force and masticatory performance than healthy people.

This systematic review and meta-analysis summarised the current information on the masticatory function of stroke patients. Four electronic databases were searched for relevant observational studies and clinical trials on the masticatory function of stroke patients. Meta-analysis was conducted for the comparison of bite force and masticatory performance using standardised mean difference (SMD). Of the 3,837 records identified, nine studies, corresponding to 302 participants, were included. The maximum bite force of stroke patients was significantly lower than that of the healthy individuals. There was no significant difference between the ipsi-lesional and the contra-lesional sides of the same stroke patient. Stroke patients had lower masticatory performance than healthy people, and the contra-lesional side was worse than the ipsi-lesional side. Electromyographic analysis indicated that muscle activation of stroke patients was poorer than the healthy individuals, and stroke patients seem to exhibit dysfunction in the recruiting and firing of motor units.

<https://doi.org/10.1038/s41415-022-5179-5>