

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

Do we need a light for in-office bleaching?

In-office dental bleaching with light vs. without light: A systematic review and meta-analysis.

Maran BM *et al.* *J Dent* 2018; **70**: 1–13

Activation of in-office bleaching gel with light does not improve colour change nor affect tooth sensitivity.

This review explored whether light-activated in-office vital bleaching had a greater whitening efficacy and higher tooth sensitivity than in-office vital bleaching without the use of a light. A literature search was performed in 2016–17. Twenty-one randomised clinical trials were included. Using the random effects model, a meta-analysis with a subgroup analysis was conducted for colour change as well as the risk and intensity of tooth sensitivity. No significant difference in colour change (as per a spectrophotometer and/shade guide units) and risk or intensity of tooth sensitivity was observed. For colour change as per a spectrophotometer and risk of tooth sensitivity, the quality of the evidence was graded as moderate whereas the evidence for color change in shade guide units and intensity of tooth sensitivity was graded as very low and low, respectively. The activation of in-office bleaching gel with light does not seem to improve colour change or affect tooth sensitivity, regardless of the hydrogen peroxide concentration.

DOI: 10.1038/sj.bdj.2018.331

Orthodontic treatment and smile aesthetics

Effect of nonextraction and extraction orthodontic treatments on smile aesthetics for different malocclusions.

Cheng HC, Want YC. *Am J Orthod Dentofacial Orthop* 2018; **153**: 81–86

Extraction subjects with >4 mm overjet were rated higher than the non-extraction subjects

This study evaluated the differences in aesthetic perceptions and smile variables between extraction and non-extraction treatments for different malocclusions. Ninety participants were divided into three groups according to their pre-treatment overjet (group I, 0–4 mm; group II, >4 mm; group III, <0 mm), with 15 extraction and 15 non-extraction participants in each group. Post-treatment frontal smiling photographs were evaluated by ten orthodontists, ten general dentists and ten lay people. Nine smile variables were measured. The aesthetic scores by dental professionals were higher in extraction compared to non-extraction in group II. Lay people had no aesthetic preference regarding the type of treatment. The smile aesthetic score of group III was significantly lower than the scores for groups I and II. The arch form index, maxillary incisor show, and smile arc were greater in the extraction participants. Non-extraction and group III correlated negatively with the aesthetic score. Maxillary incisor show, tooth number display and buccal corridor ratio correlated positively with the aesthetic score.

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Aesthetics of peri-implant soft tissues

Evidence-based knowledge on the aesthetic and maintenance of peri-implant soft tissues: Osteology Foundation Consensus Report Part 3 - Aesthetics of peri-implant soft tissues.

Jung RE *et al.* *Clin Oral Implants Res* 2018; **29** (Suppl 15): 14–17

For single-tooth implants, the papilla height between an implant and a tooth is predominantly dependent on the clinical attachment level of the tooth. In cases with two adjacent implants, it is not possible to define the optimal horizontal distance between two adjacent implants restored with fixed dental prostheses.

The aesthetic outcome of implant-supported reconstructions is strongly influenced by the natural appearance of the peri-implant soft tissue. To better predict the aesthetic outcome of implant-supported reconstructions, it would be beneficial to identify the ideal vertical distances of the papilla height in single-tooth implants and to identify the horizontal distance between two adjacent implants to achieve inter-implant mucosa fill.

This consensus report was compiled by Working Group 2 at the 2nd Consensus Meeting of the Osteology Foundation. The influence of vertical implant placement on papilla height at single implants adjacent to teeth and on the inter-implant mucosa fill at two adjacent implants in the anterior maxilla was explored.

Two systematic reviews were prepared in advance of the consensus meeting. Due to the heterogeneity among the studies with regard to study design, study population, method of assessment, meta-analyses were not possible. Consensus statements, clinical recommendations, and implications for future research were based on structured group discussions until consensus was reached among the entire expert group. The systematic review about single-tooth implants included a total of 12 studies demonstrating that the vertical distance from the crestal bone level to the base of the interproximal contact point varied considerably from 2 mm up to 11 mm, and a partial or complete papilla fill was reached in 56.5% to 100% of the cases. For the systematic review regarding two adjacent implants, only four studies reported on horizontal inter-implant distances, which ranged between 2.0 and 4.0 mm. More than half of the papilla presence was indicated in 21% to 88.5% of the cases.

It was concluded that for single-tooth implants, the papilla height between an implant and a tooth is predominantly dependent on the clinical attachment level of the tooth. In cases with two adjacent implants, it was concluded that it is not possible to define the optimal horizontal distance between two adjacent implants restored with fixed dental prostheses.

In the anterior maxilla the clinical recommendations were that two adjacent implants should be placed with an inter-implant bone distance of 3–4 mm to optimise inter-implant mucosa fill and if the inter-implant bone distance is <3 mm, a single implant with a crown and a cantilever should be considered.

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