

[Pediatr Dent](#). 2001 Nov-Dec;23(6):514-6.

Bleaching primary teeth with 10% carbamide peroxide.

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Abstract

Bleaching teeth with 10% carbamide peroxide in a custom-fitted tray has been popular for more than 10 years. However, primary teeth are seldom considered for bleaching due to the need for compliance by the child and the natural whiteness of the primary teeth. This report describes an indication-teeth darkened from trauma-as well as the technique and outcome for bleaching discolored primary teeth.

<http://www.aapd.org/upload/articles/Brantley-23-06.pdf>

[Compend Contin Educ Dent](#). 2002 Jan;23(1A):22-8.

Tooth whitening in children.

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Abstract

Although there are several case reports of vital tooth bleaching in children, there is limited clinical trial evidence of the safety or efficacy of this practice. Accordingly, a new clinical trial was conducted to evaluate the effects of 2 different bleaching systems, a 6.5% hydrogen peroxide strip system and a 10% carbamide peroxide tray system, in a population of preteens and teens. A total of 106 volunteers, aged 11 to 18 years, took part in this 8-week study. Patients were randomized by a ratio of 2:1 to the strip or tray groups, with each group treating the maxillary arch first and then the mandibular arch for 4 consecutive weeks each. Individuals assigned to the strip group used the system twice daily for 30 minutes (a total of 56 contact hours over the 8-week study). Those assigned to the tray group used that system overnight (approximately 448 contact hours). Digital images were obtained at baseline and after every 2-week treatment period. Average tooth color was determined in L*, a*, b* color space, where L* indicated lightness, a* indicated red-green, and b* indicated yellow-blue. Both systems significantly whitened teeth ($P < 0.0001$). While there were no significant differences between groups with respect to the primary whitening response (Δb^*) on the maxillary teeth, 4 weeks of overnight treatment with the 10% carbamide peroxide tray (approximately 224 contact hours) yielded statistically significant whitening ($P < 0.05$) on the mandibular teeth compared with the 6.5% hydrogen peroxide strip used for 28 hours. Both tooth-whitening systems had similar sensitivity/irritation reported after instructed use. This research demonstrates that tooth whitening in teens may be safely accomplished using either the short-contact-time hydrogen peroxide bleaching strips or the overnight carbamide peroxide tray systems tested in this study.

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Tooth whitening in children and adolescents: a literature review.

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Abstract

The purpose of this paper was to summarize the findings of a literature review on the use of peroxide-based tooth-whitening agents in children and adolescents. Safety considerations, including localized adverse effects and toxicological concerns, are described. Oral findings include: (1) 1 in every 2 to 3 patients may experience tooth sensitivity and/or gingival irritation after bleaching treatment, which may be more traumatic an experience for children than adults; (2) depending on dose, duration, frequency, and route, studies indicate excessive exposure to peroxide can be potentially harmful; (3) degree of potential toxicity and harmful outcomes increases in those who overuse whiteners--a concern in teenagers; (4) careful case selection using stringent criteria is suggested for primary teeth whitening; (5) whitening in healthy adolescents is a case-by-case determination that must include the weighing of risks (oral health and age) vs benefits (improved esthetic perception). It is hoped that the present review will lead to a better understanding of the health implications of tooth whitening in children and adolescents, and offer guidance for treatment that provides satisfactory outcomes externally (enamel and gingiva) and internally (endodontic tissues and systemic health).