

# Poster Presentations

Friday, June 30



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## *Randomized Controlled Trial of Two Hydrogen Peroxide Whitening Strips*

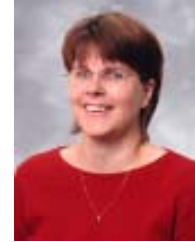
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**Objective:** A randomized controlled trial was conducted to evaluate clinical safety and efficacy of a 13% hydrogen peroxide whitening strip. **Methods:** Balancing for age and tooth color, 50 adults were randomized to a 13% hydrogen peroxide thin gel whitening strip or a 6% hydrogen peroxide strip (Crest® Whitestrips®), which served as the positive experimental control. In this 2-week, double-blind clinical trial, strips were applied unsupervised to the maxillary teeth twice daily for 30 minutes. Efficacy was measured objectively as  $L^*a^*b^*$  color change from digital images after 1 and 2 weeks. **Results:** Mean (SD) age was 31.7 (12.2) years, 74% were female, and 8% used tobacco daily. Groups did not differ ( $p > 0.29$ ) on baseline parameters or tooth color. At one week treatment, both groups experienced significant ( $p < 0.0001$ ) color improvement relative to baseline for all color parameters. Color improvement continued through Week 2. At that end-of-treatment visit, the adjusted  $\Delta b^*$  means  $\pm$  standard errors were  $-2.7 \pm 0.18$  and  $-2.1 \pm 0.18$  for the 13% and 6% control groups, respectively. Adjusted  $\Delta L^*$  means  $\pm$  standard errors were  $2.7 \pm 0.21$  in the 13% strip group versus  $2.5 \pm 0.21$  in the control. Groups differed significantly ( $p < 0.05$ ) on  $\Delta b^*$  at Week 1 and Week 2. Tooth sensitivity and oral irritation were the most common adverse events, and no subject discontinued treatment early due to an adverse event. **Conclusion:** **This positive controlled, double blind clinical trial demonstrated that twice daily use of a 13% hydrogen peroxide strip yielded significant tooth whitening after 7 and 14 days without meaningful side effects.**

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## *Clinical Evaluation of Sequential Arch Whitening with Hydrogen Peroxide Strips*

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**Objective:** A clinical trial was conducted to evaluate shade change with sequential arch use of 6% hydrogen peroxide whitening strips. **Methods:** After informed consent, eligible adults (4 teeth with shade "A2" or darker, no sensitivity or previous bleaching) were assigned 6% hydrogen peroxide whitening strips on the maxillary teeth for 14 days. The process was then repeated on the mandibular arch for another 14 days. Strip usage was twice daily, at-home and unsupervised. At baseline, Day 15 and Day 29, tooth shade was measured using a value ordered, 16-step shade guide. Shade measurements were collected from the 6 maxillary and 6 mandibular anterior teeth, by a trained examiner who was blinded as to treatment and period, and the alphanumeric shades were translated to a numeric 1-16 scale. Arches were compared using a paired difference t-test. All testing was two-sided at a 5% level of significance. **Results:** Mean (SD) age was 32.3 (12.6) years, and 65% were female. A total of 18 and 17 subjects completed the maxillary and mandibular treatment, respectively. At baseline, mean (SD) shade was 7.1 (1.12) for the maxillary teeth, and 7.6 (1.49) on the mandibular teeth. At end-of-treatment, mean (SD) shade change was -4.7 (1.4) for the 6 maxillary anterior teeth, and -4.1 (1.6) on the 6 mandibular anterior teeth. With sequential treatment, both arches exhibited significant ( $p < 0.0001$ ) shade change from baseline. There were no significant ( $p > 0.05$ ) between arch differences in shade change. Minor tooth sensitivity (10-20%) and oral irritation (15-25%) were the most common adverse events by arch. **Conclusion:** **In mild-to-moderate baseline shades, use of 6% hydrogen peroxide strips for sequential arch whitening yielded generally similar mean shade improvement on both maxillary and mandibular teeth.**