

P&G Oral Presentations

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Clinical Trial Comparing Initial and Sustained Tooth Color Using Strips

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Objectives: This randomized, parallel-group clinical trial compared the post-treatment sustained tooth color response over a 12 week period after using one of three duration regimens of 10% hydrogen peroxide strips. **Methods:** A total of 60 healthy adults were randomized equally to one of three regimens 7 days, 14 days, or 28 days total use of Crest® Whitestrips® Premium, 10% hydrogen peroxide strip, worn 30 minutes twice daily. Safety and efficacy measurements were obtained at Baseline, Day 8, Day 15, Day 22, Day 29, Week 5, Week 8, and Week 12. Efficacy was measured as $L^*a^*b^*$ color change using digital images of the maxillary anterior teeth, while safety was assessed using oral examination and subject report. The post-treatment color degradation (Δb^* and ΔL^*) was modeled over time in order to investigate whether the slopes of the Repeated Measures regression lines differed significantly between the treatment groups. **Results:** Fifty-five subjects completed at least one of the post-treatment visits and were included in the repeated measures regression model. Groups differed significantly (overall $p < 0.05$) with respect to end-of-treatment Δb^* with adjusted means of -1.7 , -3.1 , and -3.6 for the 7, 14, and 28 day groups, respectively. Similar results were observed for ΔL^* . The slopes from the post-treatment regression lines for each treatment group did not differ significantly ($p > 0.24$), showing no evidence of differences between post-treatment color (Δb^* and ΔL^*) degradation and strip use duration. Within-subject correlations between visits were 0.84 for Δb^* and 0.83 for ΔL^* . Transient tooth sensitivity and oral irritation resolved during or after treatment. **Conclusion: Regardless of the initial whitening improvement, post-treatment color retention degraded in a similar, approximately linear fashion amongst the 7, 14, or 28 day strip groups.**

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Clinical Trial of Direct-to-Consumer and Professional Whitening Strips

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Objectives: This clinical study compared direct-to-consumer and professionally-dispensed hydrogen peroxide strip tooth whitening systems. **Methods:** 51 subjects were randomized to either Oral-B® Rembrandt Professional Whitening Strips (hydrogen peroxide tab strips worn once daily for 7 days) or Crest® Whitestrips® Premium Plus (10% hydrogen peroxide strips applied twice daily for 10 days). Treatment followed the manufacturers written instructions which included 30 minutes wear time per strip application. Safety was measured from interview and examination, while efficacy was assessed objectively from CIELAB digital measurements of the maxillary anterior teeth. Groups were compared at Day 8 and end-of-treatment (Day 8 for the professional strip and Day 11 for the retail strip) using the analysis of covariance method. **Results:** The predominantly Hispanic study population averaged 40 years of age. Adjusting for baseline tooth color and age, groups were significantly different ($p < 0.02$) for the head-to-head comparison at Day 8 for both Δb^* and ΔL^* . At end-of-treatment, adjusted means (SE) for Δb^* were -0.7 (0.16) for the professional strip at Day 8 compared to -2.2 (0.16) for the retail strip at Day 11. For ΔL^* at end-of-treatment, adjusted means (SE) were 1.3 (0.20) for the professional strip compared to 2.3 (0.21) for the retail strip. Groups differed significantly ($p < 0.002$) at end-of-treatment for both Δb^* and ΔL^* . Overall occurrence of oral irritation (15%) and tooth sensitivity (12%) was low in this study. **Conclusion: Use of a direct-to-consumer 10% hydrogen peroxide whitening strip provided superior efficacy relative to a professionally dispensed whitening tab strip.**