

2344 Comparative Response of Whitening Strips Used With Light versus Strips Alone

Paul Sagel,* Nataliya Gurich, Mary Kay Anastasia.

Objectives: This clinical trial assessed the safety and efficacy of a light device used in conjunction with whitening strips relative to whitening strips alone. **Methods:** After institutional review and informed consent, 41 adults with no history of previous bleaching and a Vita shade of A2 or darker on maxillary anterior teeth, were randomized to either a Strip Alone or a Strip + Light group for 10 once a day treatments. Both groups were instructed to apply a whitening strip on their maxillary anterior teeth for a total of 60 minutes. Subjects in the Strip + Light group were instructed to apply light device to the anterior teeth during the last 5 minutes of strip wear. Efficacy was measured objectively as L*a*b* color change using digital images at Baseline and Day 4, 8 and 11, and safety was assessed by intraoral examination and subject interview. **Results:** Mean (SD) age was 37.4 (6.42), and treatments were balanced ($p > 0.6$) on starting tooth color. Beginning as early as Day 4 and continuing through Day 11, both groups demonstrated statistically significant ($p < 0.009$) reduction in yellowness (Δb^*) and increase in lightness (ΔL^*) relative to baseline. The Strip + Light group demonstrated statistically significant yellowness improvement (Δb^*) relative to the Strip group at each time-point ($p < 0.02$) with adjusted means after three, seven and ten treatments of -1.59 and -0.97, -2.50 and -1.85, -3.49 and -2.51, respectively. Both treatments were well tolerated, and no subjects dropped out of the study due to the adverse event. **Conclusions:** Light-enhanced strip treatment resulted in more efficacious color tooth improvement than strip alone.

Reprinted with permission from the *Journal of Dental Research*, J Dent Res 2017;96(Spec Issue A): Abstract 2344.