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Clinical Trial Comparing Tooth Whitening with Peroxide-Containing Strips to a Marketed Whitening Dentifrice

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Whitening toothpastes represent the most accessible and widely used approaches for improving tooth color. Development of peroxide-containing, flexible bleaching strips is reported to increase whitening accessibility (Gerlach, Comp Contin Educ Dent 2000). This randomized, placebo-controlled clinical study represents the first comparison of these two easy-to-use whitening methods. Adult volunteers were randomized to: 1) 5.3% peroxide whitening strips + a marketed regular NaF dentifrice or 2) placebo strip + a marketed tartar control whitening NaMFP dentifrice. Subjects used their assigned dentifrice and strips (30 minutes BID) for 14 days, followed by 5 weeks of dentifrice use. Digital image analysis was used to measure tooth color at baseline, 2 & 7 weeks. Of the 44 subjects who completed, the whitening strip group averaged 1.87 units reduction in yellow (b*) and 1.92 units increase in brightness (L*) significant ($p<0.0001$) improvements over baseline that were sustained throughout post-bleaching. After 7 weeks continuous use, tooth color in the tartar control whitening NaMFP dentifrice group did not differ significantly from baseline at any time point with respect to b* or L*, averaging 0.10 unit increase in yellow and -0.03 unit reduction in lightness/brightness. The whitening strip group exhibited superior whitening efficacy to the whitening dentifrice at all time points and comparisons ($p<0.001$). **This research establishes the superior whitening efficacy of peroxide-containing whitening strips compared to a marketed tartar control whitening dentifrice.**