

Home vs. In-Office Bleaching (9/03)

Clinical Evaluation of In-Office and At-Home Bleaching Treatments. Zekonis R, Matis BA, Cochran MA, Al Shetri SE, Eckert GJ, Carlson TJ. Oper Dent 2003;28:105-112.

Both in-office and at-home vital tooth bleaching have been popular and successful methods of lightening discolored teeth. Until now, there has been no clinical studies available in the literature directly comparing these two treatment modalities. The purpose of this study was to evaluate the degree of color change of teeth, color relapse and tooth and gingival sensitivity associated with ADA-accepted in-office and at-home whitening agents. After receiving a prophylaxis by a licensed hygienist, twenty subjects were fitted with a custom bleaching tray that was cut in half between teeth #8 and #9. At-home bleaching was



accomplished with 10% carbamide peroxide (Opalescence, Ultradent Products, South Jordan, UT) for two weeks using the split-mouth maxillary bleaching tray. In-office bleaching was performed on the opposite side of the arch with 35% hydrogen peroxide (StarBrite, Interdent, Los Angeles, CA). A rubber dam was placed and the gel was placed for three 10-minute applications at two separate appointments for a total of sixty minutes of in-office bleaching time. Color evaluation using a shade guide (Trubyte, Dentsply, Milford DE), slide photographs, and a colorimeter (Chroma Meter CR 321, Minolta, Ramsey, NJ) was completed at baseline, one, two, three, six and 12 weeks. Subjects completed a questionnaire on tooth and gingival sensitivity they experienced during the two weeks of treatment and for seven days after treatment. **All of the colorimeter, shade guide and clinical slide data showed a significantly greater increase in lightness with the at-home whitening treatment compared to the in-office regimen. The at-home treatment had significantly higher gingival sensitivity than in-office treatment. Tooth sensitivity, however, did not reach a statistical significance difference between the two techniques. Color stabilized by six weeks for both at-home and in-office treatments. Subjectively, eighty-four percent of the patients reported at-home treatment to be superior in tooth whitening than the in-office procedure.**

DIS Comment: This clinical study supports statements that were only made anecdotally in the past - night-guard vital bleaching at home may be more effective than bleaching in the office. The authors report claims by various manufacturers that the higher concentrations of hydrogen peroxide used in the office are more efficacious than the lower concentrations used at home. However, the greatly increased contact time the teeth receive at home with the bleaching agent apparently compensates for the lower concentration. In spite of these findings, some patients may still prefer the speed and convenience of supervised application offered in the dental office.