

VI. Removal

de Rijk, W. G. **Removal of fiber posts from endodontically treated teeth.** *American Journal of Dentistry.* 13: 19B-21B, 2000.

Abstract/conclusions: The removal of posts from endodontically treated teeth can be a major obstacle in the retreatment of teeth that have recurrent pathology, often leading to extraction of a tooth that could have been saved with endodontic retreatment. The use of a fiber post offers the advantages of a suitable elastic modulus and good bonding between post and cement, but also the advantage of easy removal, if so indicated by clinical findings. A special removal kit for fiber posts has been developed, and its use is illustrated, and described. The removal procedure can be completed in a very short time, usually less than 5 min. The tooth can then be restored with the same type and size of fiber post as was in the tooth prior to removal. Removal kits are found to be for single use only.

Cormier, C., Burns, D., Moon, P., **In vitro comparison of the fracture resistance and failure mode of fiber, ceramic, and conventional post systems at various stages of restoration.** *J Prosthodont* 2001; 10:26-36

Abstract/ conclusions: The fiber posts evaluated provided an advantage over a conventional post that showed a higher number of irretrievable post and unrestorable root fractures. At the stage of final restoration insertion, there was no difference in force to failure for all but the FiberKor material, which continued to be weaker than all other materials tested. The fiber posts were readily retrievable after failure, whereas the remaining post systems tested were non-retrievable.

Gesi, A., Magnolfi, S., Goracci, C., Ferrari, M. **Comparison of two techniques for removing fiber posts.** *JOE Vol. 29, No. 9, September, 2003*

Abstract/ conclusions: The purpose of this study was to evaluate the time needed to remove several types of fiber posts using two different bur kits. Estimates refer to the time needed to pass the fiber post until arriving at the gutta percha. Sixty extracted anterior teeth were treated endodontically. A post space with a standard depth of 10mm was prepared in each root canal. The sample was randomly divided into 3 groups of 20 specimens each. Three different types of posts were cemented: group 1, Conic 6% tapered fiber posts (Ghimas), group 2, FRC Postec posts (Ivoclar/Vivadent); and group 3, **ComposiPost** carbon fiber posts (RTD). To remove the posts, for half of each group's the burs for the RTD fiber post removal kit were used (subgroup A). For the other half of the teeth in each group (subgroup B) were removed by using a diamond bur and a Largo bur. ComposiPost (group 3) took significantly less time to remove than the other two types of posts ($p < 0.05$). For the bur kits, the procedure involving the use of a diamond and a Largo bur (subgroup B) was significantly faster ($p < 0.05$). The interaction between the type of post and the type of bur kit was not significant ($p > 0.05$).

[Lindemann M](#), [Yaman P](#), [Dennison JB](#), [Herrero AA](#). **Comparison of the efficiency and effectiveness of various techniques for removal of fiber posts.** *J Endod.* 2005 Jul;31(7):520-2.

A study was conducted to determine the efficiency and effectiveness of several techniques for fiber post removal. Four groups of 20 mandibular premolars were endodontically treated and obturated. Post spaces were prepared for the following post systems: ParaPost XH, ParaPost Fiber White, Luscent Anchors, and **Aestheti-Plus**. After cementation, 10 posts of each group were removed with their corresponding manufacturer's removal kit and the other 10 removed with diamond burs and ultrasonics. Removal times were recorded and the teeth were sectioned vertically and microscopically analyzed for removal effectiveness based on a 0 to 5 point scale. Removal kits removed Luscent Anchors the fastest (mean = 3.9 min) and most effectively (mean = 2.6), while Aestheti-Plus posts were removed the slowest (mean = 7.3 min) and least effectively (mean = 3.4). Diamonds and ultrasonics required an average of 10 additional minutes for each fiber post system removal, yet removal effectiveness improved half a point. The results suggest recommended removal kits were significantly more efficient, while diamonds and ultrasonics were more effective. Removal kits could be enhanced with subsequent ultrasonic instrumentation to remove remaining fibers and cement.

Sakkal, S., **Carbon-Fiber Post Removal Technique.** *Compendium.* 17: S86-1996.

Abstract/ conclusions: In the event of endodontic failure, removal of a metal post is a time-consuming, challenging and expensive task. The Carbon fiber post (**ComposiPost**) is the first post

with a proven and safe method of retrieval that takes only a matter of minutes. Chair-time is reduced and there is less chance of harming sound tooth structure during the removal process, because the entire procedure is performed using slow speed. The removal technique is described in 6 steps.