

# NTEA ENDO FAX

Compliments of North Texas Endodontic Assoc.

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## **The Role of Posts/Dowels: An Endodontic Perspective**

**Purpose:** The primary purpose and main indication for a post is to retain a core that can be used to support the final restoration. Posts *do not* reinforce endodontically treated teeth, and a post *is not* necessary when sufficient tooth structure is present after a tooth has been prepared. In actuality, placing a post can predispose a tooth to fracture.

**Design and shape:** Threaded posts are more retentive than serrated posts, which are more retentive than smooth-sided posts. Parallel-sided posts are generally preferable to tapered posts. Studies show that parallel-sided posts are less likely to contribute to root fracture.

**Size:** Post size should not exceed one-third of root diameter. Increased post diameter *does not* significantly improve post retention. In choosing a post size, the practitioner must consider that root diameter decreases apically and that concavities in the root can be invisible radiographically. These anatomical factors can contribute to thin dentinal walls that are subject to fracture during the initial post cementation or during occlusion if the post is too wide.

**Length:** Clinical success rates support post length equal to or greater than the crown length of the tooth. Because retention tends to increase with length, posts one-half of the length of the root are recommended.

One of the goals of root canal treatment is to seal the root canal system in three dimensions. To achieve this, a minimum of four to five millimeters of root canal filling material must be retained as the apical seal. Because of the complex anatomy of root apices, less than four to five millimeters may lead to leakage.

After the post has been cemented in place, there should be no space remaining between the filling material and the end of the post. These voids may lead to failure due to leakage through lateral canals.

**NOTE:** When endodontic therapy is performed through an existing full coverage restoration, filling the access cavity and restoring the occlusal surface is usually sufficient. Placement of a post through an existing crown *may not* enhance retention of the crown and, in fact, increases the risk of root perforation.

Care should be exercised to evaluate pre-existing endodontically treated teeth before post placement. If the previous treatment shows any signs of periapical pathosis or previous treatment is incomplete, retreatment should be accomplished before permanent post placement.

*Endo Fax is produced by North Texas Endodontic Associates, Drs. Gary Harris and Joel Small, and is intended to aid the practitioner in the management of endodontic conditions. Practitioners must always use their own best professional judgement. We neither expressly or implicitly warrant any positive results associated with this material.*