The Forgotten Retention: Core, Posts, and Pins

CR Survey Data: June 2018

- Respondents: 1009 total; 96% general dentist; average 31 years in practice

Core Build-Up

- Do you place core build-up? 90% Yes, 10% No

- Popular brands
  - 20% Build-It (Various) (Pentron)
  - 11% Core Paste XP (DenMat)
  - 7% Absolute Dentin (Parkell)
  - 7% Clearfil Photo Core (Kuraray Dental)
  - 5% MultiCore (Various) (Ivoclar Vivadent)
  - 4% LuxaCore (Various) (DMG America)
  - 4% CompCore (Various) (Premier Dental)
  - 3% Visalys Core (Kettenbach)
  - 3% FluoroCore 2+ (Dentsply Sirona)
  - 52 additional brands with ≤1% use

- Opinion: Most important characteristics of core build-up (multiple responses possible)
  - 81% bond to tooth (see CR comment A)
  - 73% radiopacity
  - 71% dual-cured
  - 5% MultiCore (Various) (Ivoclar Vivadent)

Posts

- On average, respondents place posts in approximately 1/3 of endodontically treated teeth.

- Popular brands
  - 41% ParaPost (Various) (Coltene)
  - 14% FibreKleen and FibreKor (Pentron)
  - 11% RelyX Fiber Post 3D (3M)
  - 8% Flexi-Post and Flexi-Flange (Essential Dental Systems)
  - 6% D.T. Light Post (Bisco Dental)
  - 4% EndoSequence Fiber Post (Brasseler USA)
  - 30 additional brands with ≤2% use

- Popular post materials
  - 51% fiber-reinforced composite (see CR comment B)
  - 18% stainless steel
  - 17% titanium alloy
  - 7% carbon fiber
  - 7% pure titanium
  - 2% custom cast metal

- Opinion: Most important characteristics of posts (multiple responses possible)
  - 71% reasonable cost (see CR comment C)
  - 70% strength
  - 50% proper diameter
  - 36% proper length
  - 31% shape: parallel sides
  - 30% shape: tapered
  - 27% flexibility

- Opinion: When are posts necessary? (multiple responses possible) (see CR comment D)
  - 90% tooth with one half or less of supra-gingival tooth structure present
  - 38% abutment for FPD (fixed dental prosthesis)
  - 38% canine in canine-guided occlusion (canine potentially needing post)
  - 35% bruxer
  - 33% tooth with heavy incisal guidance

- Opinion: What are the benefits of using posts? (multiple responses possible) (see CR comment E)
  - 87% better attachment of core build-up/remaining tooth structure to tooth root
  - 42% Increase in overall tooth strength

Pins

- Do you use pins? 55% Yes, 45% No

CR Comments on Survey Results

A: Such a high dependence on bond strength of a core build-up to tooth structure may be unrealistic.
B: The nickel content in stainless steel has long been proven to be problematic for allergy-prone patients.
C: Acceptable radiopacity should be the most important characteristic of posts used. Cost is secondary.
D: Most clinicians seem to be aware of how insufficient tooth structure can warrant a post. However, many other clinical situations are just as crucial for post placement.
E: Most clinicians understand how a post can better attach a core to the apical portion of the tooth, although fewer clinicians are convinced of the strength factor. Both effects have been proven clinically.