New Endodontic Technology in the New Practice:

WHAT TO LEAVE IN AND WHAT TO LEAVE OUT

Endodontics will be a significant part of new dentists’ practices because many of them have been well trained in dental school, yet they have a paucity of patients. Thus, it’s hard to justify sending patients to specialty offices. Moreover, it’s a procedure with excellent net income and no lab bills.

Efficiently providing endodontic therapy at today’s high standards requires the right tools, but not all of the tools out there. What follows is a list of equipment and instruments in descending order of importance to the delivery of exceptional endodontic results.

1. Guided Endo Access Burs—After using a small round bur to enter the pulp chamber, these burs are guided by their tips around its perimeter, resulting in ideal outline form. In molars they prevent pulp chamber floor perforations. The best is SybronEndo’s LAX diamond.
   Cost: ~$16.95/5pk ($3.39/ea). Return: Ideal access in 1/3 the time.

2. Apex Locator—These are indispensable. I wouldn’t do root canal therapy without my Morita Root ZXII. Used with a lubricant during negotiation, they are very stable and very accurate. Get one, learn how to use it, and quit taking working length x-rays—they are five-times less accurate and a waste of time.

3. Endodontic Handpiece—For a general dental office, a cordless endo handpiece is ideal as they are easily moved from operatory to operatory—after disinfection of course. You need an endo handpiece with a torque limit if you are short on clinical experience with rotary files to learn appropriately.

Cost: ~$1000. Return: Know where you are in root canals at all times—they will pay for themselves within 20 RCT cases.

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appropriate apical pressures for all the different rotary files you use. After you have 250 cases under your belt, a torque limiter will save you when you take a mental holiday with a rotary file in your patient’s tooth. Dentsply/Tulsa has a very nice one made by their sister company-Midwest.


4. Rotary Shaping Files—If your rotary training in dental school was limited to hand files and orifice shapers (or God forbid, Gates Gliddens) you are in for a treat. Dentsply/Tulsa’s GTX rotary files can cut a perfect shape in a root canal with just one-three instruments. Fewer instruments, less time, no apical ripping, conservative coronal enlargement, and far better canal shapes than you will ever create by hand. When you are done shaping, the GTX system-based approach has already selected all the obturation materials you will need to finish the case.

Cost: ~$8/file, 1-3 files needed per canal. Return: $500-1000/hr production during endo procedures with conservative, ideal results.

5. Obturation—This gets a little complex because you definitely need to lose that lateral condensation of cold, hard gutta-percha. I don’t recommend it, but single cone fills, in a GTX shape, are way better than cold lateral condensation as you: a. don’t have to over-shape the coronal third of the canal so two-five useless accessory cones can be crammed beside the master cone, and b. don’t have to wedge the tooth apart with a spreader. Your best bet for safe, fast, and effective 3D obturation is one or both of the Centered Condensation methods.

A. Continuous Wave Technique (Single-Cone Backfill)—The lowest cost/RCT alternative is to buy a System-B electric heat source from SybronEndo so you can heat and downpack through the thermo-softened master cone. Then throw in one of Sybron’s backfilling gutta-percha cones with sealer on it and you are done.

Cost: ~$1300 upfront, $0.75/canal. Return: Cheap on a case-by-case basis, safe, three-dimensional, easier than cold lateral condensation method.

B. Continuous Wave Technique (Syringe Backfill)—If you want the next step up this ladder, you can throw in a cordless System-B backfilling syringe by Sybron or buy an Elements Obturation Unit (SybronEndo) which has both a System-B down-pack handpiece as well as a very elegant motor-driven backfill syringe so that the down-pack and backfill devices are contained in one Unit.

Cost: ~$2700 (System B/Elements Unit) ~$2270 (Cordless System B and backfill gun). Return: You are doing the obturation method most often used by endodontists worldwide.

C. Carrier-based Obturation—The other direction you can go for filling conservatively-shaped canals in three dimensions is obturators—carrier-based filling devices—with a solid core and gutta-percha or a composite material around it. These require an oven to heat them. Carrier-based obturation is at the same time the simplest 3D filling method and the most technique sensitive. Dentsply/Tulsa invented carrier-based obturation and their GT and GTX carriers lead the market. SybronEndo has recently introduced RealSeal, a Resilon (composite resin) carrier and coating.

Cost: ~$371 for the ovens, ~$8 for each obturator. Return: 2/3rds less time to accomplish exceptional three-dimensional fills of conservatively shaped root canal systems.

6. Ultrasonic Handpiece—This device—with some type of magnification (loupes or better still, a microscope)—is a must if you are doing molar endo. If as an associate you are expected to do molar RCT, request the senior partners adequately equip you. Molar endo without an ultrasonic handpiece and magnification is impossible if you care about quality outcomes. If they are really cool, they will send you to a hands-on course too (many of the dentists who sign up for our Santa Barbara teaching lab are sent by their bosses).

Cost: ~$1395 Spartan ultrasonic handpiece (w/free handpiece), ~$81.50 BUC Ultrasonic tips (Spartan) ~$600-1200 for loops, ~$2685 SB Hands-on course. Return: Perfect visual access to pulp chamber anatomy and the cutting progress towards those elusive canals.

7. Cone Beam CT—This is a stretch, but after experiencing the magnificence of practicing with one, doing endo without will result in feelings of victimhood and severe whining. The best dental CT machines on earth are made by J. Monta.

Cost: ~$125-250K. I know. Return: Priceless. You will know—for the first time—what is actually going on inside the teeth you are treating during root canal therapy.