

# **PRACTICAL CLINICAL COURSES**

A Service of the Gordon J. Christensen  
Career Development Program

**V1331**

## **Nonsurgical Retreatment: Disassembly & Missed Canals, Quality & Profitability**

Produced by

**ADVANCED ENDODONTICS**

Clifford J. Ruddle, DDS (Founder/Director)

### **Materials Included**

C.E. Instruction Sheet  
Product/Supplier Lists  
Clinician Responsible  
Goals & Objectives  
Overview  
References  
AGD Post Test

**Gordon J. Christensen**  
**PRACTICAL CLINICAL COURSES**

**PROCEDURE FOR RECEIVING**  
**ACADEMY OF GENERAL DENTISTRY**  
**AND STATE CREDIT**  
**FOR CE VIDEOS**

1. Complete the enclosed Post-Test. For each **CE Video Purchased**, one test is included. If additional tests are needed, the following fees will apply: \$25 per test per dentist (limit 1 additional dentist per video purchased); \$10 per test per auxiliary (dental assistants, hygienists, lab technicians - no limit on auxiliary tests). Fees can be paid either by check or credit card when tests are submitted to Practical Clinical Courses.
2. Complete the demographic information located at the end of the test.  
**Type of Credit:**
  - a. If the applicant selects "AGD," PCC will send notification to both the applicant and the Academy of General Dentistry. (The AGD will also notify applicant of credits earned by printout information.)
  - b. If the applicant selects "State," PCC will send a certificate of verification to the applicant. The applicant must then submit this certificate to his/her state board to obtain credit.
  - c. If the applicant selects "Both," PCC will complete a. & b. above.
3. Return the **Post-Test portion** via mail, fax, or email. Our contact information is as follows:

**Practical Clinical Courses**  
**3707 N Canyon Road**  
**Suite 3D**  
**Provo, UT 84604**  
**Fax: (801) 226-8637**  
[info@pccdental.com](mailto:info@pccdental.com)

4. Practical Clinical Courses will correct the Post-Test. **Passing scores are 70% or higher.**

Clifford J. Ruddle  
**ADVANCED ENDODONTICS**  
*Sources of Products Discussed in*  
**V1331 Nonsurgical Retreatment:**  
**Disassembly & Missed Canals, Quality & Profitability**  
Presented by: Clifford J. Ruddle, DDS

| ITEM                                | DESCRIPTION                                    | BRAND / COMPANY                  |
|-------------------------------------|--|----------------------------------|
| Edge-Ease                           | X-ray Comfort Cushions                         | Strong Dental / Schein           |
| Rubber Dam                          | Handidam (one size)                            | Aseptico / Dentsply Tulsa Dental |
| Rubber Dam Frame                    | Ostby Type - Part no. 547-3539                 | Hygenic / Schein                 |
| Rubber Dam Clamps                   | Molars (26, 8A), Anteriors (9), Bi's (9)       | Ivory or Hu-Friedy / Schein      |
| Hot Pulp Test Tip                   | For thermal testing                            | SybronEndo or Schein             |
| Mirror Handle w/Ruler               | Item #100-8125                                 | Schein                           |
| Stropko Irrigator                   | Tri-plex syringe adapter                       | Dr. John Stropko                 |
| Metalift                            | Crown & Bridge Remover                         | Classic Practice Resources       |
| Endo Access Kit                     | Assorted Burs & X-Gates                        | Dentsply Tulsa Dental            |
| Burs...Transmetal                   | 1958 or 2158 FG                                | Brasseler                        |
| ...Round Surgical Length            | FG 2, 4 Carbide                                | Brasseler                        |
| ...Tapered Diamonds                 | Round End (6856L-014) / Needle (859-010)       | Brasseler                        |
| <b>IRRIGANTS / DEVICES:</b>         |  |                                  |
| Irrigating Syringes                 | 3cc, 23 gauge (notched tip)                    | Monoject / Schein                |
| Navi-Tip                            | 29 gauge (notched tip), 21 mm                  | Ultradent                        |
| NaOCl Warmer                        | Sm. hotplate for warm water bath               | Mr. Coffee                       |
| Water Beaker                        | 2651A (3x3) -- For NaOCl syringes              | Profex Medical Products          |
| RC Prep or Glyde                    | Viscous chelator                               | Schein                           |
| Syringe for RC Prep / Glyde         | 1cc Plastic #0124                              | Ultradent                        |
| Tip for syringe / Stropko Irrigator | White Mac #0661                                | Ultradent                        |
| 17% EDTA                            | Aqueous chelator                               | Roth International               |
| Calcium Hydroxide                   | Interappointment dressing                      | Pulpdent / Schein                |
| Xylo/Chloroform                     | Clean excess sealer off walls / Remove cements | Schein                           |
| <b>HAND INSTRUMENTATION:</b>        |  |                                  |
| Files / 10, 15                      | K-Files  | Dentsply Maillefer               |
| Files / 20, 25, 30                  | Flexofiles                                     | Dentsply Maillefer               |
| Files / 35, 40, 50, 60              | SureFlex                                       | Dentsply Maillefer               |
| ProTaper Hand Files                 | Snap-on handles (SX, S1, S2, F1, F2, F3)       | Dentsply Tulsa Dental            |
| Bird Beak Plier                     | For precurving NiTi hand files                 | Hu-Friedy / Schein               |
| Endo Ring                           | Blue Ring w/Foam Inserts                       | Jordco / Schein                  |
| Micro Openers & Debriders           | All Sizes                                      | Dentsply Maillefer               |
| <b>ROTARY INSTRUMENTATION:</b>      |  |                                  |
| ProTaper Rotary Files               | SX, S1, S2, F1, F2, F3, F4, F5                 | Dentsply Tulsa Dental            |
| ProTaper Retreatment Files          | D1, D2, D3                                     | Dentsply Tulsa Dental            |
| ProFile Orifice Shapers             | Sizes 20-50                                    | Dentsply Tulsa Dental            |
| ProFile .04 Tapers                  | Sizes 35-50                                    | Dentsply Tulsa Dental            |
| X-Gates                             | Single Instrument (Gates Gliddens 1-4)         | Dentsply Tulsa Dental            |
| Gates Glidden Drills                | Stainless Steel Sizes 1-6                      | Dentsply Maillefer               |

(Continued)

| ITEM                               | DESCRIPTION                                  | BRAND / COMPANY               |
|------------------------------------|--|-------------------------------|
| <b>CROWN &amp; BRIDGE REMOVAL:</b> |  |                               |
| Crown Splitter                     | Removing restorative segments                | SybronEndo                    |
| K.Y. Pliers                        | Grasping Instrument                          | G.C. America / Schein         |
| Wynman Crown Gripper               | Grasping Instrument                          | Miltex Instrument / Schein    |
| Crown-a-matic                      | Percussive Instrument                        | Peerless / Schein             |
| Coronaflex                         | Percussive Instrument                        | KaVo America                  |
| Metalift                           | Passive/Active Instrument                    | Classic Practice Resources    |
| Kline Crown Remover                | Passive/Active Instrument                    | Brasseler                     |
| Richwil                            | Accessory Device                             | Almore / Schein               |
| Rand                               | Accessory Device                             | J.R.Rand / Schein             |
| <b>CANAL OBSTRUCTIONS:</b>         |  |                               |
| Stieglitz Forceps                  | Silver point removers                        | Hu-Friedy / Schein            |
| Spinal Tap Needle                  | 18, 20, 22 g., 2 1/2", SS-1529 Blunt         | Ranfac                        |
| Instrument Removal System (iRS)    | Remove silver points, carriers or files      | Dentsply Tulsa Dental         |
| Ruddle Post Removal System         | Post Remover Kit                             | SybronEndo                    |
| Roto-Pro Burs (Variety of sizes)   | Rotosonic Scalers for Post Removal           | Ellman                        |
| Gyro-Tip                           | For Fiber Post Removal                       | Ultradent                     |
| <b>PASTE REMOVAL:</b>              |  |                               |
| Endosolv E                         | Eugenate Based Paste                         | Endoco                        |
| Endosolv R                         | Resin Based Paste                            | Endoco                        |
| <b>PERFORATION REPAIRS:</b>        |  |                               |
| ProRoot (MTA)                      | Mineral Trioxide Aggregate                   | Dentsply Tulsa Dental         |
| SuperEba                           | Resin cement                                 | Harry J. Bosworth / Schein    |
| Calcium Sulfate                    | Medical Grade                                | Life Core Biomedical          |
| CollaCote                          | Absorbable collagen dressing                 | Sulzer Dental                 |
| West Perf Repair Instruments       | West 1-2, West 3-4                           | SybronEndo                    |
| Spinal Tap Needle                  | 18 g. for delivering ProRoot                 | Ranfac                        |
| Dovgan Carriers                    | ProRoot (MTA) Carrier                        | Quality Aspirators            |
| <b>ADHESION DENTISTRY:</b>         |  |                               |
| Curing Light                       | Demetron or Pro-Lite                         | SybronEndo or Maillefer       |
| Focu Tips                          | For narrowing light beam                     | SmartPractice                 |
| Tubulicid Red                      | For cleaning enamel & dentin                 | Global Dental                 |
| Etch-37                            | Etchant 37% Phosphoric Acid                  | Bisco                         |
| Tooth Conditioner Gel              | Etching gel in syringe                       | Caulk / Schein                |
| Microbrush                         | Etching & bonding                            | Schein                        |
| Benda Brush                        | Applicator brush                             | Centrix / Schein              |
| <b>OBTURATION:</b>                 |  |                               |
| Gutta Percha                       | Fine-Medium / Medium or ProTaper Matching    | Dentsply Tulsa Dental         |
| Pulp Canal Sealer - EWT            | Powder & Liquid                              | Kerr / Schein                 |
| 5004 Touch 'N Heat                 | Heat Source 0.5mm plugger tip                | Kerr / Schein                 |
| Pluggers                           | Sizes 8-12 Posterior                         | Schilder / Dentsply Maillefer |
| Calamus Flow                       | Gutta Percha Delivery System for backpacking | Dentsply Tulsa Dental         |
| Calcium Hydroxide                  | Interappointment dressing                    | Pulpdent Corp / Schein        |

(Continued)

| <b>ITEM</b>                     | <b>DESCRIPTION</b>                      | <b>BRAND / COMPANY</b> |
|---------------------------------|---|------------------------|
| <b>EQUIPMENT:</b>               |   |                        |
| EndoActivator System            | Sonic Handpiece Driver & Activator Tips | Dentsply Tulsa Dental  |
| Slowspeed Electric H.P.         | Gear Reduction / DTC Motor              | Dentsply Tulsa Dental  |
| Slowspeed Electric or Air       | Gear Reduction                          | KaVo America           |
| Ultrasonic Unit (Piezoelectric) | P5 Ultrasonic Generator                 | Dentsply Tulsa Dental  |
| Ultrasonic Instruments          | ProUltra ENDO 1-5, ENDO 6-8, SINE 1-6   | Dentsply Tulsa Dental  |
| File Adapter                    | FA11 (file holder)                      | SybronEndo             |
| Electronic Apex Locator         | Root ZX                                 | J. Morita              |
| Microscope                      | A variety of choices                    | Zeiss                  |
| Dental Mobile Cart              | Customized Endodontic Cart              | ASI Medical            |
| Digital Xray System             | Digital Radiography                     | Schick Technologies    |
| Dental Anatomy Website          | Patient Education Tool                  | ToothAtlas.com         |

For any questions regarding the products and/or techniques presented, please contact:

**ADVANCED ENDODONTICS • CLIFFORD J. RUDDLE DDS**  
122 S. Patterson Avenue, Ste. 206, Santa Barbara, CA 93111 • (800) 753-3636 • [www.endoruddle.com](http://www.endoruddle.com)

Clifford J. Ruddle  
**ADVANCED ENDODONTICS**  
*Sources of Suppliers Discussed in*  
**V1331 Nonsurgical Retreatment:**  
**Disassembly & Missed Canals, Quality & Profitability**  
Presented by: Clifford J. Ruddle, DDS

| COMPANY                     | TOLL FREE    | FAX          | PHONE        | WEBSITE               |
|-----------------------------|--------------|--------------|--------------|-----------------------|
| Advanced Endodontics        | 800-753-3636 | 805-965-8253 | 805-964-8838 | endoruddle.com        |
| Aseptico                    | 800-426-5913 | 360-668-8722 | 425-487-3157 | aseptico.com          |
| ASI Medical                 | 800-566-9953 | 303-766-8584 | 303-766-3646 | asimedical.net        |
| Bisco                       | 800-247-3368 | 800-959-9550 | 847-534-6000 | bisco.com             |
| Brasseler                   | 800-841-4522 | 888-610-1937 | 912-927-8671 | brasselerusa.com      |
| C. K. Dental Specialties    | 800-675-2537 | 714-639-6991 | 714-639-6990 | ckdental.net          |
| CareCredit                  | 800-859-9975 | 800-333-3196 | --           | carecredit.com        |
| Classic Practice Resources  | 800-928-9289 | 888-841-5384 | 225-928-0799 | metalift.com          |
| Dentco                      | 800-454-9244 | 914-948-1711 | 914-682-6600 | dentcorp.com          |
| Dentsply Maillefer          | 800-924-7393 | 800-924-7389 | --           | maillefer.com         |
| Dentsply Tulsa Dental Spec. | 800-662-1202 | 918-493-6599 | 918-493-6598 | tulsadental.com       |
| Designs for Vision          | 800-727-6407 | 631-585-3404 | 631-585-3300 | designsforvision.com  |
| Ellman International        | 800-835-5355 | 516-569-0054 | 516-594-3333 | ellman.com            |
| Endoco                      | 800-388-7868 | 866-683-6679 | 901-683-6677 | endoco.com            |
| Global Dental Products      | --           | 516-785-7885 | 516-221-8844 | gdpdental.com         |
| Global Surgical             | 800-767-8726 | 636-861-2969 | 636-861-3388 | globalsurgical.com    |
| Hu-Friedy                   | 800-483-7433 | 800-729-1299 | 877-321-4333 | hu-friedy.com         |
| J. Morita USA               | 888-566-7482 | 949-465-1095 | 949-581-9600 | jmoritausa.com        |
| KaVo America                | 800-323-8029 | 847-550-6825 | 847-550-6800 | kavo.com              |
| Life Core Biomedical        | 800-348-4368 | 952-368-3411 | 952-368-4300 | lifecore.com          |
| Link Ergonomics             | 800-424-5465 | 417-206-4622 | 417-206-4600 | linkdental.com        |
| Marquis Dental              | 800-359-3206 | 303-344-5232 | 303-344-5222 | perio-aid.net         |
| Moyco Precision Abrasives   | 800-331-8837 | 215-362-3809 | 215-855-4300 | moycotech.com         |
| Mr. Coffee                  | 800-672-6333 | --           | --           | mrcoffee.com          |
| Profex Medical Products     | 800-325-0196 | 901-454-9850 | 901-452-7485 | profexmed.com         |
| Quality Aspirators          | 800-858-2121 | 972-298-6592 | 972-298-2669 | qualityaspirators.com |
| Ranfac                      | 800-272-6322 | 508-584-8588 | 508-588-4400 | ranfac.com            |
| Roth International Ltd.     | 800-445-0572 | 312-733-7398 | 312-733-1478 | rothendo.com          |
| Henry Schein                | 800-372-4346 | 800-732-7023 | 775-327-3200 | henryschein.com       |
| Schick Technologies         | 877-724-4254 | 718-482-2030 | 718-937-5765 | schicktech.com        |
| SmartPractice               | 800-522-0800 | 800-522-8329 | 602-225-0595 | smartpractice.com     |
| Stropko, Dr. John           | --           | 480-563-7881 | 480-515-4933 | stropko.com           |
| SybronEndo                  | 800-346-3636 | 714-516-7936 | 714-516-7979 | sybronendo.com        |
| ToothAtlas.com              | --           | 650-854-2568 | 650-233-0200 | eHuman.com            |
| Ultradent                   | 800-552-5512 | 800-842-9024 | 801-572-4200 | ultradent.com         |
| Zeiss                       | 800-442-4020 | 925-557-4101 | 925-557-4100 | zeiss.com             |
| Zimmer Dental               | 800-854-7019 | 760-431-7811 | 760-431-9515 | zimmerdental.com      |

## **PROGRAM**

### **V1331 Nonsurgical Retreatment: Disassembly & Missed Canals, Quality & Profitability**

#### **CLINICIAN RESPONSIBLE:**

**Clifford J. Ruddle, DDS**

Founder and Director, Advanced Endodontics

#### **GOALS & OBJECTIVES**

At the completion of this video presentation, participants should be able to accomplish the following:

1. Identify the rationale for nonsurgical endodontic retreatment.
2. Compare survival rates between the restored, retreated tooth and the dental implant.
3. Contrast the various devices for removing fixed restoratives intact.
4. Utilize “microsonic” procedures to remove core materials from the pulp chamber.
5. Locate and successfully treat previously missed canals.
6. Describe appropriate patient communication tools and teamwork.
7. Identify the proper scheduling and fee model for success.

#### **OVERVIEW**

### **V1331 Nonsurgical Retreatment: Disassembly & Missed Canals, Quality & Profitability**

There is a need to communicate well with patients concerning endodontic retreatment. This video shows the instruments and techniques for removing restorative materials, identifying and treating missed canals, and scheduling and fee considerations. A review of root canal system anatomy and its role in endodontic prognosis is followed by a systematic analysis of those factors commonly implicated in endodontic failure. Evidence-based procedures are clearly demonstrated utilizing the most proven, effective, and state-of-the-art techniques. Multi-disciplinary treatment planning, case selection, and retreatment fees are emphasized in order to improve clinical results, professional satisfaction, and profitability. This program is designed for the dental team whose vision is the long-term retention of critically essential teeth.

Techniques in this video are demonstrated utilizing 3D graphics and animations, in plastic models, on extracted teeth, and on patients. All procedures have been performed to optimally transfer knowledge and maximize the learning experience.

## REFERENCES

### **V1331 Nonsurgical Retreatment: Disassembly & Missed Canals, Quality & Profitability**

1. Allen RK, Newton CW, Brown CE: A statistical analysis of surgical and non-surgical endodontic retreatment cases, *J Endod* 15:6, 1989.
2. Barkhordar RA, Stewart GG: The potential of periodontal pocket formation associated with untreated accessory root canals, *Oral Surg Oral Med Oral Pathol* 70:6, 1990.
3. Burns RC, Herbranson EJ: Ch. 7, Tooth morphology and cavity preparations. *Pathways of the Pulp*, 7th ed., Mosby Co., St. Louis, 1998.
4. Hess W, Zürcher E: *The Anatomy of the Root Canals of the Teeth of the Permanent and Deciduous Dentitions*, William Wood & Co, New York, 1925.
5. Kois JC: The restorative-periodontal interface: biological parameters, *Periodontology 2000* 11:29-38, 1996.
6. Milot P, Stein RS: Root fracture in endodontically treated teeth related to post selection and crown design, *J Prosthet Dent* 68:428, 1992.
7. Parreira FR, O'Connor RP, Hutter JW: Cast prosthesis removal using ultrasonics and a thermoplastic resin adhesive, *J Endod* 20:3, 1994.
8. Ruddle CJ: How to profit from endo: finding the fair fee for endodontics, *Dental Economics* 88:11, pp. 30-42, 1998.
9. Ruddle CJ: Microdentistry: identification & treatment of MB<sup>II</sup> systems, *J Calif Dent Assoc* 25:4, 1997.
10. Ruddle CJ: Microendodontic nonsurgical retreatment, in *Microscopes in Endodontics*, *Dental Clinics of North America* 41:3, pp. 429-454, W.B. Saunders, Philadelphia, July 1997.
11. Schilder H: Filling the root canals in three dimensions, *Dent Clin North Am*, p. 723, November 1967.
12. Schilder H: Ch. 6, Canal debridement and disinfection, *Pathways of the Pulp*, 1st ed., Mosby Co., St. Louis, 1976.
13. Shanelec DA, Tibbetts LS: A perspective on the future of periodontal microsurgery, *Periodontology 2000* 11:58-64, 1996.
14. Sorensen JA, Engelman MJ: Ferrule design and fracture resistance of endodontically treated teeth, *J Prosthet Dent* 63:529, 1990.
15. Southard DW: Immediate core buildup of endodontically treated teeth: the rest of the seal, *Pract Periodont Aesthet Dent* 11:4, pp. 519-526, 1999.
16. Stabholz A, Friedman S, and Tamse A: Ch. 25, Endodontic failures and retreatment, *Pathways of the Pulp*, 6th ed., Mosby Co., St. Louis, 1994.
17. Stropko JJ: Canal morphology of maxillary molars: clinical observations of canal configurations, *J Endod* 25:6, pp.446-450, 1999.
18. Weller RN, Niemczyk SP, Kim S: Incidence and position of the canal isthmus. I. Mesiobuccal root of the maxillary first molar, *J Endod* 21:380, 1995.



## POST TEST

### **V1331 Nonsurgical Retreatment: Disassembly & Missed Canals, Quality & Profitability**

1. An issue that should be considered when choosing between retreatment or extraction is:
  - a. what does the patient want.
  - b. is it a strategic tooth.
  - c. is the tooth restorable.
  - d. all of the above.
  
2. Generally, clinicians prepare the access cavity through a restoration if it is judged to be:
  - a. functionally designed, well-fitting, and aesthetically pleasing.
  - b. the most cost-effective way to proceed.
  - c. desirable to the patient.
  - d. better than any alternative choice.
  
3. In a maxillary first molar, the clinical presence of an MB2 system is over:
  - a. 60% of the time.
  - b. 75% of the time.
  - c. 90% of the time.
  - d. none of the above.
  
4. The tool that has a wedging device at its working end that when activated is designed to dislodge restorative segments is the:
  - a. Wynman Crown Grippers.
  - b. Crown Splitter.
  - c. Coronaflex.
  - d. Metalift.
  
5. In general, restorative removal devices can be divided into the following three categories:
  - a. nonactive, vibratory, and active instruments.
  - b. grasping, percussive, and active instruments.
  - c. nonactive, active, and reactive instruments.
  - d. passive, forceful, and intermediary instruments.
  
6. The best placement of the KY Pliers in the removal of a restorative is:
  - a. on the occlusal aspect of the tooth.
  - b. on the cervical aspect of the tooth near the gingival margin.
  - c. on the buccal and lingual surface of the tooth below the heights of contour.
  - d. none of the above.
  
7. A passive device for removing restoratives that involves a precision channel is the:
  - a. Kline Crown Remover.
  - b. Coronaflex.
  - c. Crown-A-Matic.
  - d. Metalift.

**POST TEST (CONT'D)**

**V1331 Nonsurgical Retreatment:  
Disassembly & Missed Canals, Quality & Profitability**

8. An advantageous feature of the Micro-Opener is:
- a. an offset handle.
  - b. double and triple tapers.
  - c. it can be precurved.
  - d. all of the above.
9. Which of the following is not a specific technique mentioned for locating previously missed canals:
- a. explorer pressure
  - b. the champagne test
  - c. the dentinal line test
  - d. ultrasonic instrumentation
10. During endodontic retreatment procedures, vision may be enhanced by:
- a. magnification.
  - b. transillumination.
  - c. removing the restorative.
  - d. all of the above.

**PLEASE PRINT**

Name \_\_\_\_\_

Name of video purchaser (if different from above) \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Phone No. \_\_\_\_\_

Indicate which type of credit you wish to obtain  AGD  State  Both

AGD No. \_\_\_\_\_

State License No. \_\_\_\_\_