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**V1958**  
**Posts, Cores, and Build-Ups – Predictable & Strong**

Gordon J. Christensen, DDS, MSD, PhD

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

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Gordon J. Christensen  
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Presented by: Gordon J. Christensen, DDS, MSD, PhD

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22. **Filtek Supreme Ultra**  
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 Zest Dental Solutions  
 2875 Loker Avenue East  
 Carlsbad, CA 92010  
 (800)262-2310  
[www.zestdent.com](http://www.zestdent.com)
27. **MicroPrime Desensitizer**  
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 (800)262-2310  
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 Amherst, NY 14228  
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 (716)691-0010  
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 175 Pineview Drive  
 Amherst, NY 14228  
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 Building E2  
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 (800)537-7123  
[www.kerrdental.com](http://www.kerrdental.com)
31. **Panavia F 2.0**  
 Kuraray America, Inc.  
 Dental Division  
 32 Old Slip Floor 7  
 New York, NY 10005  
 (800)879-1676  
[www.kuraraydental.com](http://www.kuraraydental.com)
32. **ParaPost Fiber Lux**  
 Coltene/Whaledent Inc.  
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 (800)221-3046  
 (330)916-8800  
[www.coltene.com](http://www.coltene.com)
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 (855)423-6725  
 (612)842-1263  
[www.3m.com](http://www.3m.com)

34. **RelyX Ultimate**  
Solventum  
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[www.3m.com](http://www.3m.com)
35. **RelyX Unicem 2**  
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36. **ROEKO Stay-Put Cord**  
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(800)221-3046  
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[www.coltene.com](http://www.coltene.com)
37. **Scotchbond Universal**  
Solventum  
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(612)842-1263  
[www.3m.com](http://www.3m.com)
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42. **ViscoStat Clear**  
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43. **VITA Toothguide 3D-Master**  
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Yorba Linda, CA 92887  
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[www.vitanorthamerica.com](http://www.vitanorthamerica.com)
44. **Zekrya Gingival Protector**  
DMG America  
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Englewood, NJ 07631  
(800)662-6383  
(201)894-5505  
[www.dmg-america.com](http://www.dmg-america.com)

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## **PROGRAM**

### **V1958 Posts, Cores, and Build-Ups – Predictable & Strong**

#### **CLINICIAN RESPONSIBLE:**

**Gordon J. Christensen, DDS, MSD, PhD**  
*Founder and CEO, Practical Clinical Courses*  
*Senior Consultant & Previous CEO, CR Foundation*  
*Practicing Prosthodontist, Provo, Utah*

#### **GOALS & OBJECTIVES**

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

1. Discuss the importance of posts, cores, and build-ups in general practice.
2. Discuss the significance of the aging population to endodontic treatment and fixed prosthodontics.
3. State when questionable teeth that have had endodontic treatment should be retained.
4. List when posts and cores should be placed.
5. List the factors that dictate whether or not a post and core should be placed.
6. Discuss the main types of posts currently available.
7. Compare the success of fiber-reinforced resin-based composite posts with metal posts.
8. Discuss and draw an acceptable ferrule for endodontically treated teeth.
9. Describe crown lengthening with a scalpel, electrosurgery, or laser.
10. Describe crown lengthening accomplished by bone removal.
11. Compare the cost of posts.
12. Describe the optimum length of posts into endodontically treated teeth.
13. Describe the optimum width (diameter) of fiber-reinforced resin-based composite posts.
14. Discuss need for posts and quantity of posts for multi-rooted teeth.
15. Compare build-up materials.
16. Discuss differences in tooth preparations for the most popular crown types.
17. Discuss and compare cements for posts.
18. Compare strength of teeth with bonded build-ups with endodontically treated teeth.
19. List the technique for post placement after endodontic treatment.
20. Discuss post placement in an endodontically treated tooth when a crown on the suspect tooth does not require removal.

## OVERVIEW

### **V1958 Posts, Cores, and Build-Ups – Predictable & Strong**

This presentation is intended to update practitioners on the newest and best post, core, and build-up concepts in the profession. The following and other topics are included:

- The importance of fixed prosthodontics in general practice
- The significance of the aging population
- Endodontics for questionable teeth
- When to use posts
- The significance of the amount of remaining tooth structure
- Occlusal considerations
- The significance of many missing teeth
- The significance when endodontically treated teeth serve as abutments
- Crown-down technique significance to post and core
- Types of posts
- Research on post types
- Ferrule requirements
- Crown lengthening soft-tissue only
- Crown lengthening hard-tissue
- Cost of posts
- Length necessity for posts
- Width relationship to strength of posts
- Posts in multi-rooted teeth
- Bonding materials and posts
- Build-up materials
- Tooth preparations related to specific crown types
- Cement for posts
- Tooth strength with and without posts
- Demonstration of post and core for new crowns
- Demonstration of post and core for previously placed crowns

## SUPPLEMENTAL MATERIALS

### **V1958 Posts, Cores, and Build-Ups – Predictable & Strong**

1. El-Askary FS, El-Korashy DI. Influence of shade and light-curing distance on the degree of conversion and flexural strength of a dual-cure core build-up resin composite. *Am J Dent.* 2012 Apr;25(2):97-102.
2. Borelli B, Sorrentino R, Zarone F, Ferrari M. Effect of the length of glass fiber posts on the fracture resistance of restored maxillary central incisors. *Am J Dent.* 2012 Apr;25(2):79-83.
3. Bitter K, Eirich W, Neumann K, Weiger R, Krastl G. Effect of cleaning method, luting agent and preparation procedure on the retention of fibre posts. *Int Endod J.* 2012 May 7. doi: 10.1111/j. 1365-2591.2012.02081.x. [Epub ahead of print]
4. Costa RG, De Morais EC, Campos EA, Michel MD, Gonzaga CC, Correr GM. Customized fiber glass posts. Fatigue and fracture resistance. *Am J Dent.* 2012 Feb;25(1):35-8.
5. Soares LP, Dias KR, de Vasconcellos AB, Sampaio EM, Street A. Effects of different pretreatments on the bond strength of a dual-cure resin core material to various fiber-reinforced composite posts. *Eur J Prosthodont Restor Dent.* 2012 Mar;20(1):41-7.
6. Naumann M, Koelpin M, Beuer F, Meyer-Lueckel H. 10-year survival evaluation for glass-fiber-supported postendodontic restoration: a prospective observational clinical study. *J Endod.* 2012 Apr;38(4):432-5. Epub 2012 Feb 16.
7. de Queiroz VS, Pizi EC, Soares CJ, Macedo VC, Martins LR. Fracture resistance of composite resin cores with or without prefabricated posts over different substrates. *Gen Dent.* 2011 Sep-Oct;59(5):e214-8.
8. Fragou T, Tortopidis D, Kontonasaki E, Evangelinaki E, Ioannidis K, Petridis H, Koidis P. The effect of ferrule on the fracture mode of endodontically treated canines restored with fibre posts and metal-ceramic or all-ceramic crowns. *J Dent.* 2012 Apr;40(4):276-85. Epub 2012 Jan 11.
9. Sterzenbach G, Karajouli G, Naumann M, Peroz I, Bitter K. Fiber post placement with core build-up materials or resin cements-An evaluation of different adhesive approaches. *Acta Odontol Scand.* 2011 Aug 5. [epub ahead of print].
10. Sherfudhin H, Hobeich J, Carvalho CA, Aboushelib MN, Sadig W, Salameh Z. Effect of different ferrule designs on the fracture resistance and failure pattern of endodontically treated teeth restored with fiber posts and all-ceramic crowns. *J Appl Oral Sci.* 2011 Jan-Feb;19(1):28-33.
11. Gómez-Polo M, Llidó B, Rivero A, Del Rio J, Celemin A. A 10-year retrospective study of the survival rate of teeth restored with metal prefabricated posts versus cast metal posts and cores. *J Dent.* 2010 Nov;38(11):916-20. Epub 2010 Aug 14.



## **SUPPLEMENTAL MATERIALS (CONT'D)**

### **V1958 Posts, Cores, and Build-Ups – Predictable & Strong**

12. Mahdavi Izadi Z, Jalalian E, Eyvaz Ziaee A, Zamani L, Javanshir B. Evaluation of the effect of different ferrule designs on fracture resistance of maxillary incisors restored with bonded posts and cores. *J Dent (Tehran)*. 2010 Summer;7(3):146-55. Epub 2010 Sep 30.
13. Sailer I, Thoma A, Khraisat A, Jung RE, Hämmerle CH. Influence of white and gray endodontic posts on color changes of tooth roots, composite cores, and all-ceramic crowns. *Quintessence Int*. 2010 Feb;41(2):135-44.

## POST-TEST

### **V1958 Posts, Cores, and Build-Ups – Predictable & Strong**

1. Posts and cores for endodontically treated teeth:
  - a. are not necessary most of the time.
  - b. are necessary and desirable some of the time.
  - c. do not add strength to the overall tooth/crown complex.
  - d. should be used on all endodontically treated teeth.
  
2. Factors that relate to whether or not a post is necessary are:
  - a. remaining tooth structure.
  - b. occlusion.
  - c. number of remaining teeth.
  - d. all of the above.
  
3. When questionable endodontically treated teeth that are symptomatic are present, it is best to:
  - a. place a post and core anyway and await the discomfort to subside.
  - b. redo the endodontic treatment and then place the post and core.
  - c. redo the endodontic treatment, wait until symptoms subside, and then place the post and core.
  - d. always extract the tooth.
  
4. Crown-down endodontic technique:
  - a. can remove too much coronal tooth structure.
  - b. usually makes the situation better for placement of posts and cores.
  - c. should be opened widely to allow excellent visual access to the root canal structure.
  - d. should be avoided because it is too aggressive.
  
5. Fiber-reinforced resin-based composite posts:
  - a. provide a stronger tooth/build-up/post complex than metal posts.
  - b. provide a much weaker tooth/build-up/post complex than metal posts.
  - c. provide about the same strength tooth/build-up/post complex as metal posts.
  - d. should have as minimal diameter as possible.
  
6. The most popular posts at this time are:
  - a. custom cast posts.
  - b. fiber-reinforced resin-based composite posts.
  - c. fiber-reinforced resin-based composite posts and titanium alloy posts.
  - d. fiber-reinforced resin-based composite posts and pure titanium alloy posts.
  
7. It was suggested that endodontically treated teeth should have at least \_\_\_ mm of remaining tooth structure from the gingival margin to form a ferrule effect.
  - a. 2
  - b. ½
  - c. 1
  - d. 3

**POST-TEST (CONT'D)**

**V1958 Posts, Cores, and Build-Ups – Predictable & Strong**

8. If the optimum amount of tooth structure for an optimum ferrule effect is not present, the following should be done:
- a. place the post and core anyway.
  - b. do a soft and/or hard tissue crown lengthening.
  - c. place a custom cast post and core.
  - d. cut away the gingival tissues with a scalpel, electrosurgery, or laser to the bone level.
9. The length of the post into the root canal channel should be:
- a. ¼ of the bony supported length of the root.
  - b. 2/3 of the way down the root canal.
  - c. to about the level of the cemento-enamel junction.
  - d. about ½ of the length of the bony supported length of the root.
10. This presentation used \_\_\_\_\_ for post cementation.
- a. self-cure resin cement
  - b. resin-modified glass ionomer cement
  - c. self-etching resin cement
  - d. dual-cure self-adhesive resin cement

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