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# V4350

# **Socket Preservation and Bone Grafting**

Gordon J. Christensen, DDS, MSD, PhD

### Materials Included:

C.E. Instruction Sheet Products List Clinician Responsible Goals & Objectives Overview Supplemental Materials AGD Post-Test

## Gordon J. Christensen PRACTICAL CLINICAL COURSES

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#### Gordon J. Christensen PRACTICAL CLINICAL COURSES Sources of Products Discussed in V4350 Socket Preservation and Bone Grafting Presented by: Gordon J. Christensen, DDS, MSD, PhD

- 1. **3M RelyX Luting Plus** Solventum 2510 Conway Avenue St. Paul, MN 55144 (855)423-6725 (612)842-1263 <u>www.3m.com</u>
- 2. **3M RelyX Unicem** Solventum 2510 Conway Avenue St. Paul, MN 55144 (855)423-6725 (612)842-1263 <u>www.3m.com</u>
- 3. AccuFilm II Parkell, Inc. 300 Executive Drive Edgewood, NY 11717 (800)243-7446 (631)249-1134 www.parkell.com
- 4. Amalgam Condenser Various Manufacturers

5. **Big Easy Periotomes** Premier Dental Co. 1710 Romano Drive Plymouth Meeting, PA 19462 (888)670-6100 (610)239-6000 www.premierdentalco.com

#### Bio-Oss Geistlich Pharma North America 400 Alexander Park Drive Suite 302 Princeton, NJ 08540 (855)799-5500 www.geistlich-na.com

- 7. **Blu-Mousse** Parkell, Inc. 300 Executive Drive Edgewood, NY 11717 (800)243-7446 (631)249-1134 <u>www.parkell.com</u>
- 8. Copper Bands Various Distributors
- 9. Cotton Pliers Various Distributors
- 10. Directed Flow Impression Tray Solventum 2510 Conway Avenue St. Paul, MN 55144 (855)423-6725 (612)842-1263 www.3m.com
- 11. Disposable Scalpel Various Manufacturers
- 12. Easy Cure 2 (Replacement for Triad 2000) Henry Schein Dental 135 Duryea Road Melville, NY 11747 (800)372-4346 (631)843-5500 www.henryschein.com
- 13. Elevators Various Manufacturers
- 14. Filpin by Filhol Dental Southeast Medical Products, Inc. 5524 Commerce Drive Orlando, FL 32839 (407)851-5848 www.filhol.com

15. **Foundation** J. Morita USA, Inc. 9 Mason Irvine, CA 92618 (800)831-3222 (949)581-8811 <u>www.jmoritausa.com</u>

- 16. GC FujiCEM Automix GC America Inc. 3737 West 127<sup>th</sup> Street Alsip, IL 60803 (800)323-7063 www.gcamerica.com
- 17. Gluma Desensitizer Kulzer North America 4315 S. Lafayette Blvd. South Bend, IN 46614 (800)431-1785 www.kulzerus.com
- HemCon Dental Dressing Tricol Biomedical, Inc. 720 SW Washington Street Suite 200 Portland, OR 97205-3504 (877)247-0196 (503)245-0459 www.tricolbiomedical.com
- 19. Hemostat Various Manufacturers
- 20. Integra (Miltex) Sutures Various Distributors
- 21. Luxator by JS Dental Various Distributors

22. Madame Butterfly Silk Almore International 441 19<sup>th</sup> Street S.E. Hickory, NC 28602 (800)547-1511 www.almore.com

#### 23. Maxcem Elite Kerr Corporation 200 S. Kraemer Blvd. Building E2 Brea, CA 92821 (800)537-7123 www.kerrdental.com

24. Megatray Custom Tray Material (Replacement for Triad TruTray) Henry Schein Dental 135 Duryea Road Melville, NY 11747 (800)372-4346 (631)843-5500 www.henryschein.com

25. MicroPrime Zest Dental Solutions 2875 Loker Avenue East Carlsbad, CA 92010 (800)262-2310 (442)244-4835 www.zestdent.com

#### 26. MinerOss

BioHorizons 2300 Riverchase Center Birmingham, AL 35244 (888)246-8338 (205)967-7880 www.biohorizons.com 27. Needle Holder Various Manufacturers

- 28. **OraGraft** LifeNet Health 1864 Concert Drive Virginia Beach, VA 23453 (800)847-7831 (757)464-4761 www.lifenethealth.org
- 29. Periosteal Elevator Various Manufacturers

30. **Proximator** Karl Schumacher 1666 East Touhy Avenue Des Plaines, IL 60018 (800)523-2427 (215)322-0511 www.karlschumacher.com

- 31. Puros ZimVie Inc. 4555 Riverside Drive Palm Bch Gardens, FL 33410 (800)342-5454 (561)776-6700 www.zimvie.com
- 32. Scissors Various Manufacturers
- 33. TempBond

Kerr Corporation 200 S. Kraemer Blvd. Building E2 Brea, CA 92821 (800)537-7123 www.kerrdental.com

- 34. Triad System (See Easy Cure 2 & Megatray Custom Tray Material)
- 35. Vicryl (Ethicon) Sutures Henry Schein Dental 135 Duryea Road Melville, NY 11747 (800)372-4346 (631)843-5500 www.henryschein.com
- 36. Wax Spatula Various Manufacturers
- 37. Zimmer Collagen Plug ZimVie Inc.
  4555 Riverside Drive Palm Bch Gardens, FL 33410 (800)342-5454 (561)776-6700 www.zimvie.com
- 38. Zimmer Socket Repair Membrane ZimVie Inc.
  4555 Riverside Drive Palm Bch Gardens, FL 33410 (800)342-5454 (561)776-6700 www.zimvie.com

# Product names, the products themselves, and company names change rapidly. Please contact the companies shown to confirm current information.

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#### PROGRAM

#### V4350 Socket Preservation and Bone Grafting

#### **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**

On completion of this video, viewers should be able to:

- 1. Discuss and support the need for socket grafting (ridge preservation).
- 2. List the four types of grafting material categories.
- 3. Describe an autogenous bone graft.
- 4. Describe an allograft.
- 5. Describe an alloplast.
- 6. Describe a xenograft.
- 7. Discuss methods to remove a tooth without breaking bone.
- 8. Describe Luxators.
- 9. Describe Proximators.
- 10. Describe a periotome.
- 11. Discuss selecting the most appropriate grafting material for specific situations.
- 12. Compare local anesthetic need and type of anesthetic for routine tooth extraction and socket grafting.
- 13. List the differences in socket grafting when planning to place an implant at a later date or placing a fixed partial denture.
- 14. Describe the forces and location of instrument placement applied to a Luxator or Proximator to remove a tooth broken off at the level of the bone.
- 15. Compare the placement of allograft bone chips with allograft putty with chips.
- 16. Discuss when a barrier membrane is needed in socket grafting.
- 17. Discuss how long allograft bone materials should be in place before placing an implant, assuming remote placement and not immediate placement of the implant.
- 18. Discuss how long soft-tissue healing of a pontic area should take place before making a fixed partial denture.
- 19. List the ADA insurance codes for socket preservation.
- 20. Discuss the necessity for patient education when presenting socket grafting to a patient.

#### **OVERVIEW**

#### V4350 Socket Preservation and Bone Grafting

Ridge preservation has been promoted for many years, but it has not become a mainstream technique, in spite of its value. There are numerous reasons related to why ridge preservation has not become popular. Among them are: there is an erroneous feeling that the technique is difficult and unpredictable; third-party payers do not pay well for the procedure; the grafting materials are relatively expensive; the waiting time between placement of the graft and being able to go ahead with the other procedures is a limitation, and the technique is not included in many dental school curricula.

Ridge preservation is an excellent, simple procedure that needs to become a commonly accomplished concept in general dental practice! This presentation shows the clinical technique for grafting an extraction socket and placing a fixed prosthesis from diagnosis, through tooth removal, grafting, healing, preparation for and placement of a fixed prosthesis over the healed, grafted pontic site. It includes the following topics:

- 1. Need for socket grafting
- 2. Types of bone grafts and the purpose for grafting
- 3. Autogenous grafts
- 4. Allografts
- 5. Alloplasts
- 6. Xenografts
- 7. Extracting teeth without breaking bone
- 8. Selecting the most appropriate grafting material
- 9. Anesthetic need for grafting
- 10. Impressions for provisional restorations
- 11. Preliminary tooth preparation
- 12. Atraumatic tooth extraction.
- 13. Placement of grafting material in a four-wall socket
- 14. Placement of wound dressing
- 15. Fabrication of provisional restorations
- 16. Seating provisional restorations
- 17. Analgesics necessary
- 18. Antibiotics necessary
- 19. The healed soft-tissue site
- 20. Impression for the provisional restoration for the final tooth preparations
- 21. Final tooth preparations
- 22. Final impressions
- 23. Seating the provisional restoration
- 24. The final fixed-partial-denture from the laboratory
- 25. Seating the final restoration
- 26. The completed healed graft and final restoration
- 27. Placement of grafts in 3-wall sockets
- 28. Placement of a socket repair membrane
- 29. Placement of grafting material in a 3-wall socket
- 30. Suturing the site
- 31. Fees for socket grafting

#### SUPPLEMENTAL MATERIALS

#### V4350 Socket Preservation and Bone Grafting

- 1. Christensen GJ, Child PL Jr. Bone Grafting Implants: Always the Best Treatment? *Dentistry Today*. November 2010.
- 2. Wang HL, Tsao YP. Mineralized bone allograft-plug socket augmentation: rationale and technique. *Implant Dent*. 2007;16(1):33-41.
- 3. McAllister BS, Haghighat K. Bone augmentation techniques. J Periodontal. 2007;78(3):377-396.
- 4. Irinakis T. Rationale for socket preservation after extraction of a single-rooted tooth when planning for future implant placement. *J Can Dent Assoc*. 2006;72(10):917-922.
- 5. Bader H. Immediate extraction site grafting: materials and clinical objectives. *Dent Today*. 2005; 24(7):86-89.
- 6. Sclar AG. Strategies for management of single-tooth extractions sites in aesthetic implant therapy. *J Oral Maxillofac Surg.* 2004;62(9 suppl 2):90-105.
- Zitzmann NU, Naef R, Schärer P. Resorbable versus nonresorbable membranes in combination with Bio-Oss for guided bone regeneration [published erratum appears in *Int J Oral Maxillofac Implants*. 1998; 13(4):576]. *Int J Oral Maxillofac Implants*. 1997;12(6):844-852.
- 8. Noumbissi SS, Lozada JL, Boyne PJ, et al. Clinical, histologic, and histomorphometric evaluation of mineralized solvent-dehydrated bone allograft (Puros) in human maxillary sinus grafts. *J Oral Implantol*. 2005;31(4):171-179.
- 9. Froum SJ, Wallace SS, Elian N, et al. Comparison of mineralized cancellous bone allograft (Puros) and anorganic bovine bone matrix (Bio-Oss) for sinus augmentation: histomorphometry at 26 to 32 weeks after grafting. *Int J Periodontics Restorative Dent*. 2006;26(6):543-551.
- 10. Vance GS, Greenwell H, Miller RL, et al. Comparison of an allograft in an experimental putty carrier and a bovine-derived xenograft used in ridge preservation: a clinical and histologic study in humans. *Int J Oral Maxillofac Implants*. 2004;19(4):491-497.

#### POST-TEST

#### V4350 Socket Preservation and Bone Grafting

- 1. The "gold standard" for grafting is:
  - a. autogenous bone.
  - b. allograft.
  - c. xenograft.
  - d. alloplast.
- 2. Socket grafting is most needed in:
  - a. maxillary molar areas.
  - b. mandibular anterior areas.
  - c. the smile zone.
  - d. upper anterior areas.
- 3. An allograft is:
  - a. the patient's own bone.
  - b. usually cow (bovine) bone.
  - c. cadaver bone.
  - d. a synthetic material.
- 4. Extracting teeth broken off at the bone level without breaking bone is best effected by:
  - a. grasping the remaining coronal tooth structure with a forcep.
  - b. using a Luxator or Proximator on the facial and lingual root surfaces.
  - c. rocking the forcep in a facial-lingual direction.
  - d. using a Luxator or Proximator on the mesial and distal root surfaces.
- 5. Patients having a tooth extracted and bone grafting require:
  - a. routine block anesthetic delivery.
  - b. oral sedation.
  - c. general anesthetic.
  - d. minimal anesthetic, as deemed appropriate by the practitioner.
- 6. A grafted site is usually ready for an implant at:
  - a. 2 months.
  - b. 3 months.
  - c. 4 months.
  - d. 6 months.
- 7. The pontic form placed in a grafted site should be:
  - a. concave to simulate the natural ridge anatomy.
  - b. convex to fit into a concavity in the soft-tissue pontic area.
  - c. flat to allow easy cleaning.
  - d. relieved from the soft tissue by one millimeter to reduce gingival irritation.

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

#### V4350 Socket Preservation and Bone Grafting

- 8. Antibiotic delivery when grafting a socket:
  - a. should always be provided.
  - b. should be the decision of the clinician after discussion with the patient.
  - c. should not be provided.
  - d. is not controversial.
- 9. Pain medications when grafting:
  - a. should be of a moderate level.
  - b. should be narcotic.
  - c. are needed only to a minimal level.
  - d. are not necessary.
- 10. Impediments for patients relative to grafting are:
  - a. this is a difficult time-consuming procedure.
  - b. minimal third-party payment coverage.
  - c. there is significant pain associated with the procedure.
  - d. the technique is not successful a significant portion of the time.

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