

# AMERICAN ASSOCIATION OF IMPLANT DENTISTRY

## 47<sup>th</sup> (AAID) ANNUAL MEETING



November 4–8, 1998

Hyatt Regency  
San Diego, California

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### Thursday, November 5, 1998—Program Abstracts

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#### Abstracts I: Prosthetics & Mechanics

8:30 AM–11:45 AM

Edward Amet, DDS  
S. Robert Davidoff, DMD  
Prof Dr Hans Grafelmann  
Gene McCoy, DDS  
Dan Root, CDT

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*Presenter:* Edward M. Amet, DDS  
Overland Park, KS

*Abstract Topic:* Computerized Tomography for Increased Mandibular Implant Prosthesis Support and Stability

This presentation uses recent advances in computer software technology that enables digitized information from a computerized tomography (CT) scan to be downloaded into a personal computer for implant planning and placement for an increased A-P spread. This allows for increased prosthesis support and stability. This same CT scan can also be used to create a computer aided designed/stereolithography application model that can then be used for implant planning and surgical placement for an increased A-P distance. The resulting implant placement and low-profile implant connecting bar allows predictable improvements for removable prosthetic reconstruction.

*Learning Objectives:*

1. Technical and clinical use of CT scans for implant placement planning.
2. Concepts of implant connecting bar physical design principles.
3. Construction of implant connecting bars and overdenture design with clinical applications.

*Presenter:* Dr Hans L. Grafelmann  
Bremen, Germany

*Abstract Topic:* Implant Prosthetics: Responsible for Success

Reviewing 30 years of oral implants in function, we concluded that the following factors are responsible for implant success or failure: implant design, surgical technique, bone quality, oral hygiene, prosthetic construction, strategic distribution of abutments, and accuracy of articulation. Connection elements, metallurgic properties of the crown and bridge material, and undisturbed functional occlusion are as essential as the interconnection of implants with natural teeth. A new series of abutment heads is introduced to compensate for these discrepancies.

*Learning Objectives:*

1. How to eliminate mistakes such as inadequate load distribution, insufficient support, early loading, and the like.
2. Selection of the optimal prosthetic materials.
3. Methods of connection of different implant types to natural teeth.

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*Presenter:* S. Robert Davidoff, DMD  
Boca Raton, FL

*Abstract Topic:* Implant Overdentures: The Key to Practice Development

There are approximately 50 million completely edentulous people in the United States. They represent a tremendous opportunity to develop a large segment of a dental practice that is involved in the provision of dental implant supported or retained overdentures. Implant overdentures are fairly simple to provide and can be very economical.

This presentation will detail the various types of implant

overdentures that may be provided for edentulous patients and will present a rationale for choosing one type over another. Attachments and bars will be discussed, and there will be a presentation of the basic implant surgical technique for overdentures.

*Learning Objectives:*

1. Understand the goals of treating the edentulous patient.
2. Understand the various types of implant overdenture treatment.
3. Visualize the necessary marketing skills required for presenting the implant-based practice.

*Presenter:* Gene McCoy, DDS  
San Francisco, CA

*Abstract Topic:* Predicting, Preventing and Protecting the Dental Implant Patient From Parafunction

Dental Compression Syndrome (DCS) is a contemporary name for parafunction: the centuries-old condition of grinding or clenching one's teeth.

Capable of exerting forces in excess of 500 pounds per square inch, DCS can destroy the integrity of any implant reconstruction and may have been the reason for the premature loss of the patient's natural teeth. It is therefore necessary that every precaution be taken to control and minimize this condition in order to ensure the longevity of the implant reconstruction. This presentation begins with a historical overview of DCS and a thorough analysis of its etiology. It explains how to determine which patients are the most susceptible to parafunction, how to design a reconstruction to minimize its effects, and how to control it after the case is finished.

The presentation concludes with a discussion of the factors that have made the subject of occlusion so controversial and an explanation of the unique way in which occlusion can cause temporomandibular dysfunction.

*Presenter:* Daniel L. Root, CDT  
Leawood, KS

*Abstract Topic:* Prosthetics and Biomechanical Considerations of Implants

This presentation will provide an up-to-date statistical overview of subperiosteal, blade, and root-form implants. It will outline how to relate to your laboratory, from the single-tooth implant to the complete full-mouth reconstruction.

The following topics will be discussed:

- Cosmetics of single-tooth implant temporaries.
- Introduction of all-ceramic restorations such as Empress and Artglass.

- Metal-reinforced full-arch temporaries.
- Occlusal scheme options, fixed and edentulous.
- Prosthetic occlusal considerations for maximum longevity of dental implants.
- Cosmetically replacing soft and hard tissue.
- Various methods for overcoming parallel problems by use of telescopic copings, reproduction copings, or milled implant heads.
- Bolting versus cementing.
- Fixed versus removable.
- Methods of relating incisal edge position of anterior teeth for phonetics and function.
- Step-by-step procedures for restoring edentulous arches.
- Preprosthetic planning.
- The importance of developing psychology profiles of the implant patient.

**Abstracts II: Implant Surgery**  
8:30 AM–11:45 AM

**Donald Callan, DDS**  
**Jack Krauser, DDS**  
**Daniel Patrick, DDS, MDS**  
**Raymond Schneider, DDS**  
**Jerry Soderstrom, DDS**

*Presenter:* Daniel Patrick, DDS, MDS  
San Diego, CA

*Abstract Topic:* The Combination Endosteal/Subperiosteal Implant as an Alternative to Sinus Lift

Restoration of the posterior maxilla with dental implants and fixed prostheses has been especially challenging to the dental implantologist. Past solutions have included subperiosteal implants, intramucosal inserts, and subantral augmentation with subsequent or concomitant placement of root form dental implants. The solution presented here combines the strengths of hydroxyapatite-coated endosteal and subperiosteal implants. Compared to the sinus lift and root form dental implant placement, the combination implant reduces morbidity and treatment time. Research with the combination endosteal/subperiosteal dental implant (patent 4,121,340) began at Indiana University in 1978 and has been in clinical use since then.

*Learning Objectives:*

1. Diagnosis and treatment planning for combination implants.
2. Surgical procedures for combination implant fabrication and placement.

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*Presenter:* Jack Krauser, DMD  
Boca Raton, FL

*Abstract Topic:* Regeneration Update: New Materials—Indications and Efficacy

Over the past 10 years, there has been much interest in the so-called "growth factors" category of enhanced bone grafting devices. Several materials are either tissue derived or recombinant created to assist in these areas. These materials are not currently available; however, a new synthetic peptide, P-15, which is a 15-amino acid sequence of type I collagen, has been discovered as a cell chemotactic material. CeraMed has developed a carrier and a product for grafting purposes. The previously known and used osteograft N material, with its microporous structure, has been developed to allow for adsorption of the P-15 protein into a new graft combination for clinical use. This presentation will review the different types of materials and research that are currently being developed and what the present status is as a detailed analysis of the development of the carrier in the active portions of the P-15 grafting complex.

Through animal trials, *in vitro* experimentation, and multicenter clinical case reports, this material has gone on to the Food and Drug Administration for product review. It is presently available in Europe and Canada; at the January 1999 Food and Drug Administration Panel Meeting, the review of this device will take place, and it may be available at the time of this meeting. The carrier-size particles are varied to allow the clinician to utilize them in many defect situations, ranging from periodontal infrabony lesions extraction sockets, ridge building, and sinus grafts utilizing particles of varying sizes. P-15 blocks can also be used for large areas of augmentation. Information on these materials will be presented through case histories supported by appropriate, experimental results.

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*Presenter:* Donald Callan, DDS  
Little Rock, AR

*Abstract Topic:* Grafting for Implant Esthetics

Endosseous implant design and protocol for dental implants have now advanced to the point where often neither the implant nor the surgery is at fault if the implant fails. Instead, when doing evaluations of failed implants, other culprits are frequently found: inadequate hard and soft tissue, poor hygiene, restorative procedures, or failure to prepare the bone and soft tissues properly to receive the implant. This presentation will focus on hard and soft tissue conditions at the implant site. Clinical experience routinely demonstrates that even the best designed implants placed with the most meticulous surgical technique are at risk if they are surrounded by inadequate bone or insufficient amounts of

attached gingival tissue. Rather than placing implants into bone of poor quality or quantity that is unlikely to withstand daily use, modification of the bone to create a more receptive environment has merit. Also, placing implants where there is improper soft tissue may jeopardize the long-term success and esthetics of the implant prostheses. This presentation will demonstrate hard and soft tissue grafting to enhance the prognosis of implant-borne restorations.

*Learning Objectives:*

1. Recognize the need for grafting to promote implant longevity and esthetics.
2. Determine the proper grafting materials to be utilized (hard and soft tissue) to enhance esthetics and prognoses.
3. Learn the techniques and order of grafting procedures to facilitate implant placement and prosthetic completion for esthetics.

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*Presenter:* Jerry Soderstrom, DDS  
Rapid City, SD

*Abstract Topic:* Techniques to Maximize Accuracy in Computerized Tomographic Scanning for Stereolithographic Anatomical Modeling

A standardized technique for making mandibular computerized tomographic (CT) scans used in anatomical model creation for construction of subperiosteal implants will be presented. Jig design and construction, patient positioning, settings on the GE CT scanner, scout view, and analysis of the virtual three-dimensional model will be discussed. Standard hard-copy images for analysis by the implant dentist who is unable to be present for a scan will be discussed. Cases with unacceptable data due to patient movement or operator error will be presented, as will accurate cases using virtual three-dimensional images. A retrospective study of 20 consecutively placed mandibular full tripodal subperiosteal implants restored with full overdentures demonstrating a 100% survival rate using minimal or no augmentation to seat all full subperiosteal implants will be emphasized in the presentation.

*Learning Objectives:*

1. Analysis of virtual three-dimensional models on a CT scanner.
2. Creation of an anatomical three-dimensional model using stereolithography.

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*Presenter:* Raymond Schneider, DDS  
Green Bay, WI

*Abstract Topic:* Bicortical Screw: A Site-Specific Implant

The Bicortical screw is a site-specific implant designed for fresh anterior extraction sockets. Its narrow one-stage uni-

body construction provides osseointegrated anterior tooth support for all anteriors, yet it is narrow enough to be inserted in the smallest tooth site. This allows the difficult single mandibular incisor to be replaced without damaging adjacent (load-bearing support) teeth. The bicortical screw requires a bone density-directed osteotomy and insertion with inferior and superior three-dimensional bicortical support.

Doctors who are experienced with implants find this new design practical, with a well-defined focus on necessary ap-

plications (anterior tooth replacement and fresh extraction sockets).

*Learning Objectives:*

1. Safer, more effective treatment for anterior tooth replacement with new implant design.
2. Protocol for pilot drills safely finds optimum implant length using bone density-directed osteotomy.
3. Basic biomechanical load-bearing principles to guide restorations for long-term goals.