of barrier membrane therapy. The final chapter in this section discusses ridge preservation techniques, the rationale for selecting the appropriate grafting material, and the importance of preservation in the esthetic zone.

Part II provides an in-depth discussion of all aspects of harvesting bone from the ramus, mandibular symphysis, and the tibia. Each chapter in this section discusses the surgical technique, armamentaria, and complications associated with the various donor sites. Dr. Garg provides particularly useful information about the amount and type of bone harvested from each donor site. For example, he states the bone harvested from the ramus is cortical in nature, yields a rectangular piece of bone approximately 4 mm thick, 3 cm or more in length, and up to 1 cm in height. Bone harvested from the mandibular symphysis yields widths ranging from 4 to 7 mm, length 15 to 20 mm, and height up to 10 mm. Tibia grafts performed by the oral maxillofacial surgeon and resident yield 20 to 40 cm^3 of noncompressed cancellous bone from the marrow space. Excellent diagrams, clinical photographs, and radiographs support all chapters in Part II.

In a logical sequence of therapy, bone-grafting techniques are presented in Part III. All aspects of grafting of the maxillary sinus in preparation for implant placement are discussed in the first chapter of Part III. Sinus anatomy is thoroughly covered, reinforced by clinical photographs of both cadavers and patients. Sinus-grafting technique is presented in a logical sequence from flap reflection to graft placement. The rationale for selecting appropriate graft materials, preoperative evaluation, surgical technique, and postoperative complications are presented in an expert manner. Clinical cases exhibited in this chapter clearly reinforce the important concepts conveyed by the author.

The next chapter in Part III presents all aspects of augmentation and grafting the maxillary anterior alveolar ridges. The author discusses the use of allogeneic block grafts, corticocancellous block grafts, particulate grafts, indications for membrane use, postoperative care, and complications.

The final chapter in Part III presents all aspects of subnasal elevation and bone augmentation.

The author covers future directions of therapy in Part IV. Promising research covering biologic growth factors provides the reader with a look at future possibilities to enhance grafting procedures. Platelet-derived growth factor, insulin-like growth factor, transforming growth factor-beta, and platelet-rich plasma are thoroughly discussed. The final section of this chapter covers bone morphogenetic proteins, recombinant human BMP-2, and recombinant BMP-7/Osteogenic protein-1.

The text binding and paper stock are excellent. The quality of the abundant color figures and illustrations are superior and compliment and reinforce the important topics covered in this textbook.

The author's goal was to enhance the knowledge of the experienced clinician, periodontist, oral maxillofacial surgeon, and respective graduate students in understanding the biologic and technical aspects of bone structure and bone metabolism and the process of osseointegration. He has accomplished those goals and much more. This text is an excellent resource for the experienced clinician and for graduate residents in periodontics and oral maxillofacial surgery interested in increasing their knowledge of bone biology, bone grafting, barrier membranes, and implantology.

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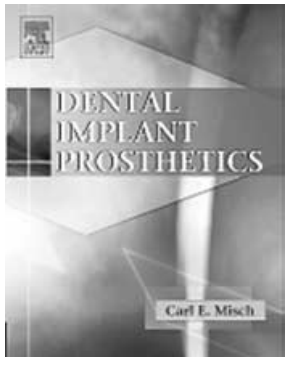

Dental Implant Prosthetics

Carl E. Misch. Mosby, Inc., St. Louis, 2005: ISBN 0-323-01955-2 (656 pages, 975 illustrations (mostly color); price: $125; hardcover)

This textbook appears to have been written for teaching purposes and as a reference source for implant dentistry. The author, Dr. Carl E. Misch, famous for his research, publication, and

international lectures, has also published the well-known text, *Contemporary Implant Dentistry*. In *Dental Implant Prosthetics*, the excellent quality of the 975 photos and diagrams makes the book a tremendous successor to previous works. The clinical photos are of high quality, and the diagrams make understanding the presented theories and concepts easy. Small boxes include the summary for each page, greatly improving readability—page design and alignment of illustrations are impressive.

As stated in the preface, implant dentistry is no longer a special, limited, or unique area of dentistry. More than 90% of U.S. dentists have personally experienced restoring implants. More dental schools have included implant dentistry in the predoctoral curriculum in some depth. Therefore, this is the time when we need and continue to look for appropriate textbooks in implant prosthodontics—for education as well as clinical reference. The implant industry changes quickly, almost daily, so it is very difficult to gather the most recent information and techniques with scientific evidence. The author's tremendous efforts in this book are to be commended.

Although there are eight contributors, Dr. Misch wrote nineteen chapters—seven chapters as the first author and three chapters as the second author. Only one chapter is written by a single contributor. Therefore, this book could be considered a codification of Dr. Misch's knowledge and experience over a dental implant prosthodontics career. As a reference source, each chapter begins with a literature review. Consistent with his previous texts, Dr. Misch puts a good deal of effort into classifying edentulous conditions and the indicated types of prostheses. It might be considered somewhat excessive by some readers, but in many aspects these terms and definitions are important and should be continued for improved communication among dental health care providers.

Introductory chapters open the book. The epidemiological data on edentulism and conventional and implant prostheses explain why implant dentistry is important and valuable in this day and age. A subsequent chapter compares dental implants with natural teeth within ten different periodontal indices. After he indicates the generic terminology of implant parts, the author continues with the classification of implant prostheses within five categories (three fixed, two removable), depending on the teeth to be replaced and the nature of the supporting areas.

Chapters 5 to 13 address diagnostic procedures and considerations in treatment planning for the dental implant patient. Various types of radiographic analysis are introduced, including the computer-generated surgical template. The author explains early bone loss with hypotheses focusing on stress factors. The result is a smooth discussion of patient force factors such as parafunction, crown height, masticatory dynamics, position in the arch, direction of force, and opposing arch. This book does not cover surgical procedures, but with two chapters, Dr. Misch suggests his own classification for bone quantity and quality. He also discusses bone graft techniques for the maxillary posterior area in Chapter 17, and provides advice for using face-bow registrations when considering asymmetry of condyle location and several methods to make surgical guides.

Chapter 11 was this reviewer's favorite. Here, the authors describe the prosthodontic considerations before the definitive treatment plan, including tooth position, vertical dimension, occlusal planes, occlusion, jaw relation, arch form, soft tissue support, and treatment prostheses. These are all valuable parameters that should be considered carefully in dental implant treatment planning. In Chapter 13, classifications for partially and completely edentulous arches are included. Based on the classic Kennedy classifications, the author makes divisions according to the remaining bone and projected crown length. Completely edentulous arches are classified according to type and dimension, depending on the arch anatomy and bone available.

Chapters 14 to 22 are divided by restorations for different areas of the mouth. The first two of these chapters concern mandibular overdentures. The author starts with a description of the movement of prostheses during function and categorizes the mandibular overdenture with five options. This presentation seems a bit complicated for clinical use, but he goes on to explain the advantages and disadvantages of each design well. Another chapter details the clinical procedures involved in the fabrication of mandibular overdentures and includes high-quality photos. Chapter 16 addresses mandibular full-arch, fixed implant prostheses and considers both the cost and mandibular flexure and torsion involved for these types of prostheses.

The maxillary posterior area is the least predictable area for implant success because of the presence of the sinuses and less favorable bone quality. This is well presented, along with surgical options, in Chapter 17. The author again approaches both partially and completely edentulous treatment plans—now for the maxillary arches. He compares fixed prostheses and overdentures in the areas of esthetics and function and also addresses additional considerations in partially edentulous cases, such as implant size, number, and position.

Chapter 19, "Clinical Biomechanics in Implant Dentistry," is modified from the previous book. This is one of the greatest summaries this reviewer has read concerning implant biomechanics and the possibilities of failures, even though more scientific evidence is being pursued as I write. Chapter 20 addresses biological, biomechanical, and biochemical considerations in implant-manufacturing designs and coating surfaces. The reviewer recommends that these two chapters be read thoroughly for a greater understanding of variable designs in commercial implants.

Chapters 21 and 22 concern single-tooth restorations for posterior single tooth and maxillary anterior teeth. In the chapter concerning single posterior restorations, the author not only approaches treatment planning, but also touches upon the most common clinical procedures including both direct and indirect techniques. Chapter 20 addresses the maxillary anterior single tooth restorations and lists all kinds of surgical and prosthodontic considerations and techniques for the achievement of the most highly esthetic restorations.

Chapter 23 concerns cement-retained fixed prosthodontics, including a comparison with screw-retained fixed prosthodontics, techniques for abutment preparation, custom abutments, and cements. Principles are covered for screw-retained prostheses, the mechanics in screw systems, and clinical protocols and techniques for achieving passivity of fit with a variety of clinical and laboratory procedures. Additionally considered are the existing occlusion, implant orientation, cantilever, crown height, width, and location of restorations and materials. Chapter 25 goes into more depth for when the clinician approaches these important factors.

Loading times for implants remains a very popular issue, and Dr. Misch has been credited for the term "progressive loading," as originally proposed. Chapter 26 concerns this approach of progressive loading, while Chapter 27 is about immediate loading. The author reveals his prosthodontic specialty background in Chapter 28 in discussions of clinical combination syndrome tendencies when treating patients with mandibular implant prostheses. The book concludes with information on the maintenance of implants and success and failure criteria.

This book has been very well written for all aspects of dental implant prosthodontics by the primary author, Dr. Misch. It is a great resource for the beginner to understand the overall aspects of implant restorations as well as for experts to review their own concepts and approaches. If this reviewer may suggest one small thing, there are dominant illustrations from one specific brand of implant since the author maintains a close relationship with that company. While that is certainly understandable, the text would have been even better were it more balanced with other brands of commercially available implant components. The price is very competitive—not too excessive for such well-organized knowledge and tremendous illustrations. This is a very valuable book to have on-site for both clinical reference and formal education.

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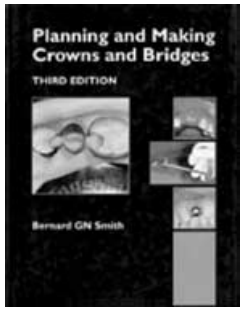

Planning and Making Crowns and Bridges, 3rd Edition

Bernard GN Smith. Martin Dunitz Publishers, London, 1998 (reprint 2000): ISBN 1-85317-314-2 (289 pages, 500 color illustrations; price $89; hardcover)

This textbook was written with an emphasis on treatment planning, crown and fixed partial