This new textbook on temporomandibular disorders (TMD) is edited by three true veterans in the field. Laskin, Greene, and Hylander have already contributed significantly to the TMD literature, and this certainly adds even more. Their goal for this text was to gather experts in the various fields of TMD and challenge them with describing their areas of expertise using evidence-based support. I believe they have been as successful as possible with the available data. There are forty-two authors writing thirty-six chapters in this text. The list of authors is impressive, all well known for their expertise in the field about which they have been asked to write. Very few textbooks offer this much diversity and expertise.

The text is divided into two basic parts: the biology of TMD and the clinical management of TMD. In the first part, four chapters address the normal anatomy and function of the masticatory system. This first section takes the reader beyond TMD to the basic fundamentals of pain mechanisms and functional adaptation. The remaining five chapters in this part describe the various dysfunctions and pathology that may arise in the masticatory structures. In addition to the typical muscle and joint disorders, there is a chapter on persistent orofacial pain and another on systemic conditions affecting the temporomandibular joint (TMJ). Part one of this text thus takes the reader beyond the ordinary TMD information into areas that are basic to understanding the underlying mechanisms. This information is essential to proper diagnosis and management.

The second part of the text is oriented towards the clinical aspects of TMD. This part is divided into four sections: diagnostic modalities, diagnosis, therapeutic modalities, and evidence-based treatment. The section on diagnostic modalities offers a good review of the many modalities that have been offered over the years for diagnosing TMD. Standard accepted modalities such as imaging and psychological assessments are reviewed, and new thoughts on analysis of TMJ synovial fluid are presented. A single chapter is dedicated to the modalities that have less scientific support and can be misinterpreted and misused.

The second section of this part of the book consists of nine chapters that review diagnostic considerations of a wide variety of disorders. In addition to discussions of the common disorders such as muscle and joint problems are chapters on movement disorders, tumors, fibromyalgia, and other common orofacial pain disorders. This section offers the reader information not often discussed in books on TMD.

The third section of part two consists of six chapters that review traditional therapies for TMD such as appliances, physical medicine, behavioral therapy, TMJ surgery, and occlusal therapy. This section is likely to be of great interest to the clinician managing TMD.

The final section of the text attempts to address current evidence that supports treatments for TMD. This section consists of eight chapters that look at evidence-based treatment for most of the common TMD diagnoses, such as muscle pain and intracapsular pain disorders. This section also discusses evidence-based treatment for movement disorders, benign and malignant tumors, and idiopathic condylar resorption. This section may be humbling to the seasoned clinician who for years has successfully used modalities that may not have strong evidence-based support.
As with any edited text, there are some inconsistencies from chapter to chapter and author to author. However, the editors have done a nice job of minimizing these discrepancies. The style is very readable, the information is state of the art, and the book is well illustrated with some color. This text is a must for anyone who has an interest in TMD. It is a great way to keep current with the latest concepts and management considerations since it presents the latest thinking of the who’s who in the world of TMD.

Comprehensive English language publications concerning the history of European orthodontics do not appear very often, so for students of dental and, in particular, orthodontic history, this translation from the original Italian text is a welcome source of interesting, even intriguing, historical documentation. Levrini and Favero describe the details of the invention and development of a revolutionary European approach to the treatment of malocclusion known as functional jaw orthopedics (FJO), first described and popularized in textbook form in 1936 by Viggo Andresen, a Dane, and Karl Häupl, an Austrian.

The history of American orthodontics is usually traced back to the beginning of the twentieth century, the era of Edward Hartley Angle. Angle’s remarkable contributions to orthodontics include not only his internationally accepted classification of malocclusion, but also a lesser known but equally important accomplishment: the invention and development of modern fixed appliances.

Whereas Angle and his followers were proponents of fixed appliances, disdaining the use of removable devices except as retainers, the appliance used in the FJO concept—the “activator” of Andresen and Häupl—was removable and loose fitting. Its adherents considered it much more “physiological” than the American-style fixed devices.

Levrini and Favero emphasize the important role of the French dentist and physician Pierre Robin in the development of the FJO concept. In 1902 Robin published an article in the *Revue de Stomatologie* introducing the “monobloc,” considered by many to be the forerunner of the activator. The authors’ research has provided interesting, obscure details about the life of Robin, including the following tidbit: “A lover of high living, he owned twelve boats, all anchored at Cap d’Antibes, and numerous cars.”

A point of dispute that plagued Andresen since introducing the activator was whether he took the ideas of Robin without attribution. The authors address this controversy by writing that it is not clear what role Robin’s works may have had in the conception of the activator. However, in an article published in 1942 in the *Deutsche Zahnärztliche Wochenschrift*, Andresen wrote that, in 1908, without any knowledge of the work of Robin, he designed a retention activator for his own daughter. This statement would seem to provide support to those who believe Andresen to be the undisputed father of the activator.

The names of the “masters of functional orthodontics” will be familiar to orthodontists worldwide. Andresen, Bimler, Balters, Klammt, Fränkel, Stockfisch, Muzj, and Hoffer are given several pages each, with a presentation of their biographies and elaboration of their contributions to the evolution of functional appliances. Other historical figures referred to include Hotz of Switzerland, Korkhaus of Germany, Schwarz of Austria, and Rogers of the United States.
Oral and Intravenous Bisphosphonate-Induced Osteonecrosis of the Jaws: History, Etiology, Prevention, and Treatment

Dr. Robert E. Marx
150 pp., illustrated, indexed
$98.00 paperback
ISBN 987-0-86715-462-7

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These pioneers led their colleagues into an orthodontic world (or, better termed, a dentofacial orthopedic world) disparaged by Angle, who decried the removable apparatuses of his time. He once wrote that “the use of huge plates combined with springs taken from clocks and various strange mechanisms . . . now seems more in accord with many of the teachings of medicine during the period of history known as the ‘dark ages.’” In spite of such negativity, functional jaw orthopedics has not been the fleeting chimera that many orthodontists on this side of the Atlantic thought would soon fade into obscurity. It has become a useful therapeutic adjunct to fixed appliances when treating certain skeletal malocclusions.

Except for a few minor annoyances in translation (which yield expressions like “functional jawbone orthopedics” and “mobile appliances” instead of “removable appliances”), this book provides an altogether enjoyable and educational reading experience. Levrini and Favero have provided the international dental community with a valuable addition to the library on the history of dentistry.

The first cases of bisphosphonate-induced osteonecrosis of the maxilla and mandible were documented by Marx and Stern in 2002 in a textbook entitled Oral and Maxillofacial Pathology: A Rationale for Diagnosis and Treatment. Clinicians around the United States had begun to see cases of osteonecrosis of both the maxilla and mandible that were seemingly inexplicable with regard to etiology. The clinical presentation was similar to osteoradionecrosis: spontaneous exposure of bone or failure to heal after surgical intervention, variable pain complaints, secondary infection, slow but steady progression of the lesion, etc. But these symptoms were occurring in a group of patients who had not had radiation treatment. Most cases were eventually referred to oral and maxillofacial surgeons for management. With millions of patients potentially at risk (17 million prescriptions written for Fosamax alone in 2003), answers to the many questions dentists had were not obvious. Aggressive surgery and antibiotics (as indicated in osteomyelitis) were not effective. More conservative surgical management (as in osteoradionecrosis) seemed to work better. At least the more conservative measures did not speed the progression of the lesions. There was not—and to date is not—a nonsurgical treatment available other than withdrawal of the drug.

Marx has been widely known for many years as the pioneer in treatment of osteoradionecrosis (ORN). Hyperbaric oxygen protocols have been used extensively for many years for prevention and treatment of ORN. The etiology of ORN is, however, completely different from the mechanism behind bisphosphonate-induced osteonecrosis. ORN is the result of hypocellularity, hypovascularity, and tissue hypoxia following ionizing radiation. Bisphosphonate-induced osteonecrosis is a chemical toxicity resulting in the death of osteoclasts. Inhibition of normal bone remodeling—resorption and deposition—is an integral component of bone healing. Compromising this process seems to be the cause of the lesion. Since the normal rate of bone turnover is naturally higher in alveolar bone than in the rest of the skeleton, it is logical that a compromised ability to remodel bone generally will manifest first in the alveolus.
This softcover book is 150 pages in length, including a glossary and index. Chapters are footnoted and referenced with detail enough to get the interested reader started in the literature. The author covers the colorful history of osteonecrosis as it has evolved since 2002. He summarizes the clinical and basic sciences involved and discusses the political aspects of this relatively new disease entity. Abundant clinical examples are documented with color photographs and nicely reproduced radiographs. Treatment protocols are suggested to aid clinical decision making for patients who have osteonecrosis and patients at risk. Given the history of the problem and the paucity of prospective clinical studies documenting treatment options, Marx’s early protocols, as presented in this book, are likely to be the gold standard, at least until large prospective studies are available from several different centers.

The book should be mandatory reading for surgical specialists and surgery residents. The interested general dentist will also find the book valuable. It will be widely referenced for the next several years at least. Marx will, no doubt, continue his efforts to further elucidate and refine treatment protocols, as will other interested researchers. For now, this book seems to be the primary clinical reference with regard to this troublesome clinical entity.

The goals of the authors are to create a textbook on panoramic radiology that is for the entire dental team, presents the principles of panoramic imaging in an easily understandable manner, and maximizes image quality and diagnostic yield. The book confines its material to seven topics: 1) history and future development, 2) radiographic technique, 3) anatomy, 4) radiation dose and risk, 5) use in general dental practice, 6) quality assurance, and 7) radiographic interpretation.

The strongest parts of the book are the chapters on radiographic technique, anatomy, and radiographic interpretation. I don’t think you will find a clearer, more concise, and easily understandable description of the principles of panoramic imaging than this provides. This section, supplemented by high-quality illustrations, concludes with a step-by-step guide for making the radiograph, including proper patient position, radiographic unit adjustments, proper use of the light beam diaphragms for patient alignment, and correct exposure factors—all of which are needed to ensure a diagnostic radiograph.

Accurate interpretation of the panoramic radiograph requires a thorough knowledge of both normal anatomy and common radiographic disorders and/or pathology. The anatomy chapter divides the anatomic structures into four categories: hard tissues, soft tissues, air shadows, and ghost shadows. Each category is presented with concise text and an illustration and corresponding radiograph. One problem in this chapter is that, in two figures, the listings of anatomic structures do not match the numbered sites of the illustration, but I treat this more as a distraction than a negative.

What I do consider a weak point in the book is the chapter on quality assurance. With the direction of dental diagnostic imaging moving rapidly to digital radiography, I feel the number of pages devoted to film considerations and darkroom activities is excessive when you consider...
that these activities are becoming obsolete. A strong point in this chapter, however, is the section on operator technique. This section reinforces the importance of patient positioning and the need for the patient to remove all metallic objects prior to the exposure. The section also reviews the results of positioning errors with both radiographs and illustrations.

The chapter that discusses radiographic interpretation is a must for all clinicians who use panoramic imaging. This chapter is divided into disorders of the teeth, soft tissues, jaws, maxillary antrum, and temporomandibular joint. The authors’ approach in this chapter is to concentrate on the more common disorders that have a high probability for occurrence in a general dental population. Each entity is discussed concisely.

This is a well-organized and well-written book. It would not be my textbook of choice for the didactic rigors required of dental students or residents; however, good things come in small packages, and this book—at 148 pages and 5.75 x 8.5 inches—easily fits into the pocket of one’s lab coat. I find this book indispensable when interpreting my patients’ panoramic radiographs. As an academician, I would not consider conducting a panoramic radiographic interpretation encounter with a student without this book being available to enhance the student’s interpretation skills. I enthusiastically recommend the book for any dental diagnostic/treatment activity that has panoramic imaging capabilities.

Preventive Materials, Methods, and Programs

Per Axelsson, D.D.S., Odont.Dr.

651 pp., illustrated, indexed
$178.00 hardcover
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This is the fourth of five volumes in The Axelsson Series on Preventive Dentistry. The stated purpose of this book is “to provide the reader with updated information about various preventive materials and methods, needs-related preventive programs, and analytical epidemiology for quality control.” The book’s nine chapters cover plaque formation, mechanical self-care, professional mechanical cleaning, chemical plaque control, use of fluorides, use of fissure sealants, integrated caries prevention and control for children and young adults, oral health promotion and needs-related prevention programs, and analytical computerized oral epidemiology for quality control of preventive programs and treatment.

This book has less breadth than the usual text on preventive dentistry. This is because it is only one of five volumes that, when taken as a whole, provide a comprehensive look at all aspects of preventive dentistry. The other volumes explore diagnosis and risk prediction for caries and periodontal disease, epidemiology, therapeutic approaches, and maintenance therapy.

As expected of textbooks from Quintessence, this volume is of high production and print quality. The excellent photographs, bar graphs, and illustrations that shine are made possible because they are printed on heavy paper stock. There are ample drawings in both black and white and color. The text is well organized, the prose flows well, the typeface is easy to read, and the chapters contain comprehensive reviews of the literature.

Unfortunately, a significant weakness of the book is its failure to fulfill its purpose to “provide the reader with updated information.” All of the citations are collected at the back of the book, and an inspection of the reference section shows only a few references dated 2001 or later. With very few exceptions, the only 2003 or 2004 citations are papers by Axelsson himself. Furthermore, in this day and age, it is unacceptable for intraoral
Inspiration: Truly Natural Tooth Restoration

David Korson

112 pp., illustrated
$98.00 hardcover
ISBN 1-85097-151-X

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David Korson is a master ceramicist whose passion for his occupation is rivaled by few. This book was created to help others understand all about restorations and learn what to look for so that their restorations can blend seamlessly into the patient’s oral environment.

This book is a perfect example of the saying “a picture is worth a thousand words.” This book’s primary method of conveying the material is through very high-quality photographs.

These photographs are broken down into five primary areas. The first two areas discussed are the study of anterior and posterior teeth. This is done through sectioned slides that are subjected to different lighting conditions to accentuate the intricate details of the teeth. Laboratory exercises to simulate creation of entire teeth are then shown. The third topic is aesthetic full-contour wax examples of anterior and posterior teeth. These are far from the single color wax-ups that many dental laboratories provide. Laboratory techniques for porcelain fused-to-metal and Empress crowns are then discussed. Once again, this is primarily through photos. The characterization that he provides on these “phantom cases” is absolutely astonishing.

The final section deals with case studies. The author’s skills really are shown in this area. Rather than being full-mouth rehabilitations that are easily matched, most of the cases are unilateral replacements of one to two teeth. The restorations disappear in the patient’s mouths. That is what is so impressive.

This book is not an instructional manual for making any type of crown or using any certain type of porcelain. It is about looking at the patient’s teeth and building the characterization and depth of color from the inside out. The author stresses looking at the patient and taking photographs so that the restorations can be fabricated to each individual.

The true value of this book is to assist any laboratory technician or dentist who is interested in becoming more educated on the abilities and techniques that can be used to provide more lifelike restorations. Clearly, this is not a substitute for a dental anatomy textbook, but would provide a wonderful adjunct to any porcelain course in dental school or a continuing education course in esthetics.
Smile Design: A Guide for Clinician, Ceramist, and Patient

Gerald J. Chiche and Hitoshi Aoshima

109 pp., illustrated
$118.00 hardcover

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The purpose of this guide is to serve as a communication tool among the clinician, patient, and ceramist. The book is well illustrated with intraoral images of before and after treatment as well as procedural steps.

The introduction reviews definitions used in esthetics, characteristics of an esthetic smile, different esthetic treatments, definition of the smile design, and step-by-step procedures for a few cases. The smile design is incorporated into each case and includes alignment, brightness, character, and incisal effects.

The book is divided into sections by the degree of shade change the patient would like to incorporate into his or her restorative treatment. Treatments include porcelain veneers, all ceramic crowns, ceramometal crowns, and composite resin restorations, as well as other necessary periodontal or orthodontic treatments. The section names are as follows: Tinted Shades, Moderate Shades, Natural Shades, High Shades, and Maximum Shades. Several cases are described in each section. The case appears on the left hand page and all the photos are on the right hand page, making it easy for a patient to follow along with the steps. The case description includes the patient’s objectives, the esthetic objectives, shade selection for teeth involved, and the smile design.

A wide spectrum of cases is depicted, showing attainable treatment results. Pages 62 and 72 show the layering of shades, as well as the ceramist’s armamentarium for achieving the desired shades. Although the book does not go into depth regarding all the steps for laboratory procedures, it does depict some relevant laboratory steps. This can be helpful in communicating with the dentist’s laboratory of choice or in showing the complexity of the restorations to the patient.

This book can be propped on a book stand in front of a patient while the dentist explains treatment options in a consultation visit. The patient will probably learn the most from looking at the photos. The intraoral photos are of high quality, and minimal imperfections are easy to see. Some of the tooth preparation photos are large enough that the patient can see how minimal tooth structure is actually removed prior to the procedure. Photographs of restorations are taken with a blue or black background on lab models to show the translucency on the incisal edges. A disadvantage is that the descriptions of cases are written in technical dental language, so the patient would need dental knowledge to interpret the objectives.

The book is printed on high-quality paper that should stand up to extended use. This characteristic should reassure clinicians that if they loan the book to a laboratory or patient for review outside the clinic, they should be able to get it back in the same condition.

This book would best be utilized in a consultation room rather than a reception area in a dental office. I recommend it to general practitioners and prosthodontists who provide the treatment described. The guide is well organized and easy to follow, making it a useful communication tool for the practitioner describing cases to patients and lab technicians. If practitioners photograph and document their own cases to use in consultations with potential patients, this book could be used as a supplement. The book would also be a useful addition to a dental school library.