

Preface

We are pleased to present *Color Atlas of Dental Hygiene—Periodontology*, a new book dedicated exclusively to practicing dental hygienists, dental hygiene educators, and students in dental hygiene education and training programs.

For many decades, periodontics has been the most prominent aspect of the clinical practice of dental hygiene. Calculus removal has been a primary goal of each patient appointment; indeed, the ability to physically remove subgingival calculus remains still today the *sine qua non* of virtually all Dental Hygiene State Board examinations. Many excellent textbooks have been published over the years to teach successful mechanical instrumentation. Manufacturers of dental hand instruments – scalers and curettes – each year introduce innovative and sometimes even fanciful designs touted to improve calculus removal. Manufacturers have also given the dental hygiene profession powerful tools such as sonic and ultrasonic scalers, air scalers and powder-water spray devices; again, to better or more efficiently clean tooth surfaces.

But the turn of the century seemed an appropriate opportunity to freshly analyze the role of periodontics in the profession of dental hygiene, to ascertain new realities, and to define new goals for the profession. Our intent was to integrate new and relevant scientific and clinical knowledge into daily professional practice. We know now that this effort is leading rapidly – world wide – to total paradigm shifts within dental practice generally and dental hygiene in particular. In only the past ten years, progress in periodontology has accelerated exponentially! This has been the result of teamwork, by teams including clinicians, biologists, behavioral scientists, epidemiologists, and specialists from many medical disciplines.

We now know that inflammatory periodontal diseases today represent some of the most widespread health problems in the world. The effects of periodontal diseases upon general systemic health are becoming clearer almost daily. For any dental hygienist to ignore – or be ignorant of – these now obvious medical/dental interrelationships is simply unacceptable.

Therefore, this new book emphasizes a much broader spectrum of new dental and medical knowledge, targeted especially for the dental hygienist. Chapter presentations include:

- Etiology – Dental plaque as a “biofilm”, the periodontopathic microorganisms
- Pathogenesis – Host response, risk factors
- Oral pathological changes in gingiva and periodontium
- Oral manifestations of HIV disease. Treatment
- Gingival recession – Prevention!
- New diagnostic tests
- The “systemic pre-phase” of dental hygiene treatment
- Phase I therapy
- “Closed”, non-surgical periodontal treatment—Promising new techniques
- FMT – “Full Mouth Therapy”
- Pharmacologic strategies for periodontitis
- Phase II therapy – Summary of surgical treatment
- Phase III therapy – Risk-managed periodontal maintenance – Success and failure
- Periodontal diseases in elderly patients

As Bob Dylan said more than 40 years ago: “The times, they are a’changing.” The demands of daily dental practice are leading quickly to the necessity that the dental hygienist assume more and more responsibility, beyond “tooth cleaning”, during the routine “recall appointment.” Such responsibilities include measures beyond therapy, into clinical and radiographic diagnosis of oral and head-neck pathology, smoking cessation programs, cancer detection, and the performance of tests for genetic risk factors. The trend nationwide, although not yet supported by all participants in the dental community, is toward independent clinical practice for dental hygienists. Indeed, the dental practice laws of five states already permit such practice. And therefore, today’s dental hygienist must be prepared to take on a much higher level of clinical responsibility for her/his patients, and this demands a higher level of knowledge as well as a deeper understanding of disease pathogenesis.

The overriding goal of this new textbook is to present and impart the information required in periodontology for the dental hygienist of today, and of tomorrow.

Herbert F. Wolf, Zurich
Thomas M. Hassell, Greensboro

Foreword – I

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The widespread nature of periodontal disease today among the world's population puts the dental hygienist in a key position at the forefront in the diagnosis, treatment, and prevention of oral conditions. Today's dental hygienist must be able to evaluate clinical, radiographic, and historical information, and participate in the team effort of diagnosis, treatment planning, care, and maintenance of the periodontal patient. The long-term success of periodontal therapy depends on a combined effort of the "preventive team," with the dental hygienist occupying a critical role in the prevention, success, and maintenance achieved by periodontal therapeutic measures.

There are many excellent textbooks on periodontology available today, but this *new* book provides a comprehensive, easy-to-read text, extensive diagrams, and exceptionally presented clinical photographs, which make it an ideal medium to capture both theoretical and clinical concepts in an effective, time-efficient manner. The summaries provide clear understanding and easy reference for practicing dental hygienists, dental hygiene educators, and especially students of dental hygiene at all levels. This book provides the knowledge base required of today's dental hygienist, who has a wide scope of responsibilities ranging from comprehensive clinical examinations to the placement of antimicrobials in combination with a wide array of periodontal debridement protocols.

One major requisite for understanding contemporary concepts of periodontology is having an appropriate resource that contains time-proven fundamentals, while also providing new information. For the dental hygienist, this book presents very comprehensive and contemporary information on the microbiology, pathogenesis, cell biology, immunology, host response, disease progression and healing of periodontal diseases. Serious attention is given to the importance of data collection, because without this an accurate diagnosis cannot be made. Of special interest is the section on oral pathological alterations of the periodontium, which

must be recognized, thus helping the team coordinate appropriate periodontal and preventive care. A comprehensive classification of the most recent categories of periodontal disease is included as a synthesis of the information covered in the text.

This text is unique in its attention to Phase 3 Therapy (periodontal maintenance therapy), focusing long-term success on rigorous follow up by the dental hygienist as part of the preventive team. The idea of prevention in periodontology or "continuous risk management" is targeted toward recognition of a multilevel assessment of risks. The authors suggest practical periodontal maintenance guidelines in an effort to follow the long-term health status of the periodontal patient.

As the percentage of elderly individuals within a population increases, so does the need to enhance our knowledge and expertise in the treatment/maintenance of this population. This text addresses the structural/biological changes in the periodontal tissues of the elderly individual, leading the clinician to consider modified treatment planning to create a sense of oral well-being for the elderly.

The international appeal of this text is apparent with the extensive array of instruments, devices, products, and medications discussed and pictured in the text. This new atlas will serve as an excellent reference in establishing a broader scope of dental hygiene practice, helping to enhance the understanding of periodontology for students, educators, and current practitioners as we strive toward a better future for the health of patients through the most comprehensive dental hygiene care available.

It is with particular pleasure that I offer this foreword to introduce the *Color Atlas of Dental Hygiene–Periodontology*. My thanks go to the Wolf/Hassell team for this masterful contribution.

Foreword – II

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It is with great enthusiasm that I write this foreword to the new book *Color Atlas of Dental Hygiene—Periodontology*. The art and science of periodontology are changing rapidly; the practicing dental hygienist and the dental hygiene educator are looking for current information presented in the most up-to-date manner. They will find it here.

For dental hygiene students the *Color Atlas of Dental Hygiene—Periodontology* will be a formidable book that they will utilize throughout their entire education and for years to come. For the novice, the book is presented in clear and concise language. The chapter “Initial Therapy 1” will give the new student a wonderful understanding of his/her future profession. There are few dental hygiene text books that present such an all inclusive approach to the profession. The exquisite color photographs with their fine detail will be a wonderful educational tool not only for the student but for the practicing dental hygienist as well. As I read the book, the old adage “a picture paints a thousand words” kept resonating in my head. In today’s age of computer technology our patients are becoming much savvier in their dental knowledge. Many of the questions posed by the patients can be answered clearly and succinctly with the aid of this atlas as a chair-side educator.

This high-tech age in which we live has produced an evolution of power-driven scalers. The new designs of the inserts permit much more effective debridement and lavage in deeper pockets. However, there is still a very prominent place for hand instrumentation. Students must learn the basics of hand instrumentation prior to using the power-driven instruments. The discussion of hand instrumentation in the Therapy sections (pp. 242–243, 257–275) not only contains excellent detailed pictures of the various types of cures, but also presents proper adaptation of the instruments and correct operator positioning for successful debridement. This book will be a valuable addition in the pre-clinical phase of the dental hygiene student’s education.

It is universally acknowledged that the dental hygienist is the dental team member with whom patients spend the majority of their patient time. Hygienists are called upon to answer questions concerning oral and systemic conditions. As research continues, the connections between the patients’s oral cavity and systemic health will continue to evolve. This new book will enable both the student and practicing dental hygienist to educate their patients regarding the contemporary paradigm shift connecting oral and systemic conditions.

One of the largest segments of the US population is the baby boomer. According to the US Census Bureau, in 2006 75 million people, or 29% of the population, fall within this group. We are all aging gracefully and living longer. This will have an impact on our oral health. The chapters “Geriatric Periodontology?” and “Phase 3 Therapy” clearly explain the oral changes that will occur within this population, along with the most innovative recommendations for customizing maintenance care for this group.

For the dental hygiene educator, this atlas will be a versatile text. As the teacher of our periodontology course at MCPHS Forsyth, I often found it difficult to locate high-quality illustrations to use in my lectures. The authors and publisher of the *Color Atlas of Dental Hygiene—Periodontology* have agreed to permit the reproduction of the lovely photographs, crisp diagrams, and artful illustrations in your lectures. This generosity can greatly enhance lectures and enrich the learning experiences of not only the visual learners but of all students.

Congratulations to Dr. Wolf and Dr. Hassell for their foresight in creating this first-class book.