

Comprehensive Preventive Dentistry

EDITED BY

Hardy Limeback



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Hardy Limeback

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Preface

Who should read this book?

This textbook has been written for the practicing dentist, dental hygienist, dental assistant, and those students who aspire to enter the rewarding profession of dentistry. It is also meant to be a resource for dental educators. It is written in such a way that even patients interested in learning more about preventive dentistry should be able to easily understand this book: it is not a research text or complicated clinical manual. As with most clinical textbooks in dentistry, however, the current literature has been reviewed and cited. Each chapter discusses the current state of knowledge, with numerous practical suggestions for the private practice setting and discussions as to which products have been successfully used in preventive dentistry. A public health approach to managing dental disease in the population as a whole is occasionally mentioned in this book, but this is not its focus. Nevertheless, community dentistry students and Public Health Dentists would find this a useful text to learn about preventive procedures that might be adapted from the private practice setting to a public health setting. The main goal of the book is to bring to the reader new concepts not covered in other texts in dentistry and introduce the reader to new approaches to preventing dental diseases, especially dental caries.

What is preventive dentistry?

Preventive dentistry has its roots from the Latin terms '*praevenire*,' which means 'to anticipate' and '*dens*,' which is the word for tooth. Dentists and their team members strive every working day to 'anticipate' what could happen to their patients' teeth and supporting structures. To predict whether a subject under observation will end up with damaged or diseased oral tissues, diagnosing the presence or absence of disease and then assessing risk for future disease, is required. These topics are discussed in Chapters 2 and 15, respectively.

In Chapter 1, the introduction chapter, we discuss the various levels of prevention. This book endeavors to review the best methods for primary prevention of dental disease: through primary prevention it is possible with intervention to 'anticipate' disease and prevent it altogether. Comprehensive preventive dentistry also includes intervening early, when the disease is just starting, and returning the subject to good health. This is secondary prevention. A new branch of dentistry has emerged called Minimal Intervention Dentistry, and some consider this to be part of preventive dentistry. Others, however, feel that this still represents restorative dentistry, but patients are treated using a more conservative approach, with minimal removal of tooth structure. True preventive dentistry means not having to remove ANY tooth structure. This book's focus is to review the approaches that can be used before Minimal Intervention Dentistry is required.

There is actually very little evidence in the literature on what is really effective in protecting people from developing soft tissue diseases such as periodontal disease and oral cancer. Of course there are journals and texts in

periodontics or oral pathology describing the management of these diseases once they develop. When an 8-mm periodontal pocket has formed, there has already been tissue damage. Similarly, when cancer is detected in the mouth and confirmed microscopically after a biopsy is taken, the cancer has already started. The cornerstone for the prevention of periodontal disease has been to control the biofilm that leads to tissue destruction. This can be achieved mechanically or with the aid of antimicrobials. To prevent oral cancer, alternatives to biopsies used for early detection and surgical removal are only now being explored. These include various molecular-based diagnostic markers. Since smoking is a risk factor for all oral diseases, smoking cessation education and motivation should be provided in each dental office. Dental insurance plans lag far behind new developments in providing preventive services, and it takes a long time for third-party insurers to recognize their values. Patients are not reimbursed for preventive services that would be considered 'new.' Thus, dentists are slow to adopt modern preventive services, especially in soft tissue disease prevention. It is not surprising, then, that this book's primary focus is prevention of hard tissue destruction. It is what dentists have been most familiar with during the twentieth century. The new millennium will witness a massive expansion of products and techniques for the early detection and prevention of dental diseases.

Client versus patient

Because this book is written for the preventive dentistry team, dental hygienists will want to apply what they can learn from this book in clinical practice to treat their 'clients.' There is a trend in North America for the dental hygiene profession to refer to their patients as 'clients.' The reason being is that the term 'patient' is derived from the

Latin verb '*patior*,' meaning 'I am suffering.' For literally centuries health care providers have considered those who receive their services as 'patients.' But some people are in perfect health and are not 'suffering' from any illness or malady. These people seek the services of health care professionals to prevent illness. Although the term 'client' can be used to infer that the person is not ill or has any dental disease, it really is a term meant to describe a person involved in a business transaction receiving commerce goods and services. Lawyers, consultants, accountants, and hairdressers provide services to 'clients.' It may be an appropriate term for someone receiving 'preventive dental care' by a dental hygienist. Still, people accessing the services of most health care professionals prefer to be called 'patients' (Wing 1997).

To many in dentistry, it has become second nature for the dental hygiene profession to refer to those who receive their service as 'clients.' Within the same setting of a dental office with dentists and dental hygienists working together, the customer is sometimes called a client and sometimes called a patient. It would be ideal to have a term that everyone could be comfortable using.

Clinical researchers have traditionally avoided this relatively recent dichotomy of terms by calling the people in their clinical trials 'subjects.' This term is used throughout the book as well where appropriate.

Is preventive dentistry still needed?

As discussed in Chapters 1, 3, and 4, dental diseases are still widespread problems worldwide. Researchers have estimated the total expenditures on dental treatment and compared them to the costs of some medical diseases, and

it might astound the reader to know that more money is spent in dentistry on treating patients than treating all cancer patients combined (Baldota and Leake 2004). The cost of treating patients with dental problems is only second to the cost associated with cardiovascular diseases. The cost of treating patients' dental problems continues to increase annually. As decay rates decline, dentists turn their interest to previously underutilized therapies such as cosmetic dentistry, orthodontics, third molar extractions, implant dentistry, and so on. Despite approximately half of children growing up these days free of dental decay, there is still a huge demand for preventive dentistry. With more children undergoing orthodontics, there needs to be improved preventive care. People are keeping most of their teeth into old age and living longer, which means that preventing root caries, periodontal disease, and oral cancer will be even more important than before. The frail elderly is the fastest growing segment of the population, and they will need even more preventive care because of their increased risk for disease. We dedicate Chapter 19 to the frail elderly in the long-term care setting.

Although some dentists prefer to provide only cosmetic dentistry, or only orthodontics, most dental offices provide all-encompassing general dentistry services using teams to provide comprehensive preventive therapy. Dental hygienists and dental assistants are important members of the preventive team. The team approach is discussed in Chapter 21.

We have attempted to cover as many topics as possible in preventive dentistry in this textbook. I trust the title *Comprehensive Preventive Dentistry* best describes the contents of this book.

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Baldota, K.K. and Leake, J.L. (2004). A macroeconomic review of dentistry in Canada in the 1990s. *Journal of the Canadian Dental Association*, 70, 604-609.

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Preface

Acknowledgments

This book started with a visit to our dental school in Toronto on May 7, 2008, by Sophia Joyce, Senior Commissioning Editor for dentistry books at Wiley-Blackwell in Oxford, UK. I was honored to be asked by such a well-known publisher of dentistry texts to edit a textbook. I was initially also assisted by Shelby Allen, Senior Editorial Assistant for Wiley-Blackwell in Ames, Iowa, and then Melissa Wahl, Wiley-Blackwell Editorial Assistant for Dentistry and Nursing in Ames, Iowa, who took over and provided me with expert guidance. Her cheerful emails and patience made the book editing process surprisingly pleasant.

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