

Perfecting Your Smile

Your Comprehensive Guide to
Oral Health Care

Dr Edward Givens Jr, DDS, MS

With Forward by Dr Sompop Bencharit, DDS, MS, PhD

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1st Edition.

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I would also like to thank my friend and mentor, Dr Sompop Bencharit, for his review of this work and supplemental forward. I have learned much from him during our time together in residency, and very much appreciate all of the knowledge received during that time.

Finally, I would like to give thanks to the one who has blessed me in ways that I could never have imagined, my Father in heaven. Indeed through Him all things are possible, and this work is in no small way a testament to that fact.

Forward

I met Dr Givens while he was a prosthodontic resident (dentist training to be a specialist in making dentures, partial dentures, implant therapies, etc) at the University of North Carolina at Chapel Hill. In his first year there, Dr Givens presented to me with an idea for his master degree thesis that involved work with dental implants. At the time, I was also interested in starting an implant clinical study through an industrial sponsor. When he came to me and inquired about this potential research, I was glad to help. For three years, he had worked tirelessly on the project and ultimately presented the research at our national meeting in 2013 (The American College of Prosthodontists) and was awarded a prize. The research was also published soon thereafter in a respected peer-reviewed journal.

About 3 years ago, I connected with Dr Givens at our annual specialty meeting in San Diego. While there, he told me about his desire to write a book on oral health and dentistry for the public. He pointed out to me that unlike medicine there are very few books on oral health for the general population. There are a number of our patients who do not completely understand some of the common dental diseases, ways in which many of these diseases can be prevented, and the important questions that should be asked when dealing with or presented with certain treatment options. Dr Givens addresses all of these important issues and more within the chapters of this book.

It is important to point out that dentistry is unique in that it is a profession that combines art and science. The esthetic component in dentistry is as important as the functional component. When we as providers ‘fix’ teeth, we need to do so in a way that our outcome is as beautiful as it is functional. Learning more about dentistry and dental treatments can help one to better understand those treatment needs, options, and expected outcomes.

With a steadfast dedication and determination in helping others to improve their well-being, Dr Givens has brought to life his idea of developing a comprehensive book on oral health for the general public. He does an excellent job of educating his readers using lay terms and defining each of the different kinds of dental issues and treatments that are currently available, in addition to many of the latest technological advances and how those advances have improved the delivery of dental care in the modern era. I am very proud of his accomplishment and strongly believe that as you read through these pages, you will find the information presented to be a tremendous asset to the preservation and care of your oral health.

Sincerely,

Sompop Bencharit

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Fellow, American College of Prosthodontists

Introduction

In pursuit of the perfect smile! Ideally, this would be the mantra of every man, woman, and child in our society. The importance of good oral health at times is overlooked, sometimes due to willful neglect, but at times due to lack of finances to cover needed procedures. Proper maintenance of your oral health is not only the key to a lasting and healthy set of teeth, but also important in promoting the overall health of your body. Numerous studies have shown a relationship between loss of teeth, and changes in diet. These changes are typically adverse, with those who have lost most or all of their teeth adapting a not-so-ideal diet high in fat and carbohydrates (sugar). These dietary changes can then lead to other adverse conditions for the body, such as high cholesterol, obesity, and diabetes.

It is often said that the mouth is a window into the body. There are a number of conditions in the mouth that can affect the body, and a number of conditions affecting our bodies that can manifest themselves in the mouth. The primary focus of this book will be to identify those dental diseases that are common, how they can negatively impact your overall health, how they may be prevented (those that are preventable), and how those problems may be corrected in the modern dental practice.

Included are chapters on cosmetic and implant dentistry, providing insight into some of the technological advances that have become available to improve upon the appearance and function of your teeth. These technological advances in today's dental practice have been many and extraordinary. We are very fortunate to live in a time when so many options to restore our teeth back to normal function are available, and when those options achieve an extraordinary level of longevity and success.

It is my hope that as you read through the pages of this book, that you will gain a better understanding of the importance of your teeth and, more specifically, how they relate to the importance of your overall general health. With the information presented, you will be in a better position to care for your teeth, you will be better versed in the dental lexicon so as to be better able to communicate with your dental provider, and ultimately you will be in a better position to preserve or obtain that perfect smile!

Edward J Givens Jr, DDS, MS
Prosthodontist

Chapter 1-Dental Disease

**“Be true to your teeth, and they
won’t be false to you”**

-Soupy Sales

Just as is the case with various other parts of our body, our teeth are under constant attack from a variety of sources, with the main culprits being certain types of bacteria, viruses, and fungal organisms (Fig 1-1). These tiny microorganisms are found throughout your mouth, with the majority of them not causing any problems. There are a few, however, that, when left unchecked, can wreak havoc on the teeth and even the gum tissue surrounding our teeth. The most common cause of tooth loss can be attributed to tooth decay, and is caused by a few different species of bacteria that inhabit the surfaces of teeth.

Tooth Decay

What is decay? Decay is the end result of the destruction of a tooth which has occurred as a result of the bad bacteria I have just described. When your dentist tells you that you have a ‘cavity’, what he really means is that you have tooth

decay which has likely resulted in the formation of a cavity, or hole, in the tooth. Tooth decay occurs as a result of the acid produced by those specific bacteria when they consume the sugar that you consume. As they ‘ingest’ the sugar from the sweet foods that you have eaten, they produce acid as a by-product of their ‘digestion’. This acid in turn begins to eat away at the outer part of your teeth, the enamel (Fig 1-1).



Fig 1-1. Tooth decay and formation of cavity

The enamel is the hardest part of the tooth, yet the acid produced by those bacteria is strong enough to ‘eat’ away at the enamel. It continues to do so, until it encounters the middle part of the tooth, the dentin. Once the acid has destroyed the enamel,

and the bacteria are able to invade into dentin, the process of destruction usually accelerates, as dentin is not as resistant to the acidic attack. Ultimately, if left unchecked, the bacteria will reach the inner part of the tooth, the pulp, and this is generally, though not always, when one feels tooth pain (Figure 1-2 shows the continuum of the process of tooth decay). Once the infection reaches this part of the tooth, then the procedure you probably know as a ‘root canal’ is needed to eliminate the infection and provide relief from pain if present.

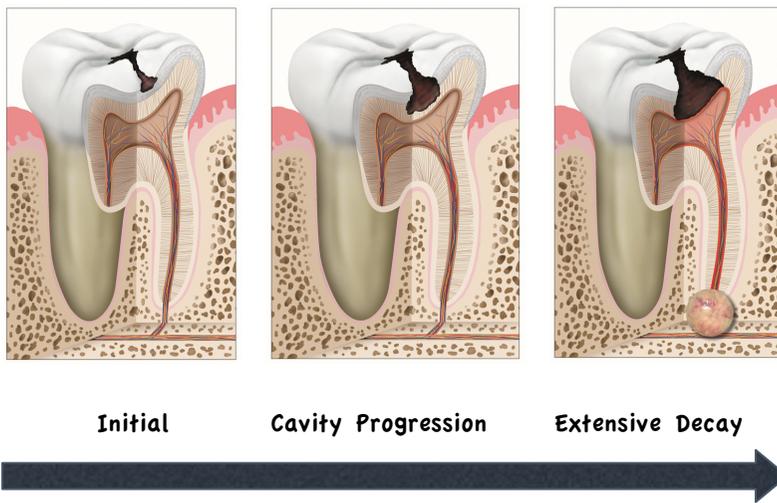


Fig 1-2. Progression of decay

The tragedy of this disease process is that it is almost always preventable. You’ve certainly heard the old saying “an ounce of prevention is worth two pounds of cure”. Nowhere could this saying be more true than with the process of tooth

decay. Regular brushing, ideally after meals, is the surest way to remove the plaque (that sticky material that covers teeth after meals), which in turn removes the bacteria responsible for the decay. Routine daily care of your teeth, combined with regular cleanings is the surest way to prevent the formation of decay, and subsequent loss of teeth.

Gum Disease

While decay is the primary reason that people loose teeth, there is another common cause for tooth loss, which is related to the tissues (gums) surrounding teeth. Each tooth in your mouth is suspended in the jaw bones by ligaments, and covered by the gum tissue. These ligaments help the teeth absorb the forces that are created when we eat, and also allow for movement of teeth when braces are used to straighten misaligned teeth. Just as is the case with tooth decay, the usual cause of gum disease can be attributed to a couple of specific bacteria. These bacteria produce products that eventually result in the breakdown of the gum tissue, ligaments, and bone that support the teeth (Fig 1-3). If left untreated, the loss becomes so progressive that the tooth becomes ‘loose’, and will eventually need to be extracted. In contrast to tooth decay, where most people will experience pain from that process, individuals with gum disease typically have no associated pain or discomfort. They will typically not realize that they have this problem until

they notice movement of the teeth. While this disease process is different from tooth decay, then end result is usually the same-tooth loss. The best way to know whether or not you have gum disease will be to ensure annual examinations with your dental provider.

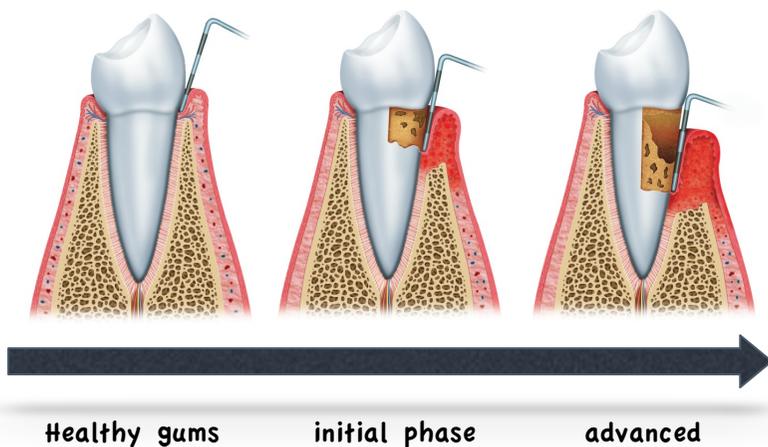


Fig 1-3. Stages of gum and bone loss in gum disease (Periodontitis)

There are other causes of tooth destruction and loss that are not as common as tooth decay and gum disease, and they include the following: Trauma, cancers occurring in and around