

## Today's Vocabulary

- Maxillofacial - the jaws and face
- Apices (plural of apex) - the terminal end of the root of the tooth
- Aberrant - wandering off; deviating from the normal location
- Morphology - the size, shape and structure of a given organ
- Alveoli (plural of alveolus) - tooth sockets or the tooth-bearing bones

## Dentistry

Dentistry is defined as the evaluation, diagnosis, prevention and treatment (nonsurgical, surgical or related procedures) of diseases, disorders or conditions of the oral cavity, maxillofacial area and the adjacent and associated structures and their impact on the human body; provided by a dentist, within the scope of his/her education, training and experience, in accordance with the ethics of the profession and applicable law.

## Dental Specialties

As a dentist, you can choose a variety of career paths including Private Practice (having your own office), Academics (teaching at a dental institution), Hospital Care, and Public Health.

The following are recognized dental specialties Approved by the Council on Dental Education and Licensure, American Dental Association:

### **Endodontics**

"Endo" is the Greek word for "inside" and "odont" is Greek for "tooth." Endodontics is the study of "saving teeth"—in other words, of treating and preventing disorders of the dental pulp, or soft tissues. One of the endodontists' most frequently occurring tasks is treatment of the root canal—the removal of damaged pulp from within the root canal of a tooth. Such treatment is required when the pulp becomes inflamed or infected. Inflammation and infection can occur as a result of tooth decay, tooth cracks, or repeated dental work on the same tooth. In some cases, such as calcified canal, blocked apices, or aberrant root morphology, root canal treatment may be impossible. In such cases, endodontic surgery is required instead. Surgery may also be required to remedy earlier treatments that failed to heal. In some cases, surgery can be used as a diagnostic tool; opening the tooth can allow the endodontist to find the cause of unexplained discomfort in a patient. Specialization in this field requires two to three years of study in addition to dental school, plus frequent continuing education courses to keep the endodontist up-to-date with the latest research and development in their field.

### **Periodontics**

Periodontics is the study of periodontal disease (also known as gum disease), its effects and treatment. The word comes from the Latin word "peri" meaning "around" and the Greek word "odous" meaning "tooth." Literally taken, it means study of that which is "around the tooth". Periodontology is one of the eight dental specialties recognized by the American Dental Association. It is an entire branch of dentistry dedicated to studying the soft tissues and bone supporting the teeth, researching new techniques for treating periodontal diseases, and replacing teeth lost to periodontal disease with dental implants. Periodontists are dental specialists who are experts in the prevention, diagnosis, and treatment of diseases affecting the gums and supporting

## Specialties in Dentistry

structures of the teeth. After periodontists complete dental school, they continue their education for 3 more years to obtain a postdoctoral certificate in periodontics and limit their practices to this specialty.

### **Pedodontics**

Pediatric Dentists are dedicated to the oral health of children from infancy through the teen years. They have the experience and qualifications to care for a child's teeth, gums, and mouth throughout the various stages of childhood. Children begin to get their baby teeth during the first 6 months of life. By age 6 or 7 years, they start to lose their first set of teeth, which eventually are replaced by secondary, permanent teeth. Without proper dental care, children face possible oral decay and disease that can cause a lifetime of pain and complications. Today, early childhood dental caries—an infectious disease—is 5 times more common in children than asthma and 7 times more common than hay fever. Pediatric dentists have completed at least four years of dental school, two additional years of residency training in dentistry for infants, children, teens, and children with special need.

### **Prosthodontics**

"Prosthodontics" is a special branch of dentistry that concentrates all its skills and science on helping make your mouth, teeth, and face work right, feel right, look right, and stay right. Although most general dentists do a lot of prosthodontic service: they cap teeth, make bridges, and do some reconstructive work. There is a difference in emphasis, however. Because the Prosthodontist concentrates on one area of dentistry, he or she can usually handle more complex problems more easily or more efficiently than the general dentist. It's the same with other specialty areas of dentistry. Oral surgeons, orthodontists, endodontists, periodontists, and prosthodontists ... all make up the skilled specialty complex of dentistry. A prosthodontist has one aim: to help you return as close to normal, healthy function and appearance as possible.

### **Oral Surgery**

Oral and Maxillofacial Surgery is one of the specialties to consider after completing dental school. Oral and Maxillofacial Surgery involves various areas of treatment. Along with routine dentoalveolar surgery, which includes complex dental extractions and the placement of dental implants, oral surgeons are responsible for diagnosing and treating oral disease, in particular benign and malignant tumors of the jaws, head and neck. They also perform surgeries to aid in the treatment of sleep disorders, and surgical treatment of the TMJ (the joint that is formed between the mandible and the base of the skull). To become an oral surgeon, one must complete four to seven years of hospital-based surgical residency training (which may or may not involve getting an M.D. degree). This training includes training in internal medicine, general surgery, anesthesiology, ears nose and throat, emergency medicine and plastic surgery. Residency training comes after 4 years of dental school. After completing residency training, Oral and Maxillofacial surgeons may pursue a career in private practice, the hospital setting, teaching institutions, the military, or any combination.

### **General Dentistry**

Upon completing four years of dental school and receiving a Doctor of Dental Surgery (DDS) or Doctor of Dental Medicine (DMD) degree, one is considered a general dentist. There is no practical difference between the DDS and the DMD degree. The difference is very subtle and related to minor differences in the training received in dental school. General dentistry is a broad and gratifying profession. General dentists are not

directly limited to what they can do in practice. This includes, Prosthodontics (crowns, AKA "Caps", and dentures, AKA "Plates"), periodontics (gum surgery and management), Endodontics (Root Canal Therapy), Pedodontics (treating children), geriatrics (treating the elderly population), and orthodontics (Braces). General dentists plan and sequence all of the treatment for all of their patients. They can then choose to perform the various stages of treatment or they can choose to refer to specialists (send their patient to a specialist for certain types of treatment). They are the center of the dental care team (like what a quarter back is to football). General dentists can work in a private practice on their own, in a practice with other dentists, or in teaching institutions.

## Orthodontics

An orthodontist is a specialist in the diagnosis, prevention and treatment of dental and facial irregularities. All orthodontists are dentists, but only about six percent of dentists are orthodontists. Admission to orthodontic programs is extremely competitive and selective. An orthodontist must complete college requirements before starting a three-to five-year graduate program at a dental school accredited by the American Dental Association (ADA). After dental school, at least two or three academic years of advanced specialty education in an ADA-accredited orthodontic program is required to be an orthodontist. The program includes advanced education in biomedical, behavioral and basic sciences. The orthodontic student learns the complex skills required to manage tooth movement (orthodontics) and guide facial development (dentofacial orthopedics). Only dentists who have successfully completed these advanced specialty education programs may call themselves orthodontists.

## Dental Public Health

Dental public health is the science and art of preventing and controlling dental diseases and promoting dental health through organized community efforts. It is that form of dental practice which serves the community as a patient rather than the individual. It is concerned with the dental health education of the public, with applied dental research, and with the administration of group dental care programs as well as the prevention and control of dental diseases on a community basis.

## Oral and Maxillofacial Pathology

Oral pathology is the specialty of dentistry and discipline of pathology that deals with the nature, identification, and management of diseases affecting the oral and maxillofacial regions. It is a science that investigates the causes, processes, and effects of these diseases. The practice of oral pathology includes research and diagnosis of diseases using clinical, radiographic, microscopic, biochemical, or other examinations.

## Oral and Maxillofacial Radiology

Oral and maxillofacial radiology is the specialty of dentistry and discipline of radiology concerned with the production and interpretation of images and data produced by all modalities of radiant energy that are used for the diagnosis and management of diseases, disorders and conditions of the oral and maxillofacial region.

## Express your ideas:

1. What is your dream career path as a dentist?
2. What is your most preferred dental specialty? Why?
3. What do you think is the most difficult field in Dentistry? Why?
4. Which do you think is the most interesting field in Dentistry? Why?