

Dentistry

- Dentists are an indispensable part of the medical field, ensuring patients receive proper and professional oral health care. With dental procedures being a crucial part of our entire lifespan, these professionals must be well-versed in caring for both pediatric and senior patients visiting for myriad reasons. As of 2015, the American Dental Association reported nearly 196,000 dentists were practicing throughout the country, with projections showing more than 26,000 roles will be added in the coming years. Individuals who are prepared to complete an extensive education and learn the tools and technologies of the trade should enjoy fulfilling, busy careers. Learn the steps to becoming a licensed dentist and what a dentist career entails.
- **Dentist Career Basics**
 - Tasked with delivering safe and effective dental care to patients, dentists are specialized professionals who diagnose and provide treatments for a variety of oral health issues. These professionals are required to complete a supplementary four years of training in addition to undergraduate coursework, making them highly qualified for the role. They may work in general dentistry or concentrate their knowledge and skills in areas of orthodontics, oral and maxillofacial surgery, periodontics or endodontics. Whether opening their own practice or working with a team of dentistry professionals, dentists also frequently oversee the work of others in the office, including dental hygienists and assistants.
- **Dentist Careers In-Depth**
 - Dentists are required to complete rigorous educations and live up to high standards, and for good reason: Whether administering local anesthetics, removing cavities from teeth, reviewing x-rays and deciding a course of action, or fitting patients with prosthetics, patients entrust dentists with their oral health and wellbeing. While the pressure can be great, dentists also enjoy the benefits of their hard and exacting work. The average salary for dentists in 2015 topped \$158,310, while those with years of experience can expect to earn even more.
- **Dentist Salaries**
 - When choosing the right career, it is important to understand what you can expect to make when you enter the profession. Those who choose to become dentists often do so not only because they want to help people, but because it is a career with a reputation for high salaries. According to the Bureau of Labor Statistics, dentists made a median annual wage of \$152,700 in 2015. The top 10 percent of

dentists made greater than \$187,200 per year. Those who choose to specialize might make even more.

- **Steps to Becoming a Dentist**

- Complete a Bachelor's Degree
 - Before reaching dental school, students must complete at least 90 hours of an undergraduate program, though many departments now require a full degree. While students may elect to complete an unrelated curriculum, those who choose pre-dentistry or a science-related major will be ahead of the pack when it comes time to meet prerequisite requirements. Some of the common undergraduate degree paths for aspiring dentists are reviewed in-depth below.
 - Students should be vigilant about their grades and study habits even at this level, as GPAs play a profound role in dental school admissions.
- Get a Good Score on the Dental Acceptance Test
 - Administered by the American Dental Association, the Dental Acceptance Test is a major component of a dental school application. Comprised of 280 questions, this five-hour test is heavily weighted toward questions related to the natural sciences, with reading comprehension and quantitative reasoning also making up a significant portion of the overall score.
 - Scored out of a possible 30 points, the current average score is 19. To be truly competitive, though, students should aim for a higher mark. The ADA reports that enrollment for 2014-2015 reached its highest level in the history of dental school, beating out the peak levels of entrants seen in the 1980-81 academic year. In reviewing admission cycle statistics, the competitive nature of the process becomes clearer when considering these admission numbers reported by some of the following top schools:
 - University of California San Francisco: 1,935 applicants, 118 admission offers
 - Tufts University: 4,635 applicants, 182 enrollees
 - Indiana University: 1,508 applicants, 106 matriculated
- Complete a Doctoral Degree
 - Dental schools in America currently offer two different types of program that qualify students to practice as dentists once licensed: the Doctor of Dental Surgery and the Doctor of Dental Medicine. Don't let the names fool you. Both programs are basically the same in terms of coursework and outcomes. The most important consideration at this level is to find a program accredited by the Commission on Dental Accreditation to ensure licensure will be possible after graduation.
 - Besides regular coursework and clinical rotations covered in the standard four-year program, the American Dental Association currently recognizes

nine different specialty areas students can choose to focus their learning. These include:

- Dental Public Health
 - Oral and Maxillofacial Radiology
 - Pediatric Dentistry
 - Endodontics
 - Oral and Maxillofacial Surgery
 - Periodontics
 - Oral and Maxillofacial Pathology
 - Orthodontics and Dentofacial Orthopedics
 - Prosthodontics
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- **Undertake Requirements for Licensure**
 - Individual states mandate licensure requirements for dentists, but most include similar steps. Aside from completing a course of study at an accredited institution, students must pass two examinations covering written and clinical components.
 - The National Board Dental Examinations are administered by The Joint Commission on National Dental Examination and covers topics ranging from biomedical sciences, dental anatomy, and ethics to clinical dental subjects and patient management.
 - Clinical examinations are overseen by individual state's boards of dentistry and use a regional testing center to manage the exam process.
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- **Preparing for a Dentist Career:**
 - Dental Schools & Programs
 - Pre-dental School Programs & Degree
 - While dental programs don't start in earnest until the graduate level, there are numerous academic paths a dentist-in-training can take to prepare for future studies. Some of the most common are highlighted in this section.
 - **Pre-dental**
 - This interdisciplinary undergraduate program equips students for advanced dental coursework by combining a variety of educational requirements they'll need to meet for admission to advanced programs, including general and organic chemistry, physics, biology, microbiology, cell biology, biochemistry, physiology, speech, communications and English.
 - **Biological Sciences**
 - Students who undertake biology degrees receive extensive exposure to laboratory training, preparing them well for future work in a dental program. Students cover a variety of helpful

topics throughout the four-year degree, ranging from genetics and cell biology to social behavior and philosophy of human nature.

- **Physiological Sciences**

- Physiological sciences incorporates concepts pulled from areas of anatomy, pathology, physiology and neurobiology to inform students on how organisms behave. This major is well-suited to students aspiring to dentistry as it provides an elemental framework for advanced topics they'll encounter later on. Common courses include biostatistics, psychology, experimental physiology and microanatomy.

- **Dental School Admission Requirements**

- Admission to an academic program for dentistry is a demanding process. Most programs are small, and admission is competitive. In order to rise above other hopefuls, prospective students must show how their blend of skills, academic achievements and prior learning prepares them for the rigors of dentistry school. Components of this process include:
 - Prerequisite Courses
 - The majority of programs require at least 90 credits be completed at the time of application, or in some cases a full baccalaureate degree. These credits must include studies in biology, general chemistry, organic chemistry, physics, anatomy, biochemistry, immunology, physiology, math and English composition.
 - Undergraduate Record
 - Aside from showing the above courses have been completed, the grades achieved in each also matter. Most programs require a GPA minimum of 3.2, but students should aim for higher grades to be truly competitive.
 - Test Scores
 - Like the GRE or GMAT, applicants to advanced dentistry programs must pass the American Dental Association's Dental Admissions Test (DAT). The examination is comprised of eight different scores: six of these cover areas of biology, general chemistry, organic chemistry, perceptual ability, reading comprehension and quantitative reasoning. The other two scores are based on total science and academic average. The examination is scored between 0 and 30 points, with the scores of those accepted to programs in 2012 averaging 19.9.

- **Dental School Courses & Requirements**

- Upon passing the application stage, admitted students are accepted to either a doctor of dental surgery or doctor of dental medicine program. These terminal doctorates both qualify a graduate for licensures, and the content in each is the

same. The name differences are more a matter of semantics rather than differing curriculum.

- Students dedicated to full-time study are typically able to complete their program in four years, during which time they sit in on lectures and seminars while gaining hands-on training in clinical rotations and laboratory sessions. The first two years of study are foundational in nature and expose students to an array of topics that inform the field. The final two years, conversely, heavily involve clinically-based courses; didactic learning continues alongside.
- Some of the courses most commonly found at dental school include:
 - Microbiology & Oral Health Promotion
 - Teaches students how to effectively communicate with and provide culturally competent care to a spectrum of patients. In addition to lectures covering dental public health and health communication, students dig into demographic topics such as special needs and medically compromised patients.
 - Skills Gained
 - Providing care to a range of patients
 - Being socially and culturally aware of individual needs
 - Learning how to address dental public health
 - Dental Development and Anatomy
 - Introduces students to common frameworks used within the dental profession, including numbering and classification systems. This course provides a mix of lectures and laboratory time and underpins theoretical knowledge with real-world application. It is typically taken in the first year of study.
 - Skills Gained
 - Understanding traits of different teeth within the classification system
 - Developing an awareness of primary vs. permanent dentition
 - Recognizing the differences of maxillary vs. mandibular arches
 - Oral Health and Nutrition
 - Provides an understanding of how nutrition affects tooth and gum health while teaching dentists-in-training how to employ behavioral management techniques with their patients. Many case studies are used to help students develop their skills in working with varied populations and demographics.
 - Skills Gained
 - Overcoming barriers to care with different types of patients
 - Teaching patients how to properly care for their teeth and gums

- Delivering the best oral health care to patients regardless of their circumstances
- Anesthesia and Pain Management
 - Incorporates both classroom instruction and clinical rotations to provide future dentists with a thorough understanding of how to manage dental pain associated with procedures. Many courses allow students to observe licensed dentists administering anesthesia and offer the first opportunity for students to administer local anesthesia.
 - Skills Gained
 - Understanding how anesthesia blocks nerve impulses
 - Learning how to safely administer anesthesia
 - Identifying the correct amount of anesthesia to use for different types of patients and procedures
- Oral Surgery
 - Offered as a bundle class incorporating both lectures and clinical rotations on oral and maxillofacial surgeries, this block exposes students to the foundational skills behind more complicated procedures. These classes also provide students with their first opportunity to perform exodontia and pre-prosthetic procedures under the watchful eyes of professors. This course is typically taken in the third year.
 - Skills Gained
 - Awareness of implant selection and surgery
 - Understanding how post-surgical care is implemented
 - Ability to diagnose and treat conditions requiring oral and maxillofacial surgeries
- **Dentist Career Concentrations**
 - The American Dental Association reported that one in five active dentists worked in a practice, research or administration area that is recognized as a specialty by the ADA in 2015. Dentists can specialize in a variety of different areas of the field, ranging from pediatric and periodontal to oral surgery and orthodontics. Many dental programs offer different concentrations for students who have a fine-tuned idea of the type of oral health care they wish to provide. Whether planning to work in general dentistry or a focused area, the following examples of options will help narrow down your top choices.
 - **General Dentists**
 - Median salary: \$152,700
 - These professionals serve as the backbone of the dentistry profession and the first port of call for any oral health issues. A general dentist's day-to-day work involves examining patients and diagnosing or treating problems

surrounding teeth and gums. Common procedures they perform include repairing cavities, fitting caps and treating diseases related to nerve or pulp issues. This career concentration is perfect for the future dentist who may feel limited by performing similar tasks each and every day.

○ **Orthodontists**

- Median salary: \$187,200
- Orthodontists are tasked with correcting misaligned teeth and jaws for their patients. These issues can affect a wide range of daily activities in their patients' lives and lead to problems with chewing, speech and articulation, and appearance. These professionals may correct anteroposterior deviations – also known as underbites and overbites – or realign teeth that have been overcrowded by lack of jawbone space. Whether fitting braces or realigning jaws, lips, and teeth to correct malocclusions, these professionals must be well versed in the nuances of orthodontic care.

○ **Prosthodontists**

- Median salary 2015: \$119,740 (BLS)
- Unlike orthodontists who work with existing jawbones and teeth to correct structural issues, prosthodontists specialize in the use of prosthetics to replace missing teeth or correct deformities. Some of the procedures done by prosthodontists include dental implants, dentures, crowns, bridges and temporomandibular corrections. Aside from issues requiring surgery, these dental professionals may also be called upon to handle cosmetic procedures. In addition to dental school, prosthodontists must also complete three years of advanced training in a graduate-level prosthodontic program.

○ **Oral and Maxillofacial Surgeons**

- Median salary 2015: \$187,200 (BLS)
- Oral and maxillofacial surgeons are most commonly associated with the extraction of wisdom teeth, but these medical professionals are also responsible for performing many other advanced dental procedures. In addition to removing impacted or compromised teeth, oral and maxillofacial surgeons are tasked with ensuring the health of other components of the mouth. This may include regenerating deficient bones; treating infections in salivary glands, jawbones, and the neck; diagnosing and developing treatment plans for ulcers; removing tumors and abnormal growths in the oral cavity; correcting cleft palates; and using tissues from other parts of a patient's body to perform reconstructive surgery on the face or jaw.

○ **Endodontist**

- Median salary 2015: \$201,208 (Payscale)
- With a focus on the tooth specifically, endodontists are concerned with the soft tissues and nerves living within the tooth. One of the most common

procedures performed by an endodontist is the root canal, and patients are typically referred to them by their general dentist. The main goal of these professionals is to avoid extraction of a tooth if there is a way it can be saved. In addition to oral surgeries, endodontists also provide teeth whitening and bleaching services. After graduating from dental school, aspiring endodontists must complete two to three more years of training and must pass the American Board of Endodontology examination to be licensed.

- **Components Of A Successful Dentist Career: Skills, Credentials, Tools & Technology**

- Although education plays a critical role in the abilities and successes of dentists, many other components combine to form a prosperous career. The following section highlights some of the top skills and credentials top dentists hold and takes a look at common tools and technologies they use.
- Skills
 - Problem Solving--Dentists must be able to identify the issue affecting their patient before formulating an effective treatment plan. Because young children and older patients may not be able to withstand certain types of treatments, dentists must find the right solution to fit their needs.
 - Compassion--Dental procedures can cause fear and anxiety in many patients, and the best dentist will be alert to these feelings and show compassion before, during, and after a procedure.
 - Time Management--Dentists must balance their time while also ensuring each procedure is done safely and according to set protocols.
 - Leadership--In addition to working with their patients, dentists are also tasked with overseeing other members of the dental office, including dental assistants, dental hygienists, and front office staff.

- **Credentials**

- Licensure requirements are mandated at the state level and individual components vary by region; however, all states have three basic requirements:
- **Education**
 - To be eligible for licensure, students must graduate from a program accredited by the American Dental Association's Commission on Dental Accreditation. As of 2016, there are 66 accredited programs throughout the United States.
- **Written Examination**
 - Licensing boards use the National Board Dental Examination for the written component. The exam, which consists of two parts, is overseen by the Joint Commission on National Dental Examinations.

○ **Clinical Examination**

- All 50 states except Delaware outsource the clinical exam component to a regional testing agency. Depending on where a licensee lives, they must contact one of these assessment boards:
 - Central Regional Dental Testing Service
 - Commission on Dental Competency Assessments
 - Council of Interstate Testing Agencies
 - Southern Regional Testing Agency
 - Western Regional Examining Board