

## My Career as a Dentist



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English  
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## Outline

### I. Introduction to Dentistry

#### A. Reason for interest

1. The desire to help others
2. Excitement involved in this career
3. Salary
4. Hours

#### B. History

##### 1. First tooth extractions

a. By Greeks

b. Only loose teeth pulled

##### 2. First dentures

a. By Etruscans

b. Human and calf teeth used

##### 3. First application of dental hygiene

a. By slaves for wealthy Roman families

b. With sticks

c. With tooth powder

(1) of crushed egg shell

(2) of crushed pumice

##### 4. Monks practiced dentistry

a. Papal edict stopped monks from practicing

b. Barber-surgeons replaced them

##### 5. Giovanni d'Arcoli was first to use gold as fillings

6. Discoveries made

a. Andreas Vesalius

b. Fallopius

c. Bartolomeo Eustache

(1) pulp cavity

(2) root system

7. Pierre Fauchard publishes book

a. The Surgeon Dentist

b. Explains tooth diseases

8. Eighteenth century inventions

a. Turnkey

(1) Removed teeth in twisting motion

(2) Sometimes fractured jaw

b. Wax casts

c. Plaster models

(1) Made dentures fit better

(2) Increased comfort

9. Society and colleges founded in 1840

a. The American Society of Dental  
Surgeons

b. Baltimore College of Dental Surgery

10. Major advances made

a. Anesthesia introduced

(1) nitrous oxide

(2) By Horace Wells

(3) In 1844

b. Vulcanized rubber used in dentures

(1) More comfort

(2) Less expensive

## II. Nineteenth century inventions

a. Extraction forceps

b. Dental drill

## II. Education

### A. Dentist

1. Two to four years of undergraduate work

2. Four years of postgraduate school at an accredited dental school

3. An optional one-year hospital internship

### B. Specialties

#### 1. Oral surgery

a. One academic year of specialty education

b. Two years as a hospital resident

#### 2. Other specialties

a. Two academic years of specialty education

b. Optional internships

## III. Branches

### A. Orthodontics

1. Prevention of malocclusions

2. Correction of irregularities

### B. Oral surgery

1. Corrects fractured jaws

2. Removes tumors in mouth

3. Corrects congenital abnormalities

4. Extracts diseased teeth

### C. Pedodontics

1. Treats children under twelve
2. Teaches children not to fear dentists

### D. Periodontics

1. Study of abnormal conditions in gum tissues
2. Treatment of pyorrhoea

### E. Prosthodontics

1. Installs dentures
2. Replaces missing teeth

### F. Oral Pathology

1. Deals with microscopic nature of diseases in the mouth, teeth, and jaws
2. Diagnoses diseases in the mouth

### G. Dental Public Health

1. Educates public on dental matters
2. Makes an effort for or against legislative matters concerning teeth

## IV. Evaluation of Research

### A. Personal requirements

1. Intelligence
2. Strong interest in science
3. Good hand and finger coordination
4. Excellent judgement of space and shape
5. An ability to comprehend technical material
6. Compatible personality

B. Personal qualities

1. Compatible personality

2. Desire to help others

C. Advantages of S<sup>th</sup> State planning

Dentistry is the healing art concerned with the health of the mouth, especially the teeth'. This definition may not sound so exciting but just think of all the problems there would be if there were no teeth or dentists to care for them. It would be difficult to talk and eat to name a few. As you can see, dentists are important.

There is a need for dentists. In 1967 there was one dentist for each 1,950<sup>2</sup> and with the population growing the way it is, can you imagine what the ratio is now?

An American Dental Association report indicated there was a total of 9,705 dental specialists in the U.S. There were 4,128 orthodontists, 2,262 oral surgeons, 1,106 pedodontists, 654

<sup>1</sup> George Bion Denton, "Dentistry", Encyclopedia Britannica, (1971), 7, pp. 260-262.

<sup>2</sup> Philip E. Blackerby, Jr., Dentist, Should You Be a?, pp. 4-5.

prostodontists, 439 endodontists, 98 public health dentists, and 89 oral pathologists.<sup>3</sup>

I would like to be an oral surgeon, which is a branch of dentistry, because I would like to help people. Also this career wouldn't become boring since it involves emergencies.<sup>4</sup>

The average dentist in private practice earns about \$15,000 a year. Specialists average about \$20,000 a year. Even a dentist in his first year of practice can make up to \$10,000.<sup>4</sup>

The first people believed to make tooth extractions were the ancient Greeks who used primitive forceps and only pulled loose teeth. They also cauterized decayed teeth by using a red-hot wire.

The Etruscans were the first to use dentures. These crude dentures were made with either human or calf teeth joined together with gold bands.

The first application of dental hygiene

<sup>3</sup> George W. Tenscher, "Dentistry: Education"; The Encyclopedia of Education (1971), 3, pp. 49-53.

<sup>4</sup> Blackerby, pp. 4-5.

was when the wealthy Roman families had their teeth cleaned by slaves using sticks and tooth powders of crushed egg shell and pumice.

In the middle ages Monks were the chief dental practitioners until the 12<sup>th</sup> century papal edict<sup>5</sup> directing that Monks are to stop practicing and that barber-surgeons will take over the practice.

In the 15<sup>th</sup> century an Italian physician named Giovanni d'Arcoli first used gold as a filling for teeth. He also invented the pelican. The pelican was a special hinged lever to extract teeth.

In the 16<sup>th</sup> century dentistry became greatly advanced by the study of Andreas, Vesalius, Fallopius, and Bartolomeo Eustachi. They discovered the root system and the central pulp cavities in the teeth.

In the 17<sup>th</sup> century a Dutch lens maker named Antony van Leeuwenhoek became the first man to notice

<sup>5</sup> papal edict - an order issued by the pope. Definition from: Webster's eldest Dictionary (1961), p. 483.

the presence of microorganisms in dental tartar.

In the 18<sup>th</sup> century Pierre Fauchard published his book called The Surgeon Dentist which describes tooth diseases and dental techniques.

About 1750 the "turnkey" was invented. The turnkey was an instrument that removed teeth in a turning motion. Although it removed the firmer teeth it sometimes fractured the jaw or surrounding teeth. Also wax casts and plaster models were used for the first time in fitting dentures.

In 1840, The American Society of Dental Surgeons and the Baltimore College of Dental Surgery were founded.

In 1844, Horace Wells introduced anesthesia. Nitrous oxide, or laughing gas was used.

In 1851 Nelson Goodyear discovered vulcanized rubber which they began to use as a base in dentures.

In the 19<sup>th</sup> century special forceps replaced the turnkey. In 1871 the dental drill was invented.

From 1880 to 1890 several scientists

including W. B. Miller offered the hypothesis that dental decay occurs when bacteria are present and that actual dissolution of tooth substance is due to bacterial products.<sup>6</sup>

In 1895, Wilhelm Roentgen discovered X rays and in 1896 the first radiographs of teeth were made.<sup>7</sup>

The training for this career includes two to four years of undergraduate school or college. Although in 1955 the Council on Dental Education of the American Dental Association stated, "The Council fixes as the minimum basis for admission to an approved dental school the successful completion of two full academic years of work in an accredited college of liberal arts and sciences," most schools prefer applicants who have four years of undergraduate school and a B.A.<sup>8</sup>

<sup>6</sup> Pierce Anthony, "Dentistry," Grolier Encyclopedia (1956), VII, pp. 66-70.

<sup>7</sup> Ibid, pp. 66-70.

<sup>8</sup> Saul N. and Joan R. Greenberg, So You Want to Be a Dentist, p. 24.

<sup>9</sup> B.A. - Bachelor of Arts.

or a B.S.<sup>10</sup> degree.

The state Board of Regents and dental schools require that all applicants have six points of each of the following: English composition and literature, physics, biology, inorganic chemistry, and organic chemistry<sup>11</sup>. Although these are the only courses required, most dental schools expect additional courses in chemistry, advanced biology, math, foreign languages, sociology, psychology, history, and the fine and industrial arts.<sup>12</sup>

If you take these prescribed courses you will have more than enough credits or points to graduate, approximately 96 after three full years or 128 after four full years. If you are properly organized this will leave you plenty of time for extra-curricular activity since it is only sixteen points per term.

In your first year of college you will take the Dental aptitude Test. It is required since no dental school will

<sup>10</sup> B.S. - Bachelor of Science.

<sup>11</sup> Greenberg, pp. 24-25.

<sup>12</sup> Ibid., pp. 25

consider your application without seeing the scores on your test.

In general, the test evaluates: (1) speed and comprehension in reading scientific material, (2) manual dexterity, (3) reasoning with numbers, (4) understanding and use of words, (5) manipulation of numerical relationships, and ability to deal with quantitative<sup>13</sup> materials, (6) visual perception, (7) ability to translate knowledge into basic principles and solve problems in biology and chemistry.<sup>14</sup>

After you have sent out your application for a dental school you will receive a letter requesting a personal interview. An admissions committeeman from the university you have applied to will interview you. He will ask about your home life, financial state, your interests, and why you decided on dentistry as your career.

Now you are able to apply for a

<sup>13</sup> quantitative - Of, relating to, or concerned with quantity. Definition from: Webster's 3rd New International Dictionary (1961), p. 530.

<sup>14</sup> Greenberg, pp. 41-42.

a license. Each of our 50 states and the District of Columbia have their own licensing board. In order to receive a license you must take a state board examination from the state you wish to practice in. If you don't know which state you would like to practice in you can take a national board examination. When you decide on the state you can take their examination. If you pass you become a licensed D.D.S.<sup>15</sup>

You must now make a decision. You can go into practice or you can go into a specialty. In my case, I would like to continue my education and become an oral surgeon. Oral surgery requires one academic year of specialty education in oral surgery and two years as a hospital resident. All the other specialties require two academic years of education in that specialty and optional internships. The dentist who successfully completes the educational program in a specialty area becomes eligible to apply for the examinations offered by the board in that

<sup>15</sup> D.D.S. - Doctor of Dental Surgery.

specialty. Most boards require some years of practice or teaching in addition to completion of the educational requirements before permitting the applicant to complete the examinations<sup>16</sup>. They usually last a minimum of four days and are offered once a year by each of the boards. If the applicant passes the examinations he becomes a diplomate of the board.

The branches or specialties of Dentistry are the following: orthodontics, oral surgery, pedodontics, periodontics, prosthodontics, oral pathology, and dental public health.

Orthodontics deals with the prevention of malocclusions<sup>17</sup> and correction of irregularities. The American Society of Orthodontics was founded in 1901.

Oral surgery corrects fractured jaws, removes tumors in the mouth, corrects congenital abnormalities, such as cleft palate, and extracts diseased teeth. A cleft palate is a cleft from front to back along the middle of the palate or roof of the

<sup>16</sup> Tawcher, pp. 49-53.

<sup>17</sup> malocclusion - overbite.

mouth, caused by the failure of the two parts of the palate to join in prenatal development.<sup>18</sup> I would like to be an oral surgeon because of the excitement involved in the emergencies. The American Society of Oral Surgeons was founded in 1918.

Pedodontics is concerned with the dental care and treatment of children to the age of about 12.<sup>19</sup> He must get along well with children and teach them not to fear dentists. The American Society of Dentistry for Children was founded in 1927.

Periodontics is concerned with the study and treatment of abnormal conditions in the tissues immediately about the teeth. In popular usage some of these abnormal conditions are often called pyorrhea. The American Academy of Periodontology was founded in 1914.<sup>20</sup>

Prosthodontics deals with the replacement of missing teeth. Prosthodontists use

<sup>18</sup> Anthony, pp. 66-70

<sup>19</sup> Ibid., pp. 66-69

<sup>20</sup> Ibid., pp. 68-70

bridges and dentures. The National Society of Denture Prosthetists was founded in 1919.<sup>21</sup>

Oral pathology deals with the microscopic nature of diseases of the teeth, jaws, and tissues lining the mouth.

He also diagnoses diseases such as cancer, tuberculosis, dental caries, and pyorrhea.

The American Academy of Oral Pathology was founded in 1947.<sup>22</sup>

Public health dentists educate the public on dentistry and the care of the teeth. They also make efforts for or against legislative measures that concern the care of teeth. The American Association for Public Health Dentistry was founded in 1937.<sup>23</sup>

Endodontics isn't recognized as a specialty but is still an important part of dentistry. It preserves the usefulness of a tooth despite the death of its nerves and blood vessels. It is also known as root canal therapy.<sup>24</sup>

<sup>21</sup> Ibid, pp. 68-70.

<sup>22</sup> Ibid, pp. 69-70.

<sup>23</sup> Ibid, p. 70.

<sup>24</sup> Greenberg, pp. 138-140.

In order to become a dentist you must be intelligent, an excellent judge of space and shape, must work with hands well, must have a strong interest in science, must have an ability to comprehend technical material, must have a compatible personality and most important, a desire to help others.

## &lt;Interview

Q. What is your name?

A. Dr. James Bradley.

Q. Are you a specialist?

A. Yes.

Q. What kind?

A. An oral surgeon.

Q. How many hours do you work a week?

A. About 43 not counting emergencies.

Q. How much do earn a year?

A. About \$20,000.

Q. What university did you attend?

A. I went to college at Princeton and to dental school at the University of Buffalo.

Greenberg, Saul N., and Joan R. So You  
Want to Be a Dentist. New York:  
Harper and Row, Publishers, Inc., 1963.

## Dentistry

### Education: (p. 18-49)

1. 2 to 4 years of undergraduate work.
2. 4 years postgraduate school.
3. An optional one-year hospital internship.
4. The state Board of Regents and Dental schools require that all applicants to dental school have 6 points of each of the following: English composition, and literature, physics, biology, inorganic chemistry and organic chemistry.
5. All specialties require 2 yrs. of specialty education except for Oral Surgery which requires one year of specialty education and two years as a hospital resident.
6. The dental aptitude test evaluates, (1) speed and comprehension in reading scientific material, (2) manual dexterity, (3) reasoning with numbers, manipulation of numerical relationships, and ability to deal with quantitative materials, (4) understanding and use of words, (5)

visual perception, (6) knowledge of biology and chemistry, (7) ability to translate knowledge into basic principles and solve problems in biology and chemistry.

2. You will have an interview with an interviewer from a dental school you applied for.

#### Branches: (p. 113-140)

1. Orthodontics deals with the prevention of malocclusions and correction of irregularities.
2. Oral Surgery corrects fractured jaws, removes tumors in the mouth, corrects congenital abnormalities, and extracts diseased teeth.
3. Pedodontics deals with children under 12.
4. Periodontics deals with the study of abnormal conditions in the gum tissues.
5. Prosthodontics deals with replacing missing teeth.
6. Oral pathology deals with the microscopic nature of diseases in the mouth. He also diagnoses diseases

in the mouth.

2. Dental Public Health deals with the education of the public on dental matters and makes an effort for or against legislative matters.

Anthony, Pierce. "Dentistry". Grolier Encyclopedia (1956), VII, pp. 66-70.

## Dentistry

### History: (pp. 66-70)

1. The first tooth extractions were probably done by the Greeks. Decayed teeth were cauterized with a red-hot wire.
2. The Etruscans were the first to use dentures in which human or calf teeth were joined with gold bands.
3. The rich Romans had slaves clean their teeth with sticks and crushed egg shell and pumice.
4. In the middle ages Monks were the chief dental practitioners until the 12<sup>th</sup> century papal edict directed monks not to practice anymore and for barber-surgeons to take over the practice.
5. In the 15<sup>th</sup> century Italian Giovanni d'Arcoli who <sup>first</sup> filled teeth with gold invented the pelican.
6. In the 16<sup>th</sup> century Andreas Vesalius, Fallopius and Bartolomeo Eustachi discovered the root system and central pulp cavity.

7. Pierre Fauchard published his book, The Surgeon Dentist.
8. In the 18<sup>th</sup> century the turnkey, wax casts, and plaster models were invented.
9. The American Society of Dental Surgeons and the Baltimore College of Dental Surgery were founded in 1840.
10. In 1844 Horace Wells introduced nitrous oxide.
11. Vulcanized rubber was used as a base for dentures.
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14. In 1895, Wilhelm Roentgen discovered X rays and in 1896 the first radiographs of teeth were made.

Dentist, Should You Be a? Philip E. Blackerby, Jr. Career Information Service. New York: New York Life Insurance Co., 1967.

### Dentistry

Salary: (p. 4)

1. The average dentist in private practice earns about \$15,000 a year.
2. Specialists average \$20,000 a year.
3. A dentist in his first year of practice can earn up to \$10,000 a year.

### Requirements: (p. 5)

1. Intelligence
2. Strong interest in science.
3. Good hand and finger coordination.
4. Must be an excellent judge of space and shape.
5. Must have an ability to comprehend technical material.

### Cost of Education: (p. 5)

1. \$16,000 away from home after 6 yrs.
2. \$6,000 at home after 6 yrs.

Hours: (p. 7)

1. Most dentists average 43 hrs. a week in the office.
2. Half of all dentists take four or more weeks off for a vacation a year.

Tenner, George W. "Dentistry: Education".  
The Encyclopedia of Education (1971), 3,  
pp. 49-53.

### Dentistry

#### Education: (pp. 49-53)

1. The dentist who successfully completes the educational program in a specialty area becomes eligible to apply for the examinations offered by the board in that specialty. Most boards require some years of practice or teaching in addition to completion of the educational requirements before permitting the applicant to complete the examinations.

2. If the applicant passes the exams he becomes a diplomate of the board. They usually last a minimum of 4 days and are offered once a year by each of the boards.

#### Licenses: (pp. 51-53)

1. Each state has a dental licensing

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The Encyclopedia of Education (1971), 3,  
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### Dentistry

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#### Licenses: (pp. 51-53)

1. Each state has a dental licensing board.

2. To get a license you need:  
evidence of graduation from an  
accredited dental school in the  
U.S., citizenship or formal  
intention become a citizen, and  
evidence of good formal character.