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Dental anatomy

Introduction

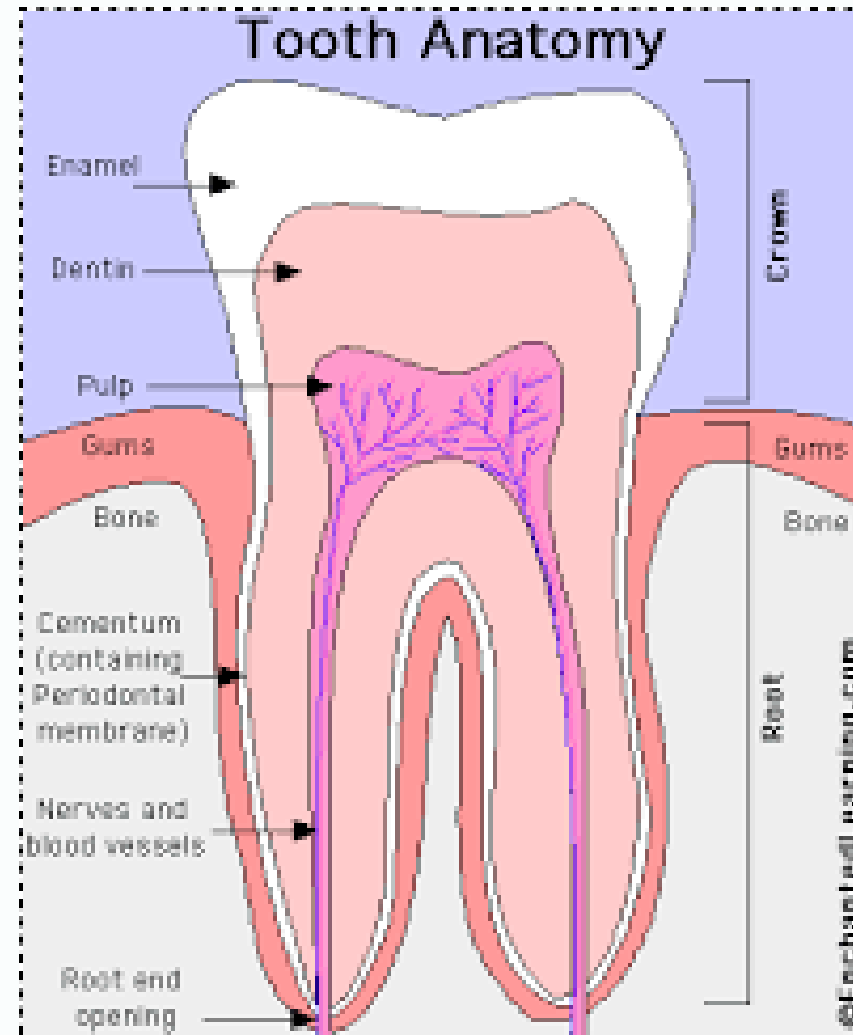


**AHMAD
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- **Dental anatomy** : is a field of anatomy dedicated to the study of human tooth structures.



The Deciduous Teeth

- At birth there are no teeth present in the mouth, but many teeth in various stages of development are found in the jaws.
- After birth (post natal period) the eruption of deciduous teeth starts at six months and lasts until two and half years (28 ± 4 months).
- The deciduous teeth stay until the permanent teeth erupt at about six years of age when the transition to the permanent dentition begins.
- The deciduous teeth are 20 in number. They have the following formula:
- $I \ 2 \setminus 2 \quad C \ 1 \setminus 1 \quad M \ 2 \setminus 2$ totally=10 (For each jaw)
- I=Incisors (central and lateral).
- C=Canine.
- M=Molars (first and second).



Figure (1): Deciduous dentition

The permanent teeth

- The transition to permanent dentition begins with the emergence and eruption of the first permanent molars at the age of six years, followed by shedding of the deciduous teeth, emergence and eruption of the remaining permanent teeth.
- This process requires about 20 years to be completed.
- The number of permanent teeth including third molars when present is 32.
- I 2\2 C 1\1 P 2\2 M 3\3 totally=16 (For each jaw)
- I=Incisors (central and lateral).
- C=Canine.
- P=Premolars (first and second).
- M=Molars (first, second and third).

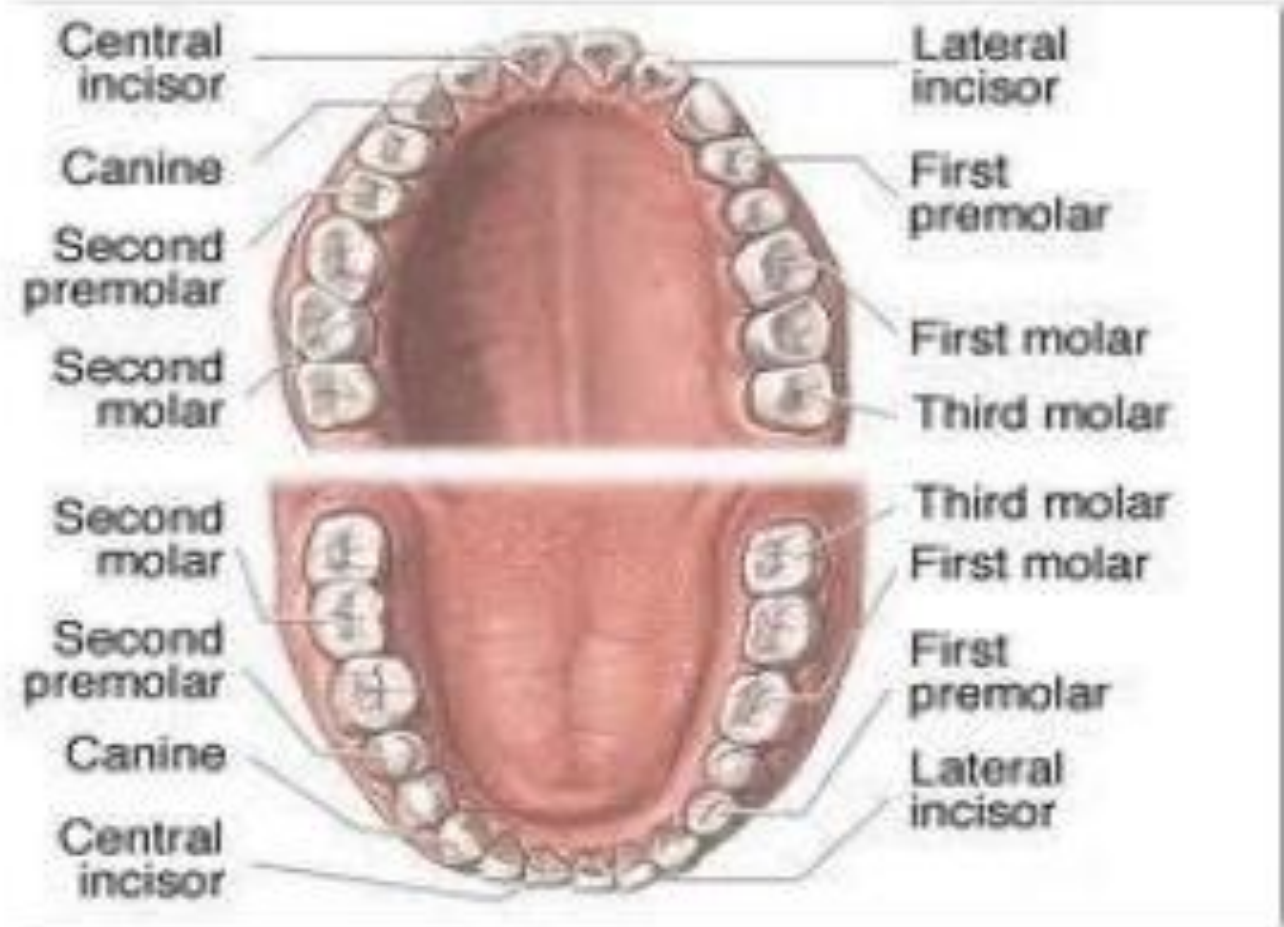
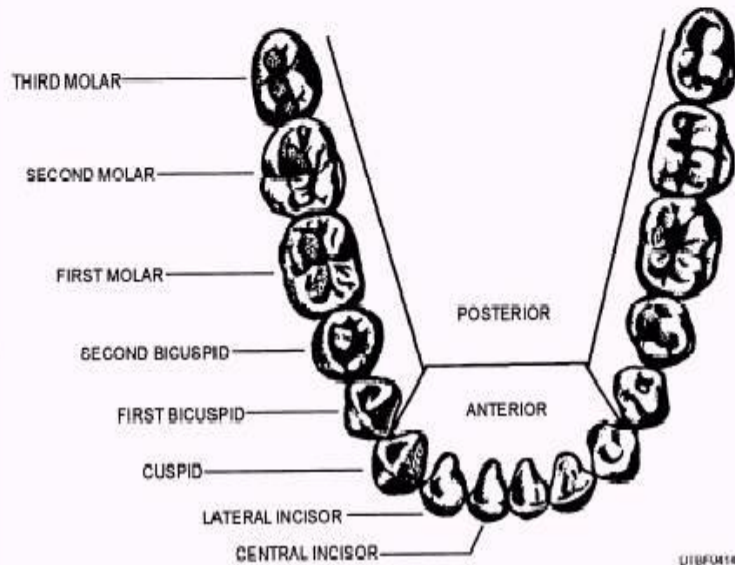
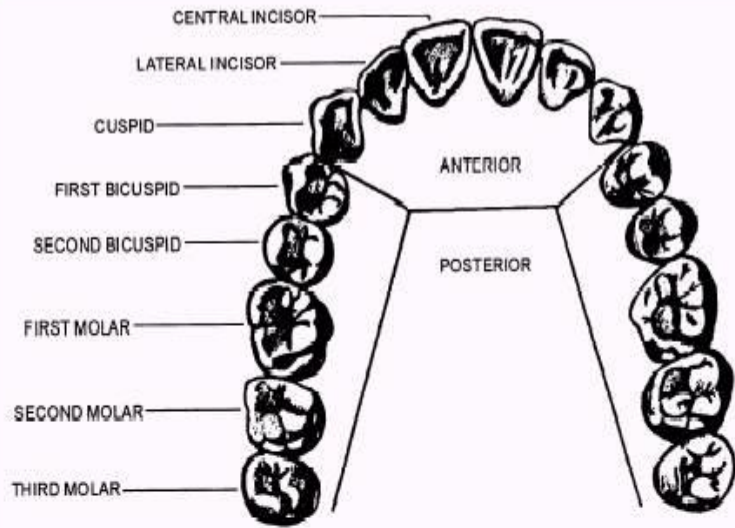


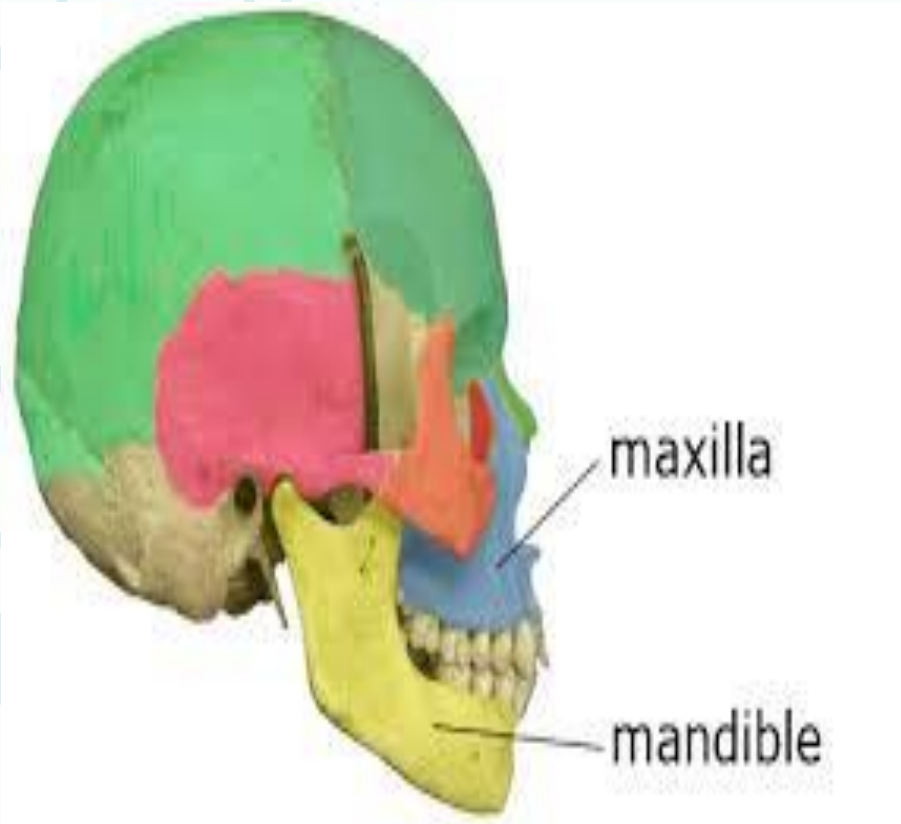
Figure (2):Permanent dentition

Anterior and posterior teeth



- Teeth are grouped into:
 1. Anterior teeth which include the incisors and the canines.
 2. Posterior teeth which include the premolars and molars.

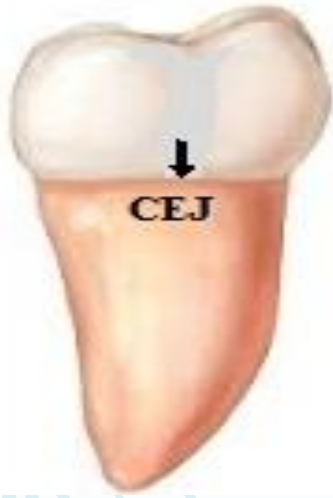
The jaw



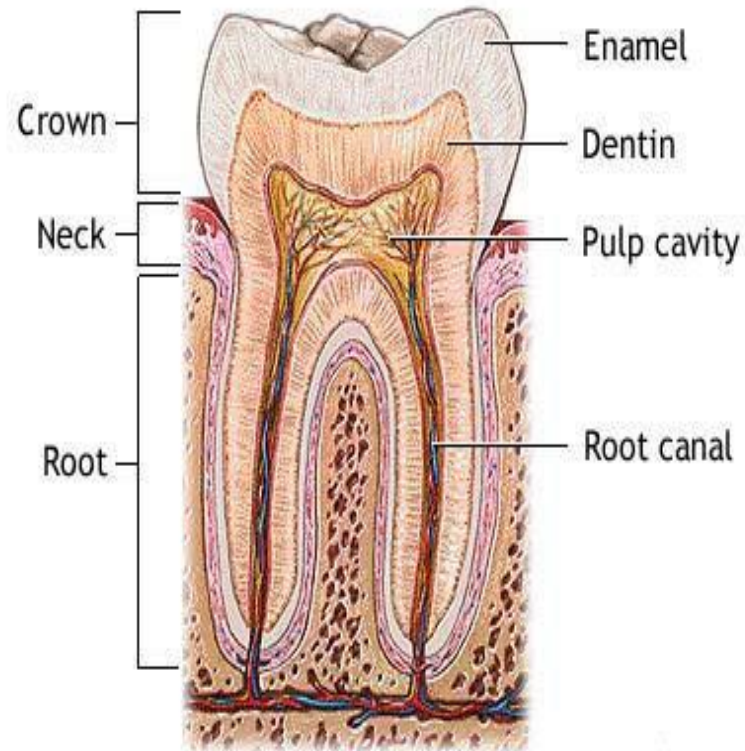
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- The jaw is the bone which carries the teeth. There are two jaws:
 1. The upper jaw which is fixed, and is called Maxilla.
 2. The lower jaw which is movable and is called Mandible.

Crown and Roots





- Each tooth has a crown and root.
- The crown is covered with enamel. The root is covered with cementum and they join at the cemento-enamel junction (CEJ) or cervical line.
- The four tooth tissues are *enamel, dentin, cementum and pulp*. The first three are known as hard tissues, the last as soft tissues. The major bulk of the tooth is dentin.



Dental pulp: is the soft tissue of the tooth and present in the pulp chamber and pulp canal.

Pulp chamber: is the part of dental pulp in the crown

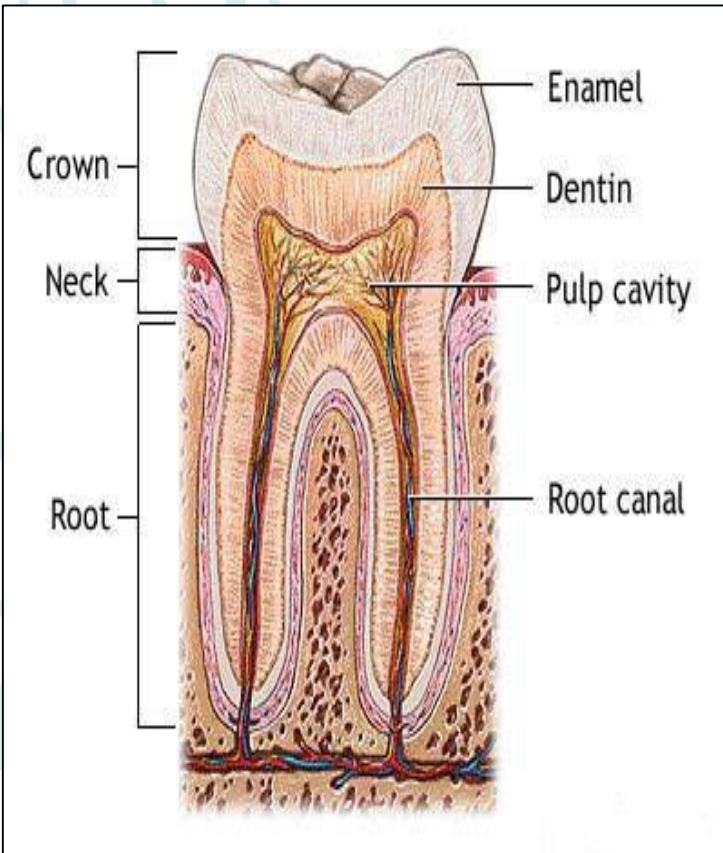
Pulp canal: is the part of dental pulp in the root.

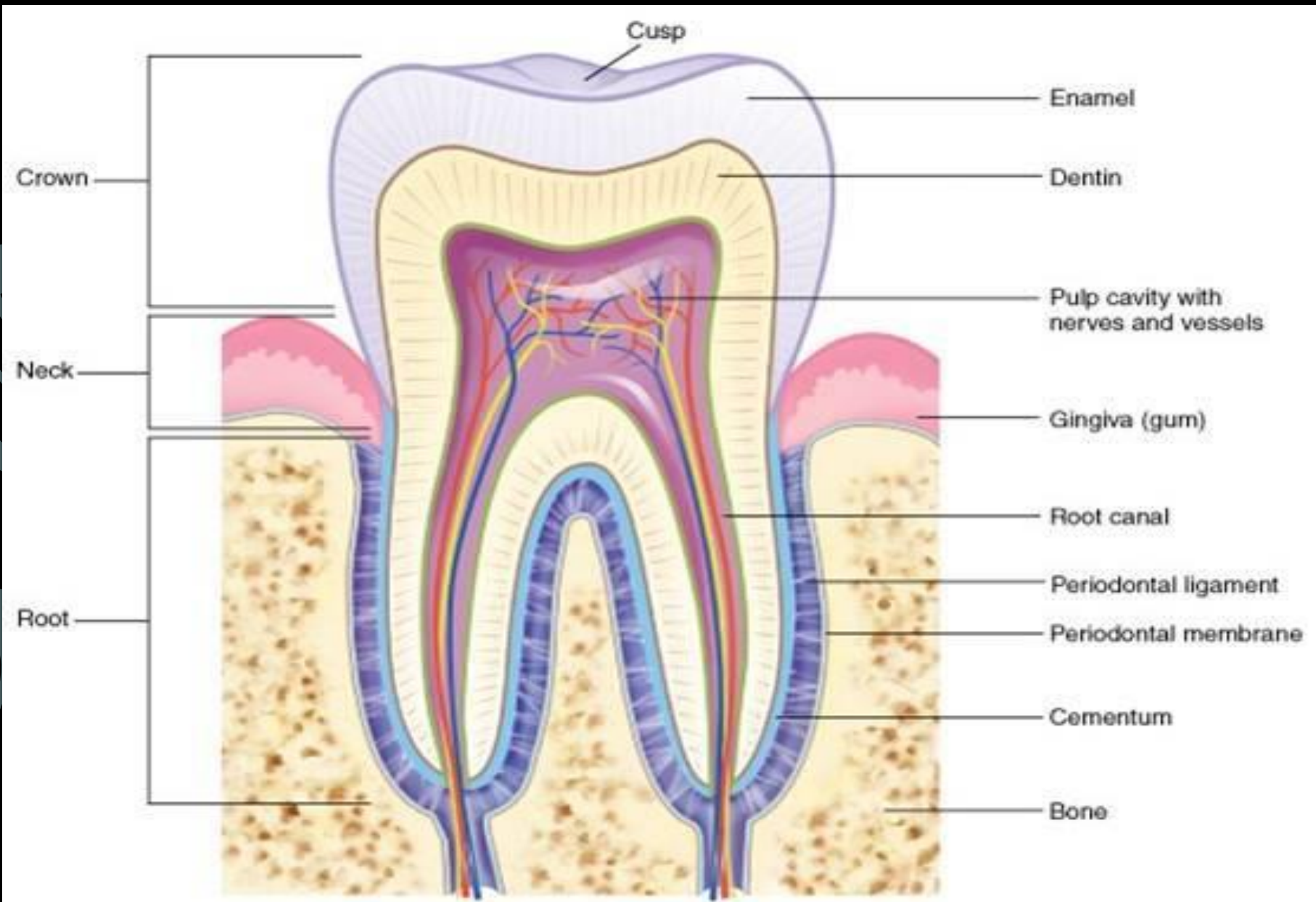
The pulp chamber is continuous with the pulp canal and collectively called as the "pulp cavity".

Anatomical crown: is the portion of the tooth that covered by enamel.

Clinical crown: is the portion of the tooth which is visible in the mouth.

- In a healthy person the anatomical crown is larger than the clinical crown.







The number of roots

1. Single root: in all anterior teeth, mandibular premolars and maxillary second premolar.
2. Two roots with bifurcation: in mandibular molars and maxillary first premolar. Division of the tooth root is known as furcation.
3. Three roots with trifurcation: in maxillary molars.

Thank You

