English language

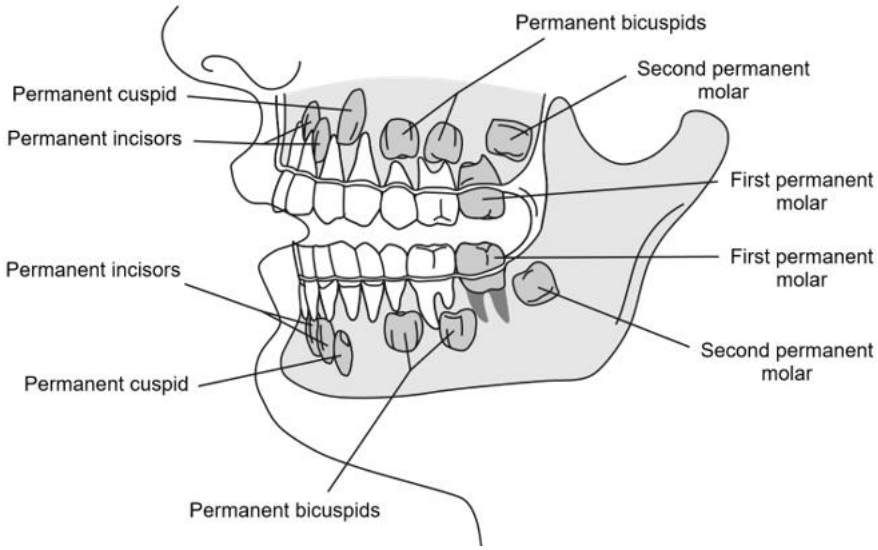
Dental terminology Dr Firas Albaaj

(Part I)

CLASSIFICATION OF THE HUMAN DENTITION

Each human receives two sets of teeth. The first set, or **deciduous** (de-**SID-**you-us = *falling off)* teeth, is followed by the permanent **dentition** (den-**TISH**-un = *tooth arrangement*). The twenty deciduous teeth that erupt first are commonly called "baby teeth" or primary teeth. The thirty-two permanent teeth that erupt and replace the deciduous teeth are commonly called secondary teeth. The permanent teeth are also termed **succedaneous** (**suck**-seh-**DAY**-nee-us) because these teeth, with the exception of the molars, replace the deciduous teeth when the latter **exfoliate** (ecks-**FOH**-lee-ate = *scale off*).

Mixed dentition occurs from ages six to sixteen, when the dentition contains both deciduous and secondary teeth. Figure 3-1 illustrates mixed dentition. Although



Tooth Development. The tooth develop from various tissues:

- **odontoblasts** (oh-**DAHN**-toh-blasts = *dentin forming cells*): encourage cell growth to form the dentin, the bulk of the tooth.
- **ameloblasts** (ah-**MEAL**-oh-blasts = *enamel forming cells*): encourage cell growth to form the enamel covering tissue of the tooth crown.
- **cementoblasts** (see-**MEN**-toh-blasts = *cementum forming cells*): encourage cell growth to form the root-covering cementum tissue.

- **fibroblasts** (**FIE**-broh-blasts = *fiber forming germ cells*): encourage cell growth to form the periodontal ligaments.
- **osteoblasts** (**AHS**-tee-oh-blasts = *bone forming germ cells*): encourage cell growth to form alveolar bone.

Eruption (ee-**RUP**-shun = *breaking out*), It occurs when the tooth moves toward the oral cavity and enters through the tissues.

Attrition (ah-**TRISH**-un = *chafing or abrasion*). This wearing away occurs where teeth interact through mastication and speech.

Tooth Abnormalities

Changes or disturbances during any of the development stages can cause a variety of tooth irregularities or abnormalities, called **anomalies** (ah-**NOM**-ah-leez = *not normal*).

- **amelogenesis imperfecta:** (**ah-meal-oh-JEN-ih-sis =** *process of forming tooth enamel*) a genetic disorder resulting in the formation of defective enamel.
- **anodontia** (an-oh-**DON**-she-ah = *absence of teeth*): partial or total abscence of teeth.
- **dens in dente** (**DENZ** in **DEN-**tay = *tooth in tooth*): a tooth enfolding on itself to form a small cavity that holds a hard structure or mass; found most commonly on the lingual surface of the maxillary laterals.
- **dentinogenesis imperfecta** (**den**-tin-oh-**JEN**-eh-sis = *occurring in dentin formation*; im-per-**FECK**-tuh =*inadequacy*): a genetic disorder characterized by weakened or gray-colored teeth or shell teeth resulting from poor formation.
- **enamel hypoplasia** (high-poh-**PLAY**-zee-ah = *underdevelopment of tissue*): lack of enamel covering.
- **fluorosis** (floor-**OH-**sis = *reaction to overfluoridation*): Fluorosis is a condition that results in tooth discoloration. It's caused by overexposure to fluoride in the early years of life.
- **fusion** (**FEW**-zhun = *joining together*): union of tooth buds resulting in large crown or root.

- **germination** (**jerm**-ih-**NAY**-shun = *development of germ cell*): single tooth germ separating to form two crowns on a single root.
- **Hutchinsonian incisors:** saw-like incisal edges of maxillary incisors, caused by maternal syphilis during tooth formation.
- **hypocalcification** (**high**-poh-kal-sih-fih-**KAY**-shun = *underbonding* or *incomplete calcification*): lack of hardening of tooth tissue, resulting in weak, susceptible teeth.
- **macrodontia** (**mack**-roh-**DAHN**-she-ah): abnormally large teeth.
- **microdontia** (**my**-kroh-**DAHN**-she-ah): unusually small teeth.
- **peg-shaped teeth:** a condition of small, rounded teeth that usually occurs in the maxillary lateral incisors.
- **supernumerary** (**sue**-per-**NEW**-mer-air-ee = *extra*): more than the normal amount of teeth.

TISSUE STRUCTURE OF THE TEETH

Although there are four different types of teeth—incisors, canines/cuspids, premolars, and molars—all teeth possess the same tissues formations, anatomical basics, and structural landmarks.

Enamel

Enamel (eh-**NAM**-el) is a hard tooth covering that is 96 percent inorganic. Tooth enamel exhibits a variety of unique structures and characteristics.

rods: slightly curved, prism-like structures that extend from dentinoenamel junction to the outer surface; tightly packed with an organic matrix material to give a smooth, hard surface.

Dentin

Dentin (**DEN**-tin), the main tissue of tooth surrounding the pulp, Dentin is present in both the crown and the root and may exhibit two unique characteristics.

tubules (**TOO**-bules = *small tubes*): also known as **Tomes' dentinal tubules**, small, S-shaped tubes or channels extending from the dentinoenamel wall to the pulp chamber. The tubules (see Figure 3-3) transmit pain stimuli and nutrition throughout the tissues

fibers (**FIGH-**bers = *threadlike films/elements*): also known as **Tomes' dentinal fibril**, fibers lying within the dentin tubule that help in sensation.

There are three different types of dentin tissue are:

primary dentin: dentin in newly formed tooth, the original dentin.

secondary dentin: occurs during regular development and maturing of tooth.

Tertiary dentin: occurs as protection from irritation, decay, trauma, attrition. This irregular dentin is also called "reparative dentin,"

Pulp

Pulp (= *soft, vascular tooth tissue*) is found in the center of the tooth. It is encased in the **pulp chamber** in the crown, and in the **pulp canal**, located in the root section of the

pulpitis (pul-**PIE**-tis = *pulp inflammation*): also called toothache; occurs for many reasons.

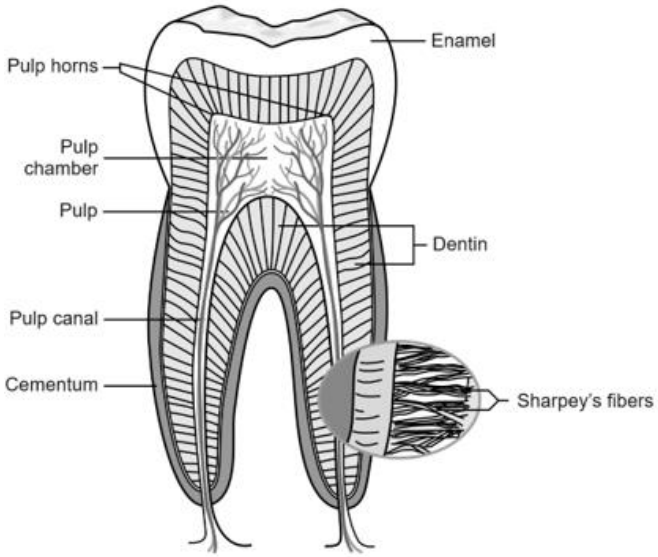
pulp stone: also known as **denticle** (**DEN**-tih-kul), a calcified mass within the pulp tissue.

periapical cyst (SIST): a closed, fluid-filled sac near the root apex.

Periapical granuloma (gran-you-**LOH**-mah) = *granular tumor or growth*): a growth or tumor usually found in the root apex.

Cementum

Cementum (see-**MEN**-tum = *tissue covering of tooth root*) is approximately 55 percent inorganic, rough in texture, and meets the enamel tissue at the **cementoenamel** (cement-enamel junction) **junction** that is located at the neck of the tooth. The function of cementum is to protect the root and provide rough surface anchorage for attachment of **Sharpey's fibers,** that are connective tissue fibers of the periodontal ligament. There are two kinds of cementum.



(C) Cementum

Thank you

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