

Community Dentistry

Lec 20

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Normal teeth eruption

- Dentition in humans includes a temporary dentition and a permanent dentition;
- There are 20 temporary or deciduous teeth and they erupt between $\pm 6 - 10$ months of age for the lower jaw (7-12 months of age for the upper jaw) and ± 30 months;
- There are 28 permanent teeth (32 with wisdom teeth) and they appear between ± 6 and 13 years of age;
- Girls often have a faster dental development than boys;
- The eruption of the same tooth on both sides of the dental arch can be delayed. If this delay goes beyond 6 months, talk to your dentist;
- Primary dentition will be completed between the second and third years of age, and some primary teeth will remain in the mouth until about 12 years of age.

Deciduous teeth

The Importance of Deciduous Teeth

1. Allow proper mastication.
2. Prevent malocclusion.
3. Guide the eruption of the permanent teeth.
4. Esthetics.
5. phonetics

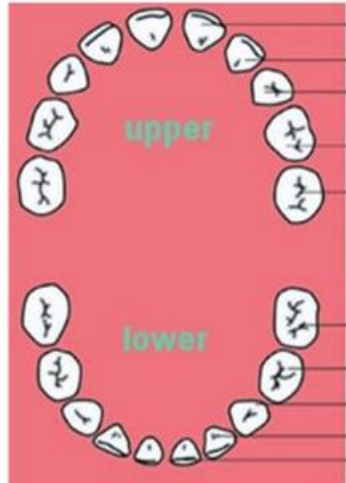
Estimation of dental age (chronology of tooth development and eruption).

- To evaluate the general health disturbances.
- To know the age of foreign children.
- **3.** In forensic dentistry, to know the victim.

The roots of the deciduous teeth are fully formed after eruption, then after a while resorption of these roots starts until exfoliation of the deciduous teeth occurs, followed by the eruption of the permanent successor teeth.

The eruption sequence of the deciduous teeth

- The eruption sequence of the deciduous teeth



The diagram shows two rows of deciduous teeth. The top row is labeled 'upper' and the bottom row is labeled 'lower'. Lines connect specific teeth in the diagram to their eruption and shedding times in the table.

	ERUPT	SHED
central incisor	8-12 months	6-7 years
lateral incisor	9-13 months	7-8 years
canine	16-22 months	10-12 years
first molar	13-19 months	9-11 years
second molar	25-33 months	10-12 years
second molar	23-31 months	10-12 years
first molar	14-18 months	9-11 years
canine	17-23 months	9-12 years
lateral incisor	10-16 months	7-8 years
central incisor	6-10 months	6-7 years

- **Note:** (gender differences) (jaw differences)

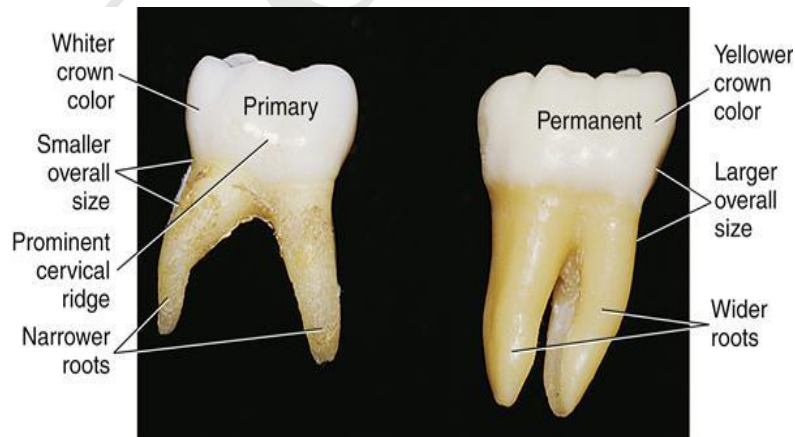
- **Primary teeth** no lower teeth earlier Than upper

Permanent teeth female earlier than male lower teeth earlier than upper

Principle differences between the deciduous and permanent teeth:

General Differences:

- 1.The deciduous teeth are 20 in number while the permanent teeth are 32 in number.
- 2.The deciduous teeth are smaller in all dimensions.
- 3.The deciduous teeth show less morphology variations
- 4.The enamel of the deciduous teeth is whiter and more opaque so they are whiter than the permanent teeth.
- 5.The enamel of the deciduous teeth is thinner(0.5-1mm); while in the permanent teeth it is (1.5-2.5mm).



Crown Differences:

- 1.The crowns of the deciduous teeth are more constricted at the cervix.
- 2.The cervical ridges in all deciduous teeth are more prominent.
- 3.The intercuspatal distance of the deciduous teeth is more constricted buccolingually.
- 4.The crown of the deciduous anterior teeth are wider mesiodistally as compared with crowns length.

Root Differences:

- 1.Lake of root trunk in the deciduous molars.
- 2.The roots of the deciduous teeth are shorter; weaker; and narrow.
- 3.The roots of the deciduous teeth are longer in proportion to the crown.
- 4.The roots of the deciduous molars are wider than the crown, to allow more room for the development of the successor permanent teeth.

Root Differences:

THE ROOT		
FEATURES	DECIDUOUS TEETH	PERMANENT TEETH
1. SHAPE	Larger and more slender	Shorter and bulbous
2. ROOT TRUNK	Smaller	Larger
3. WIDTH	Narrower mesiodistally	Broader mesiodistally
4. PHYSIOLOGICAL RESORPTION	During shedding of tooth	Absent

- The mandibular primary second molar (E) resembles the mandibular first permanent molar (6), except that the primary tooth is smaller in all its dimensions.
- The buccal surface is divided into three cusps that are separated by a mesiobuccally and distobuccally developmental grooves.
- Two cusps of all most equal in size are evident on the lingual surface and are divided by a short lingual groove.
- Mandibular first permanent molar (6) is situated distal to the mandibular primary second molar (E) with number 6 while the mandibular primary second molar(E) with number 5.

Practical Application Understanding Tooth Morphology

- **1.**Modification in the cavity depth and extension is required due to reduced thickness of enamel and dentin.
- **2.**Width of the occlusal cavity should be very much narrow in compliance with the narrow occlusal table.

- **3.**the inter proximal contacts of the primary teeth are broad and flat compared to those of permanent teeth. Use of a good wedge at the cervical part of the proximal box.
- **4.**Trying to prepare a gingival seat in a deep cavity may lead to encroachment into pulp chamber due to the cervical constriction present in deciduous teeth.
- **5.**Conical roots of primary anterior teeth facilitate easy removal.
- **6.**Extraction of deciduous molar teeth must be made with great caution. The premolar tooth bud is located between the flared roots of primary molars, which may be avulsed during deciduous tooth extraction