

# Dental anatomy

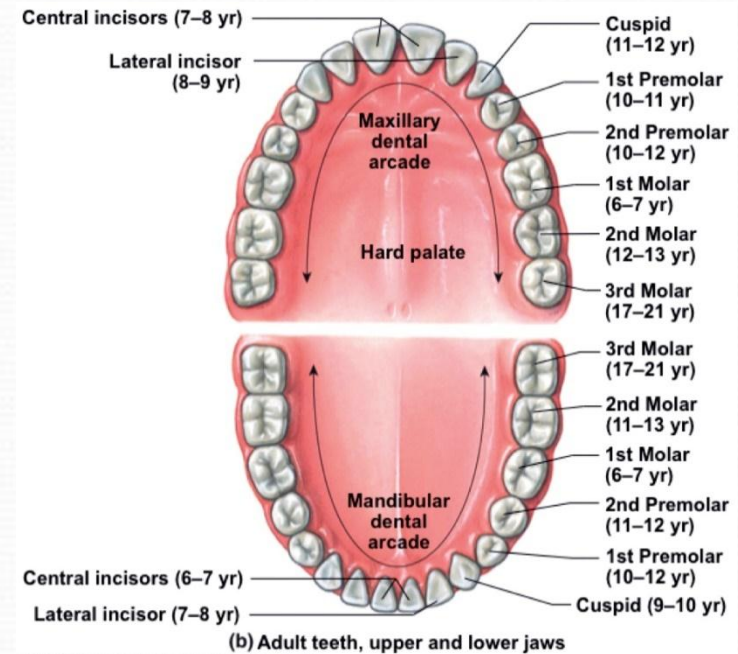
Lecture

Permanent maxillary 2<sup>nd</sup>  
molar



# Principle identifying features of the maxillary 2nd molar

- **No fifth cusp** “cusp of carabelli” is evident.
- Roots are divergent and may be coalescent (joined together).
- Both **distal cusps** (distobuccal and distolingual) are **less developed**.
- The **crown is smaller** in overall dimensions **than** the maxillary first molar.



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# Buccal aspect

- The crown is a little **shorter cervico-occlusally** (about 0.5 mm) and **narrower mesio-distally** than the maxillary 1st molar.
- The distobuccal cusp is smaller and allows part of the distal marginal ridge and part of the distolingual cusp to be seen.



Maxillary left 2<sup>nd</sup> molar



# Buccal aspect

- The **buccal roots** are about the **same** length. They are more nearly parallel and **inclined distally more than** those of the **maxillary 1st molar**. So the end of the distobuccal root is slightly distal to the distal extremity of the crown and the apex of the mesiobuccal root is on a line with the buccal groove of the crown instead of the tip of the mesiobuccal cusp as in the maxillary 1st molar.
- The **palatal root** is the **longer** (1 mm longer than the buccal roots).



Maxillary left 2<sup>nd</sup> molar

# Lingual aspect

- The **distolingual** cusp is **smaller** than that of the maxillary 1st molar.
- Part of the distobuccal cusp may be seen mesial to the distolingual cusp (through the sulcus between the mesiolingual and the distolingual cusps).
- No fifth cusp is evident.
- The **apex of the palatal root** is in **line** with the **distolingual cusp tip** instead of the **lingual groove** as was found in the **maxillary 1st molar**.



Maxillary left 2<sup>nd</sup> molar

# Mesial aspect

- The **buccolingual dimension** is the **same** as that of the maxillary 1st molar, but the **crown length** is **less**.
- The roots are **less divergent** buccolingually than those of maxillary molar, being **within the confines** of the crown.



Maxillary left 2<sup>nd</sup> molar

# Distal aspect

- Because the distobuccal cusp is smaller than that in the maxillary 1st molar, more of the mesiobuccal cusp may be seen from this aspect.



Maxillary left 2<sup>nd</sup> molar



# Occlusal aspect

- The **rhomboidal** shape of the occlusal aspect is more visible, in comparison with the maxillary 1st molar, the acute angles of the rhomboid is less and the obtuse are more.
- The **buccolingual** diameter is the **same** as the maxillary 1st molar, but the **mesiodistal** dimension is approximately 1 mm **less**.



Maxillary left 2<sup>nd</sup> molar



# Occlusal aspect

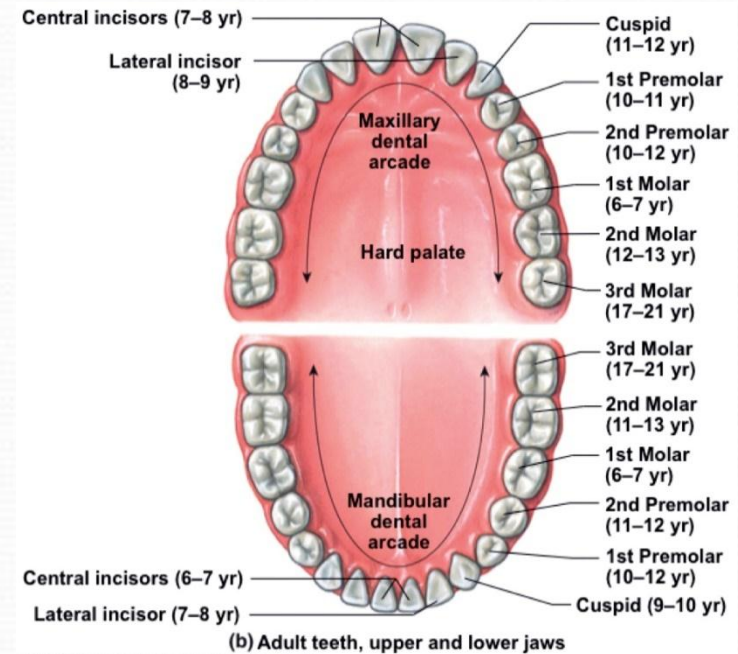
- The **distal cusps** (distobuccal and distolingual cusps) are smaller and **less developed** than those of **maxillary 1st molar**.
- No fifth cusp.
- It is not uncommon to find more supplemental grooves as well as pits on the occlusal surface than are usually found on the maxillary 1st molar.



Maxillary left 2<sup>nd</sup> molar

# Principle identifying features of the maxillary 3rd molar

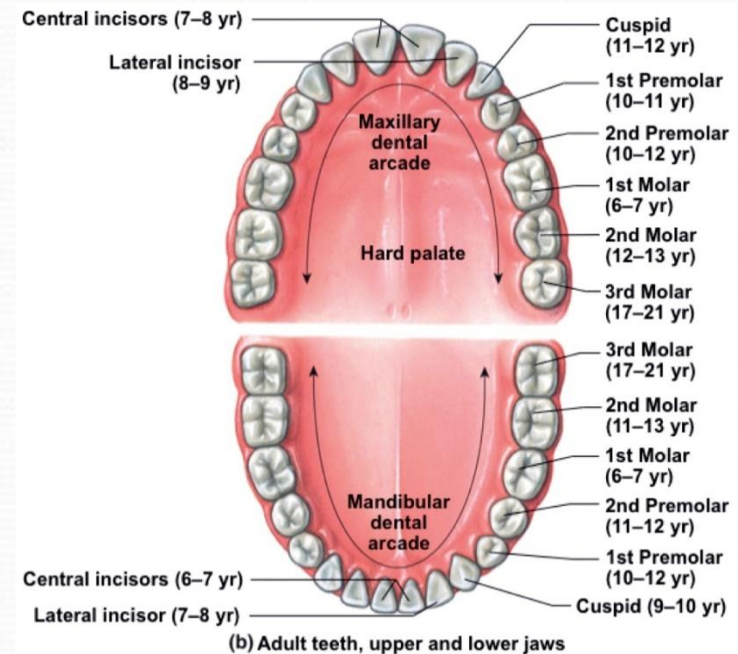
- It is the **smallest maxillary molar** tooth.
- Has a **triangular occlusal outline**, the distolingual cusp is very small and poorly developed and may be absent.
- The **roots are shorter, convergent, often fused**, and usually three in number.
- The mesiolingual cusp is the largest cusp.



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# Principle identifying features of the maxillary 3rd molar

- It may have many variations:
  - Heart shaped type with three cusps (most common type).
  - Rhomboidal shaped type with four cusps.
  - One cusp type occlusally (peg shaped).
  - Congenitally missing.



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# Principle identifying features of the maxillary 3rd molar

- A wisdom tooth, in humans, is any of the usually four third molars, mandibular and maxillary third molars.
- Wisdom teeth usually appear 17 - 25 years old. Most adults have four wisdom teeth, but it is possible to have more (they are called supernumerary teeth).
- Wisdom teeth commonly affect other teeth as they develop, becoming impacted or "coming in sideways". They are often extracted when this occurs.
- About 35% of the population do not develop wisdom teeth at all.



# Principle identifying features of the maxillary 3rd molar

- **Impacted** wisdom teeth fall into one of several categories:
  - **Mesioangular impaction** is the most common form (44%), and means the tooth is angled forward, towards the front of the mouth.
  - **Vertical impaction** (38%) occurs when the formed tooth does not erupt fully through the gum line.
  - **Distoangular impaction** (6%) means the tooth is angled backward, towards the rear of the mouth.
  - **Horizontal impaction** (3%) is the least common form, which occurs when the tooth is angled fully ninety degrees sideways, growing into the roots.



Great Thanks