

MANDIBULAR SECOND PREMOLAR

BY:

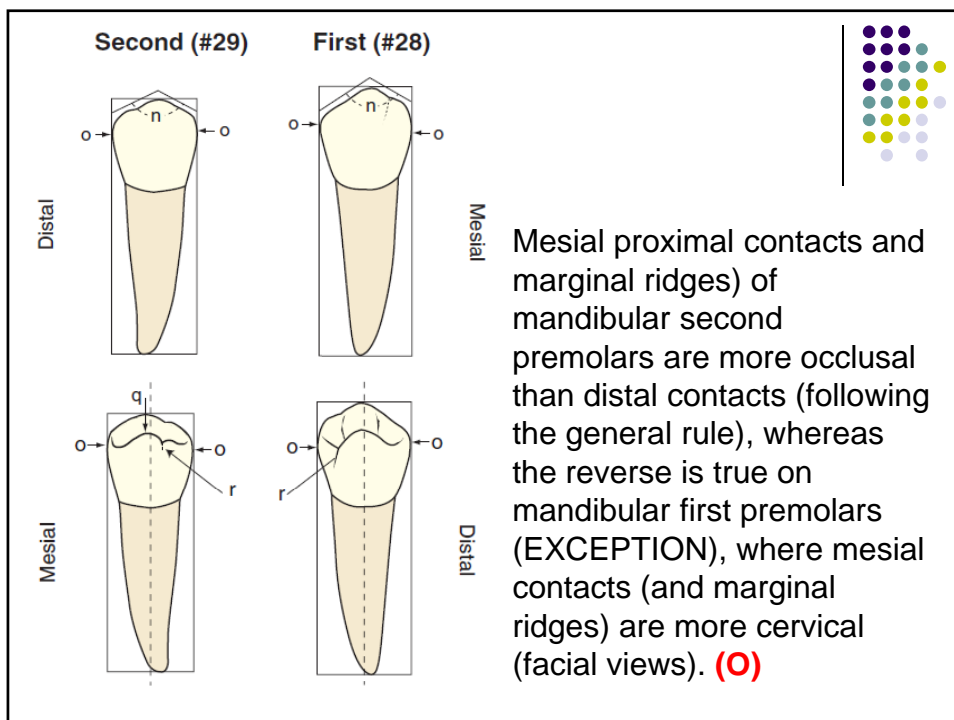
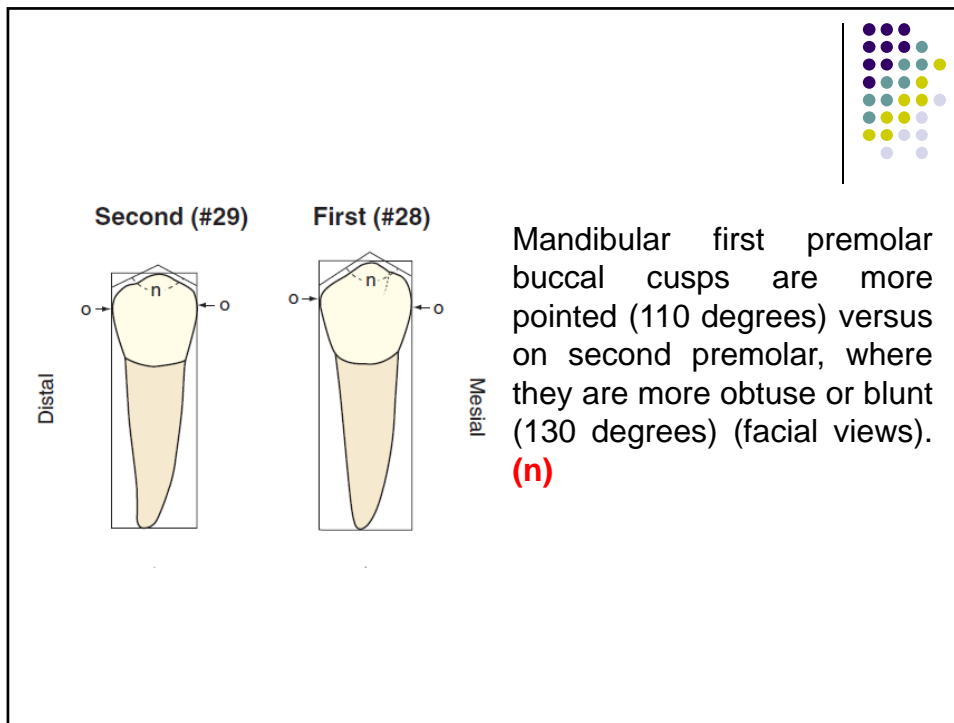
Dr. Gaurav Sapra

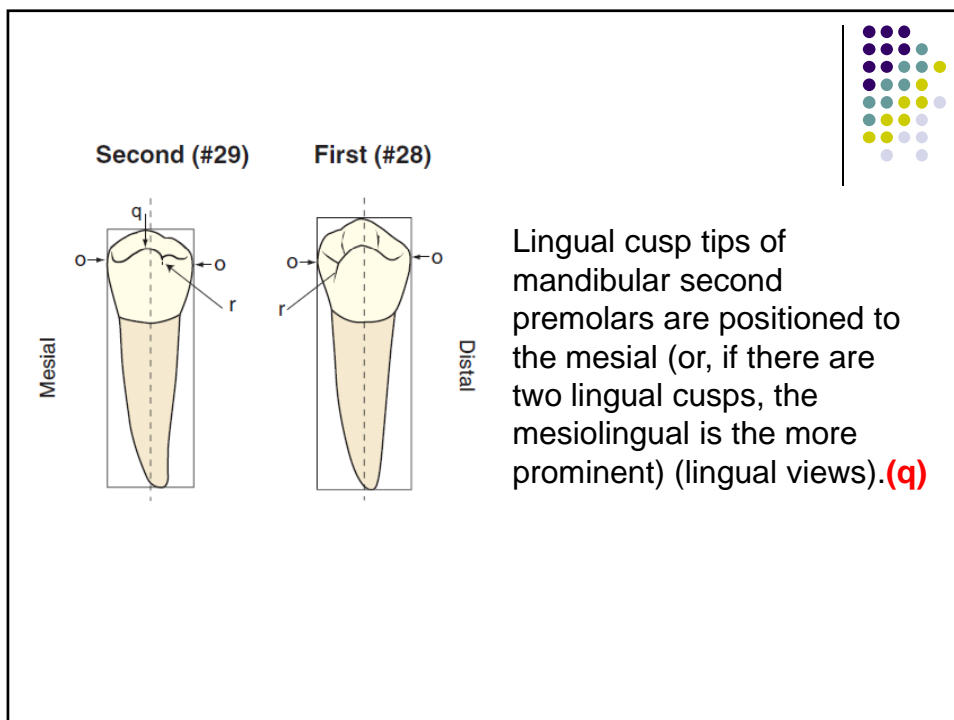
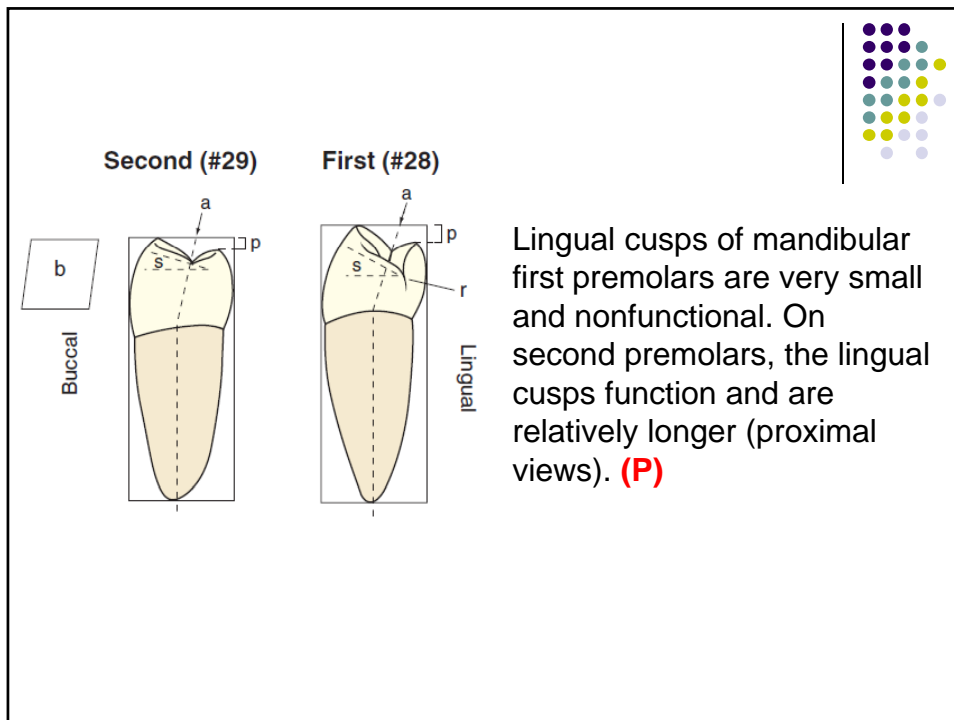
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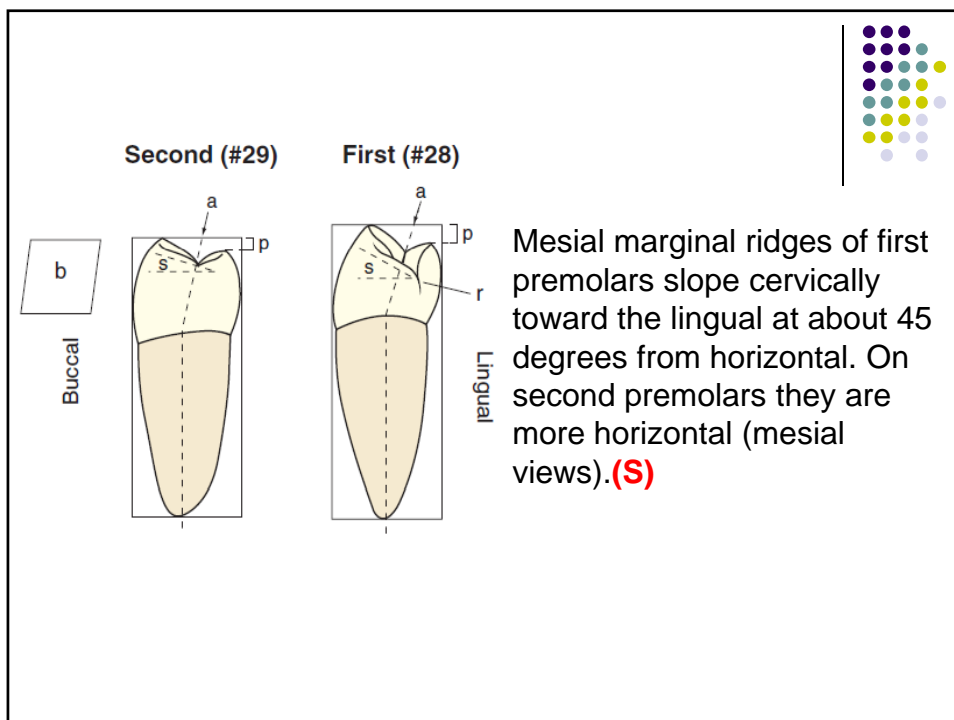
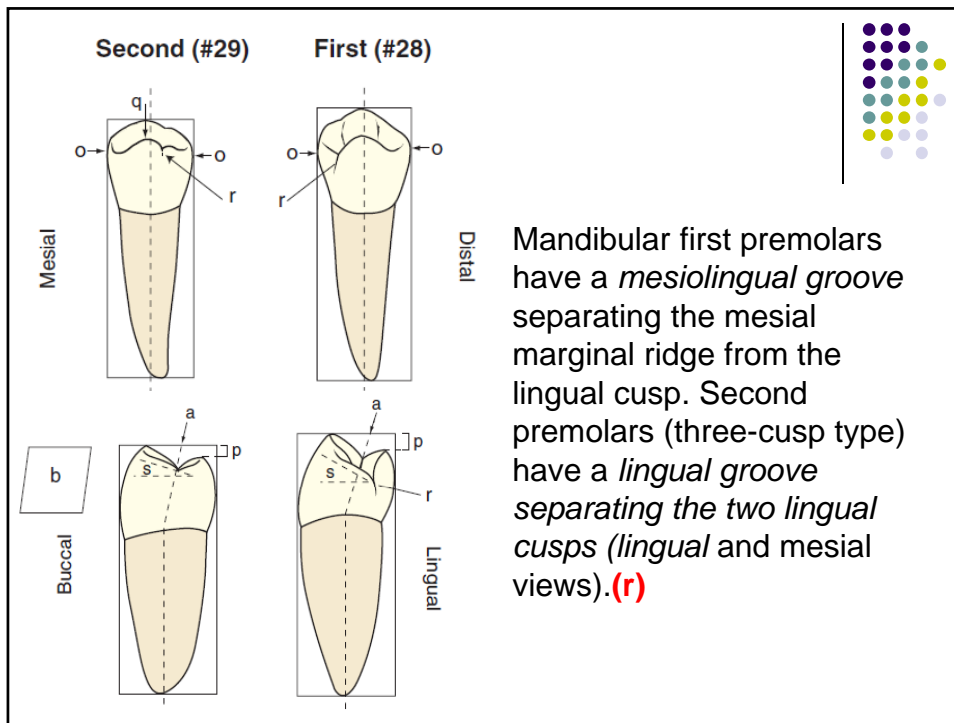


**Type traits distinguishing
Mandibular first from
Mandibular second premolars**







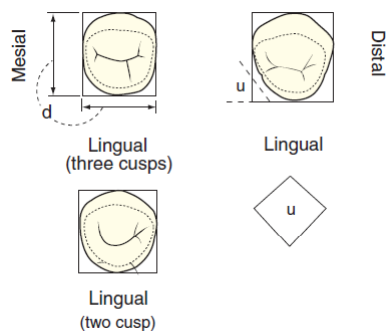




The mesial root surfaces of mandibular second premolars are the only premolar root surface (maxillary and mandibular, mesial and distal) not likely to have a midroot depression (best seen on models or actual teeth, not labeled in drawings)



Second (#29) First (#28)



Mandibular first premolars are the only premolars that have the mesiolingual corner, with its mesiolingual groove and low marginal ridge, pinched or squeezed in, forming about a 45-degree angle with the lingual surface. This makes the occlusal outline somewhat diamond shaped (occlusal views). (u)

MANDIBULAR 2nd PREMOLAR



- Resembles 1st premolar from buccal aspect
- From other aspects it appears larger & more well developed
- Two forms – three cusp & two cusp variety
- Single root, larger and longer than the 1st premolar
- Seldom bifurcated, deep development groove present buccaly

CHRONOLGY



- | | |
|---|--------------|
| • 1 st EVIDENCE OF CALCIFICATION | 2 ¼ – 2 ½ Yr |
| • ENAMEL COMPLETED | 6 – 7 Yr |
| • ERUPTION | 11 – 12 Yr |
| • ROOT COMPLETED | 13 – 14 Yr |

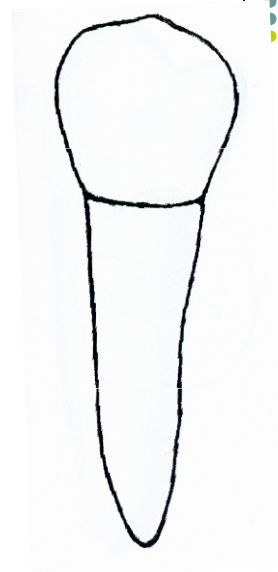
DIMENSIONS

- CERVICO OCCLUSAL LENGTH OF CROWN : 8.0
- LENGTH OF ROOT : 14.5
- M – D DIAMETER OF CROWN : 7.0
- M – D DIAMETER OF CROWN AT CERVIX : 5.0
- Bu – Li DIAMETER OF CROWN : 8.0
- Bu – Li DIAMETER OF CROWN AT CERVIX : 7.0
- CURVATURE OF CERVICAL LINE – MESIAL : 1.0
- DISTAL : 0



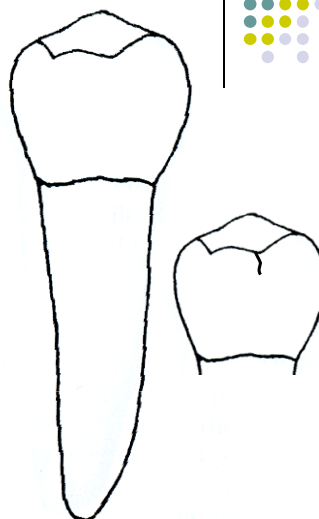
BUCCAL ASPECT

- Shorter buccal cusp
- Mesio Buccal , distobuccal cusp ridges are of a lesser angulation
- Contact areas appear to be higher
- Root is broader mesiodistally



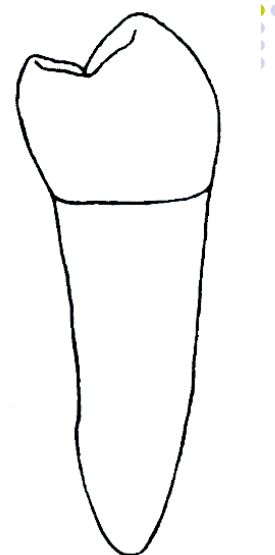
LINGUAL ASPECT

- LINGUAL LOBES WELL DEVELOPED, CUSPS LONGER
- LESS OCCLUSAL SURFACE SEEN
- THREE CUSP TYPE - buccal CUSP, mesiolingual CUSP, D- Li CUSPS. A GROOVE SEPERATES THE TWO LINGUAL CUSPS
- TWO CUSP TYPE - Buccal & Lingual CUSPS.
- DEVELOPMENT DEPRESSION PRESENT DISTOLINGUALLY
- ROOT SIMILAR TO 1st PREMOLAR
- LESS LINGUAL CONVERGENCE



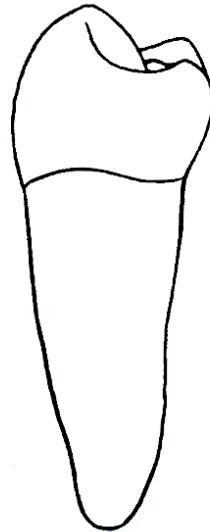
MESIAL ASPECT

- Crown & root wider buccolingual
- Buccal cusp is shorter
- Lingual lobe development is greater
- Marginal ridges parallel to long axis of tooth
- Less occlusal surface seen
- Root longer, slightly convex
- Apex more blunt



DISTAL ASPECT

- More of occlusal surface seen
- Distal marginal ridge is at a lower level than the mesial marginal ridge



OCCLUSAL ASPECT

- “Y” Shape (3 cusp)
- “H” Shape
- “U” Shape



3 CUSPS Buccal > Mesiolingual > Distolingual

- Each cusp separated by deep dev grooves
- Grooves converge in a central pit & form a “ y ” on occlusal surface
- Mesial , distal & lingual development grooves present
- Supplementary grooves radiate from developmental grooves

TWO CUSP OR ROUND CUSP TYPE :



- **Outline is rounded**
- **Mesiolingual & distolingual line angles are rounded**
- **One well developed lingual cusp present opposite buccal cusp**
- **Central development groove present, terminating in mesial & distal fossae**
- **Some show developmental depression across distolingual cusp ridge.**

Thank You

