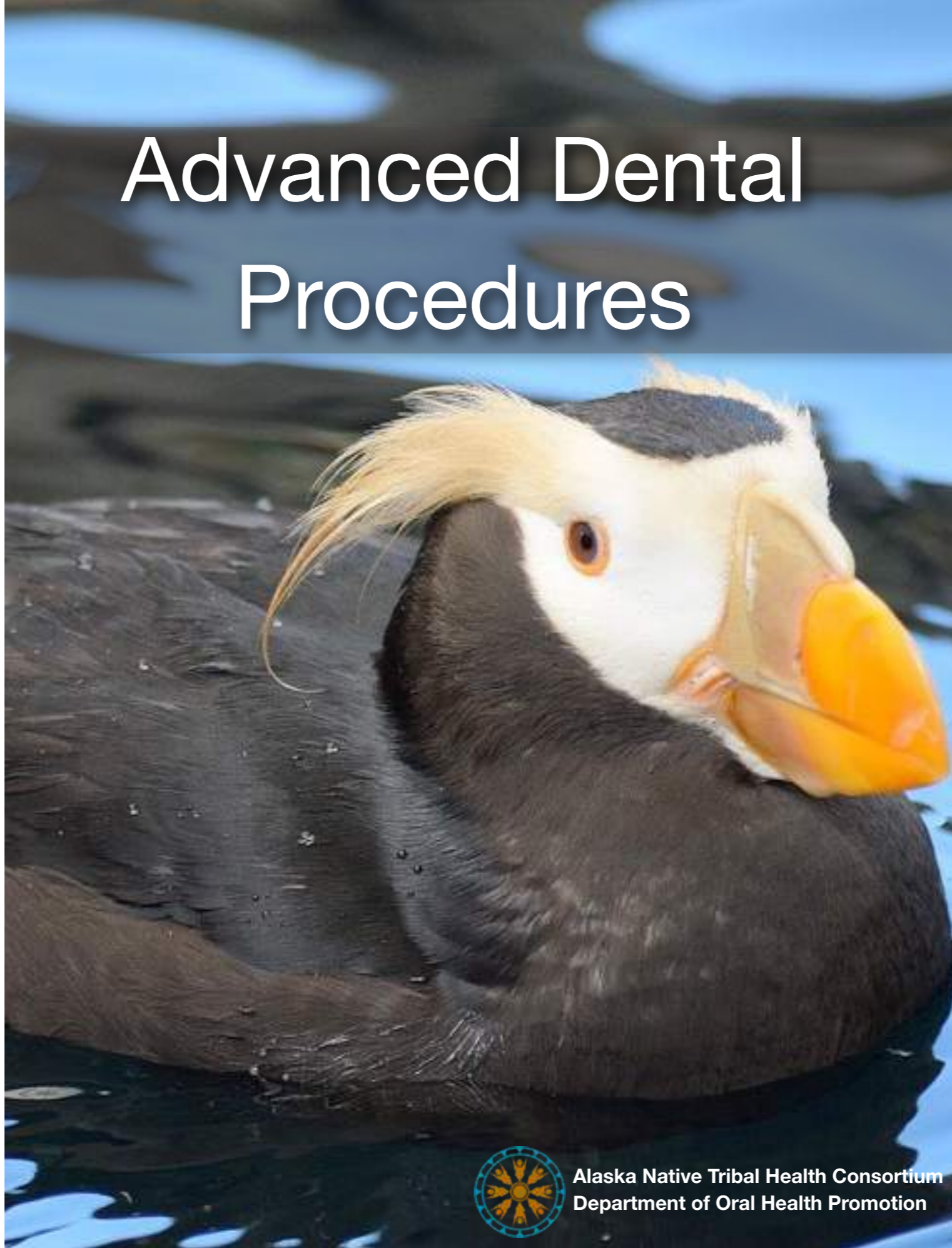


Advanced Dental Procedures



Advanced Dental Procedures

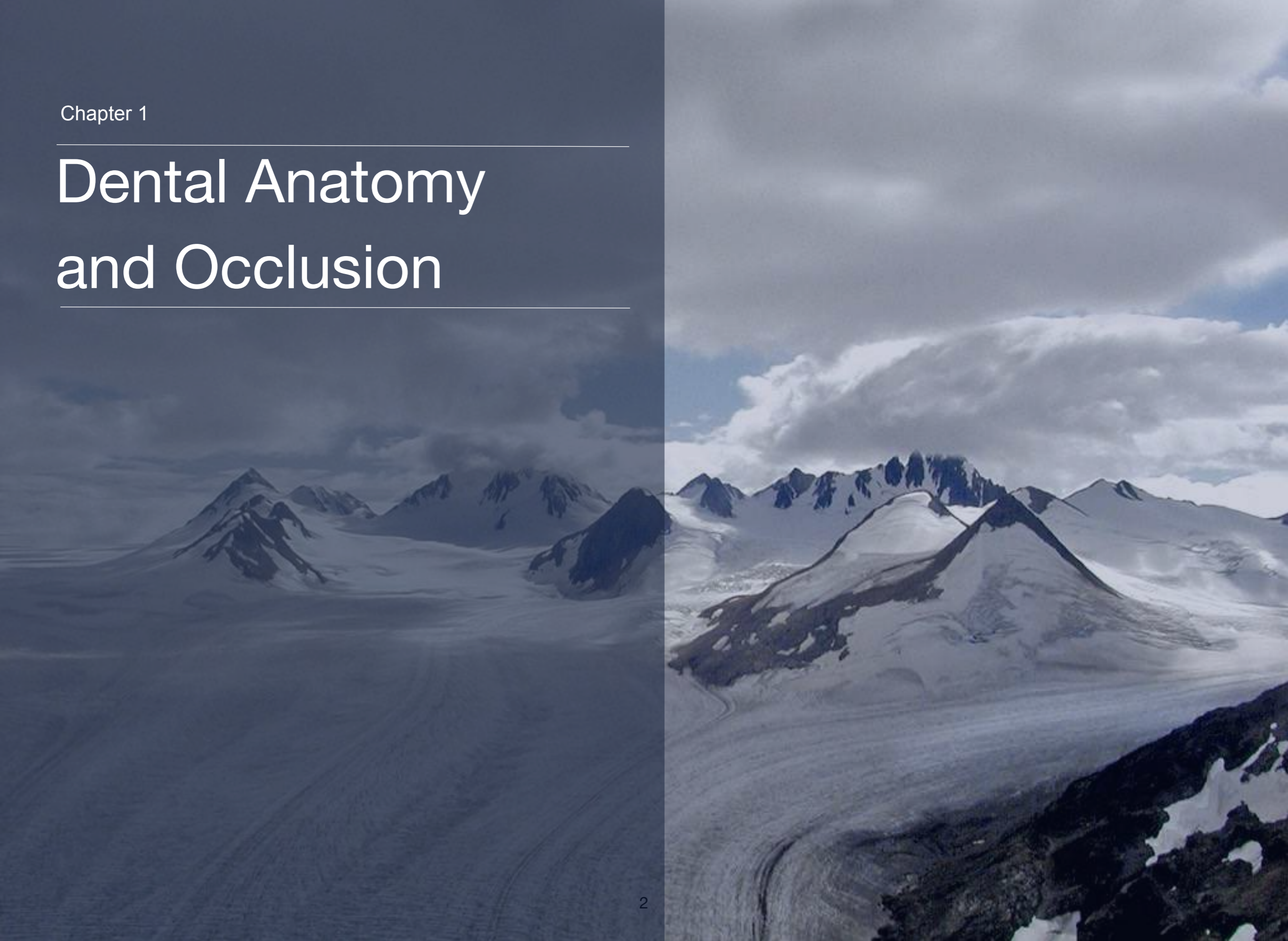
To prepare the Alaska Dental Health Aide to provide advanced dental procedures, the following topics are included:

- Dental Anatomy and Occlusion
- Tooth Anatomy Reference
- Periodontal Disease Process
- Caries Disease Process
- Dental Charting
- Patient Record Documentation
- Dental Instruments and Equipment
- Ergonomics
- Handling and Sterilization of Instruments
- Disinfection of the Operatory



Chapter 1

Dental Anatomy and Occlusion



Dental Anatomy and Occlusion

Overview

This chapter focuses on the form and shape of teeth. Each tooth has characteristics that will identify whether it is a left or right tooth or if it is an incisor or premolar. Knowledge about dental anatomy is important when charting teeth if there are missing teeth and when mounting radiographs. It is helpful when selecting temporary crowns, stainless steel crowns, and selecting rubber dam clamps. It is critical when restoring teeth to their original form and shape.

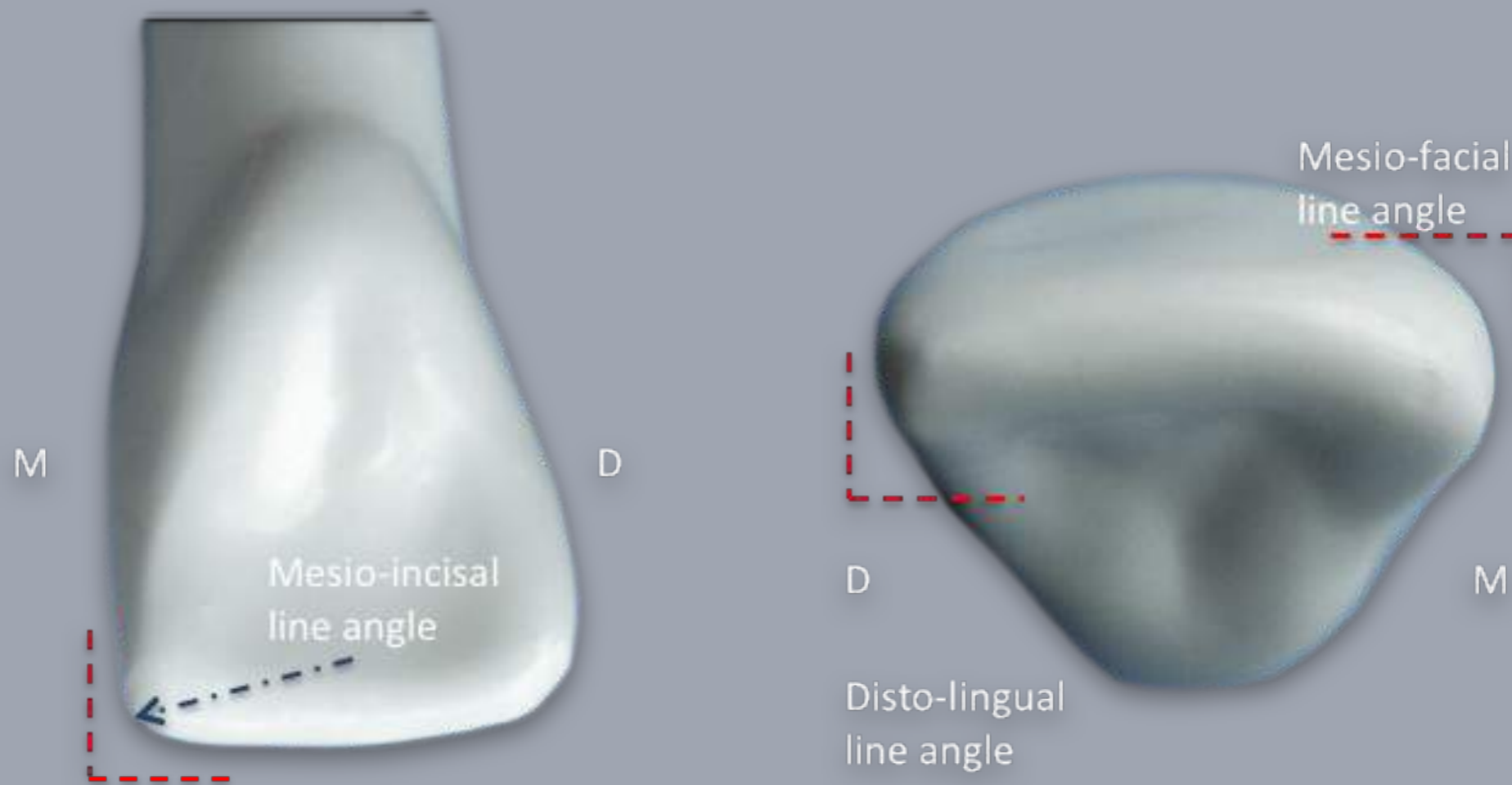
Learning Objectives:

- Identify line and point angles.
- Describe and identify common tooth elevations, ridges, depressions, and grooves.
- Describe embrasure spaces, contact points, heights of contour.
- Explain basic concepts of occlusion: working cusps, non-working cusps, maximum intercuspation, and excursive movements.

Dental Anatomy and Occlusion

Line Angles

- The junction line where two tooth surfaces meet.
 - Ex: Mesio-facial, Disto-facial, Disto-lingual, Mesio-lingual

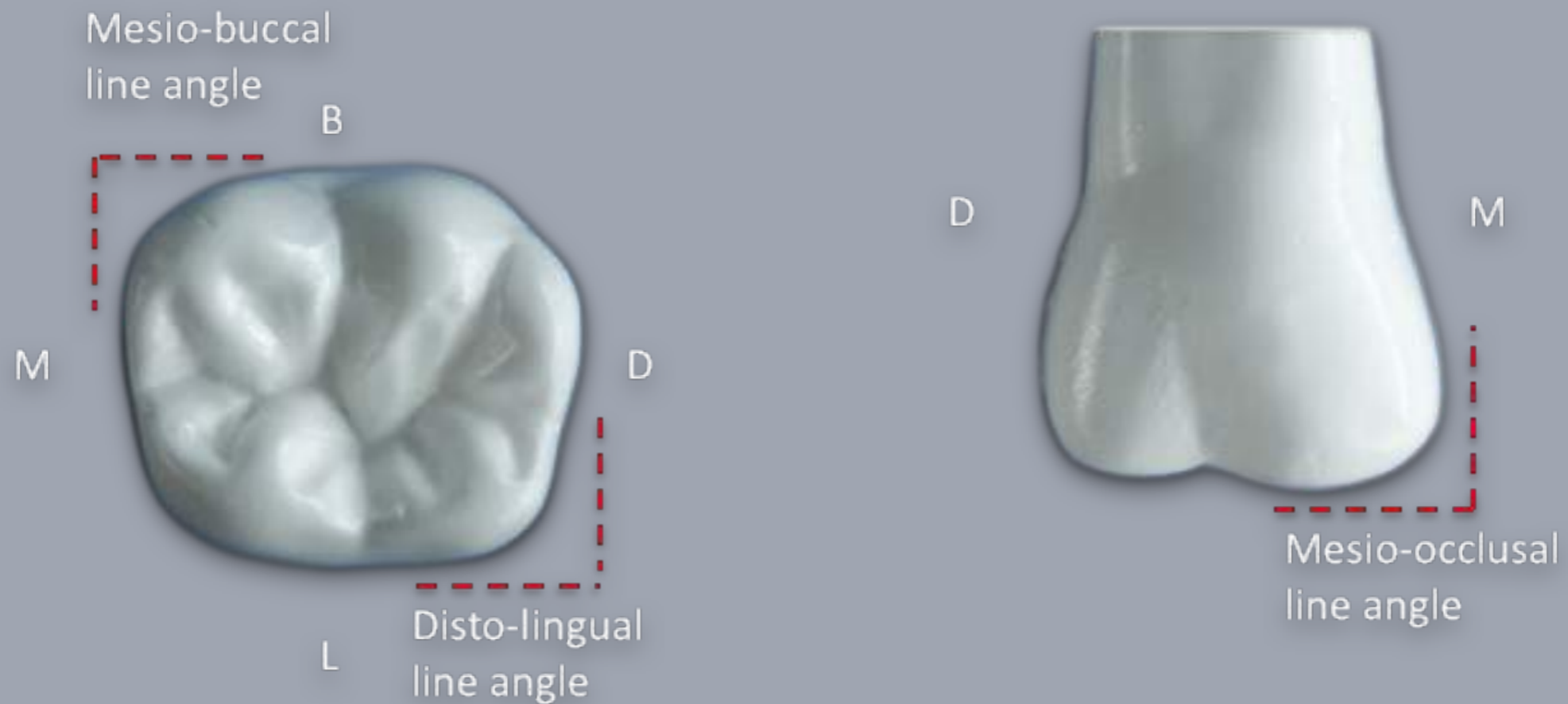


Dental Anatomy and Occlusion

Notes

Line Angles

- Posterior teeth will all be similar



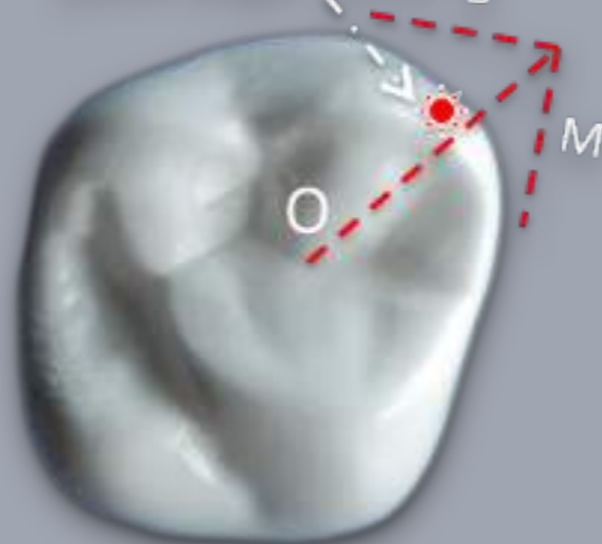
Dental Anatomy and Occlusion

Notes

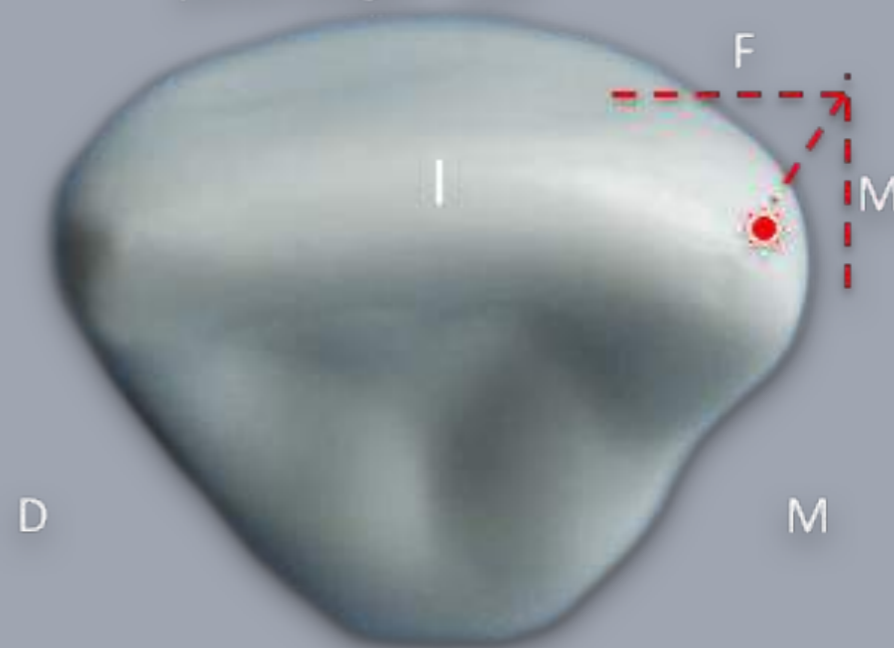
Point Angles

- The junction where three tooth surfaces meet at a single point.
 - Ex: MOB, MIF, DIL

Mesio-occlusal buccal
point angle MOB



Mesio-facial incisal
point angle MIF

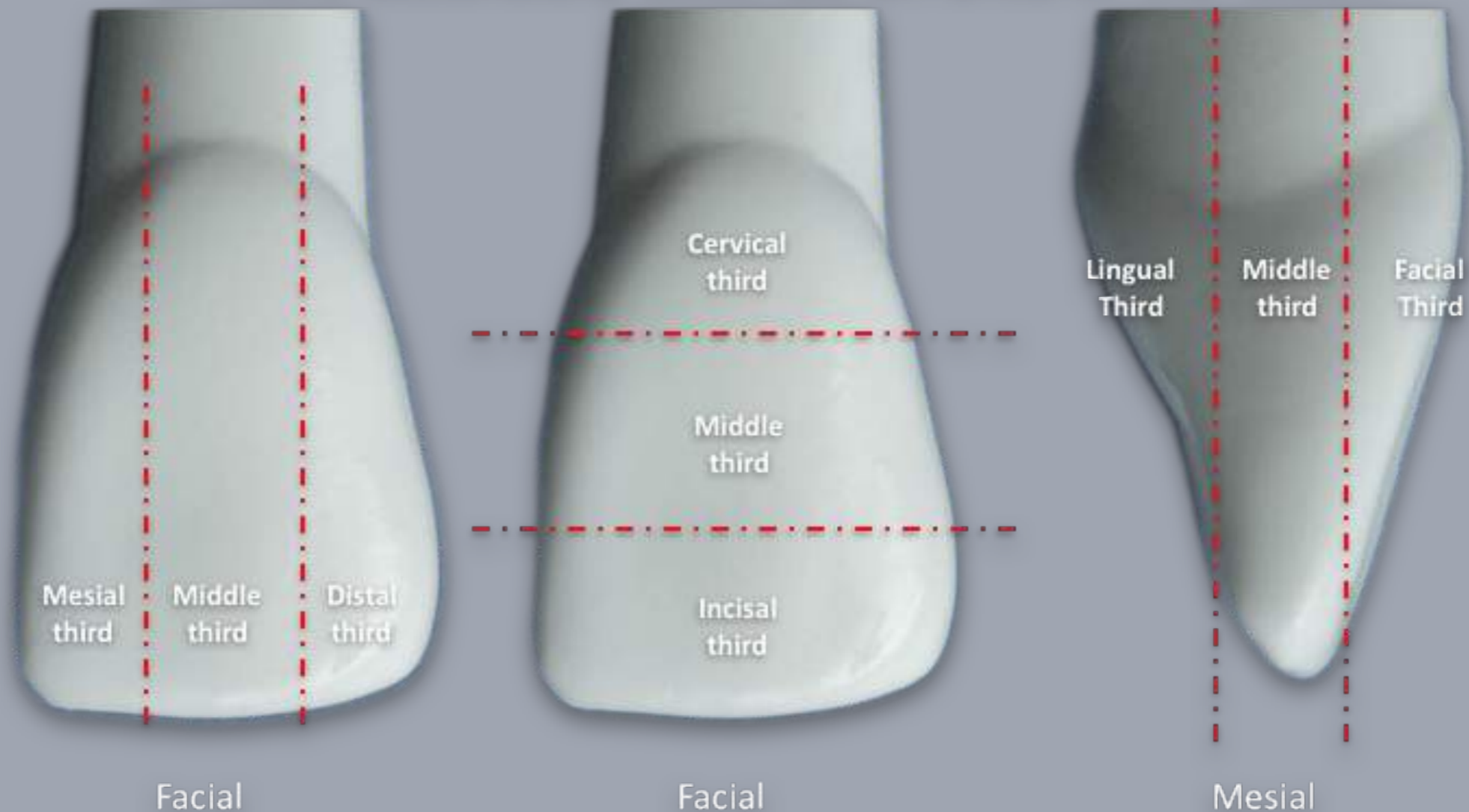


Dental Anatomy and Occlusion

Notes

Division of Thirds

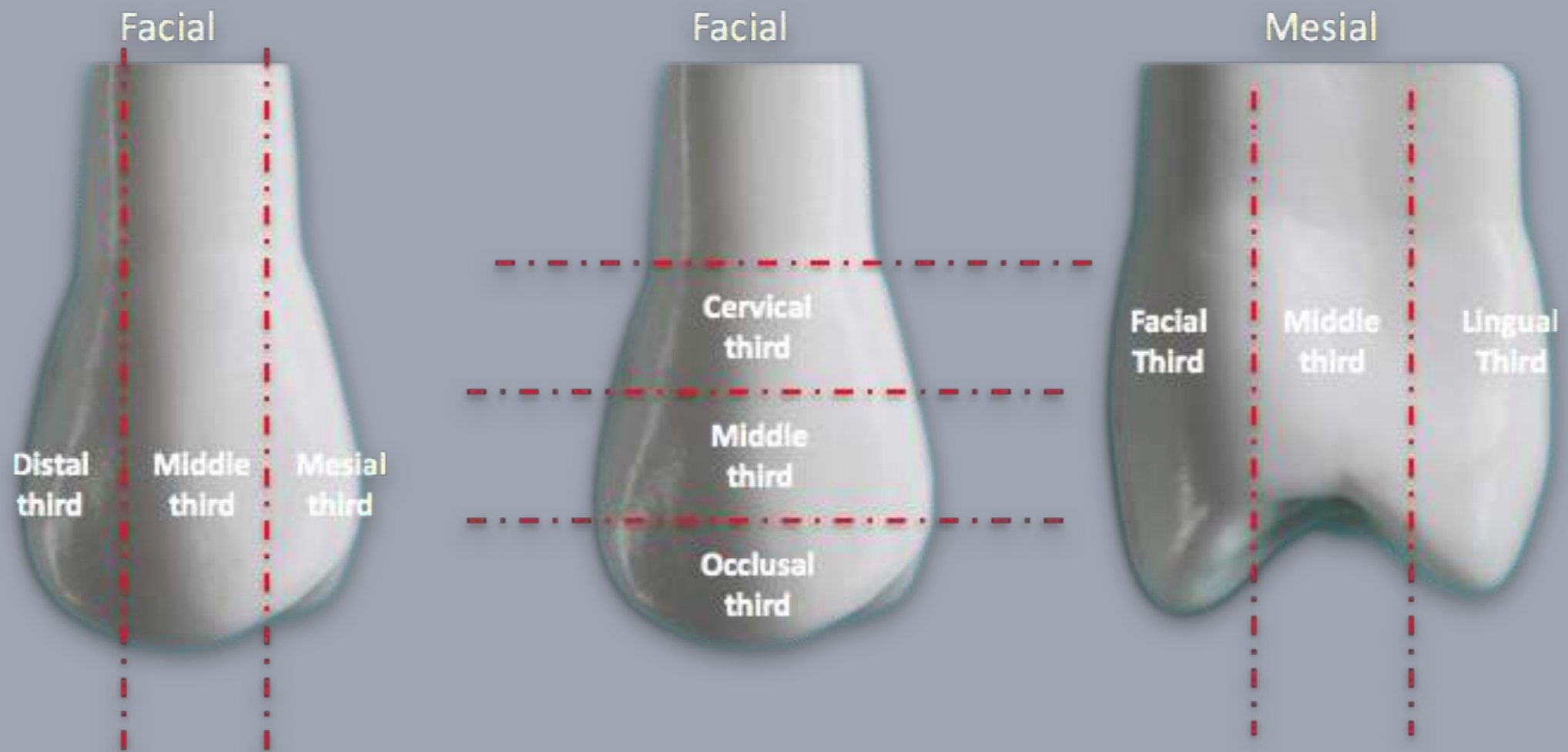
- The crown of the tooth can be divided into thirds to more accurately describe an area of the tooth.



Dental Anatomy and Occlusion

Notes

Division of Thirds

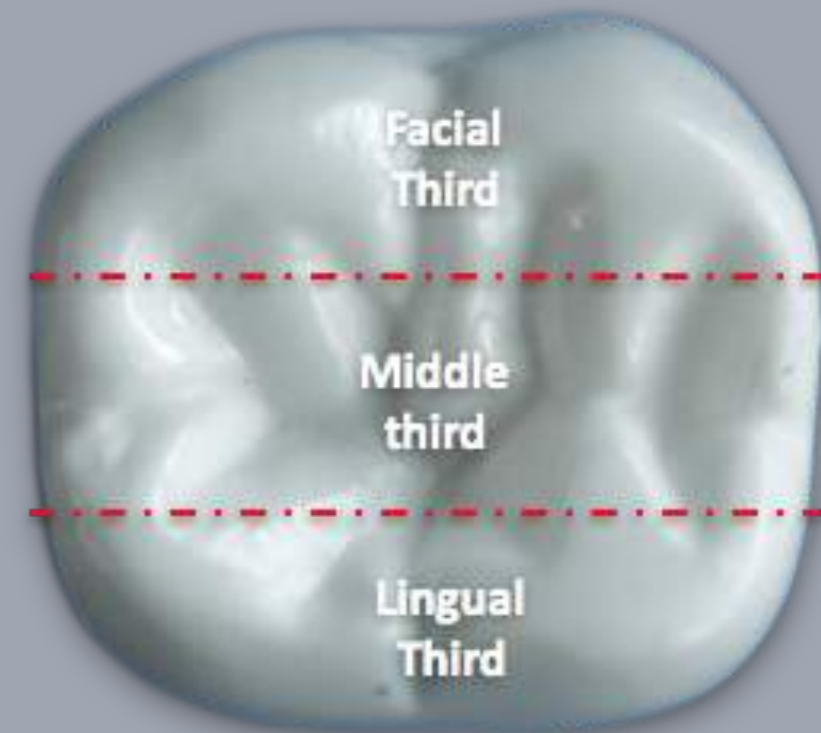
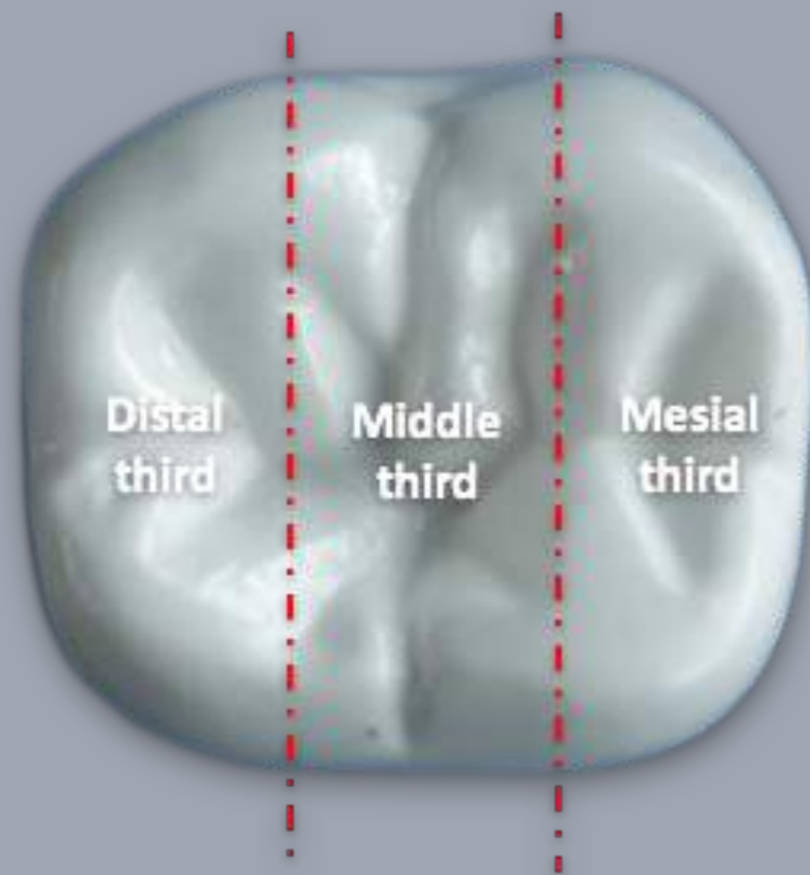


Dental Anatomy and Occlusion

Notes

Division of Thirds

Occlusal View



Dental Anatomy and Occlusion

Elevations & Ridges

Notes

Elevations and Ridges

- Cusps: formed from developmental lobes
- Mamelons:
 - Found on newly erupted incisors
 - Raised elevations or small tubercles
 - Usually worn off during mastication

Cingulum: a small protuberance found on the lingual surfaces of anterior teeth

Ridges: found on anterior and posterior teeth adjacent to fossae

- Marginal ridges
- Cusp ridges
- Triangular ridges
- Transverse ridges
- Oblique ridges

Dental Anatomy and Occlusion

Cingulum

Notes

*A small protuberance or bulge.



Dental Anatomy and Occlusion

Notes

Cingulum

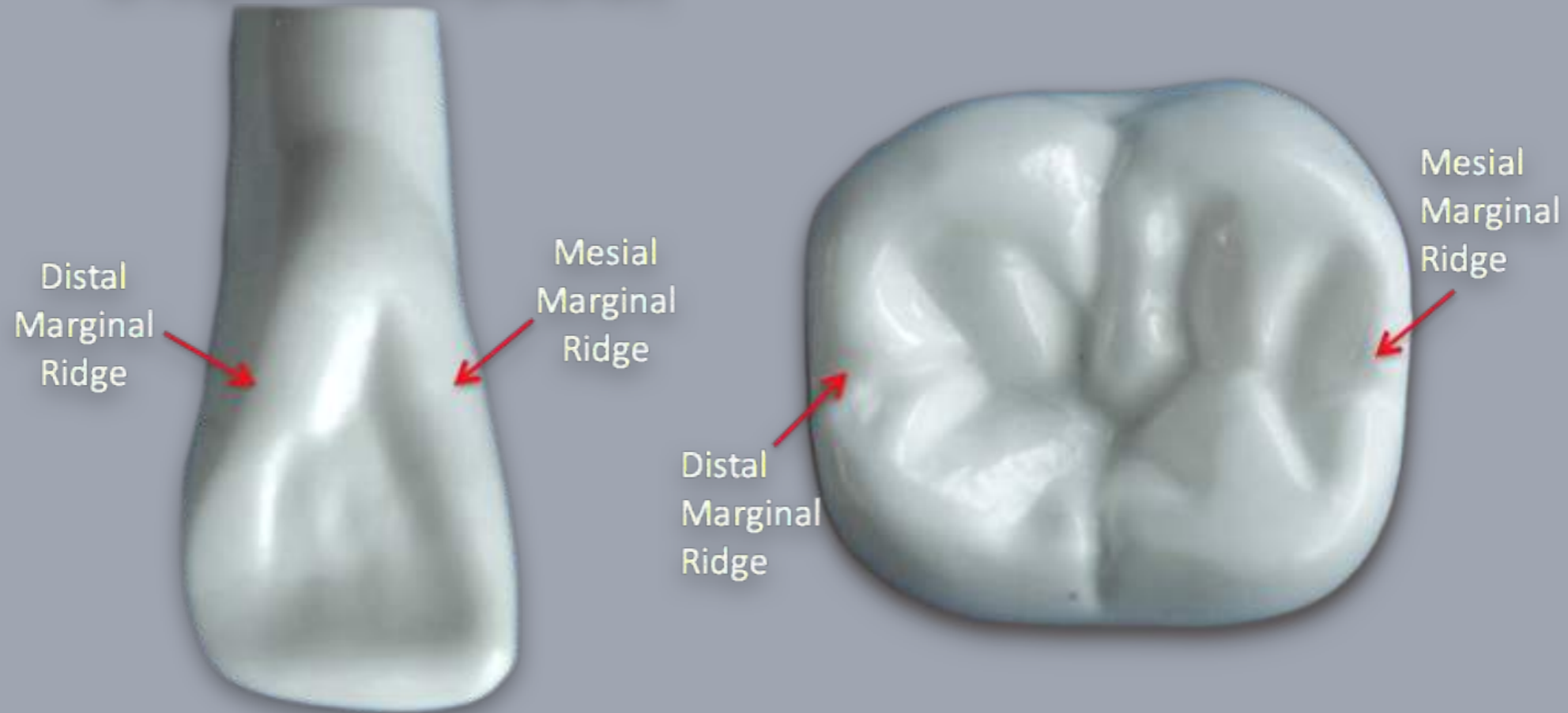


Dental Anatomy and Occlusion

Notes

Marginal Ridges

- *Named by its location: Mesial or Distal
- Adjacent to occlusal fossae/pits (posterior) or lingual fossae (anterior)

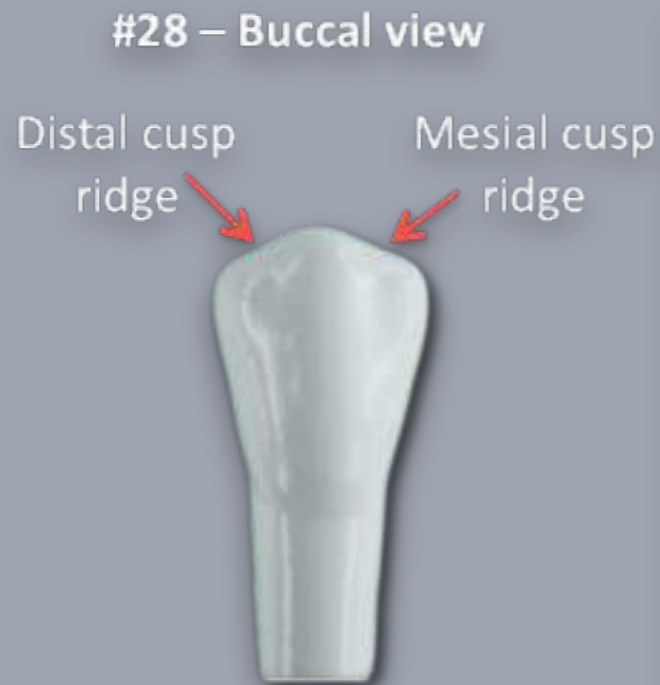


Dental Anatomy and Occlusion

Notes

Cusp Ridges

- Linear prominences that converge towards the cusp tip
- Named by its location: Buccal cusp ridges and lingual cusp ridges
 - Each cusp has 4 cusp ridges: mesial, distal, buccal, and lingual



#28 – Occlusal view



#28 – Occlusal view

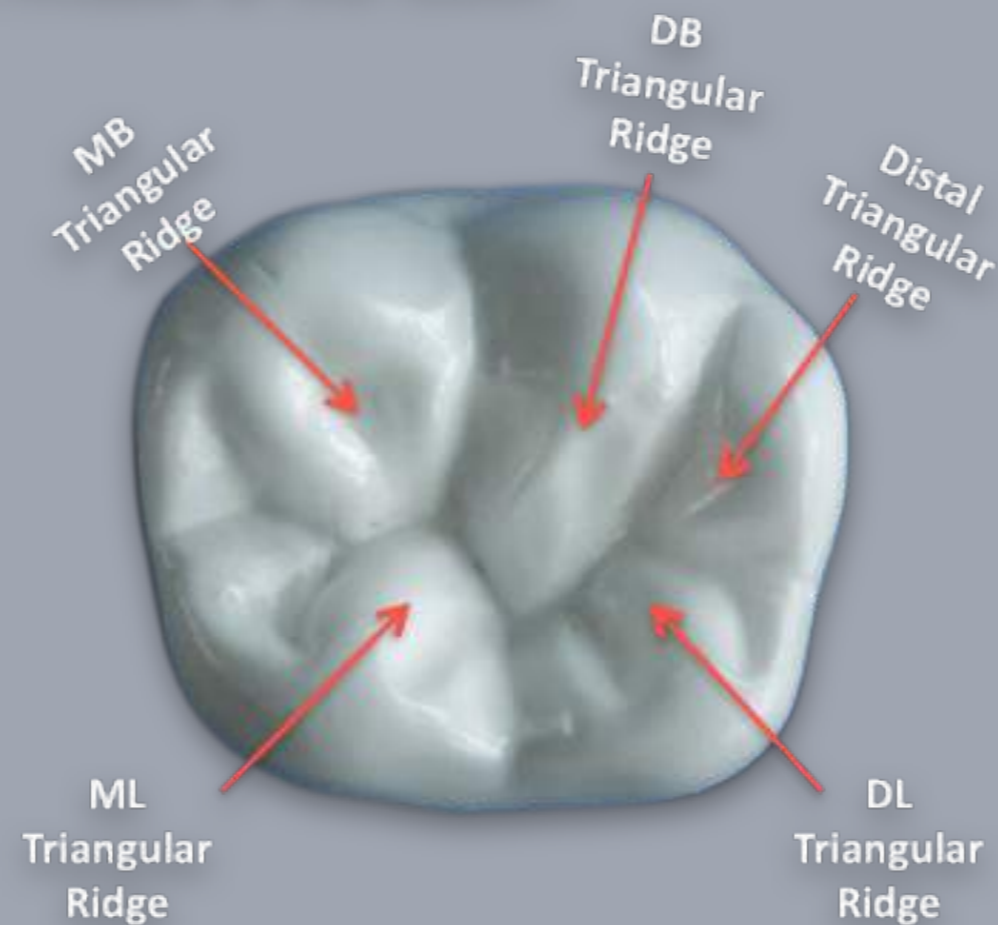


Dental Anatomy and Occlusion

Notes

Triangular Ridges

- Located on each major posterior cusp
- Extends from the cusp tip toward the depression located in the facial-lingual middle of the tooth

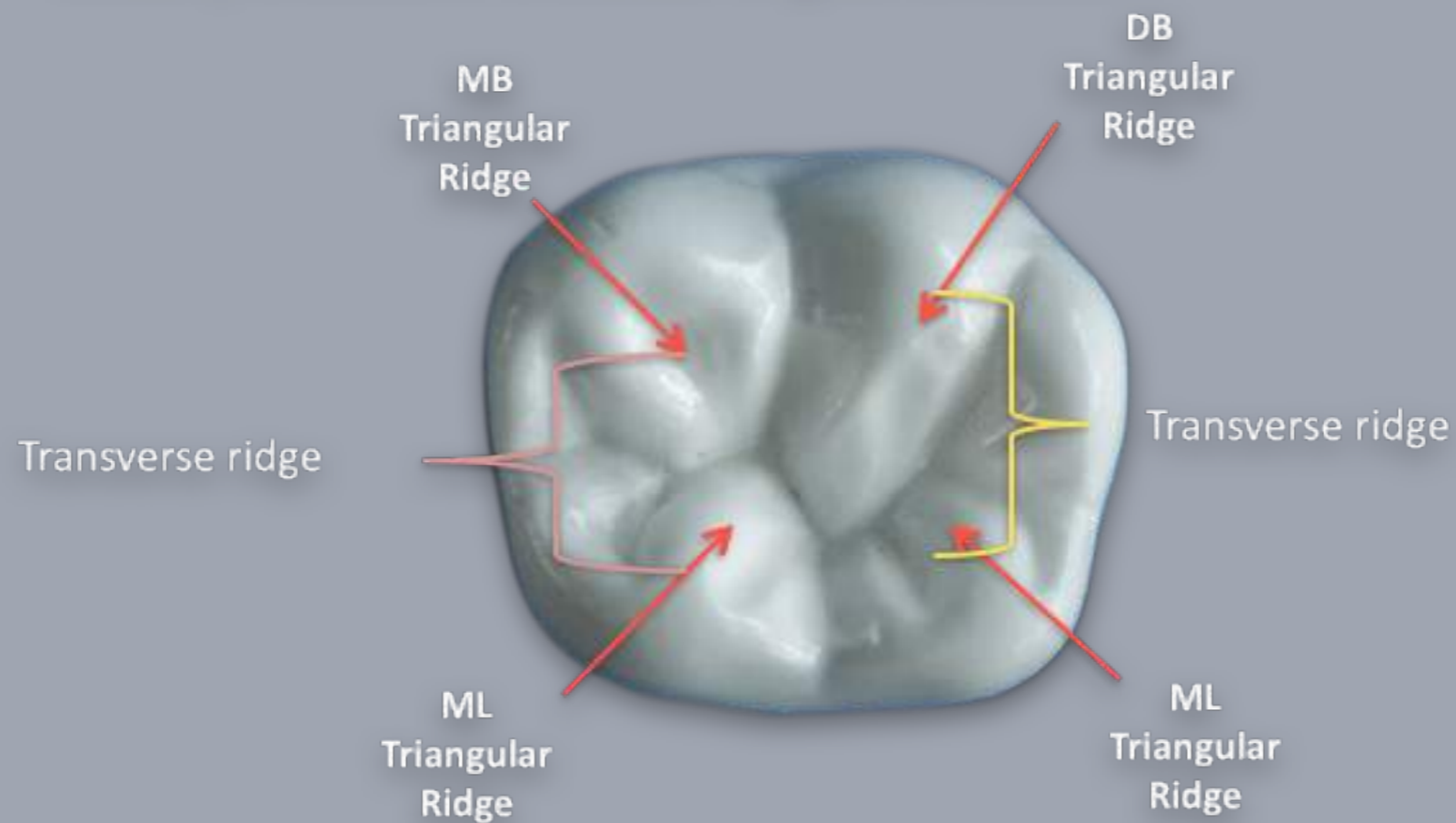


Dental Anatomy and Occlusion

Notes

Transverse Ridges

- The ridge that forms when a triangular ridge from buccal cusp joins the triangular cusp from a lingual cusp
- Usually crosses in a buccal-lingual direction



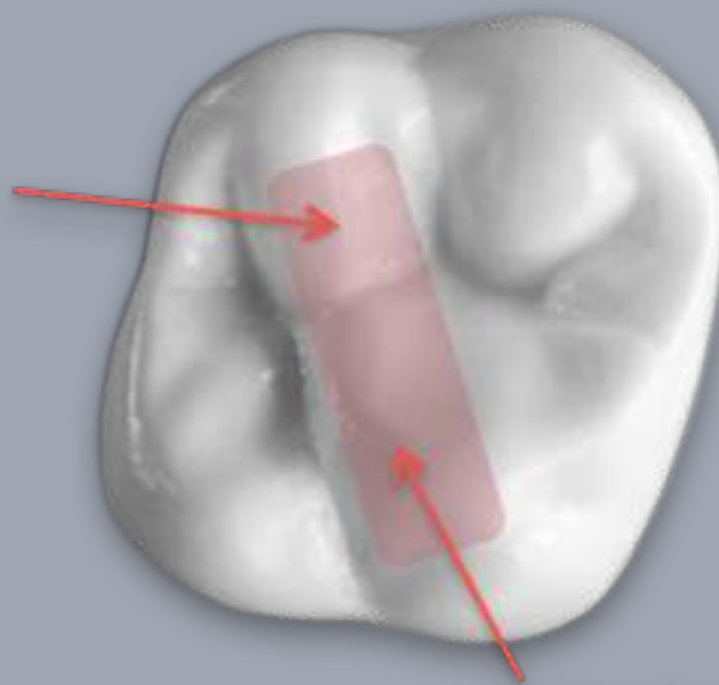
Dental Anatomy and Occlusion

Notes

Oblique Ridge

Unique to Maxillary molars

Triangular
Ridge of DB cusp



Distal cusp ridge of
ML cusp

Dental Anatomy and Occlusion

Notes

Depressions

Central Sulcus

- (the central groove)

Fossae

- A small depression that is usually found between marginal ridges of both anterior and posterior teeth
 - Central or Lingual
 - Triangular

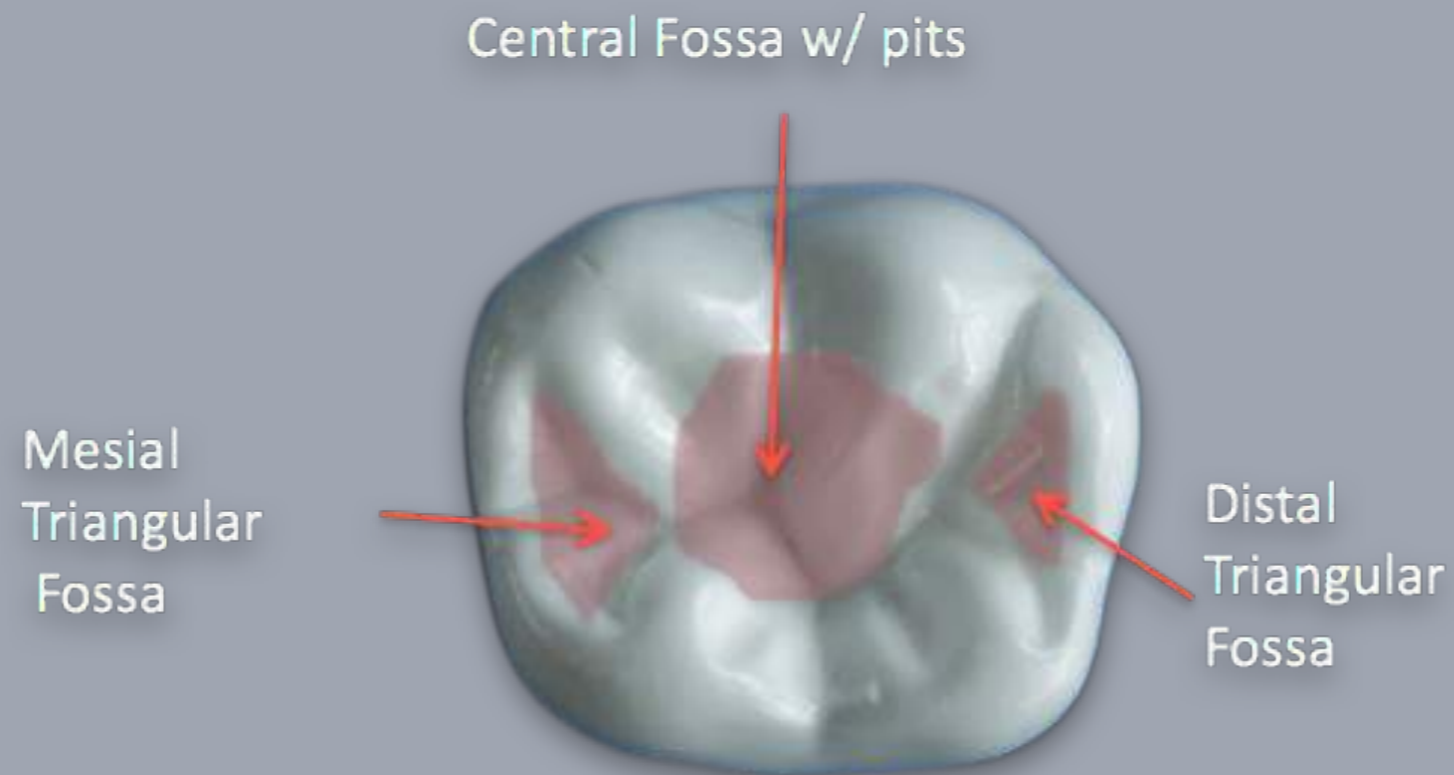
Pits

- Usually found at the deepest portions of fossae

Dental Anatomy and Occlusion

Notes

Depressions



Dental Anatomy and Occlusion

Notes

Grooves

Developmental

- Major sharply defined linear grooves that separate cusps
 - Central
 - Buccal
 - Lingual
 - Fossa development grooves

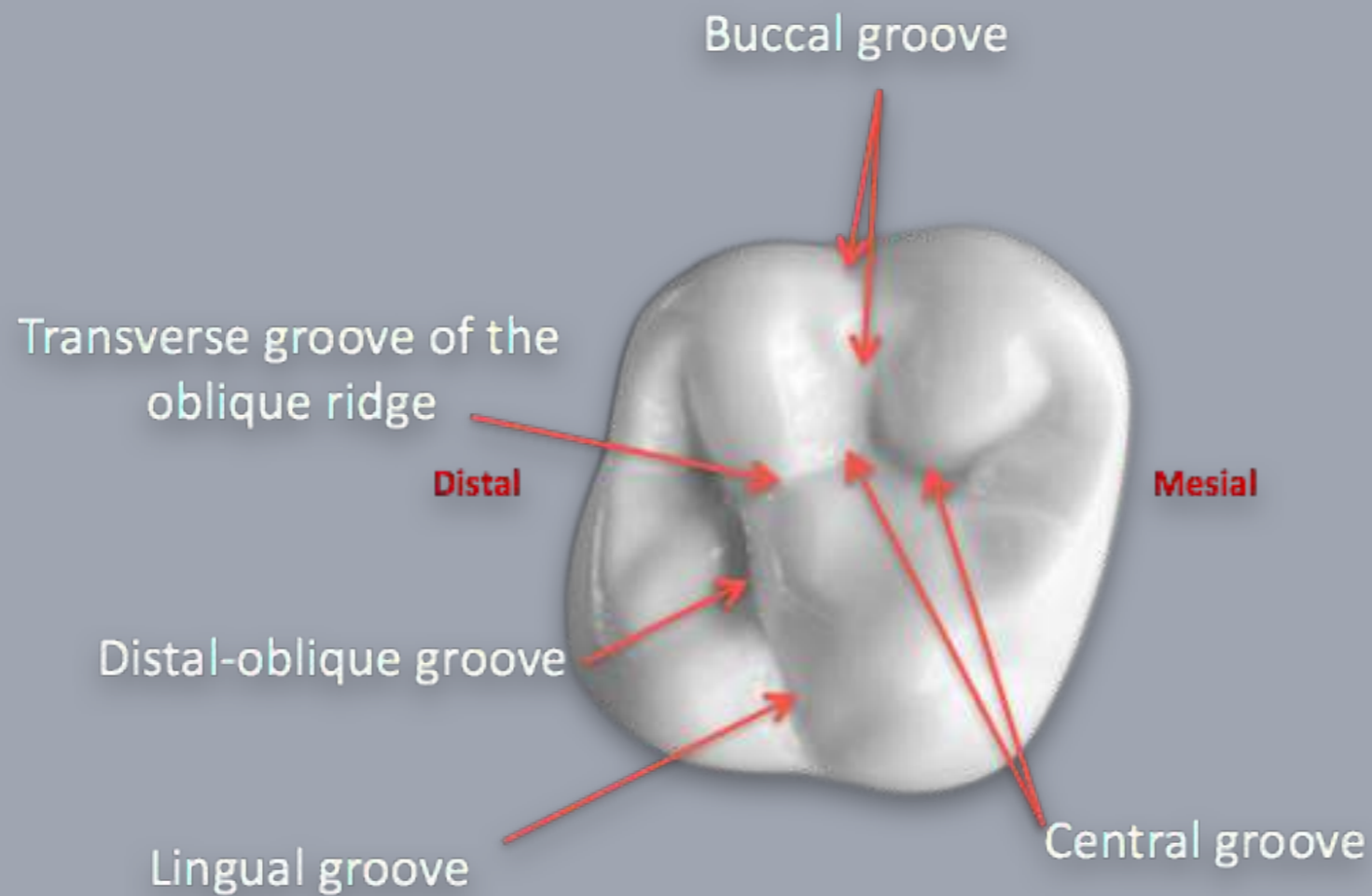
Supplemental

- Small, irregular, extra grooves

Dental Anatomy and Occlusion

Notes

Grooves



Dental Anatomy and Occlusion

Notes

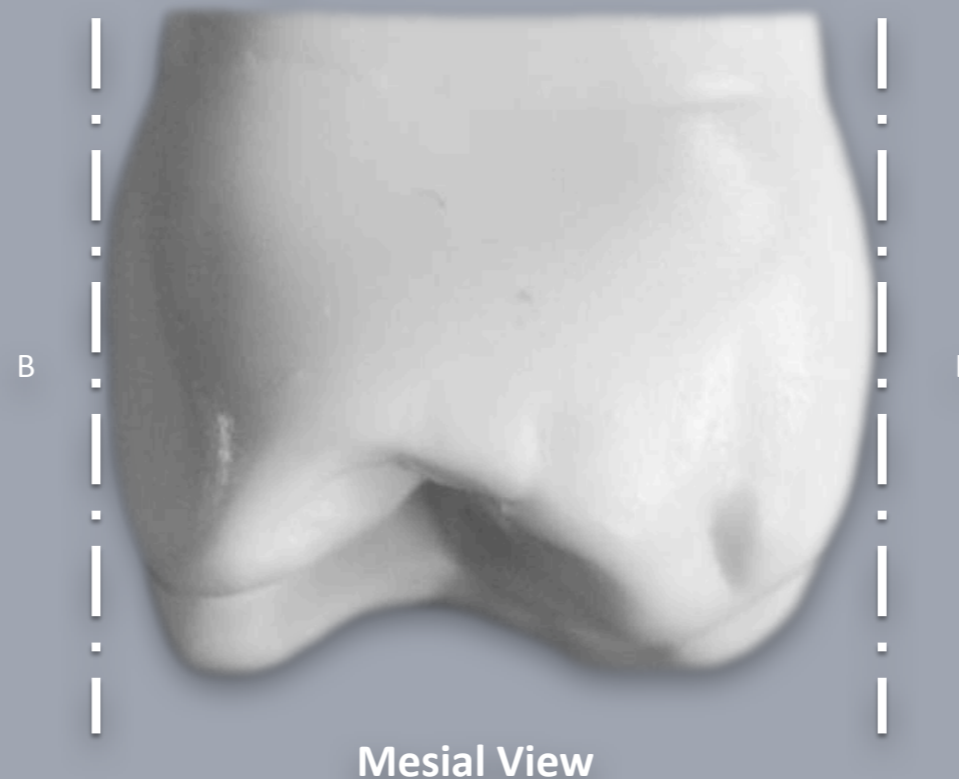
Heights of Contour

Heights of Contour (Crest of Curvature)

- The shape and curvature of the greatest dimension on the facial and lingual surfaces.
- Usually located in the cervical or middle third of a tooth.
- Help divert food and debris over the surfaces of a tooth and away from the free gingival margin and sulcus.

Natural convexities that must be reproduced when restoring a tooth

Heights of Contour



Dental Anatomy and Occlusion

Notes

Contact Points/Areas

Contact Points/Areas (proximal height of contour)

- Where two teeth contact each other proximally
- Stabilize the dental arch and anchor teeth
- Prevent food from being packed between teeth
- Must be recreated when restoring a tooth

Anterior Tooth Proximal Contacts

- Usually centered facio-lingually
- Usually at the incisal third or junction of incisal and middle thirds inciso-gingivally

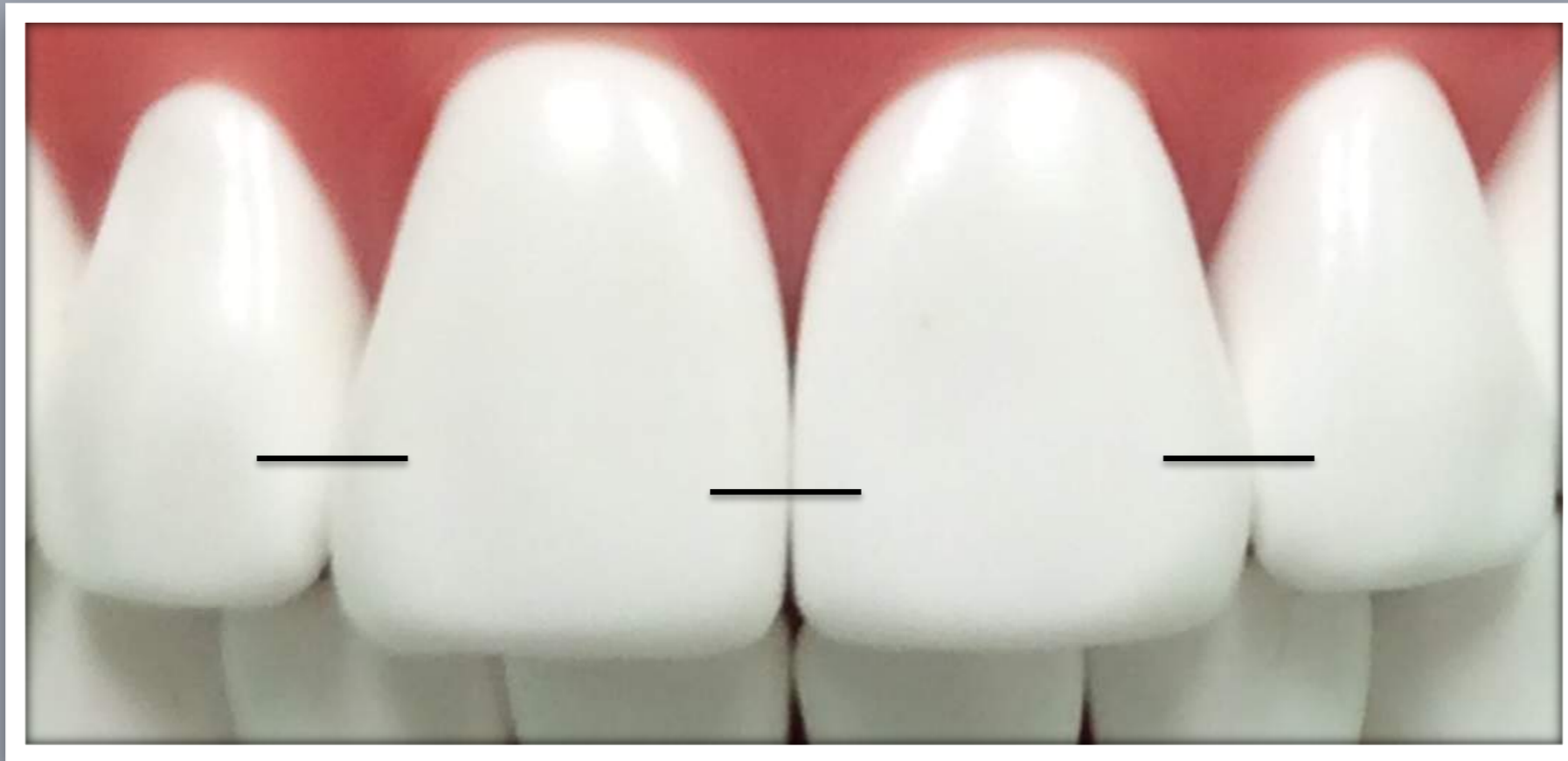
Posterior Tooth Proximal Contacts

- Usually located more buccal when viewed from the occlusal
- Usually located in the middle third of the tooth when viewed occlusal-gingivally

Dental Anatomy and Occlusion

Notes

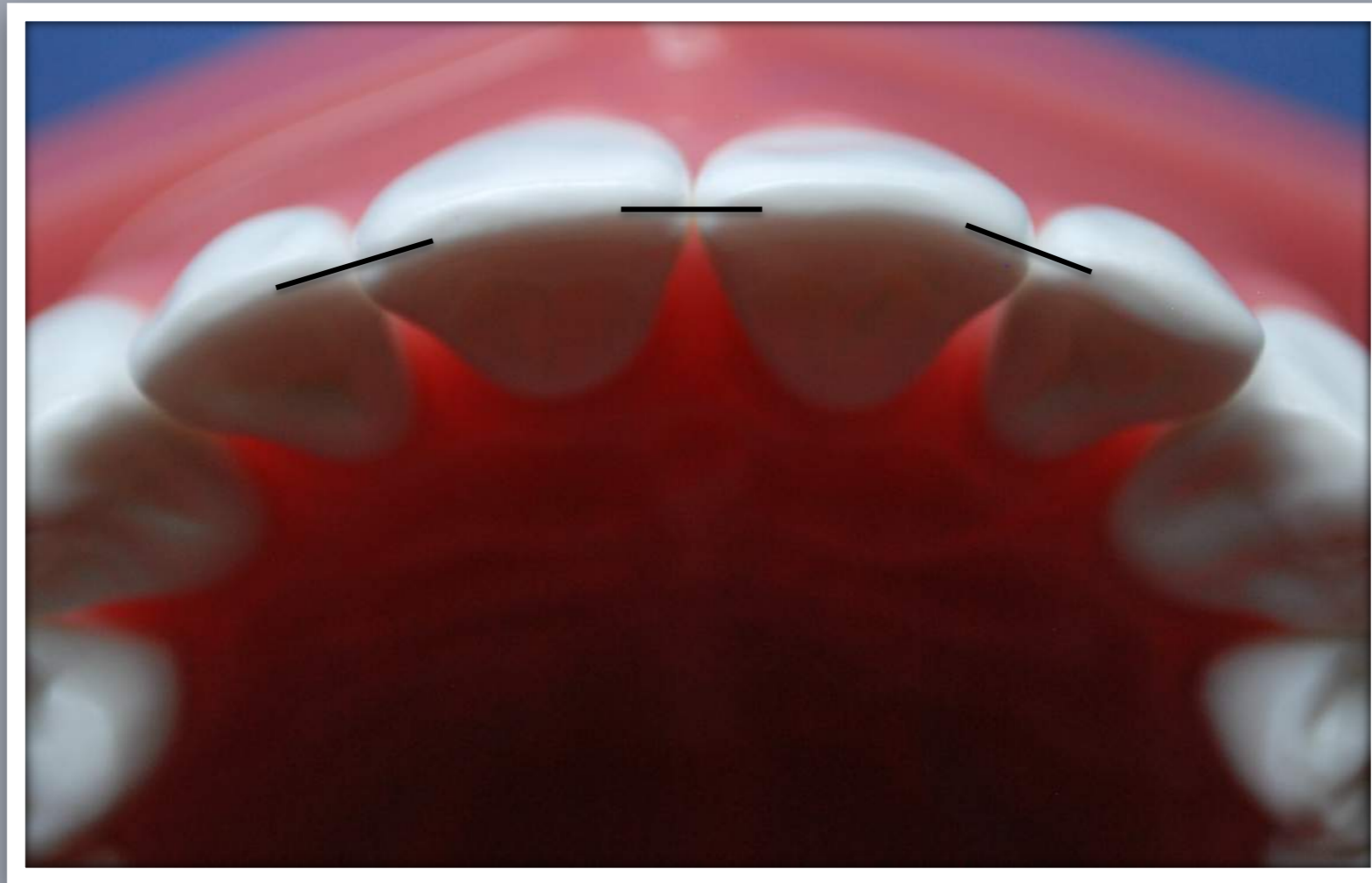
Contact Points/Areas



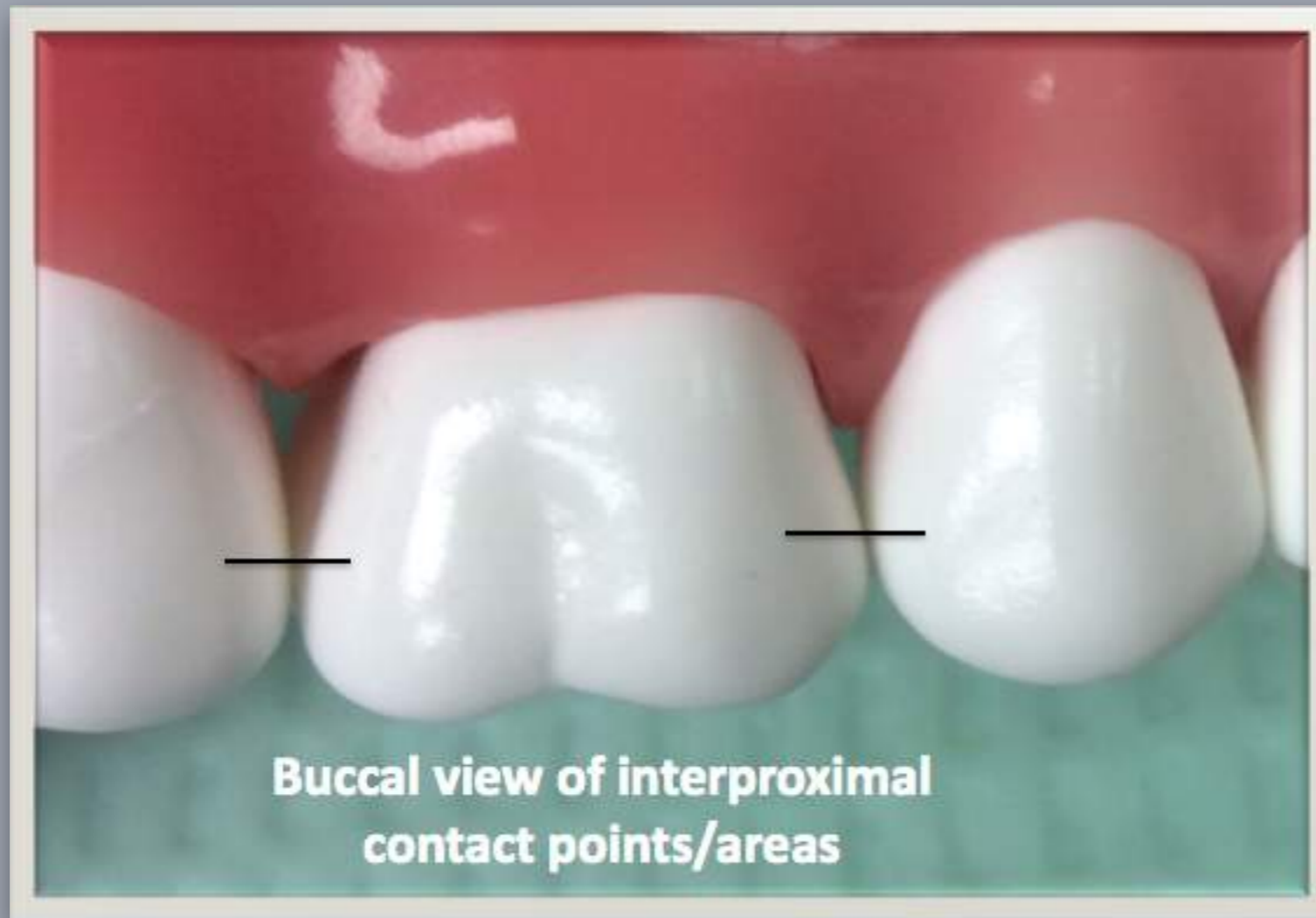
Dental Anatomy and Occlusion

Notes

Contact Points/Areas



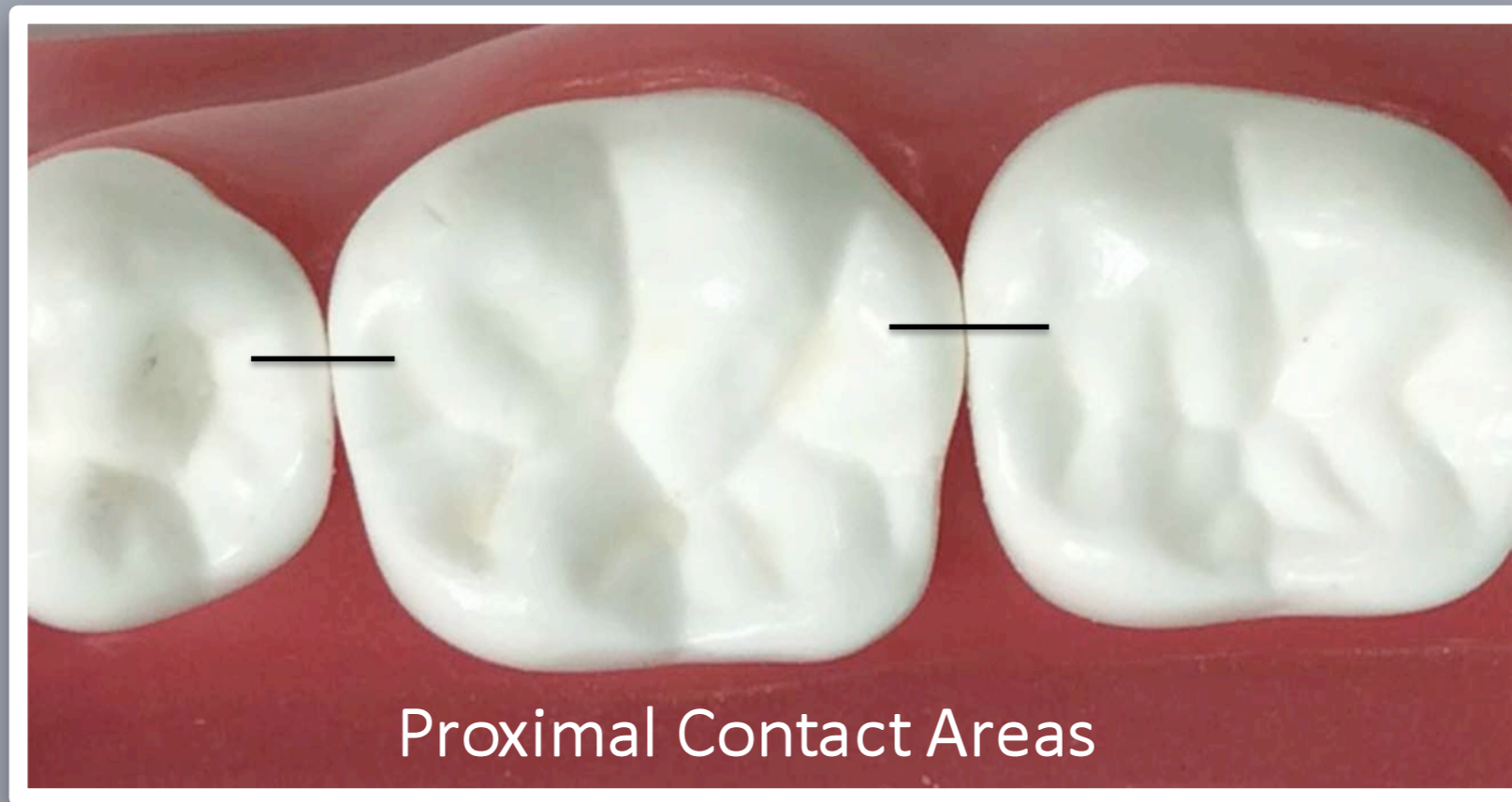
Contact Points/Areas



Dental Anatomy and Occlusion

Notes

Contact Points/Areas



Dental Anatomy and Occlusion

Notes

Embrasure Spaces

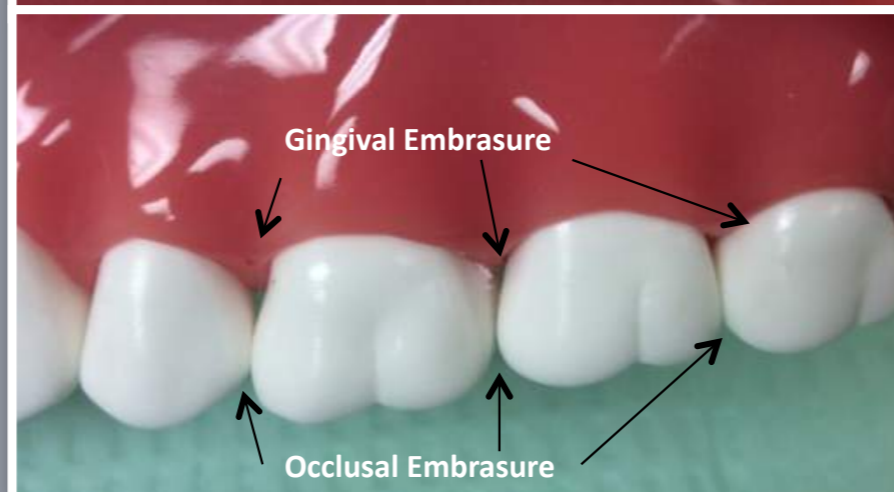
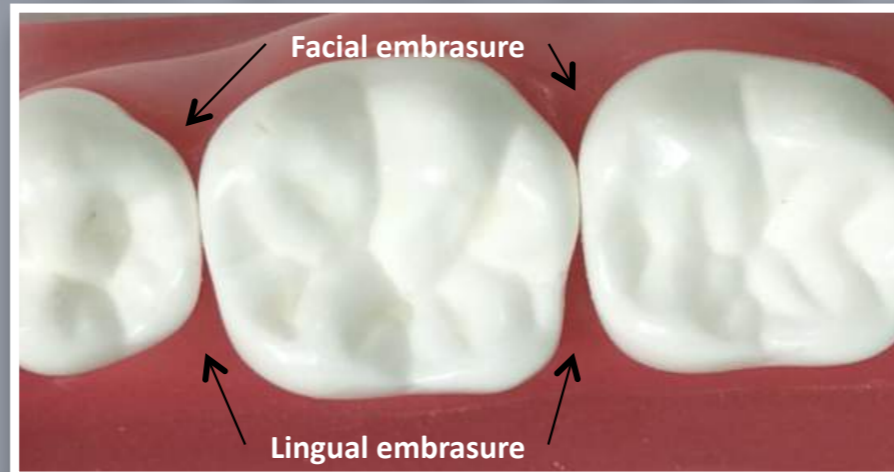
Embrasure Spaces

- Triangular areas that surround contact points/areas
 - Buccal
 - Lingual
 - Occlusal
 - Gingival (interproximal space)
- Provide a spillway for food during chewing
- Prevent food from being forced through the contact area
- Help allow the teeth to be more “self-cleaning”
- Important when restoring teeth to prevent food impaction, future decay or periodontal disease

Dental Anatomy and Occlusion

Posterior Embrasure Spaces

Notes



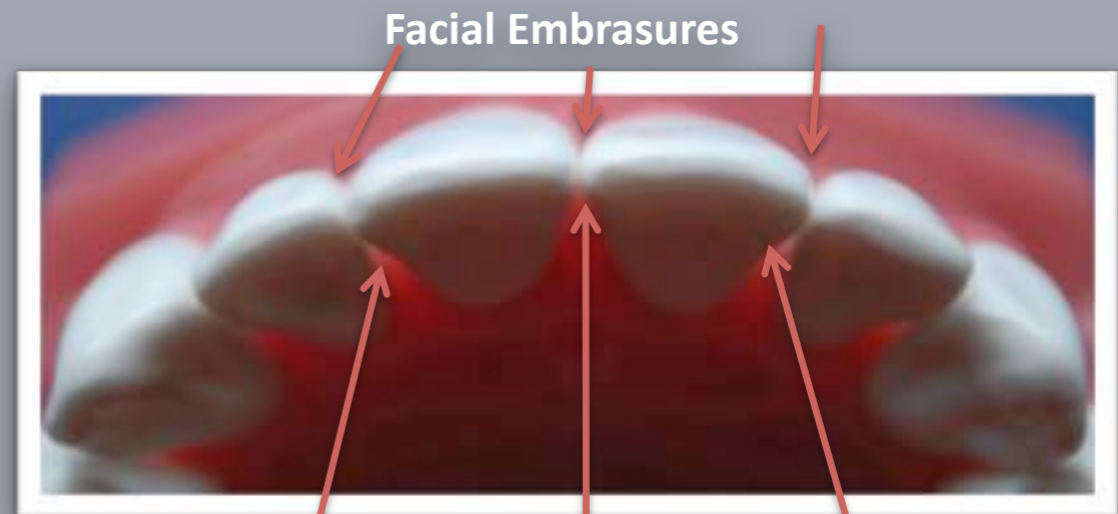
Dental Anatomy and Occlusion

Anterior Embrasure Spaces

Notes



Incisal Embrasures



Lingual Embrasures



Dental Anatomy and Occlusion

Terms to Know



Balancing or non-working cusps: The cusps that do not occlude with the opposing teeth during centric occlusion or maximum intercuspation. Remember B.U.L.L. (Buccal upper, lingual lower)



Canine Guidance: Occlusion in which the occlusal contacts of the canine teeth cause the posterior teeth to disclude or separate during lateral or excursive movements.



Lateral or excursive movements: Shifting of the mandible and mandibular teeth to the right or left (lateral) against the maxillary the teeth.



Mandibular working cusps: The buccal cusps. They occlude or contact with the fossae and marginal ridges of maxillary teeth. Remember B.L.L.U. (Buccal lower, lingual upper)



Maxillary working cusps: The lingual cusps. They occlude or contact with the fossae and marginal ridges of mandibular teeth.

Dental Anatomy and Occlusion

Notes



Maximum intercuspation:

The maximum contact of the teeth while biting the teeth together. Cusp to Fossa relationship.



Occlusion:

The way the teeth “fit,” together. The way the occlusal and incisal surfaces of maxillary and mandibular teeth contact each other or move against each other.



Protrusive movements:

Shifting of the mandible and mandibular teeth forward against and past the maxillary teeth.



Working Cusps:

Also known as Functional Cusps. They are the cusps that contact when the patient bites into their habitual or “normal bite.”

Dental Anatomy and Occlusion

Notes

Principles of Occlusion



Maximum intercuspation

Dental Anatomy and Occlusion

Notes

Principles of Occlusion

Vertical overlap



The maxillary buccal and facial cusps vertically and horizontally overlap the mandibular teeth

Horizontal overlap



Maximum intercuspation

Dental Anatomy and Occlusion

Notes

Principles of Occlusion

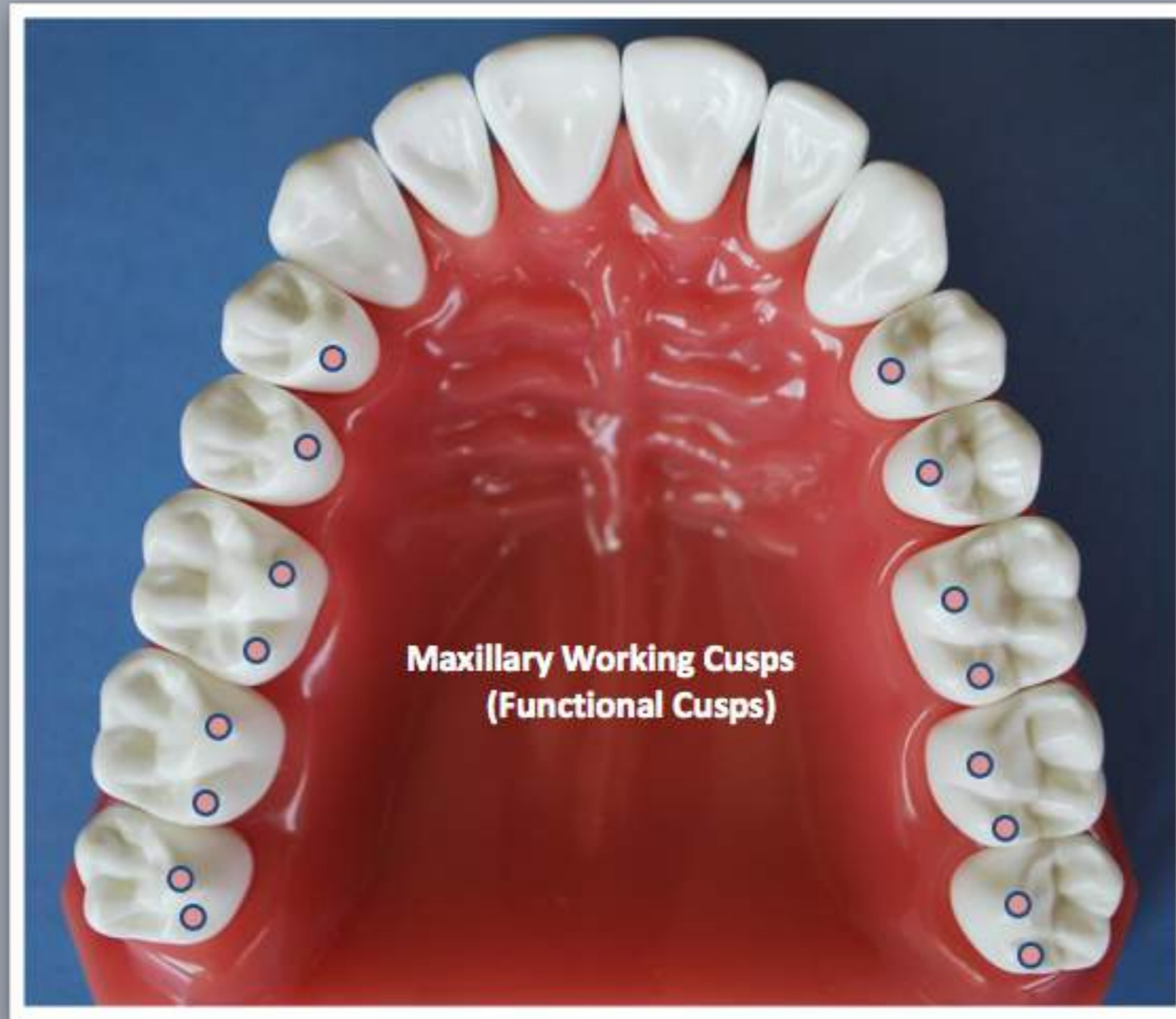
The maxillary buccal (non-working) cusps occupy the embrasure spaces and groove spaces of the mandibular teeth



Maximum intercuspation

Dental Anatomy and Occlusion

Notes



Dental Anatomy and Occlusion

Notes



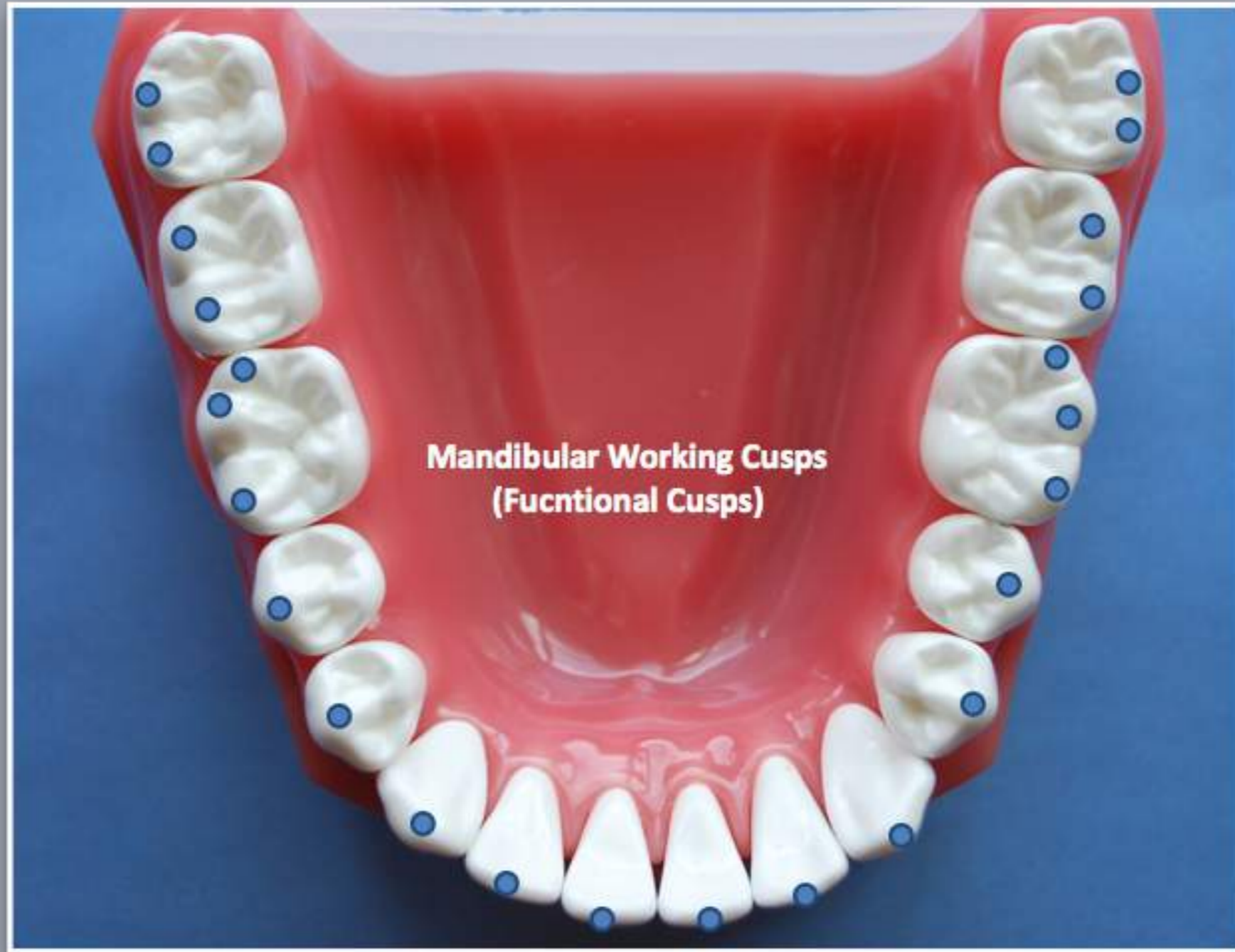
Dental Anatomy and Occlusion

Notes



Dental Anatomy and Occlusion

Notes



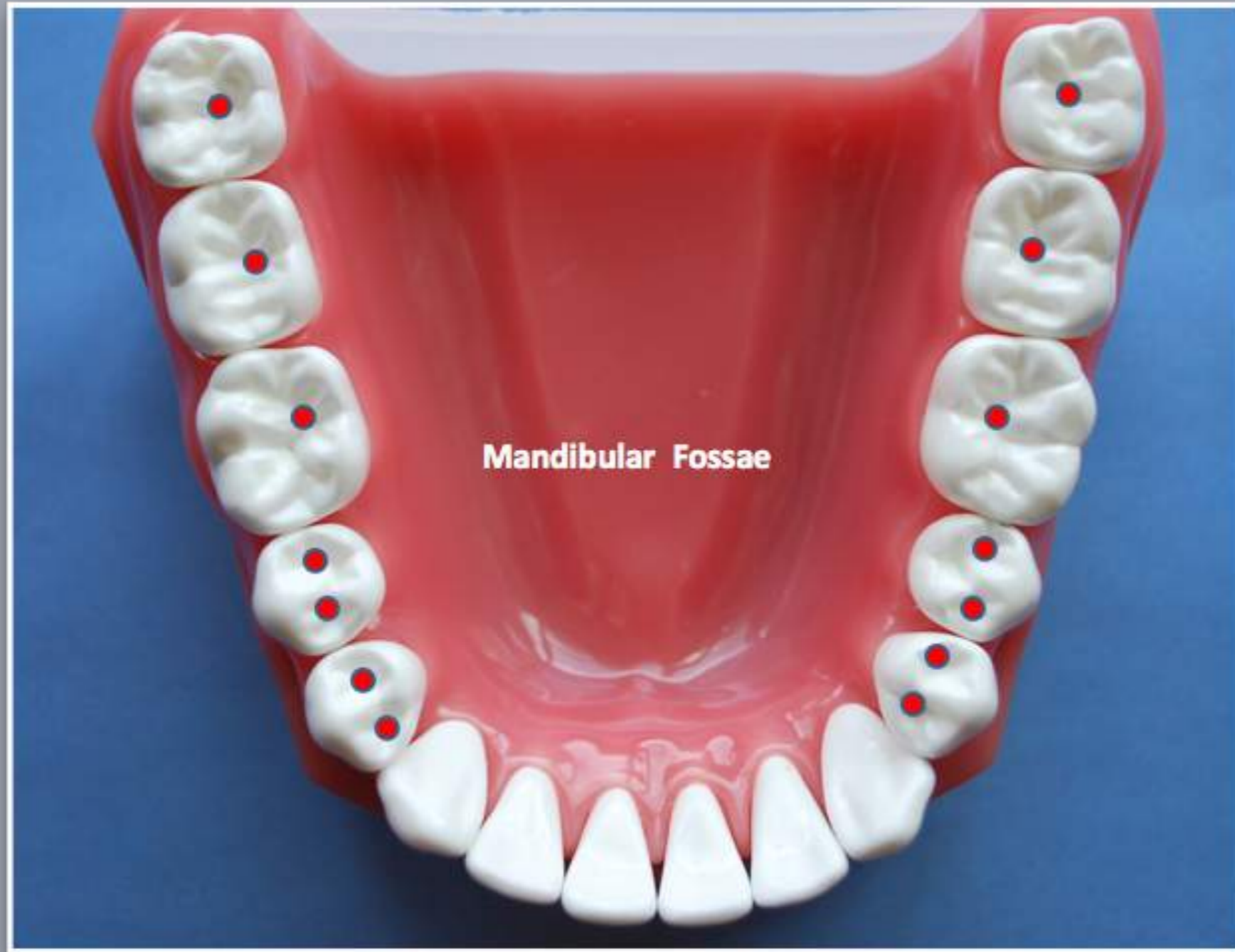
Dental Anatomy and Occlusion

Notes



Dental Anatomy and Occlusion

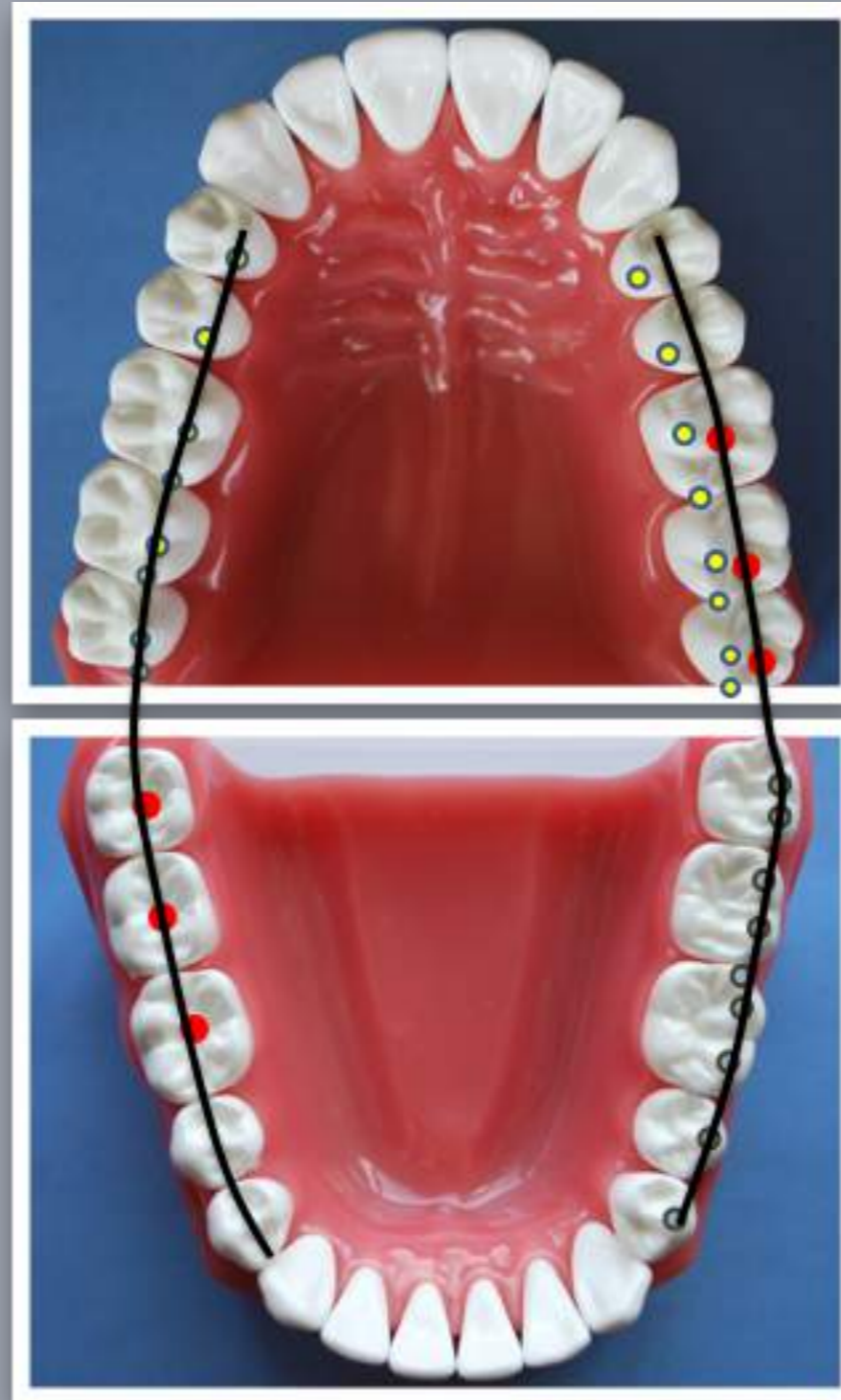
Notes



Dental Anatomy and Occlusion

Notes

Cusp to fossa relationship

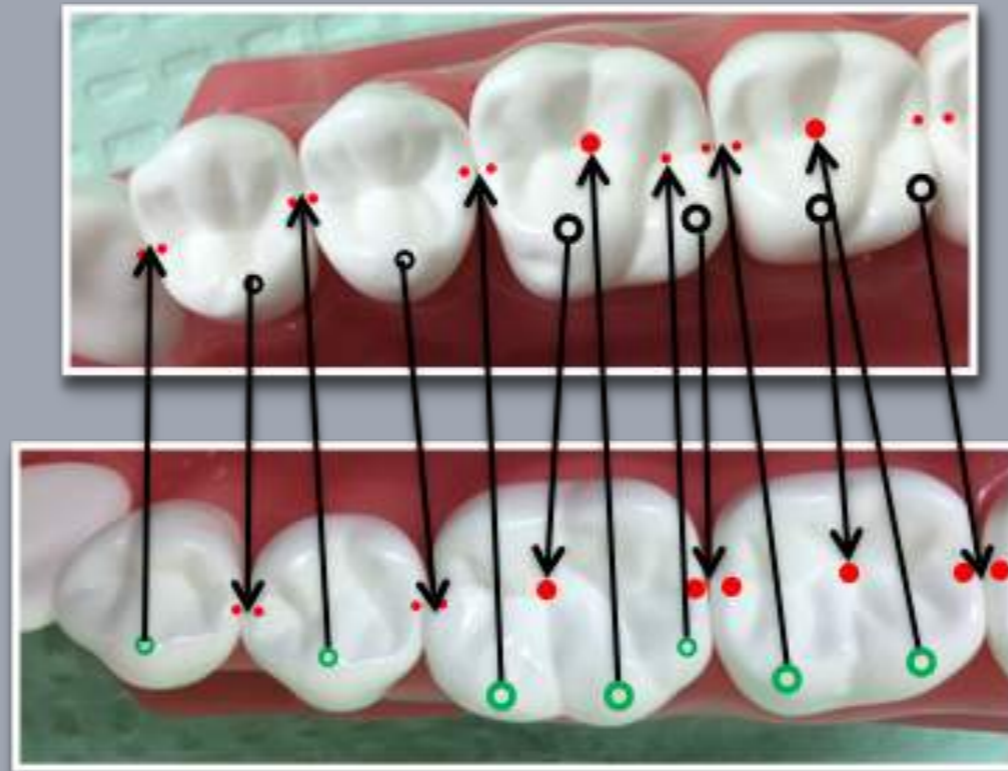


Dental Anatomy and Occlusion

Notes

Principles of Occlusion

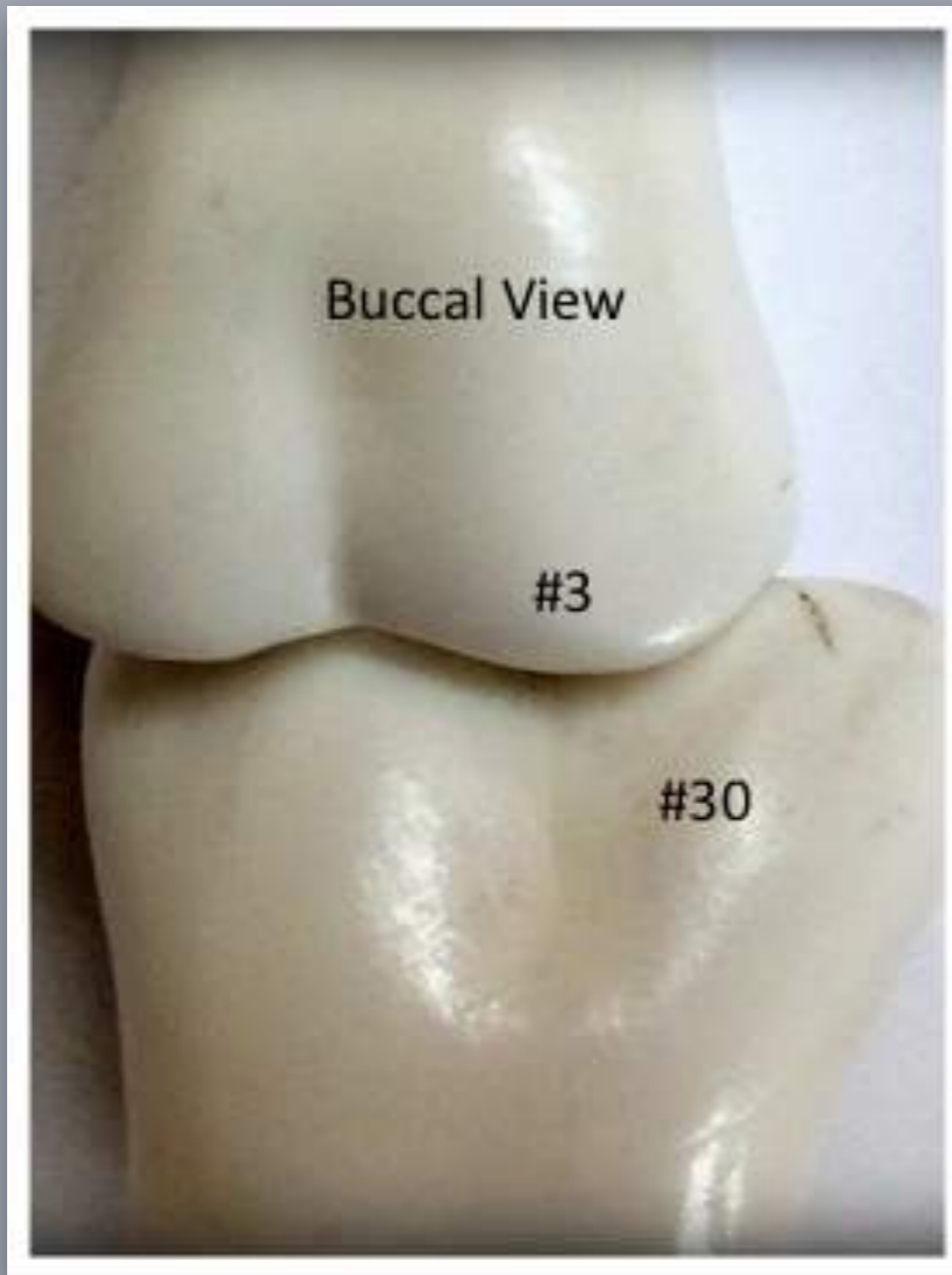
Maxillary lingual cusps ○ occlude with marginal ridges ● and central fossa ● of mandibular posterior teeth.



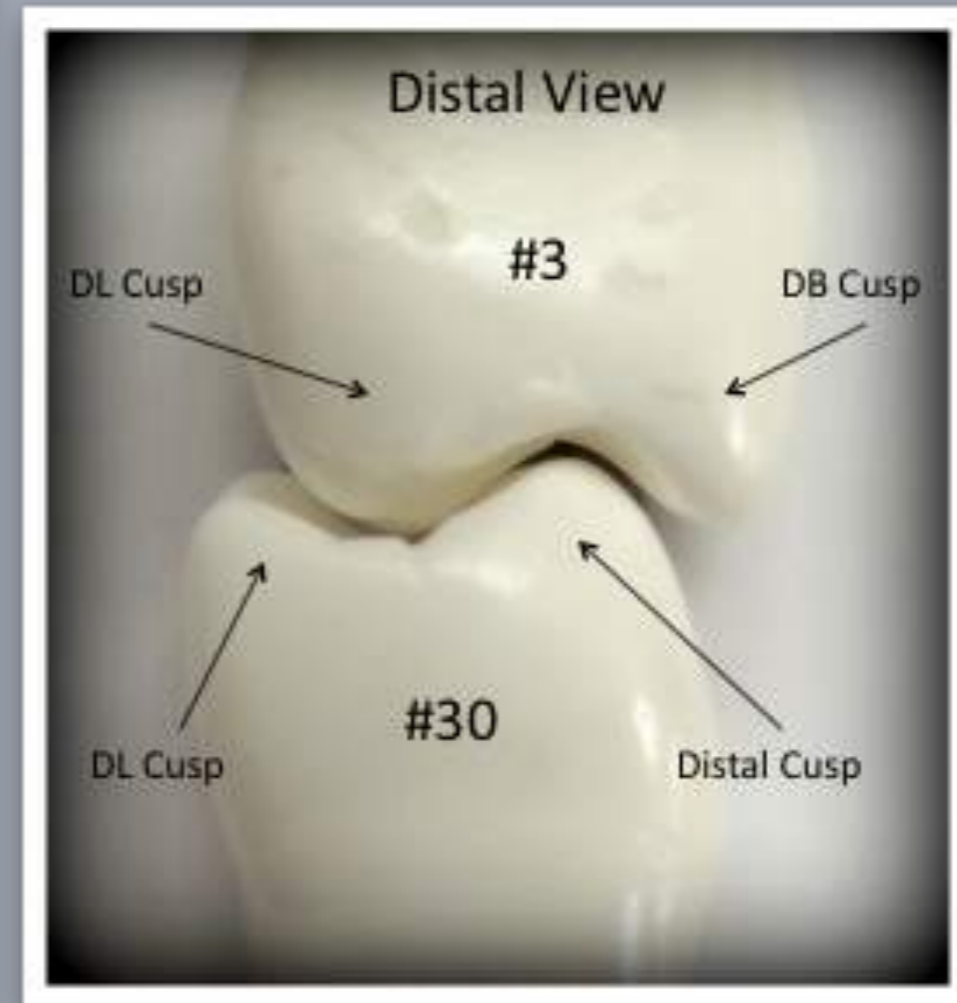
Mandibular buccal cusps ● occlude with marginal ridges ● and central fossa ●
(Distal cusp of mandibular 1st molar occludes with distal fossa) of maxillary posterior teeth.

Dental Anatomy and Occlusion

Notes



Maxillary 1st Molar – MB cusp aligning with MB groove of Mandibular 1st Molar.



Maxillary 1st Molar – DL cusp aligning with distal marginal ridge of Mandibular 1st Molar

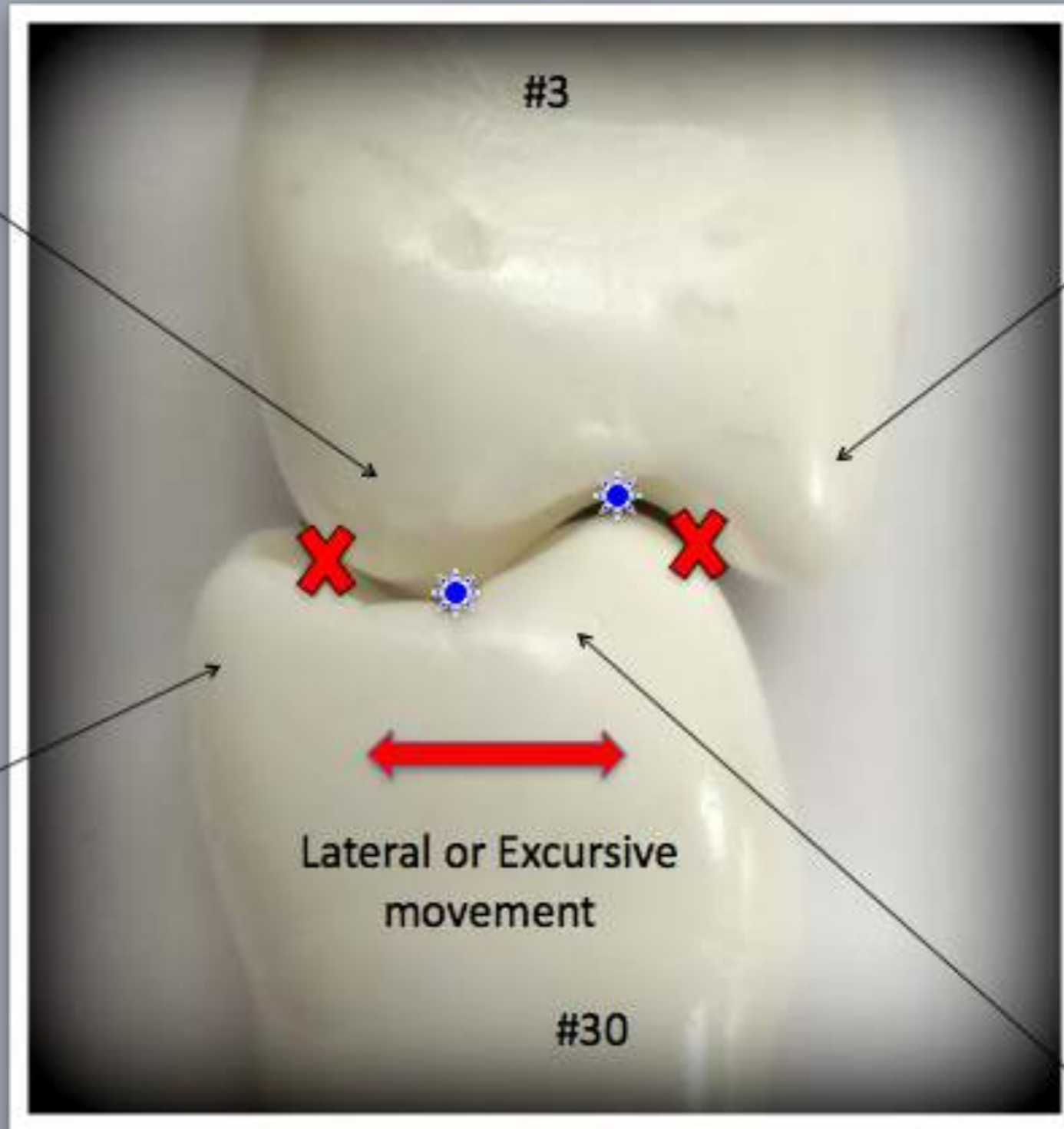
Dental Anatomy and Occlusion

Distal View

Notes

DL Cusp

DB Cusp



DL Cusp

Lateral or Excursive
movement

Distal Cusp

Dental Anatomy and Occlusion

Slider 1.1 Occlusion

Notes



Dental Anatomy and Occlusion

Notes

Tips For Checking Occlusion When Restoring Teeth

- Check central occlusion or maximum intercuspation first.
- Are there heavy or improper contacts in maximum intercuspation?
- Are the articulating paper markings where they should be? If not, adjust areas.
- Is the contact too heavy? Compare the markings on adjacent teeth.
- Check occlusion during lateral or excursive movements. You do not want contacts or “marks” during lateral movements unless multiple teeth in the same arch are similar. Remove or reduce those areas to make similar to adjacent teeth.
- Are maxillary buccal cusps in the embrasure space or in the groove spaces?
- Is there appropriate horizontal and vertical overlap?

Dental Anatomy and Occlusion

Notes

Jason R. Price, DDS Deputy Dental Director Tse'hootsooi' Medical Center Fort Defiance Indian Hospital

Dental Anatomy Reference

Jason R. Price, DDS

This reference contains illustrations that are helpful when restoring teeth with amalgam or composite restorations.

Dental Anatomy and Occlusion

Notes

Maxillary Incisors



Dental Anatomy and Occlusion

Notes

Central Incisor

Distal

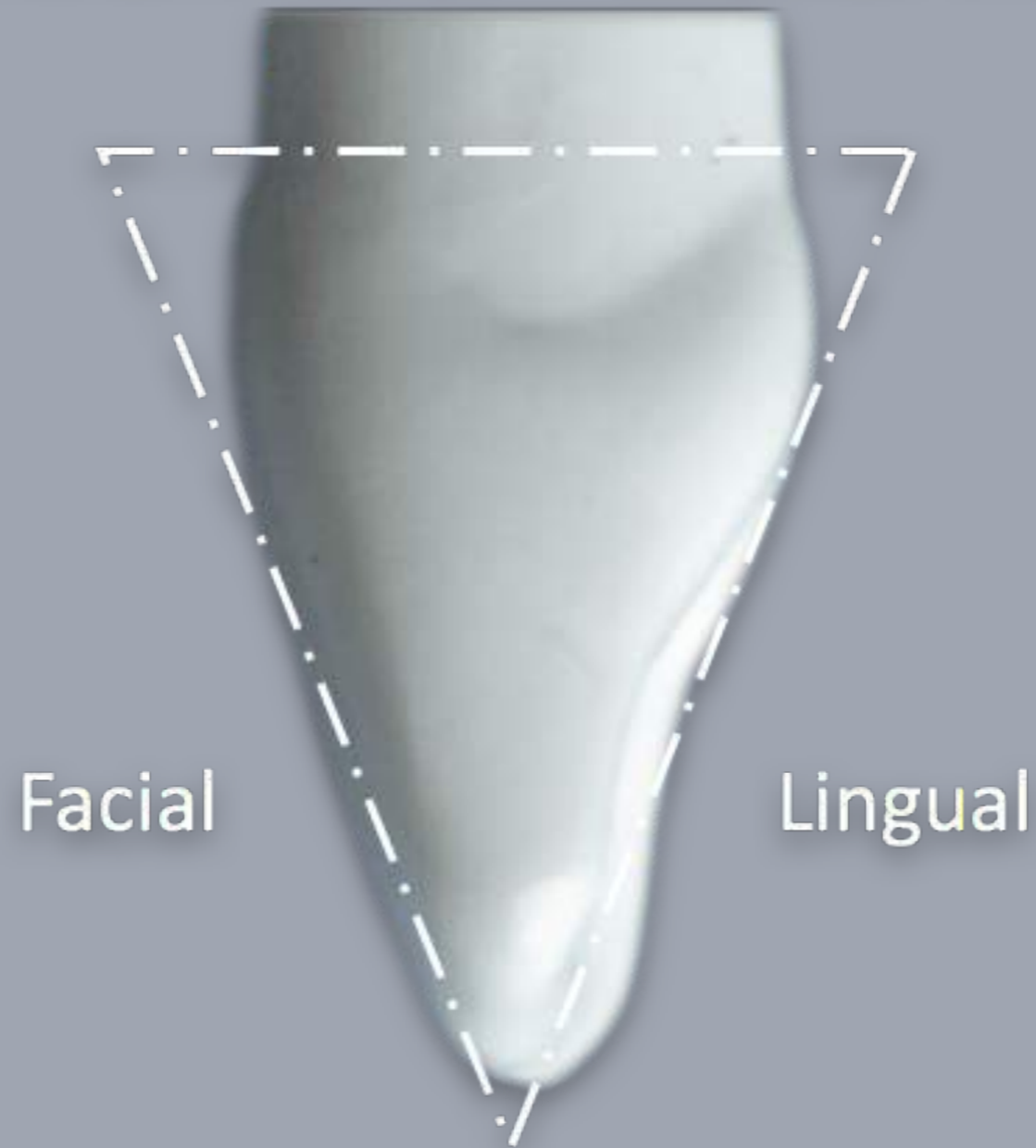


Mesial

Dental Anatomy and Occlusion

Central Incisor – Mesial View

Notes

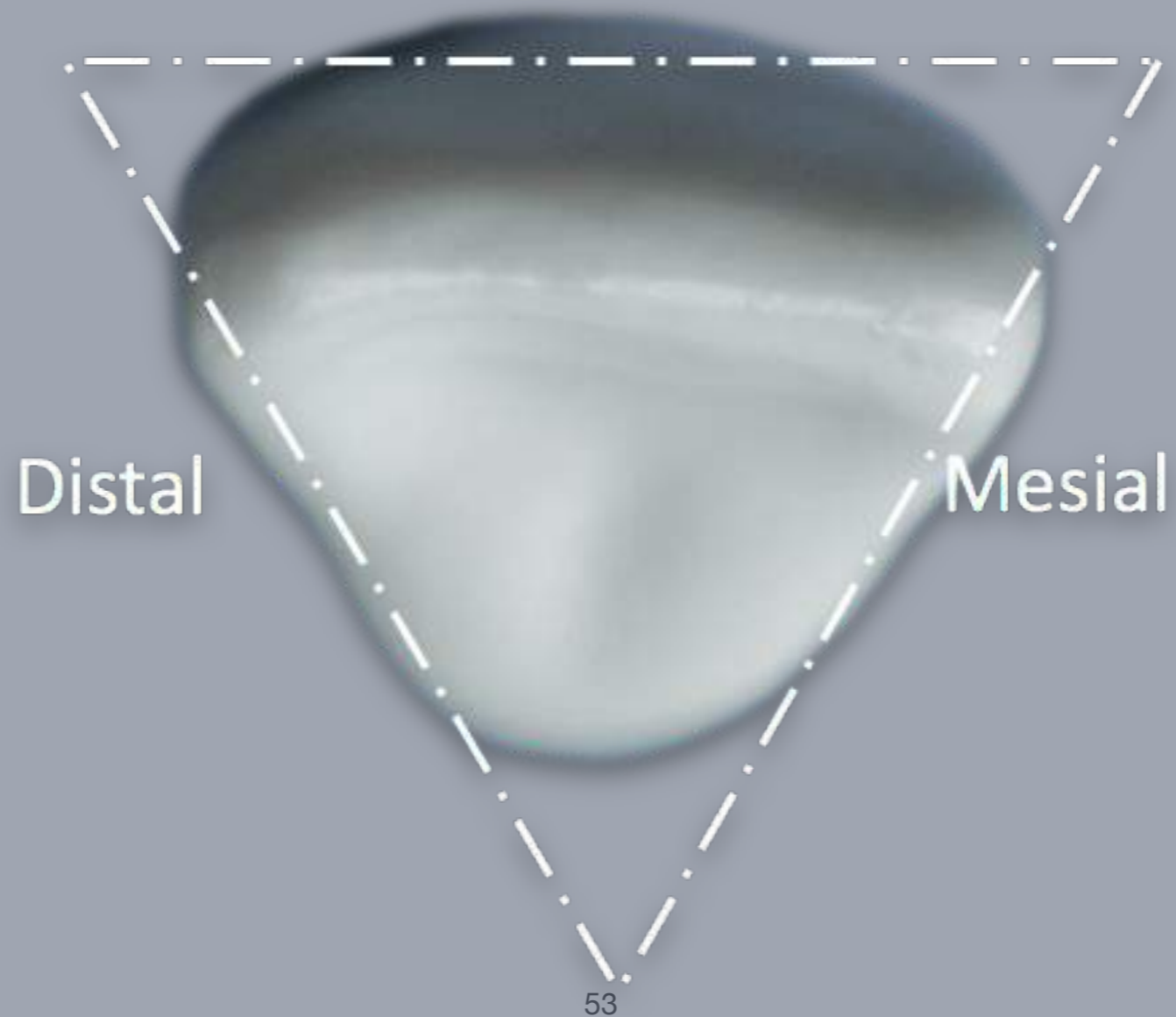


*Also referred to as a shovel shape.

Dental Anatomy and Occlusion

Central Incisor – Incisal View

Notes



Dental Anatomy and Occlusion

Notes

Central Incisor

Slightly more curved Distal



Relatively straight Mesial

Dental Anatomy and Occlusion

Notes

Central Incisor

Distal



Mesial

Contact points are
in the incisal 1/3

Dental Anatomy and Occlusion

Central Incisors

Notes



Dental Anatomy and Occlusion

Central Incisor – Mesial View

Notes

*Heights of Contour

Facial



Lingual

Dental Anatomy and Occlusion

Central Incisor – Distal View

Notes

*Heights of Contour

Lingual



Facial

Dental Anatomy and Occlusion

Central Incisor – Distal View

Notes

Cingulum *A bulge →

Lingual

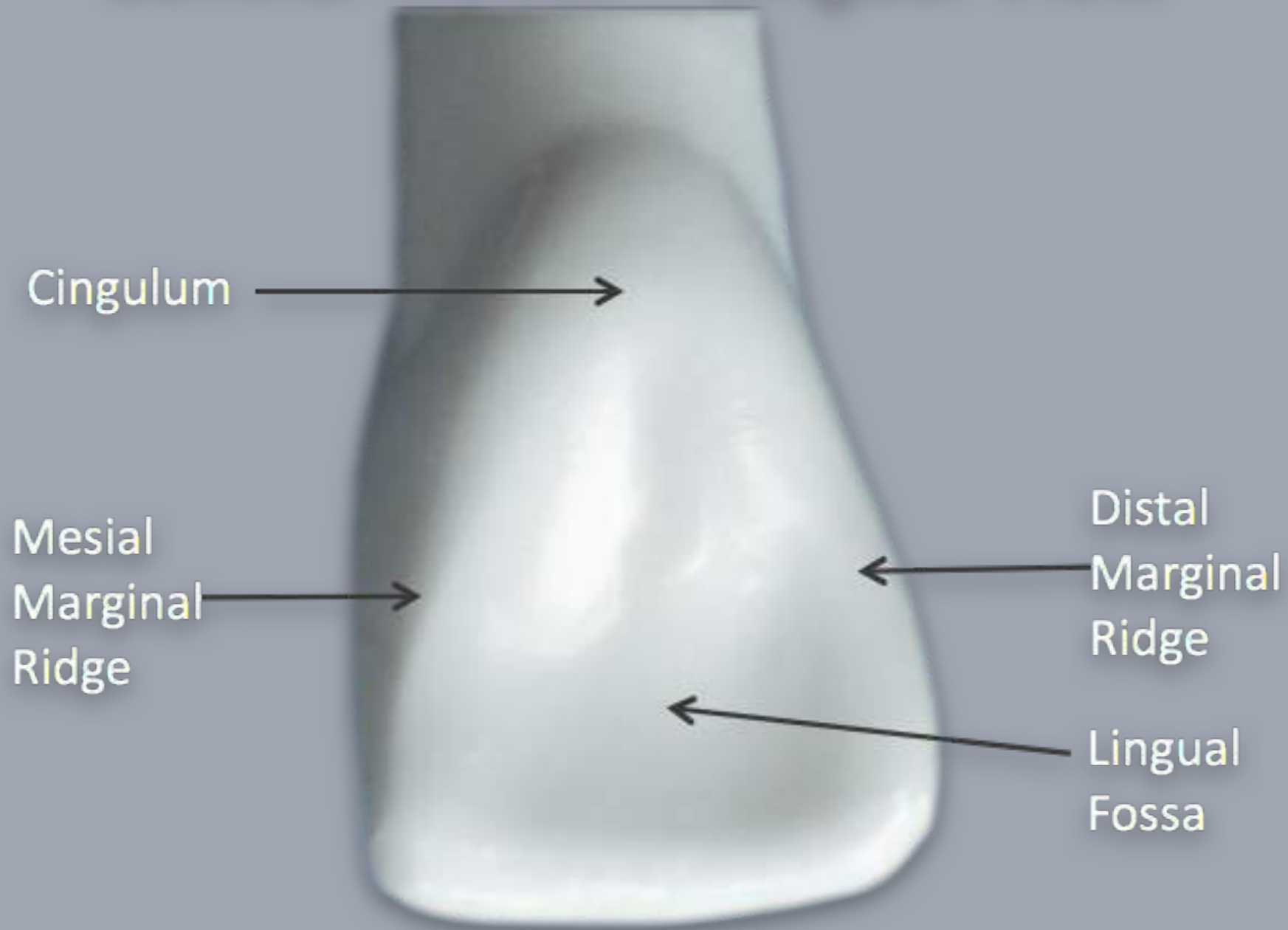
Facial



Dental Anatomy and Occlusion

Central Incisor – Lingual View

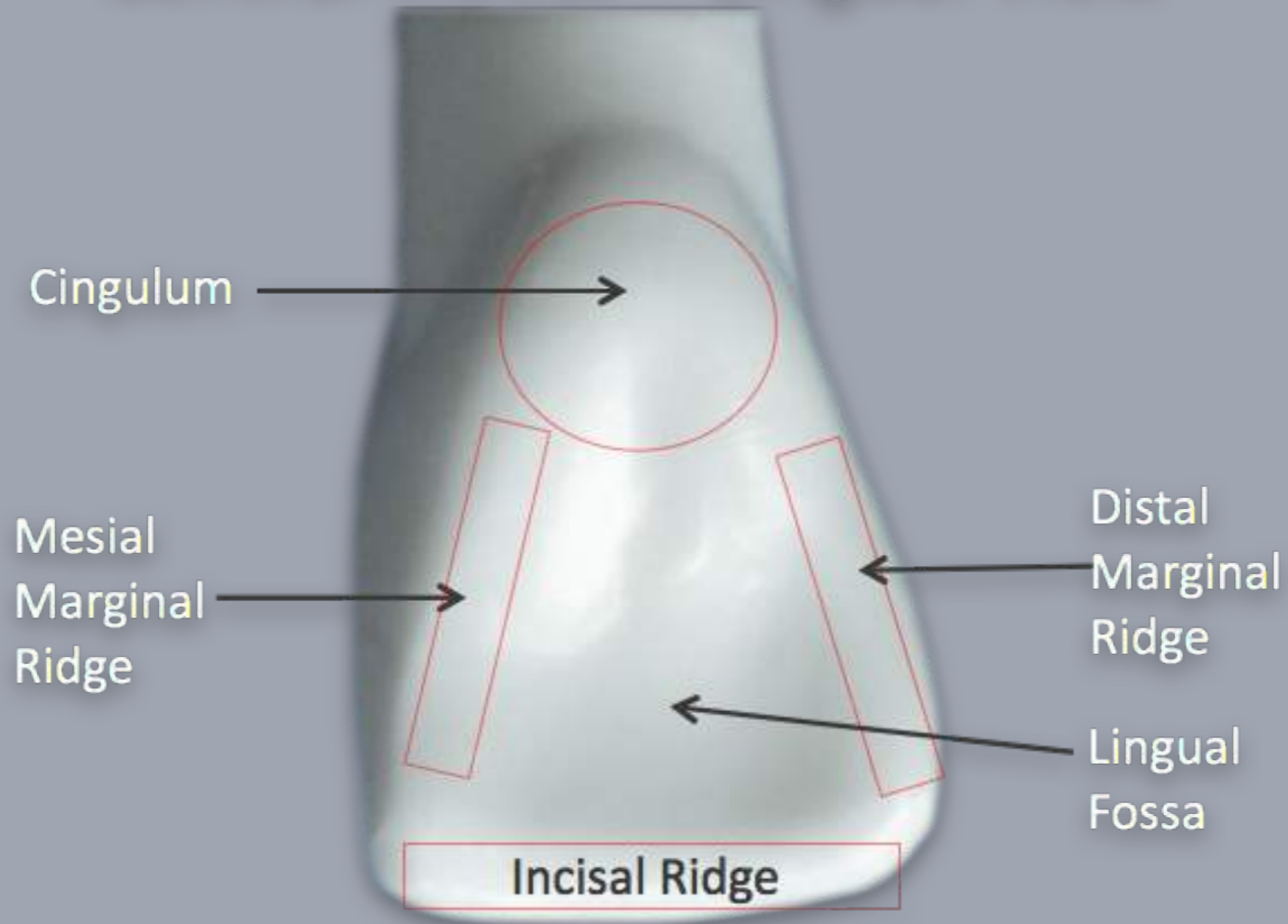
Notes



Dental Anatomy and Occlusion

Central Incisor – Lingual View

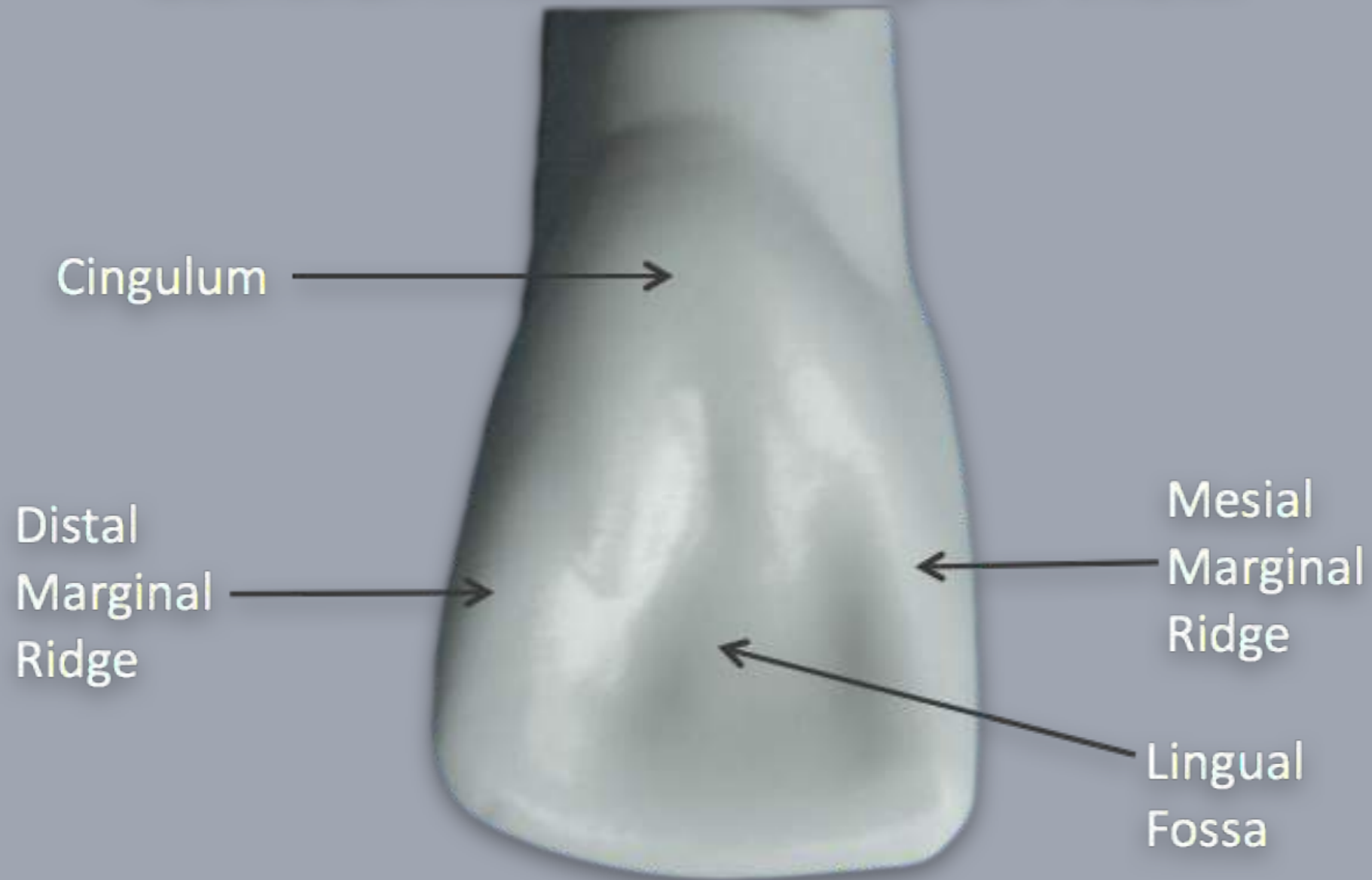
Notes



Dental Anatomy and Occlusion

Central Incisor – Lingual View

Notes

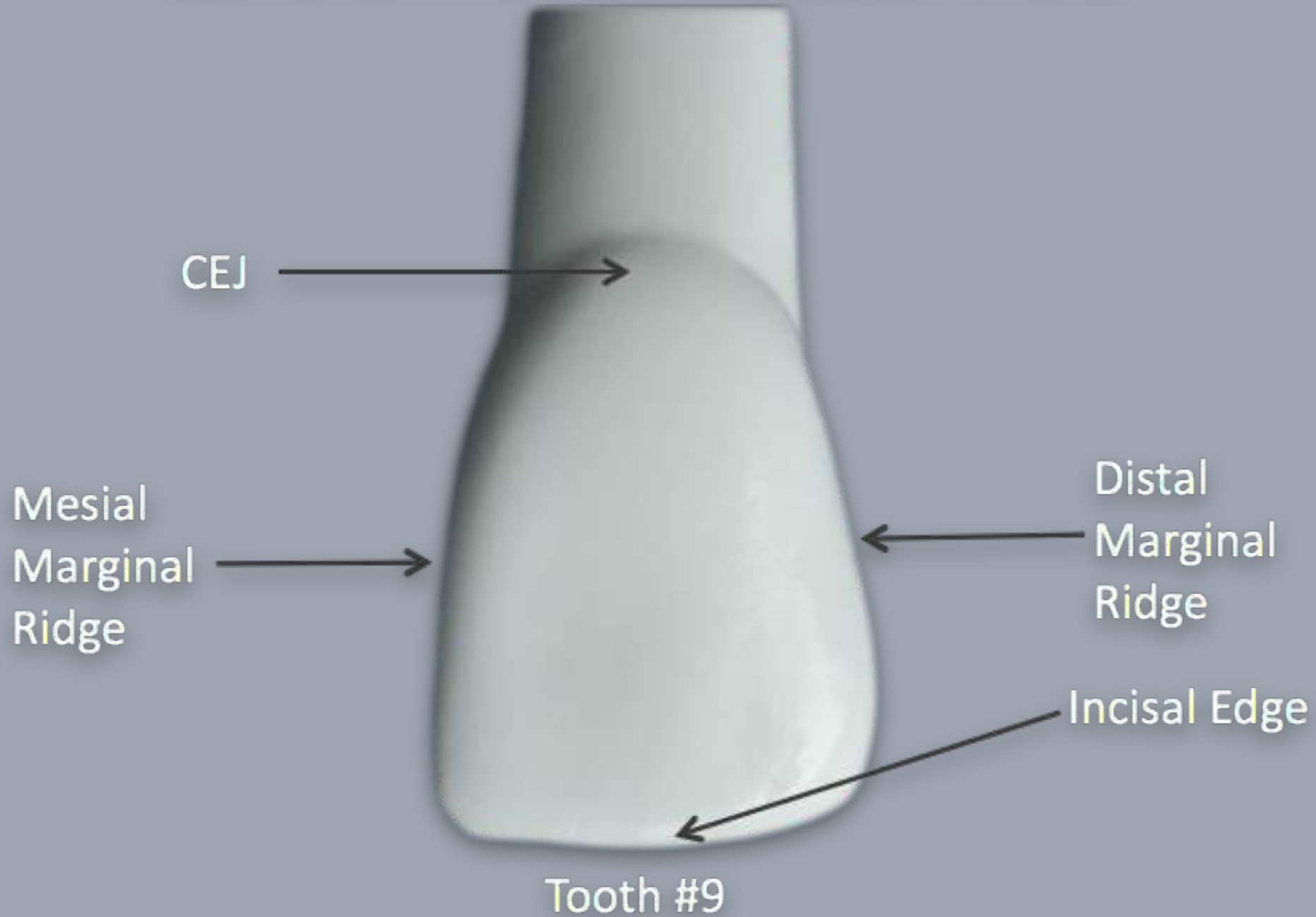


Tooth #9

Dental Anatomy and Occlusion

Central Incisor – Facial View

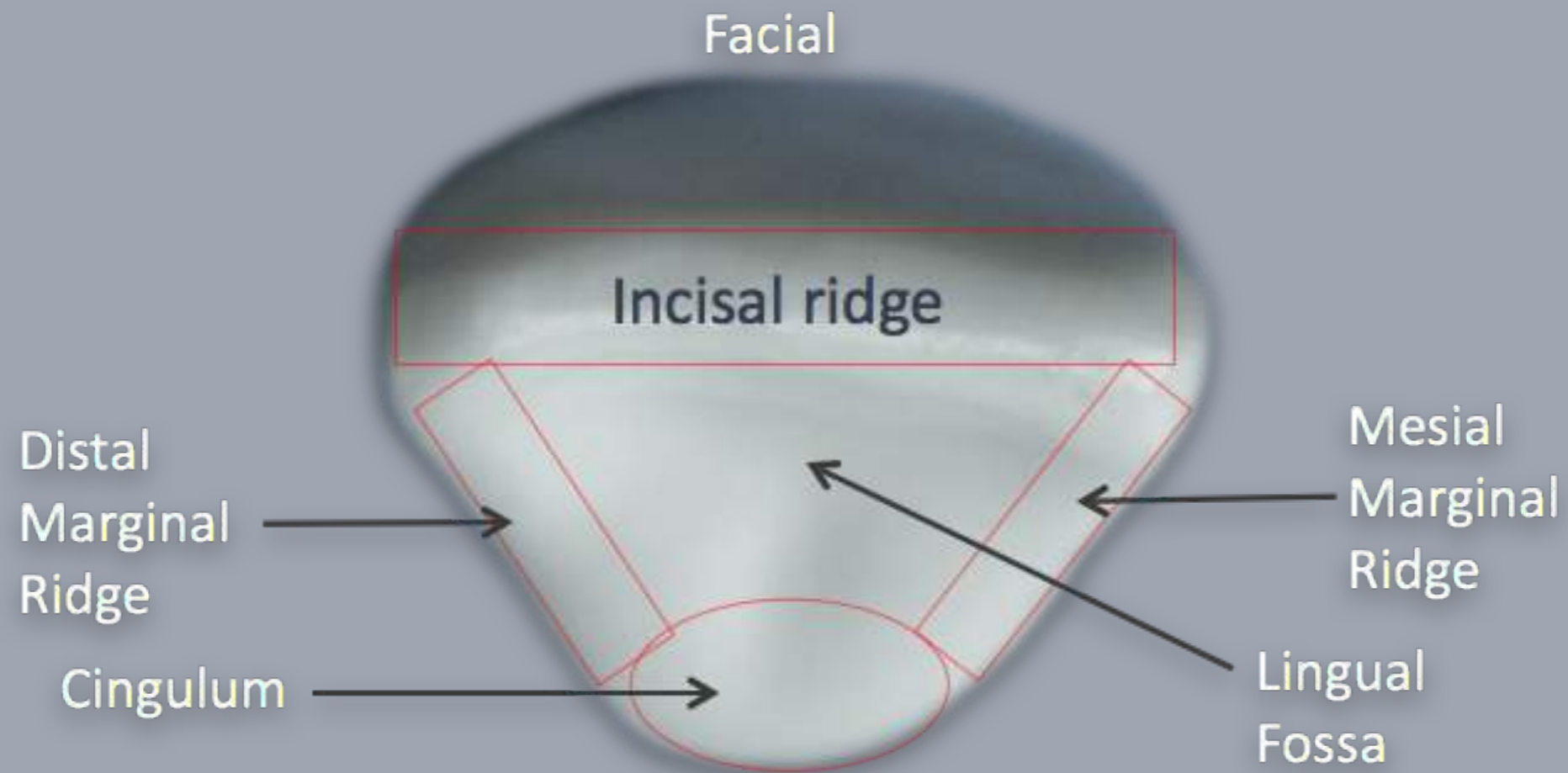
Notes



Dental Anatomy and Occlusion

Central Incisor – Incisal View

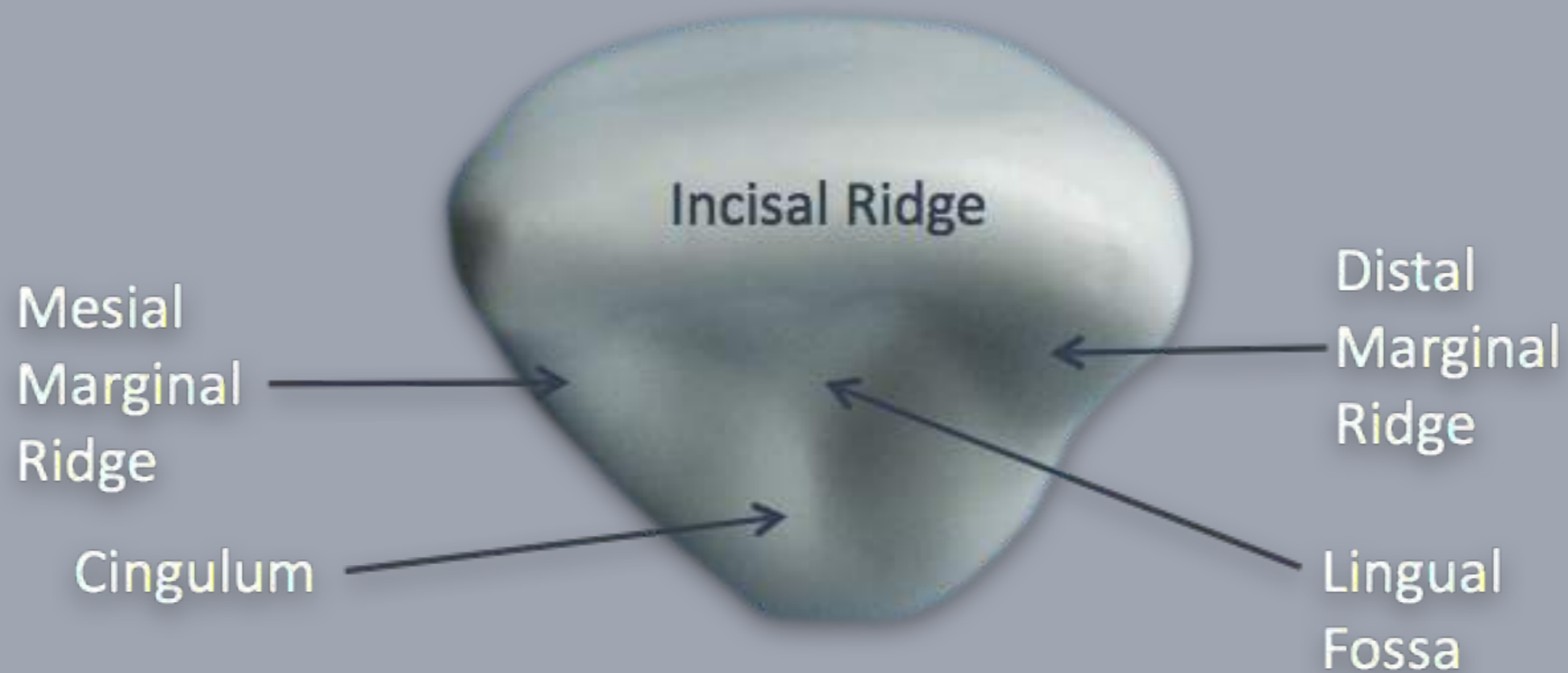
Notes



Dental Anatomy and Occlusion

Central Incisor – Incisal View

Notes



Tooth #9

Dental Anatomy and Occlusion

Notes

Central Incisor

Incisal view of contact points and embrasures



Dental Anatomy and Occlusion

Notes

Central Incisor



Dental Anatomy and Occlusion

Notes

Central Incisor

Lingual view of contact points and embrasures



Dental Anatomy and Occlusion

Notes

Lateral Incisors



Dental Anatomy and Occlusion

Notes

Lateral Incisors

Similar in shape to central incisors

Smaller in size

More rounded angles



Dental Anatomy and Occlusion

Notes

Lateral Incisors

Deeper Fossa – Gives more definition to marginal ridges and cingulum area.



Dental Anatomy and Occlusion

Notes

Lateral Incisors

Incisal Views



*Notice how defined the ridges, cingulum, and fossae are.

Dental Anatomy and Occlusion

Notes

Lateral Incisors – Proximal View



Distal



Mesial

Dental Anatomy and Occlusion

Notes

Lateral Incisors

Contact Points & Embrasure Spaces



Dental Anatomy and Occlusion

Notes

Lateral Incisors

Contact Points & Embrasure Spaces



Dental Anatomy and Occlusion

Notes

Mandibular Incisors



Dental Anatomy and Occlusion

Notes

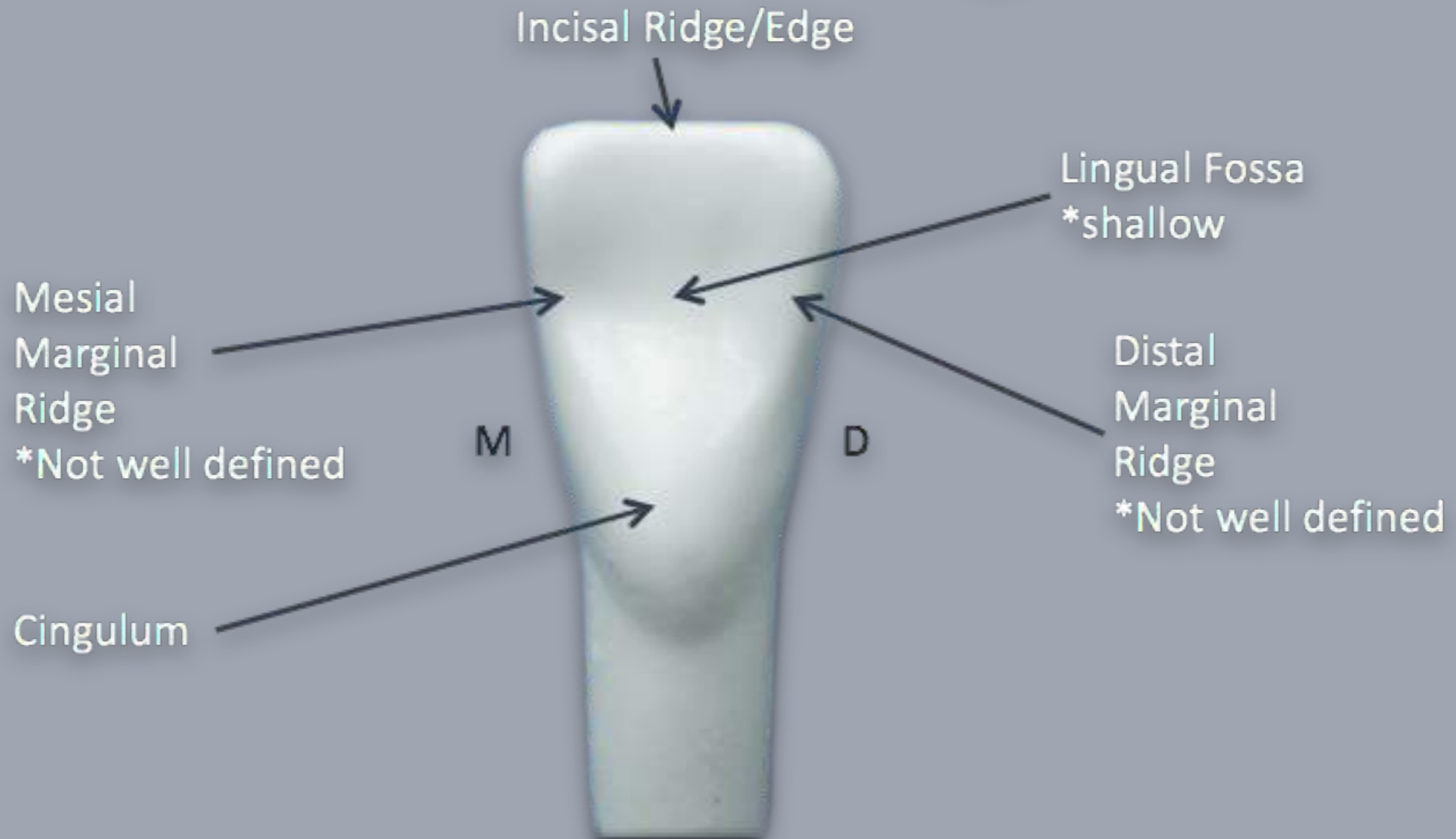
Mandibular Incisors – Facial View



Dental Anatomy and Occlusion

Notes

Mandibular Incisors – Lingual View



Dental Anatomy and Occlusion

Notes

Mandibular Incisors



*Note the curvature

Dental Anatomy and Occlusion

Notes

Mandibular Incisors



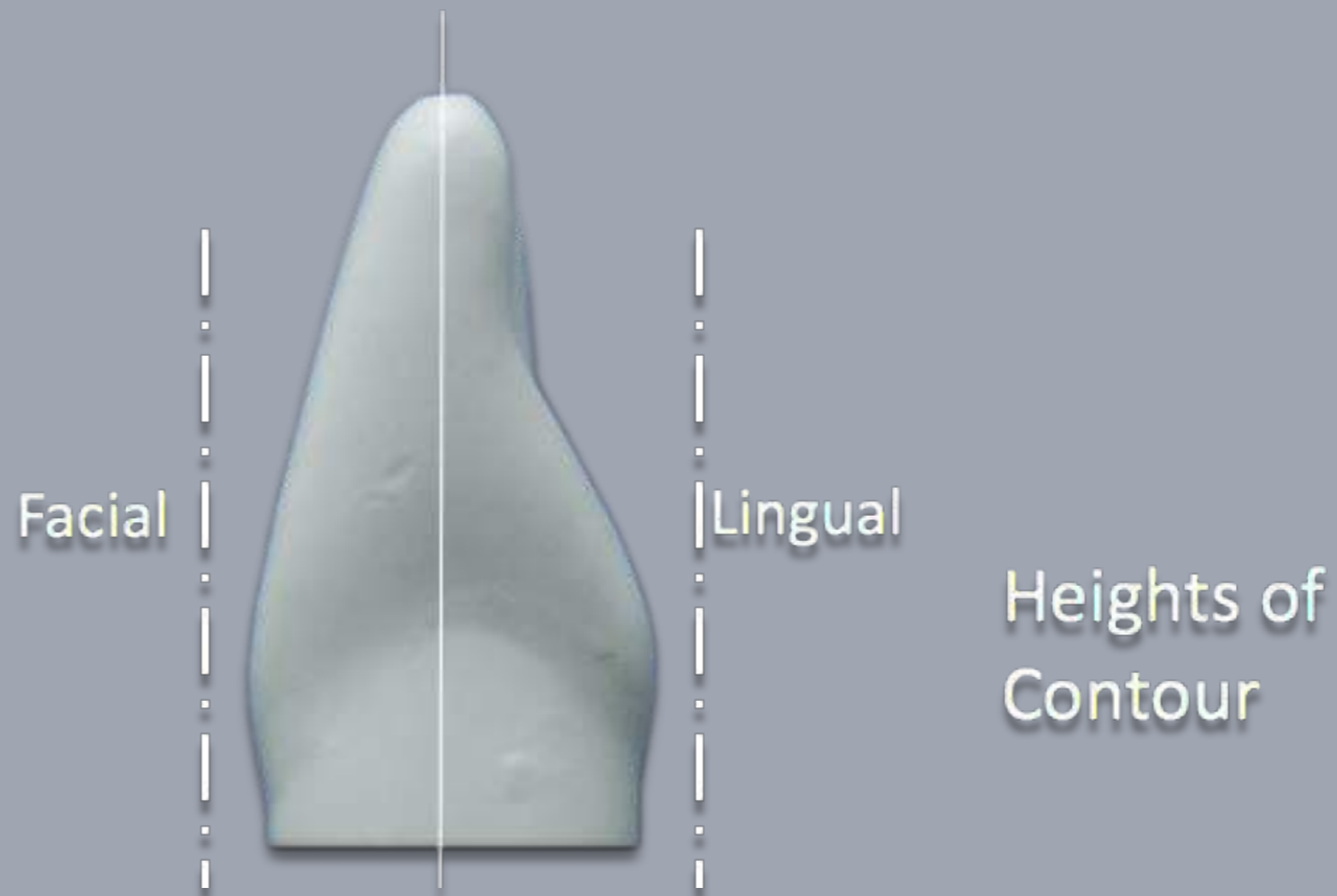
*Note the curvature

Dental Anatomy and Occlusion

Notes

Mandibular Incisors

Incisal ridge nearly centered



Dental Anatomy and Occlusion

Notes

Mandibular Incisors – Facial View



Heights of
Contour

Dental Anatomy and Occlusion

Notes

Mandibular Incisors – Lateral Incisor

Mesial



Distal

Dental Anatomy and Occlusion

Notes

Mandibular Incisors – Lateral Incisor

- *Similar shape to central
- *Slightly more rounded
- *Often slightly larger

Mesial



Distal

Dental Anatomy and Occlusion

Notes

Mandibular Incisors – Lingual View



Dental Anatomy and Occlusion

Notes

Mandibular Incisors

Rotated or “twisted,” appearance from incisal view



The incisal ridge tapers angles to the the lingual towards the distal aspect of the tooth

Dental Anatomy and Occlusion

Mandibular Incisors – Proximal View

Notes



Dental Anatomy and Occlusion

Notes

Mandibular Incisors

Contact points & embrasure spaces



Dental Anatomy and Occlusion

Notes

Mandibular Incisors

Contact points & embrasure spaces



Dental Anatomy and Occlusion

Notes

Mandibular Incisors

Contact points & embrasure spaces



Dental Anatomy and Occlusion

Notes

Canine Teeth

Maxillary Right Canine



Dental Anatomy and Occlusion

Notes

Canine Teeth

Pentagonal shape from buccal view



Dental Anatomy and Occlusion

Notes

Canine Teeth

Prominent, sharp buccal cusp



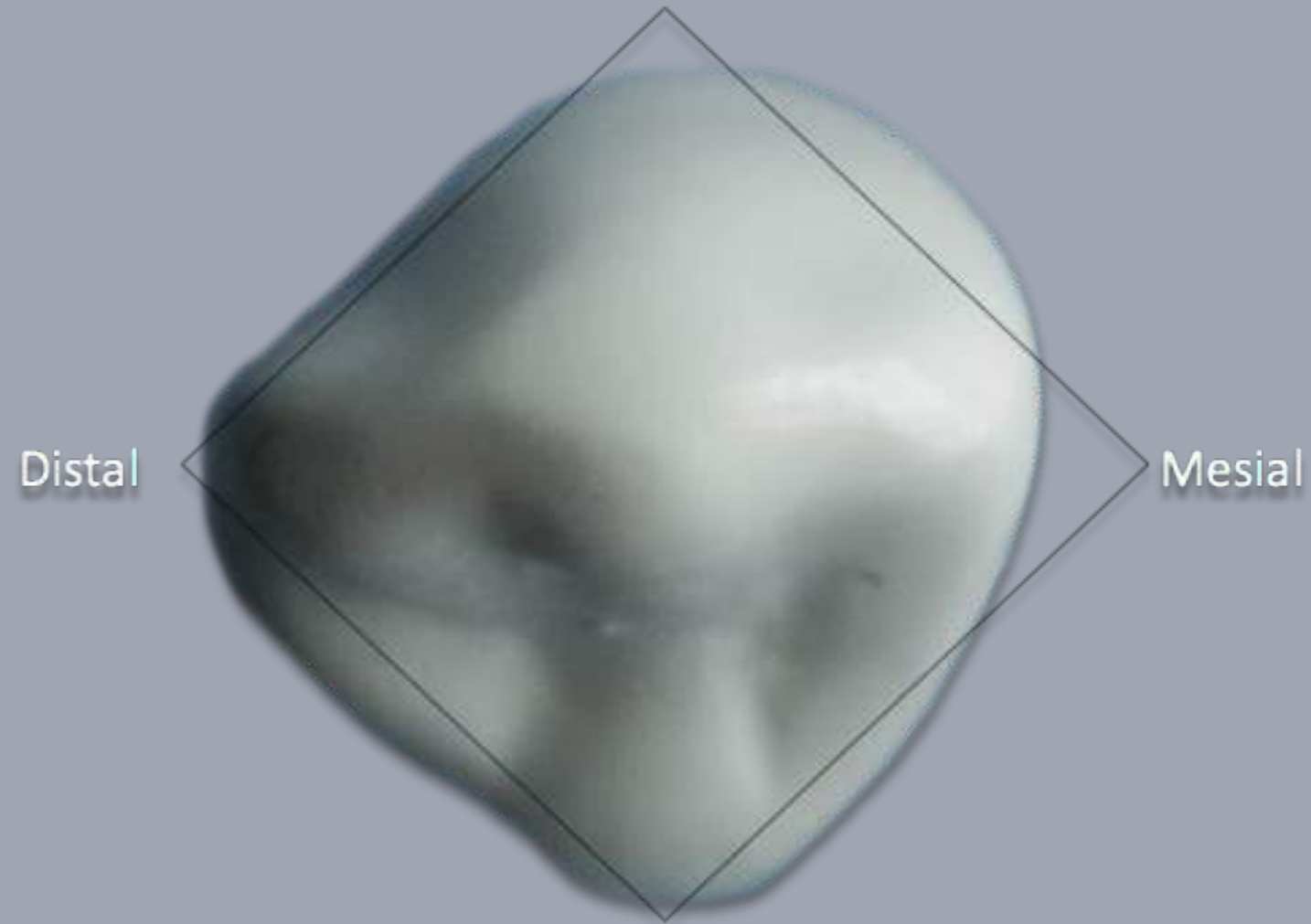
Dental Anatomy and Occlusion

Notes

Canine Teeth

Triangular in shape

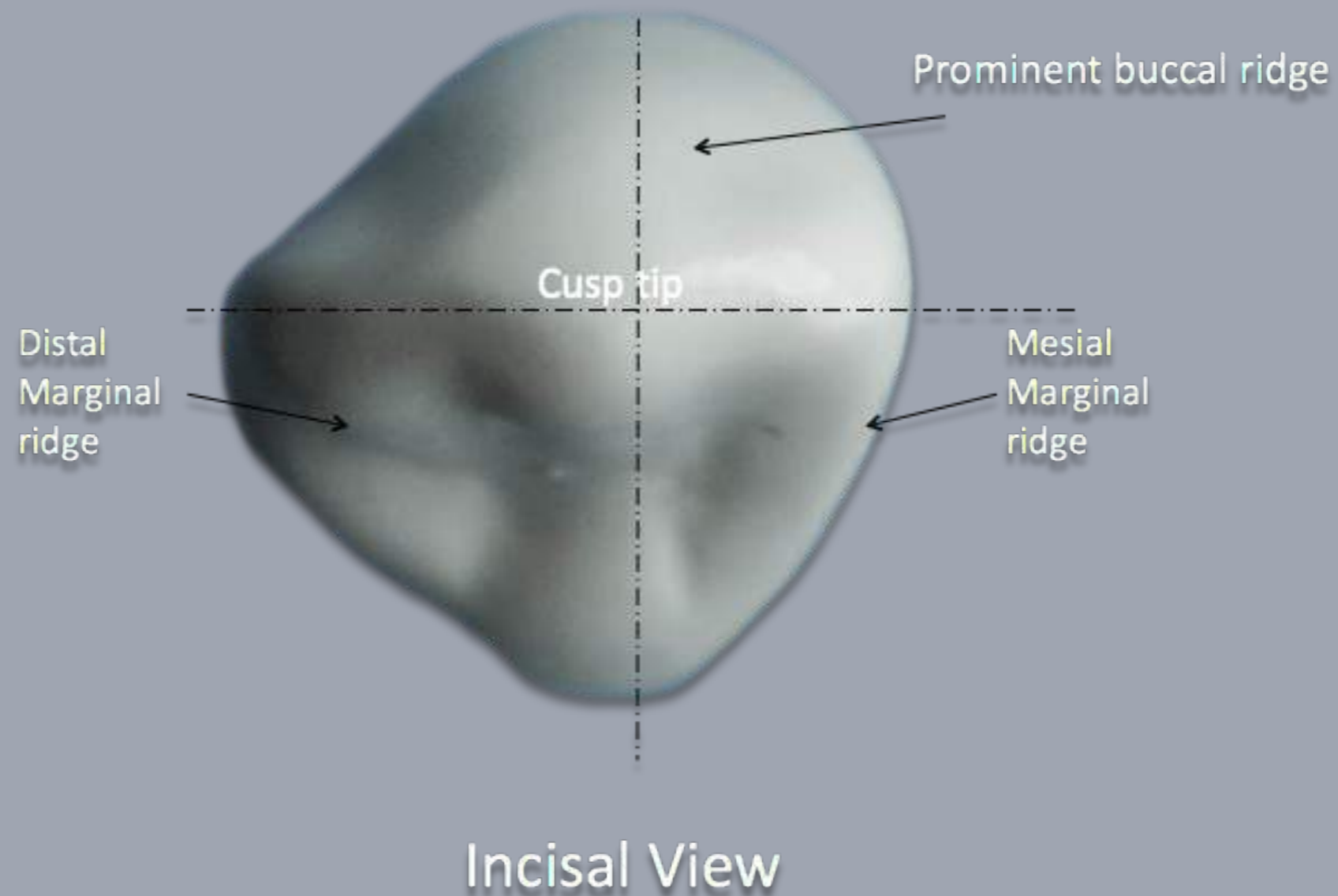
From incisal view



Dental Anatomy and Occlusion

Notes

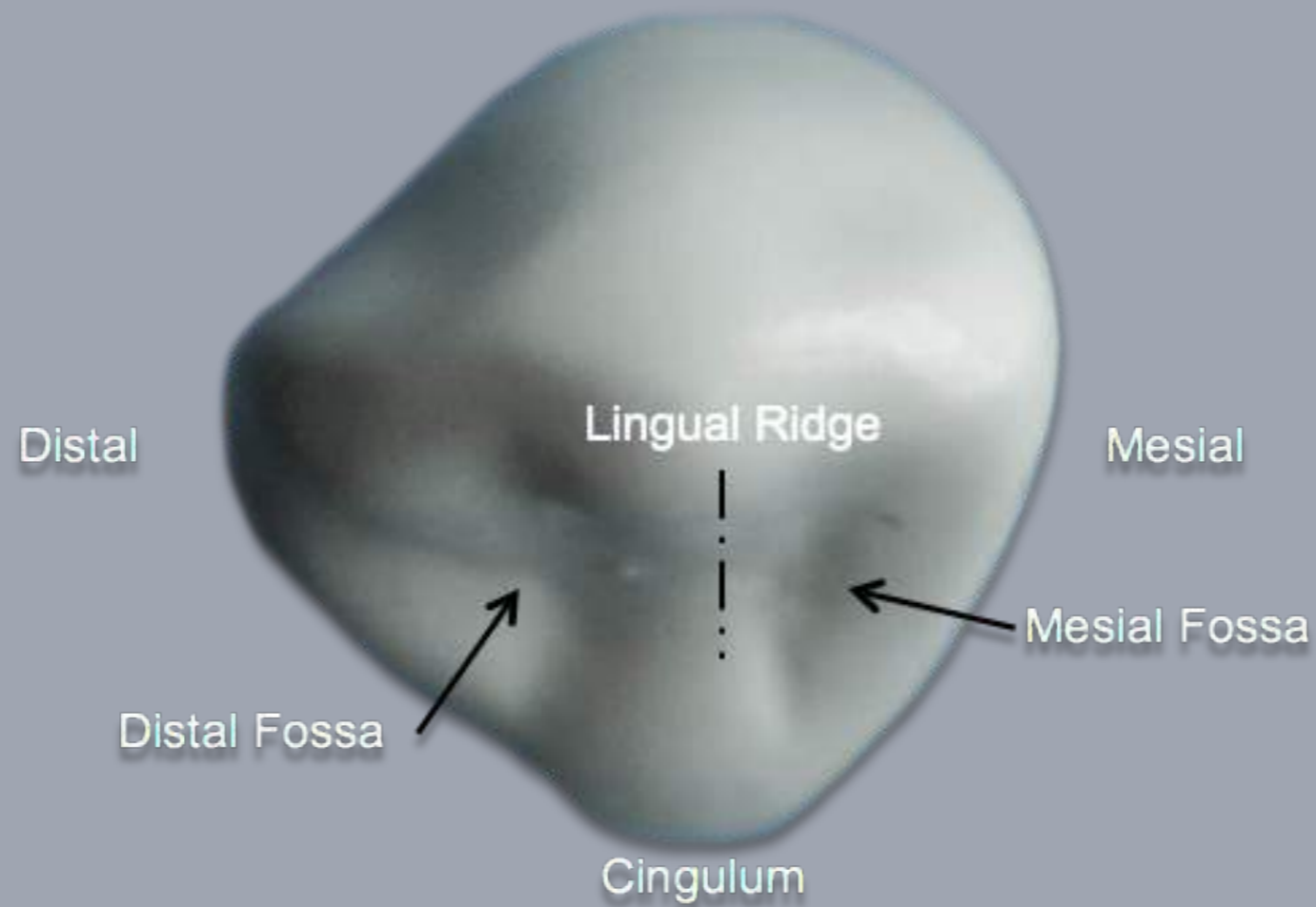
Canine Teeth



Dental Anatomy and Occlusion

Notes

Canine Teeth

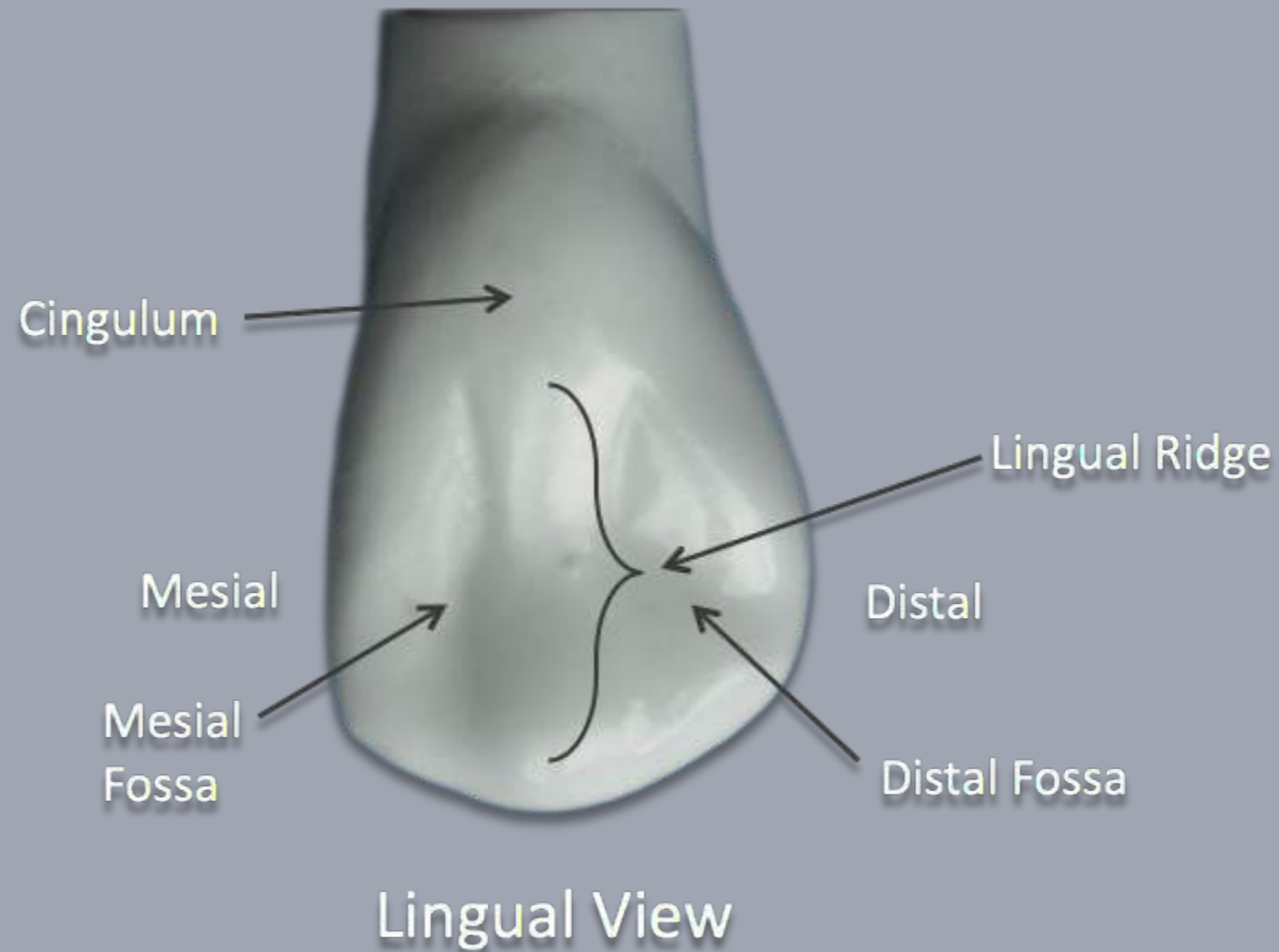


Incisal View

Dental Anatomy and Occlusion

Notes

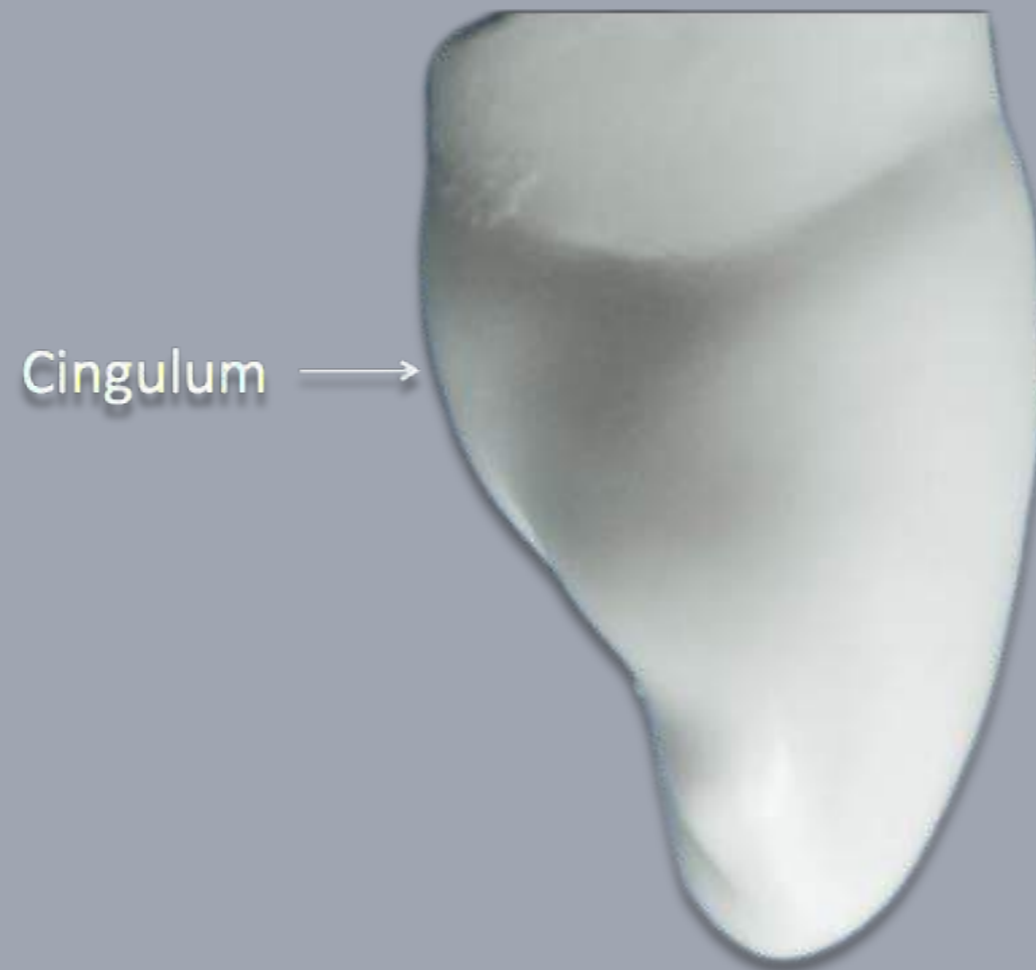
Canine Teeth



Dental Anatomy and Occlusion

Notes

Canine Teeth



Distal View

Dental Anatomy and Occlusion

Notes

Canine Teeth



Mesial View

Dental Anatomy and Occlusion

Notes

Canine Teeth

Maxillary distal contact and embrasure space



Dental Anatomy and Occlusion

Notes

Canine Teeth

Maxillary mesial contact and embrasure space



Dental Anatomy and Occlusion

Notes

Canine Teeth

Maxillary mesial contact and embrasure space



Dental Anatomy and Occlusion

Notes

Canine Teeth

Mandibular Canine



Tooth #22

Dental Anatomy and Occlusion

Notes

Canine Teeth

Similar to maxillary

Canines

More shallow

lingual anatomy

Distal



Lingual

Dental Anatomy and Occlusion

Notes

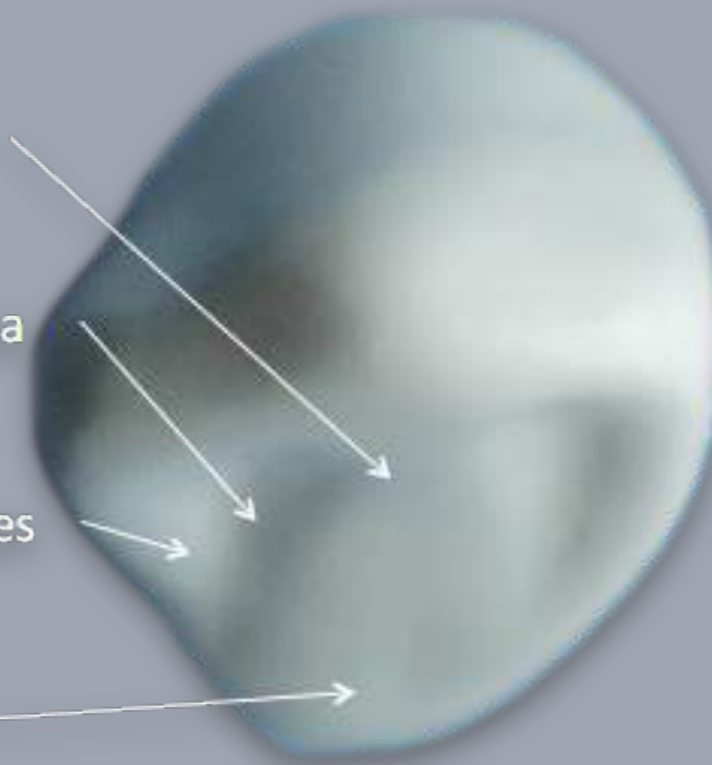
Canine Teeth

Less prominent lingual ridge

Shallow mesial and distal fossa

Less prominent marginal ridges

Less prominent cingulum



Dental Anatomy and Occlusion

Notes

Canine Teeth - Mesial View

#27



Dental Anatomy and Occlusion

Notes

Canine Teeth - Facial view

#27



Dental Anatomy and Occlusion

Notes

Canine Teeth - Lingual view

#27



Dental Anatomy and Occlusion

Notes

Canine Teeth - Incisal View

#27



Dental Anatomy and Occlusion

Notes

Canine Teeth

Contact points & embrasure spaces



Dental Anatomy and Occlusion

Notes

Canine Teeth

Contact points & embrasure spaces



Dental Anatomy and Occlusion

Notes

Canine Teeth

Contact points & embrasure spaces



Dental Anatomy and Occlusion

Notes

Canine Teeth

Contact points & embrasure spaces



Dental Anatomy and Occlusion

Notes

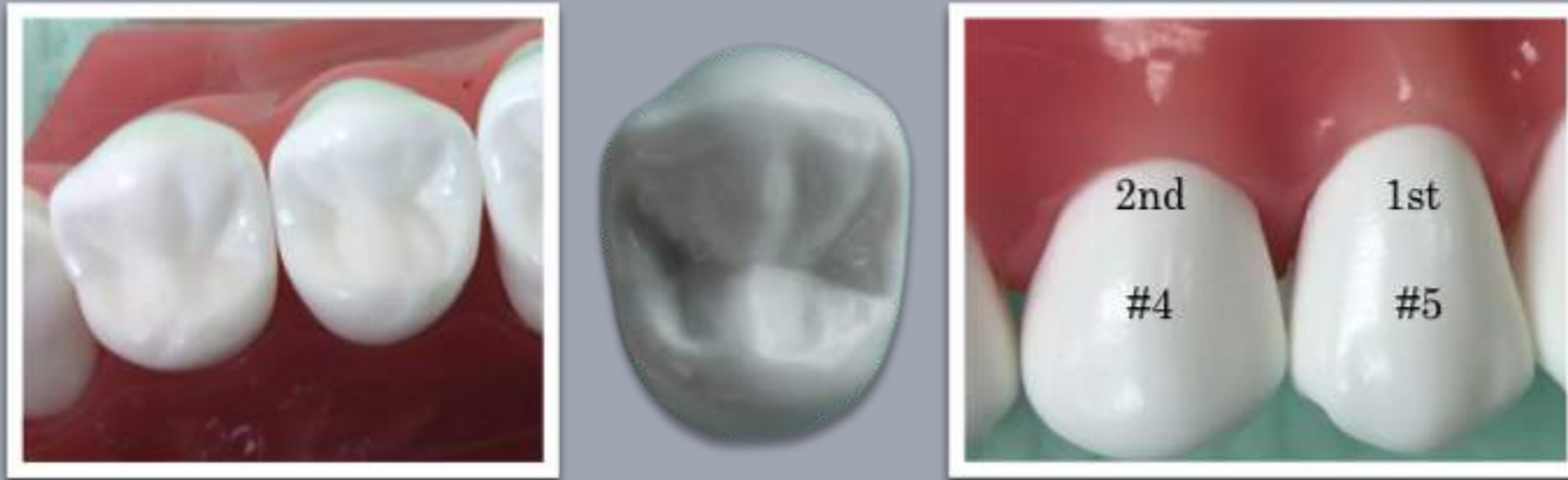
Canine Teeth

Contact points & embrasure spaces



Dental Anatomy and Occlusion

Maxillary Premolars



- Maxillary 1st premolar is usually slightly larger than the maxillary 2nd premolar

Dental Anatomy and Occlusion

Notes

Maxillary 1st Premolar



Right



Left

Dental Anatomy and Occlusion

Notes

Maxillary 1st Premolar



Right



Left

Dental Anatomy and Occlusion

Notes

Maxillary 1st Premolar



Right



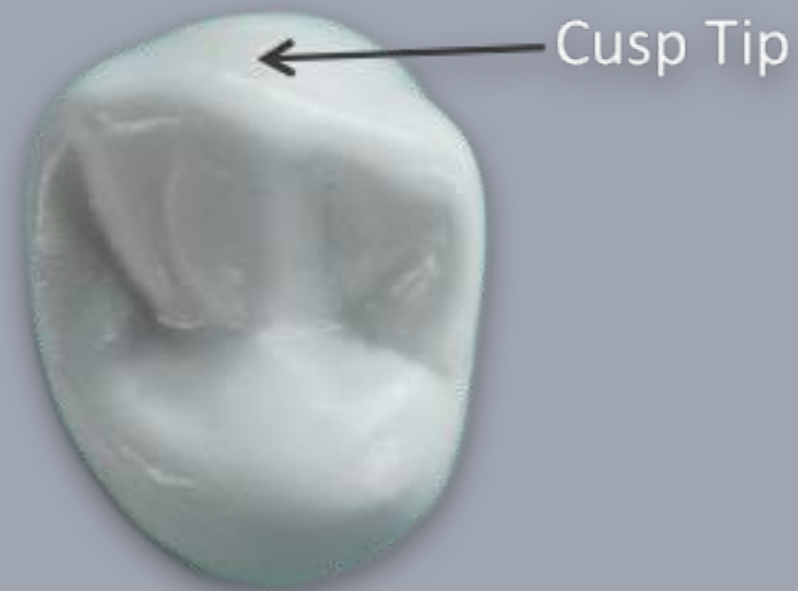
Left

Dental Anatomy and Occlusion

Notes

Maxillary 1st Premolar

- Prominent Buccal ridge



Dental Anatomy and Occlusion

Notes

Pentagonal in Shape

- Buccal View



Dental Anatomy and Occlusion

Notes

Sharp Buccal Cusp

- The buccal cusp is long with a pointed tip.
- Resembles the cusp of a canine.



Dental Anatomy and Occlusion

Notes

Maxillary 1st Premolar

- Trapezoidal shape from mesial or distal



Dental Anatomy and Occlusion

Notes

Maxillary 1st Premolar

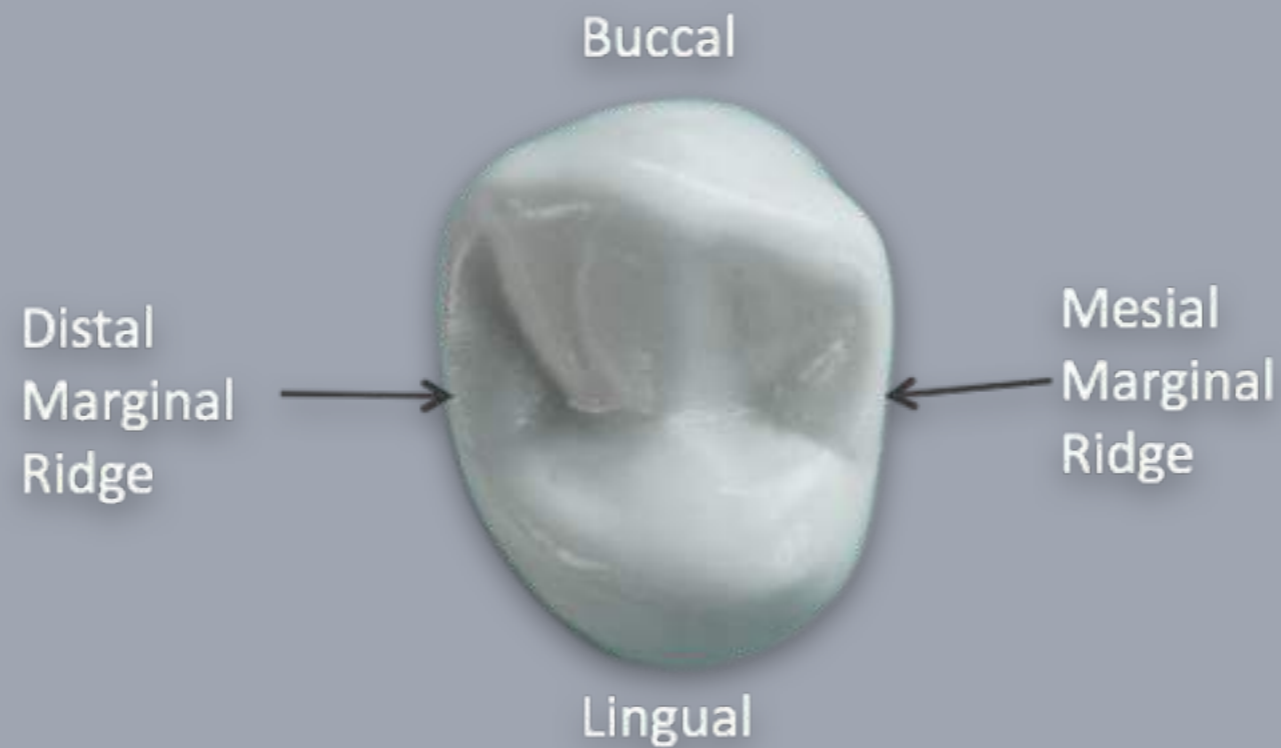
- Hexagonal shape from the occlusal view.
- Narrows towards the lingual



Dental Anatomy and Occlusion

Notes

Maxillary 1st Premolar

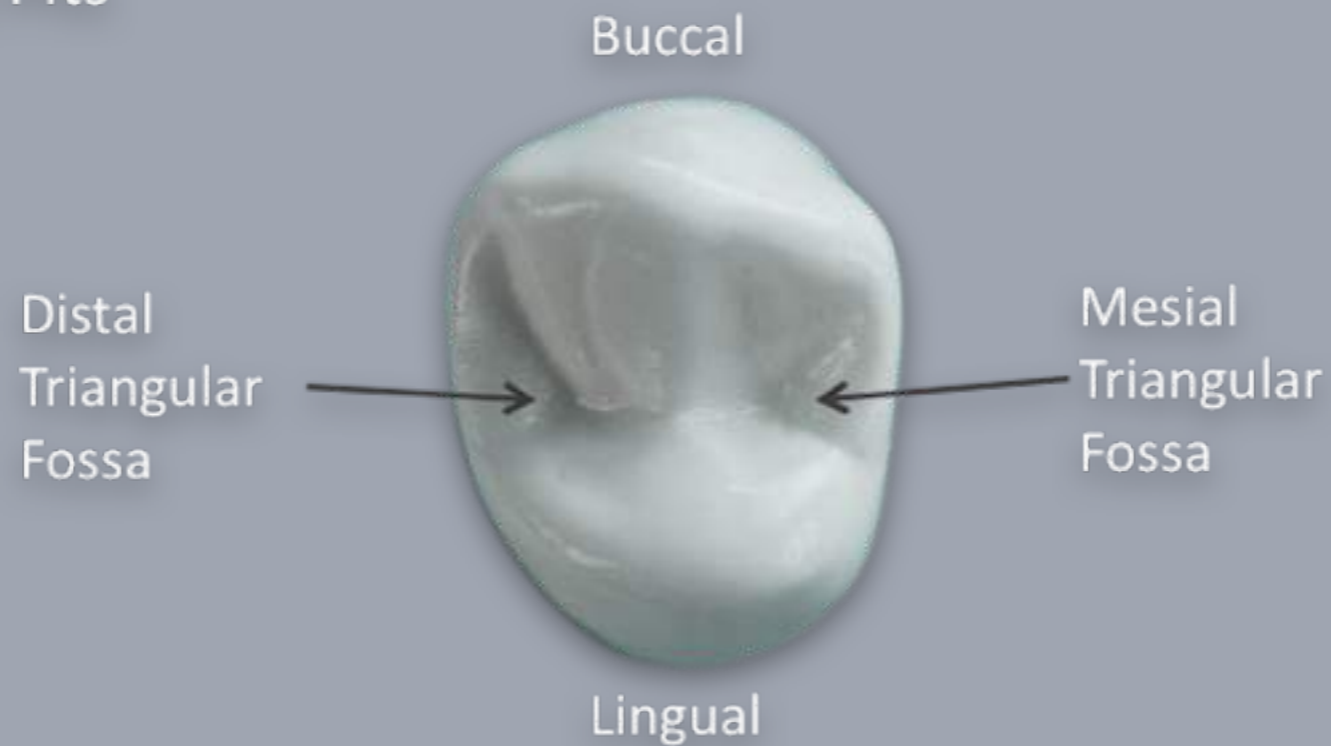


Dental Anatomy and Occlusion

Notes

Maxillary 1st Premolar

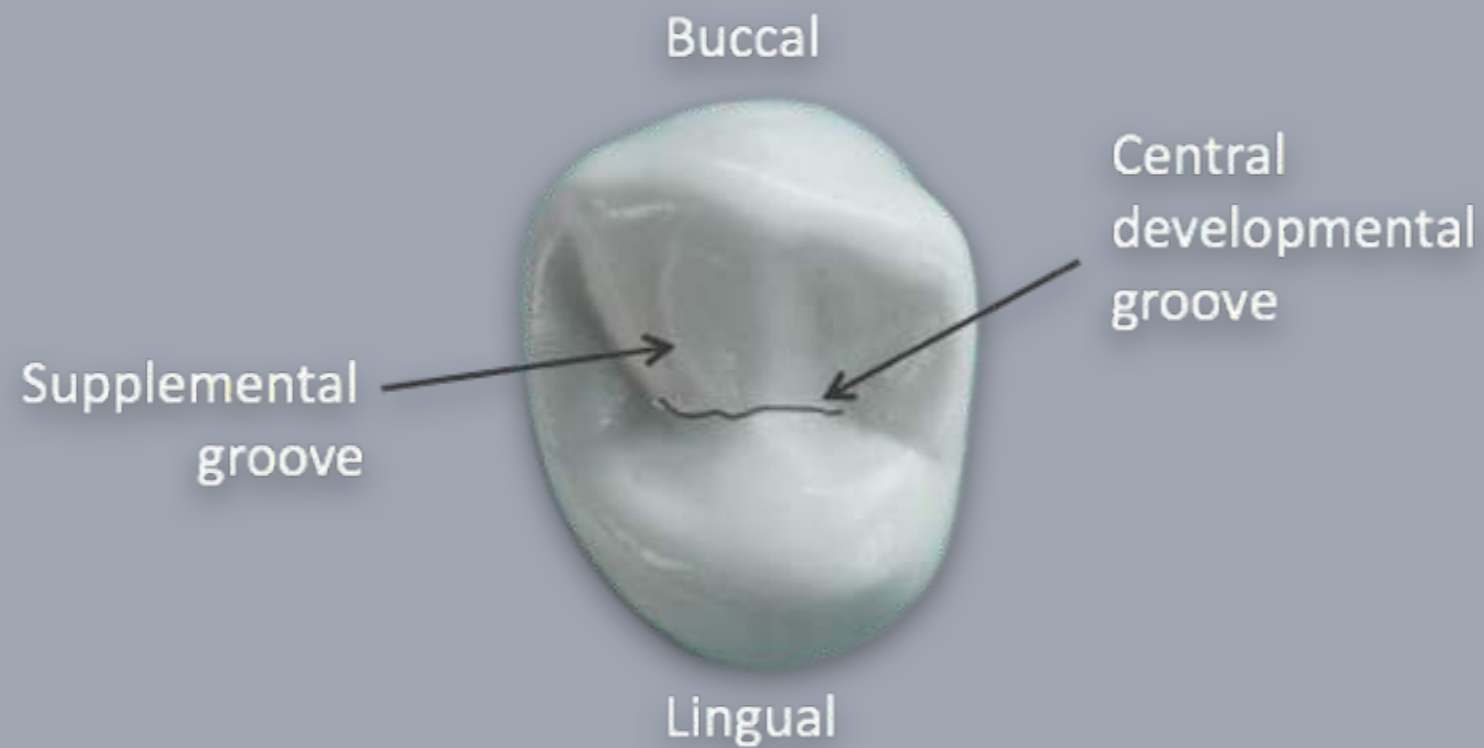
- 2 Fossae
- 2 Pits



Dental Anatomy and Occlusion

Notes

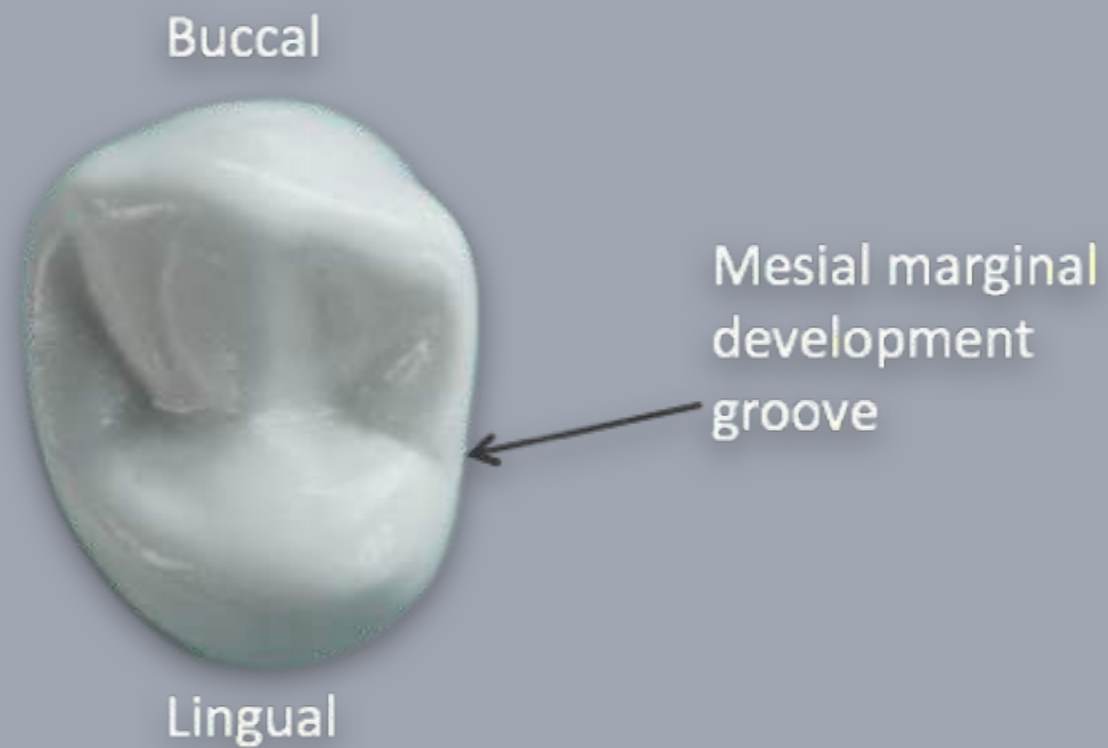
Maxillary 1st Premolar



Dental Anatomy and Occlusion

Notes

Maxillary 1st Premolar

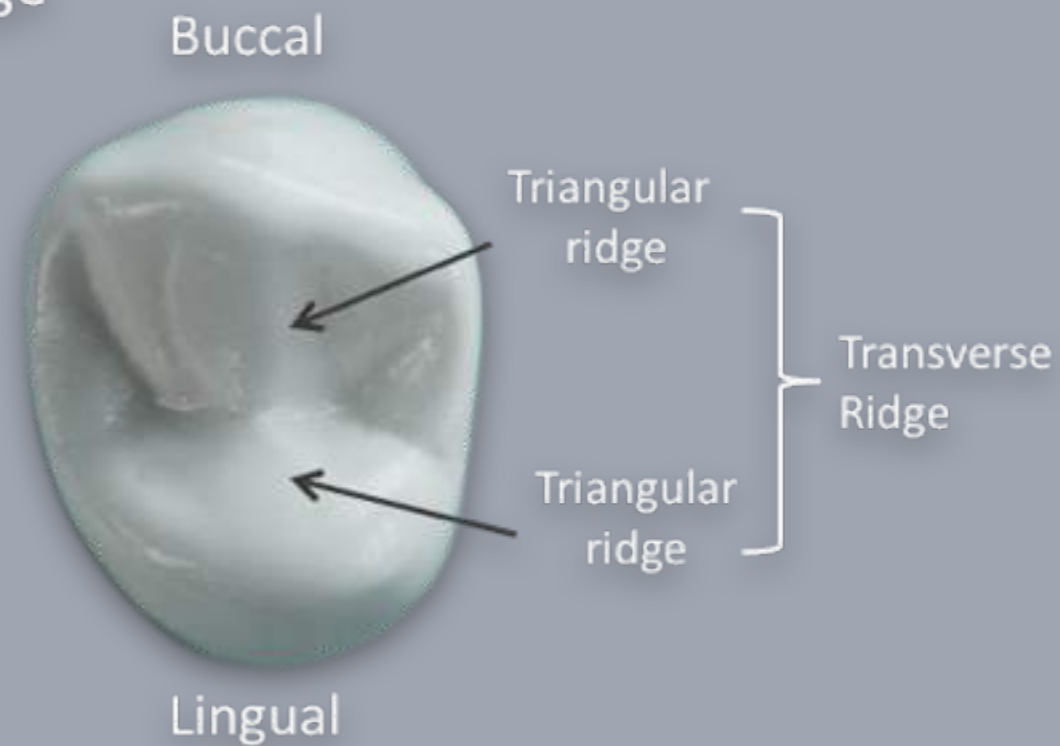


Dental Anatomy and Occlusion

Notes

Maxillary 1st Premolar

- 2 Triangular ridges
- 1 Transverse ridge

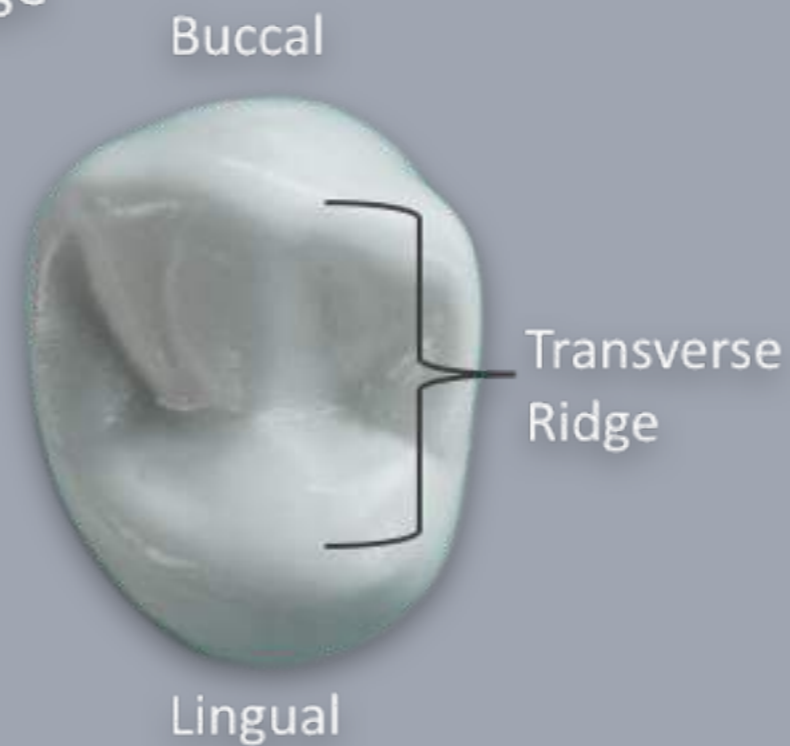


Dental Anatomy and Occlusion

Notes

Maxillary 1st Premolar

- 2 Triangular ridges
- 1 Transverse ridge



Dental Anatomy and Occlusion

Notes

Maxillary 1st Premolar

- Facial and lingual heights of contour



Dental Anatomy and Occlusion

Notes

Maxillary 1st Premolar

- Lingual cusp is shorter and smaller.
- Both cusps are visible from the lingual view



Lingual aspect

Dental Anatomy and Occlusion

Notes

Maxillary 1st Premolar Contact points & embrasure spaces



Dental Anatomy and Occlusion

Notes

Maxillary 1st Premolar



Dental Anatomy and Occlusion

Notes

Maxillary 1st Premolar

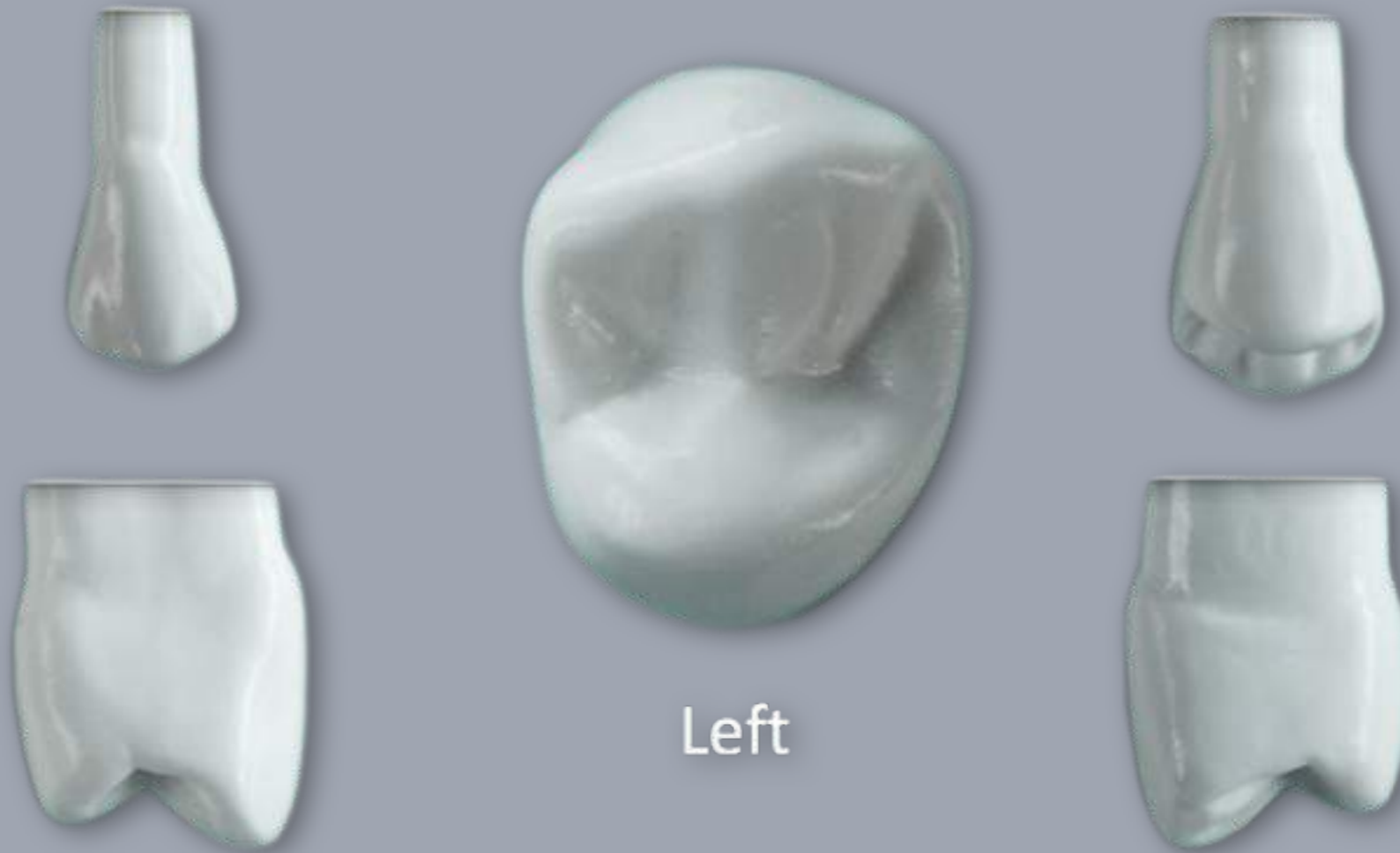


Right

Dental Anatomy and Occlusion

Notes

Maxillary 1st Premolar



Left

Dental Anatomy and Occlusion

Notes

Maxillary 2nd Premolar

- Very similar in size & shape to the 1st premolar
- A few minor differences



Dental Anatomy and Occlusion

Notes

Maxillary 2nd Premolar

- Usually slightly smaller in size
- Less prominent Buccal ridge



Dental Anatomy and Occlusion

Notes

Maxillary 2nd Premolar

- Central groove is shorter
- More supplementary grooves (spider-like).



Dental Anatomy and Occlusion

Notes

Maxillary 2nd Premolar

- More rounded buccal cusp



Dental Anatomy and Occlusion

Notes

Maxillary 2nd Premolar

- Buccal and lingual cusps more equal in height

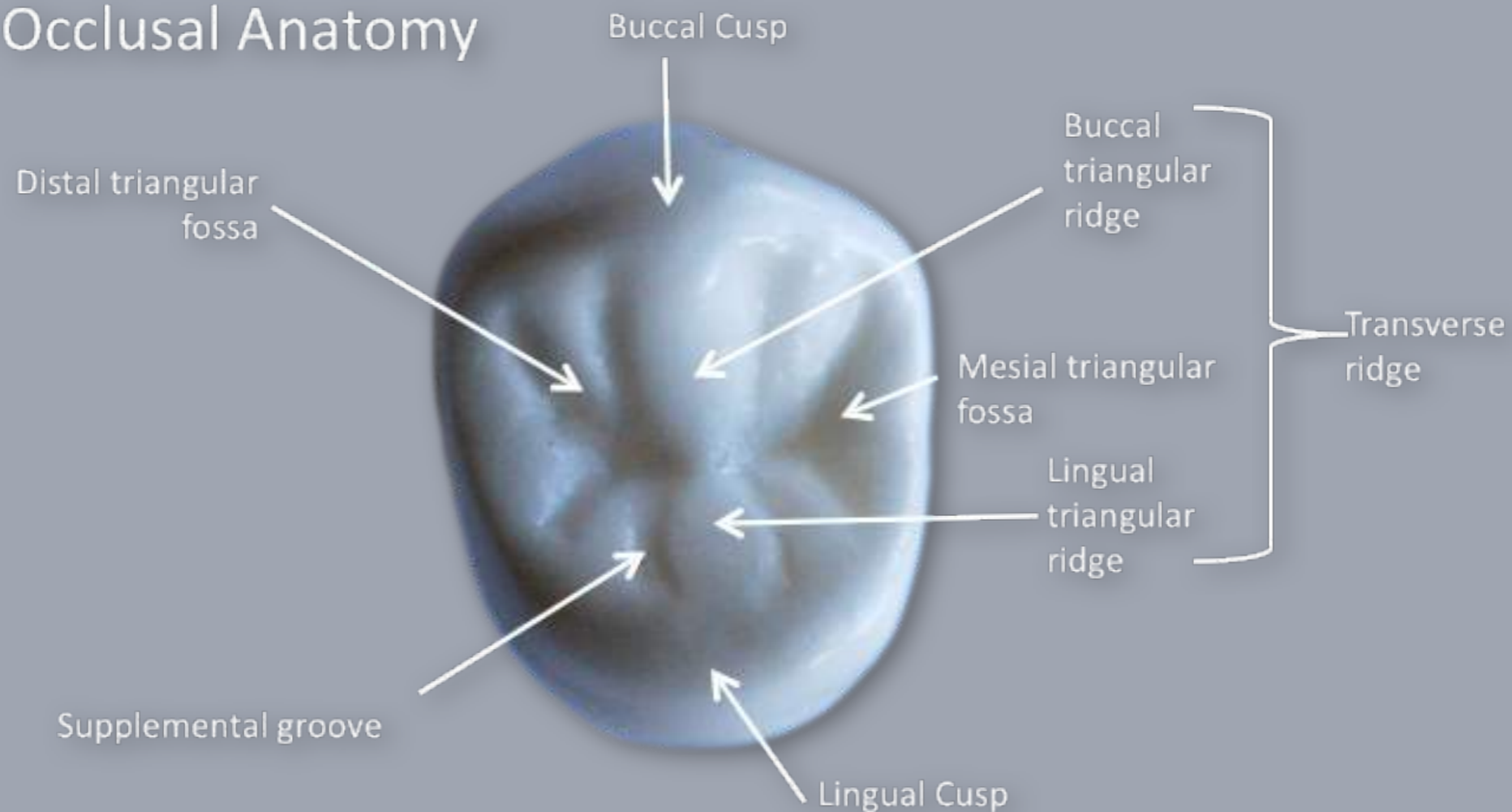


Dental Anatomy and Occlusion

Notes

Maxillary right 2nd Premolar

- Occlusal Anatomy



Dental Anatomy and Occlusion

Notes

Maxillary 2nd Premolar Contact points & embrasure spaces



Dental Anatomy and Occlusion

Notes

Maxillary 2nd Premolar

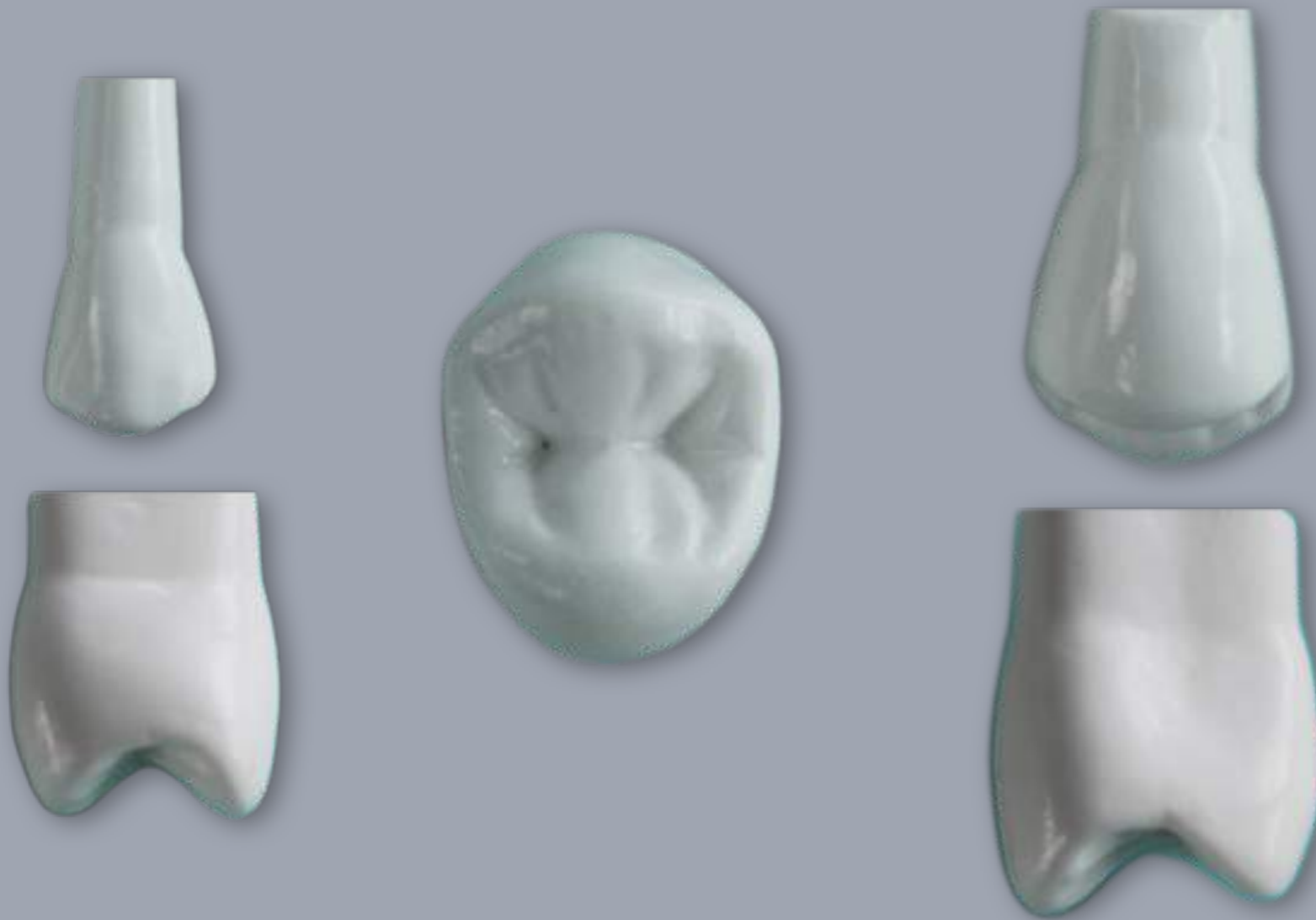
Contact points & embrasure spaces



Dental Anatomy and Occlusion

Notes

Maxillary 2nd Premolar



Dental Anatomy and Occlusion

Notes

Mandibular 1st Premolar



#21

Dental Anatomy and Occlusion

Notes

Mandibular 1st Premolar

- Buccal View



Dental Anatomy and Occlusion

Notes

Pentagonal Shaped from a Buccal View



Dental Anatomy and Occlusion

Notes

Lingual View

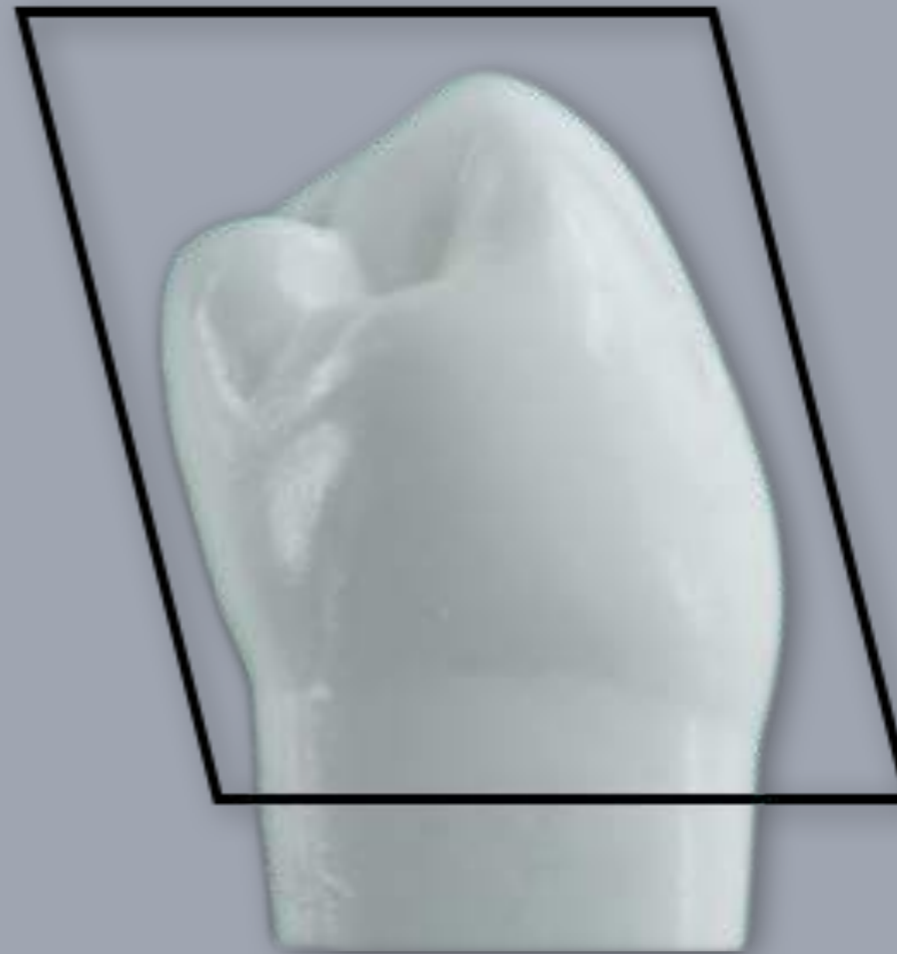


Dental Anatomy and Occlusion

Notes

Proximal View

- Rhomboidal shaped
- Note the “tilt,” or angulation of the crown of the tooth.

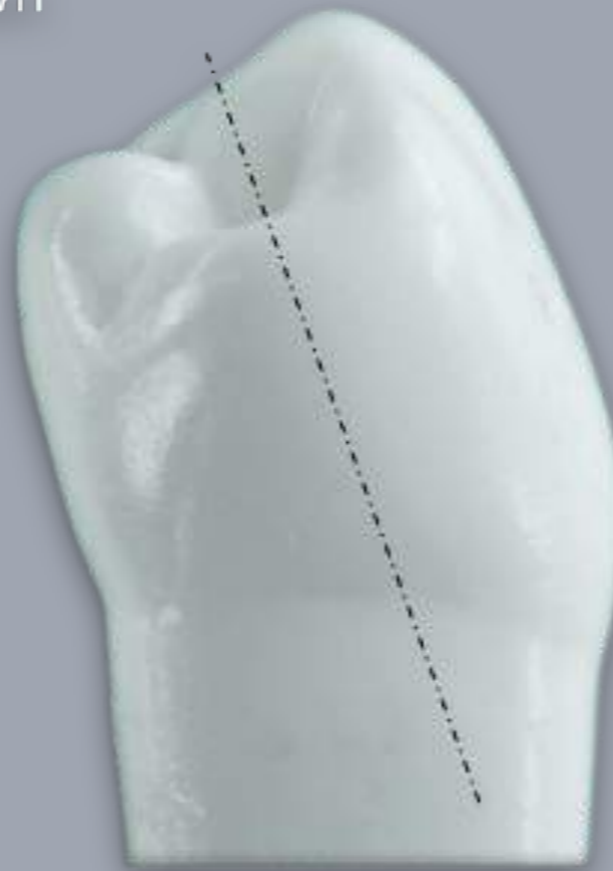


Dental Anatomy and Occlusion

Notes

Mesial View

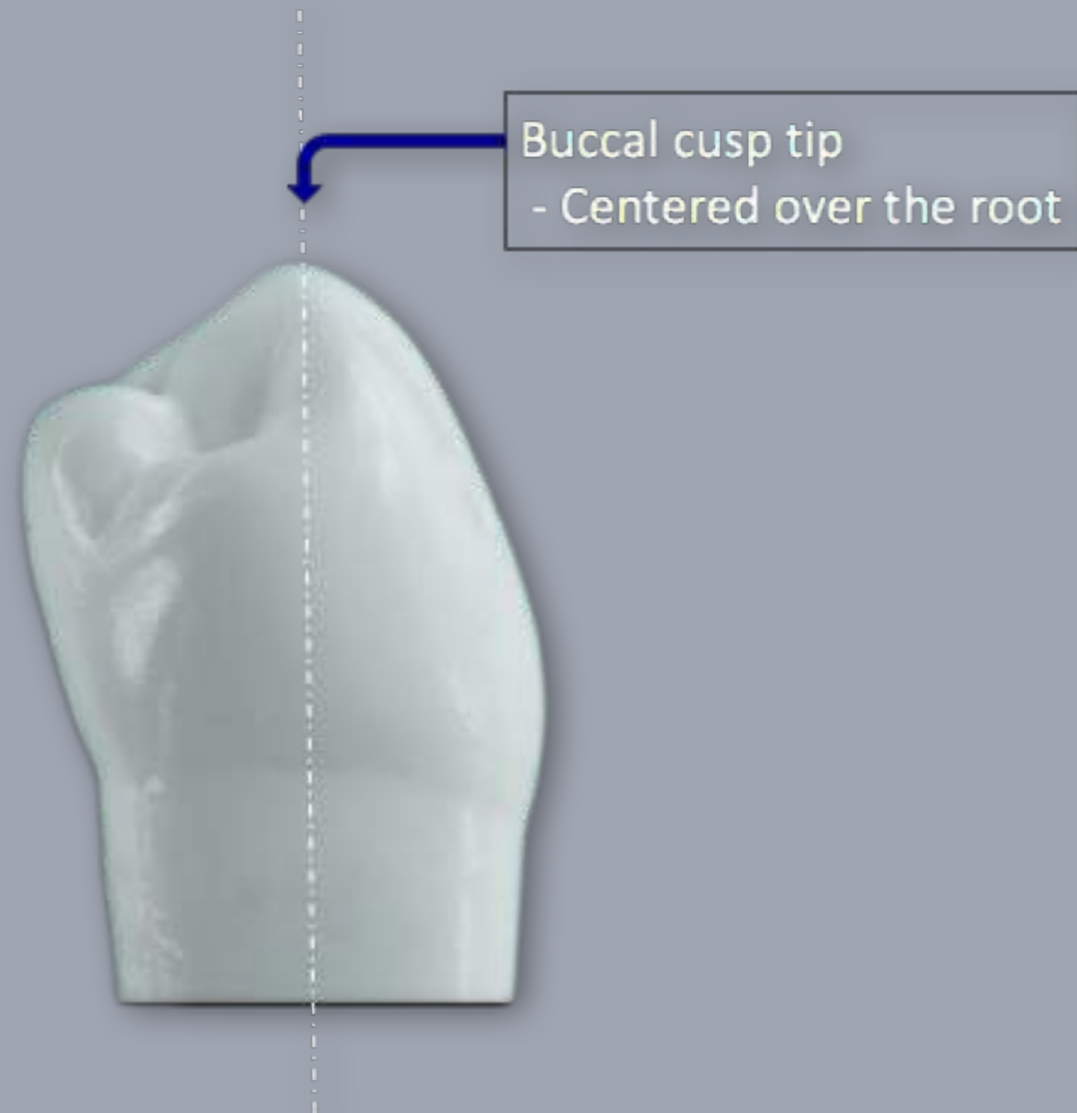
- Angulation of the crown



Dental Anatomy and Occlusion

Notes

Mesial View



Dental Anatomy and Occlusion

Notes

Distal View

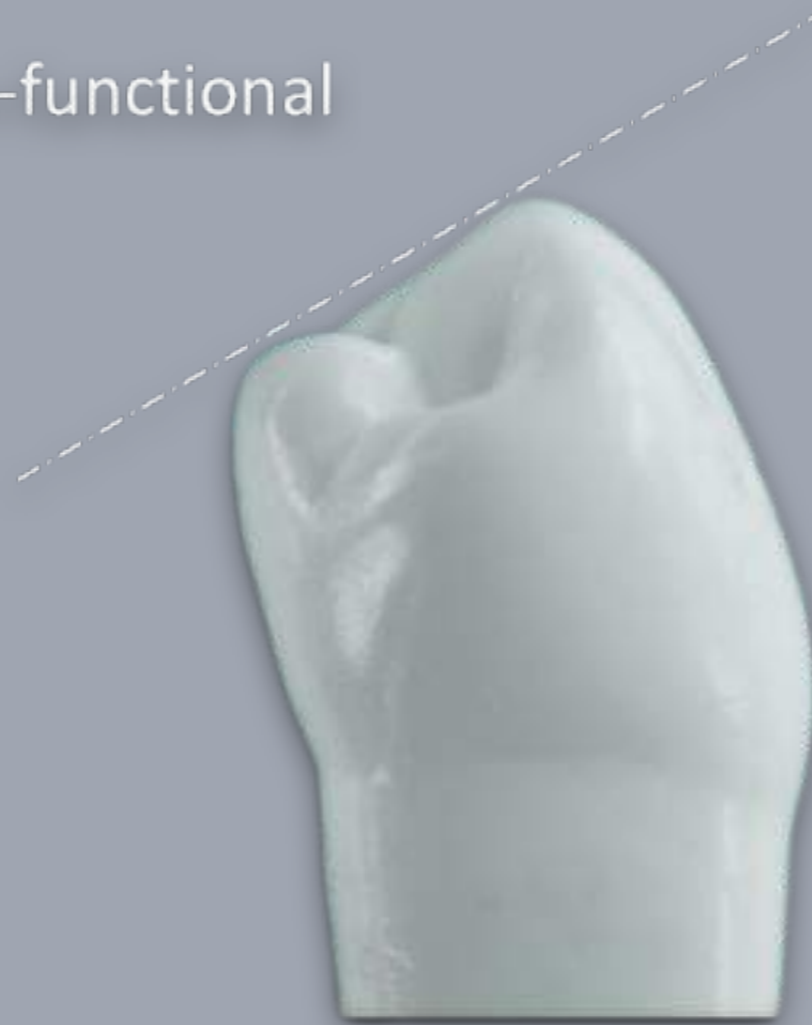


Dental Anatomy and Occlusion

Notes

Mandibular 1st Premolar

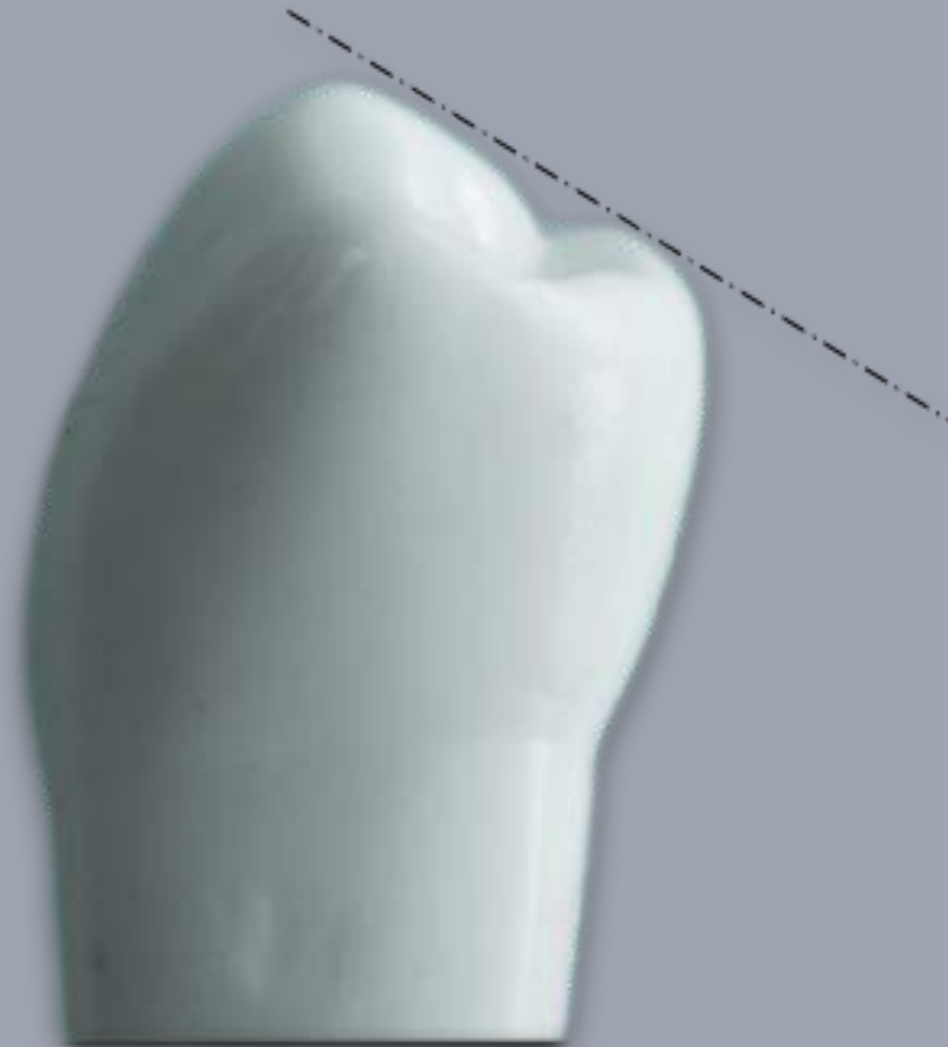
*Very short, non-functional
Lingual cusp



Dental Anatomy and Occlusion

Notes

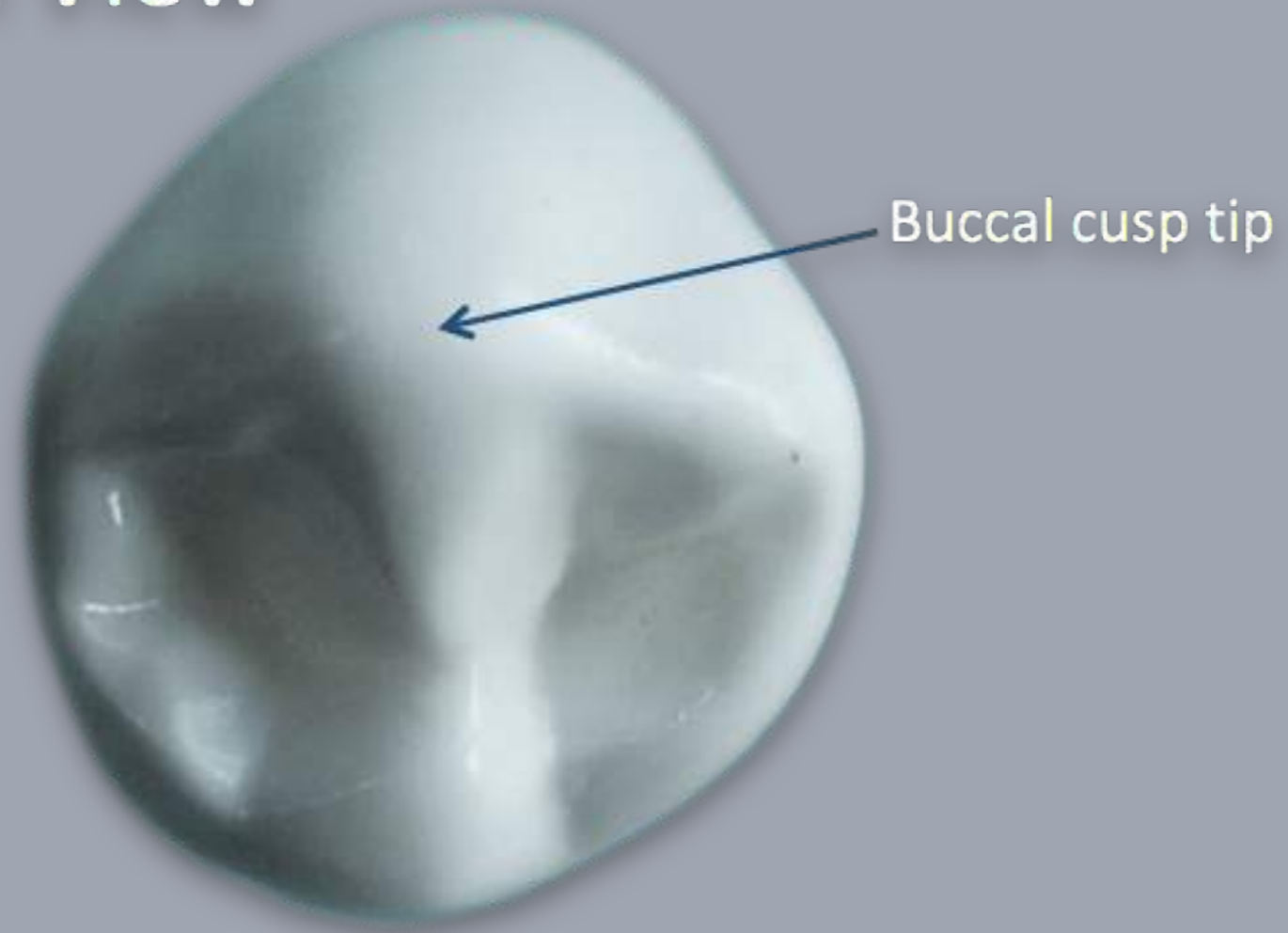
Distal View



Dental Anatomy and Occlusion

Notes

Occlusal View



Dental Anatomy and Occlusion

Notes

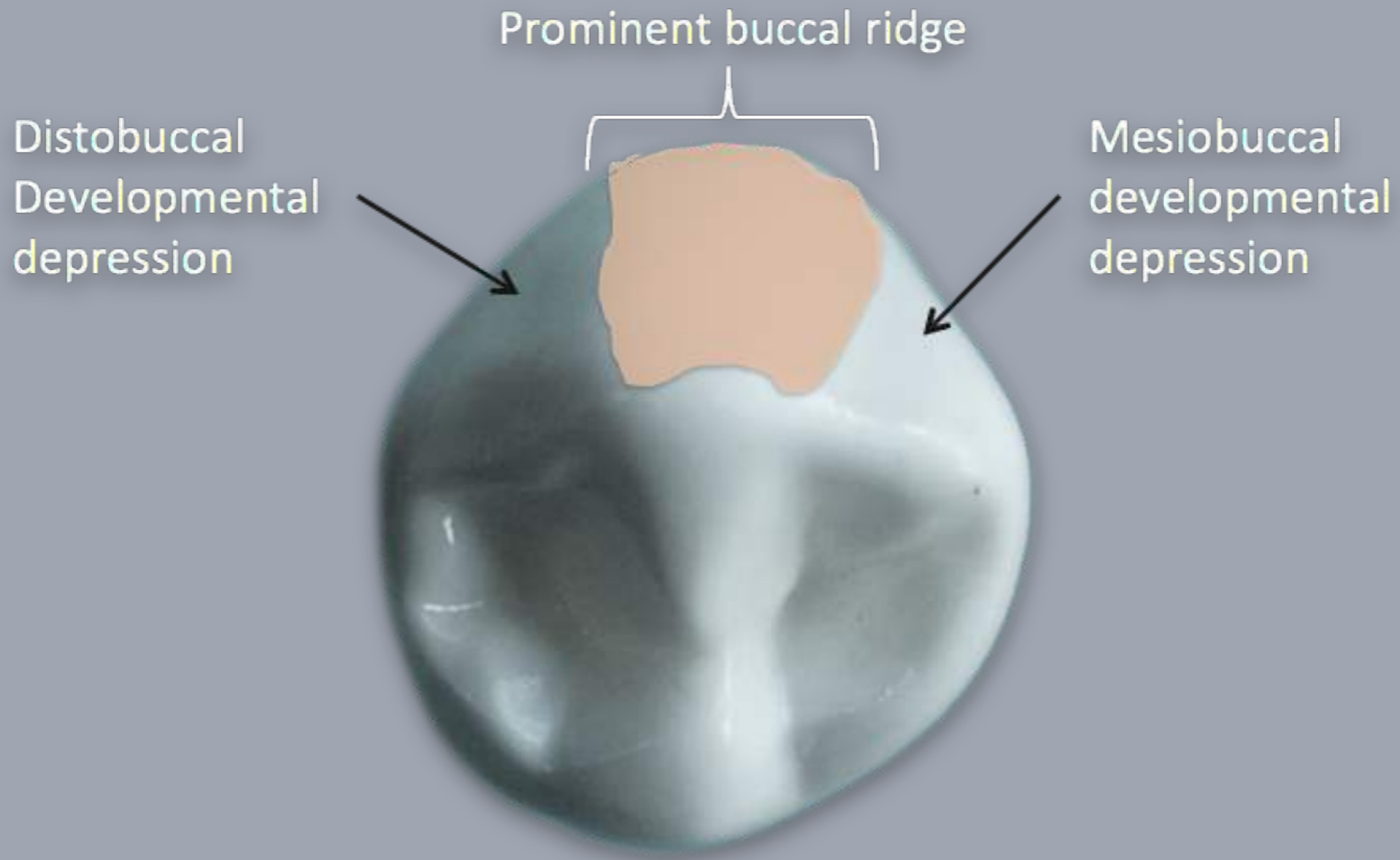
Diamond shaped from
the occlusal
aspect



Similar in
form and function
to the mandibular canine

Dental Anatomy and Occlusion

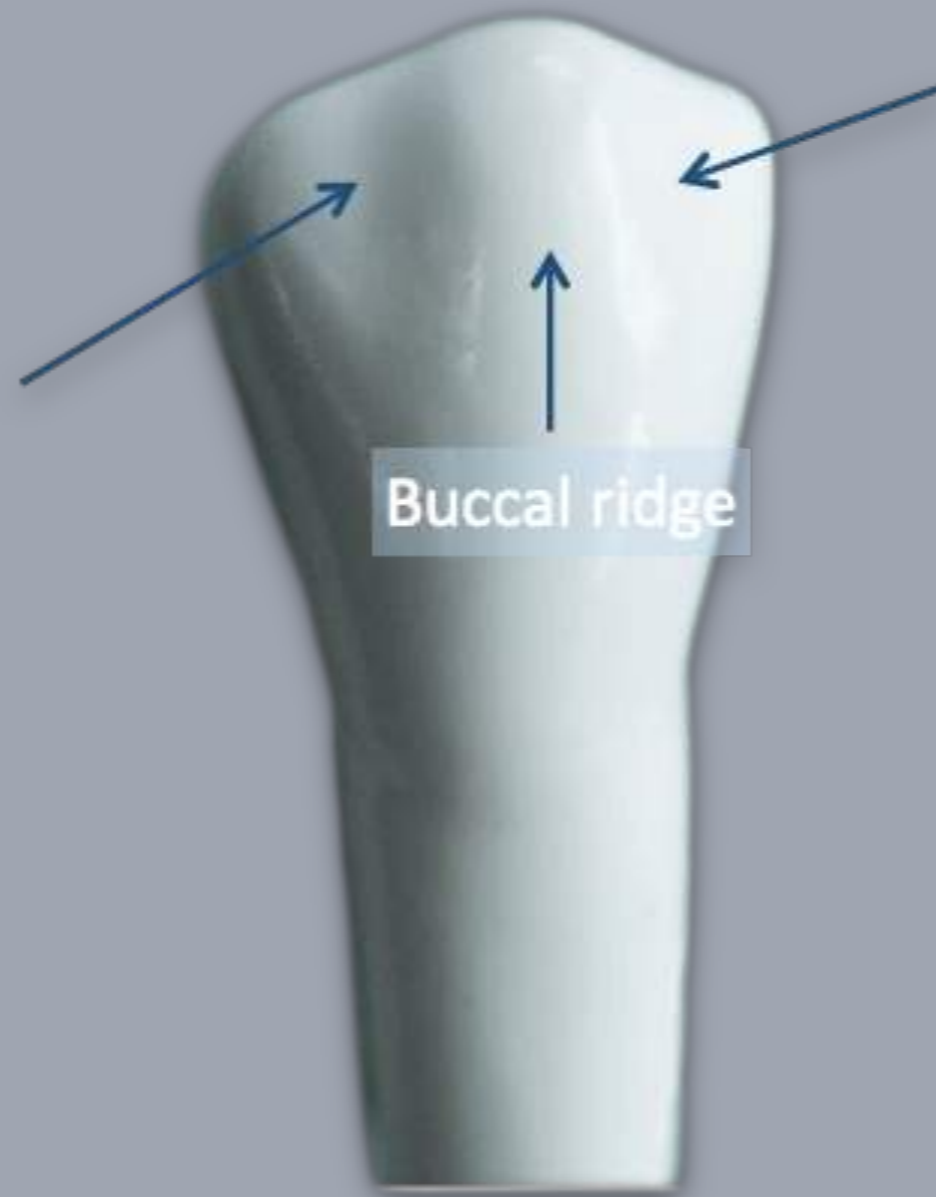
Notes



Dental Anatomy and Occlusion

Notes

Mesiobuccal
developmental
depression



Distobuccal
developmental
depression

Buccal ridge

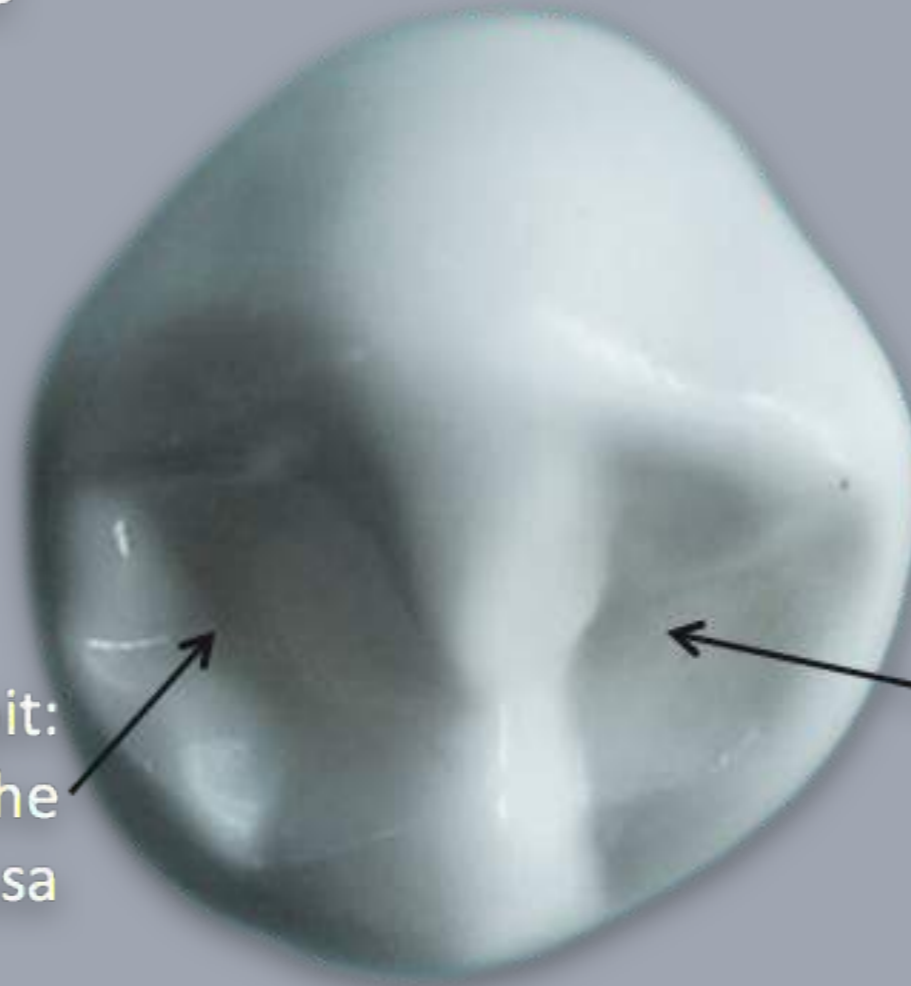
Dental Anatomy and Occlusion

Notes

2 Fossae

Buccal cusp

Distal Fossa and pit:
- Larger than the
mesial fossa



Mesial Fossa
and pit

Lingual cusp

- Small and non-functional

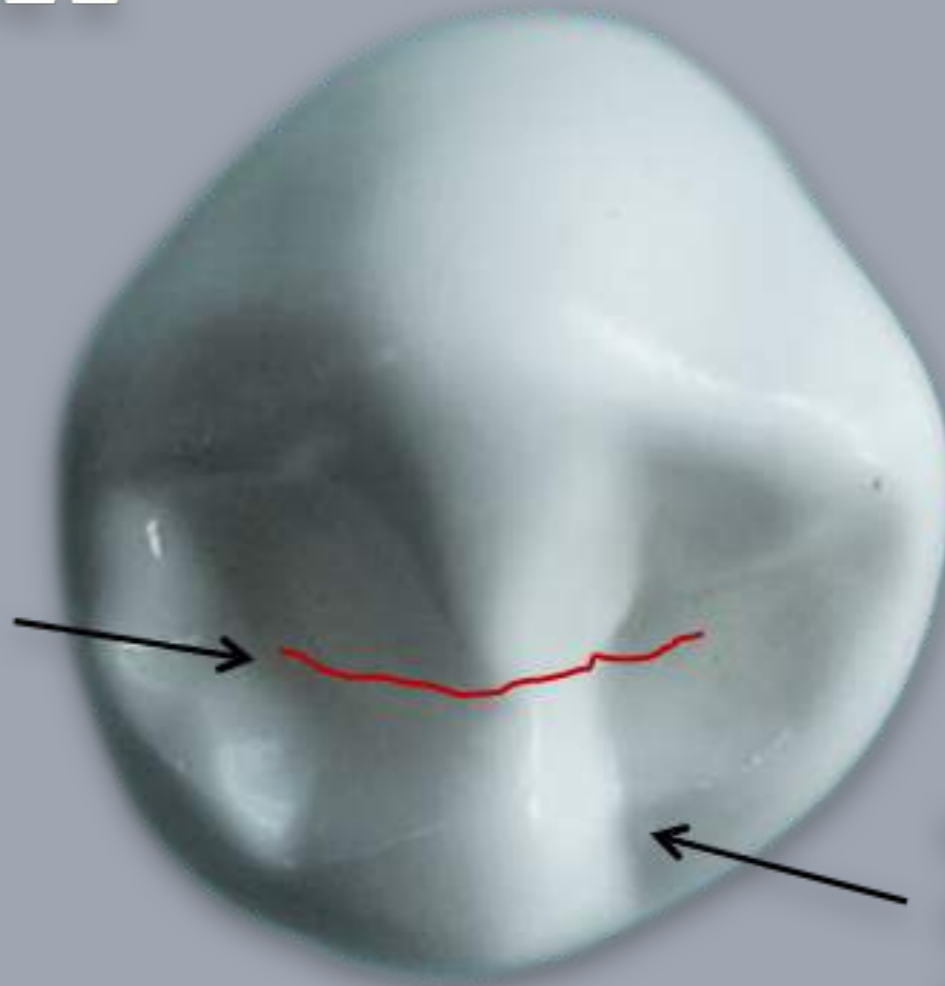
Dental Anatomy and Occlusion

Notes

Tooth #21

Buccal cusp

Central groove



Mesio-Lingual
Developmental
Groove

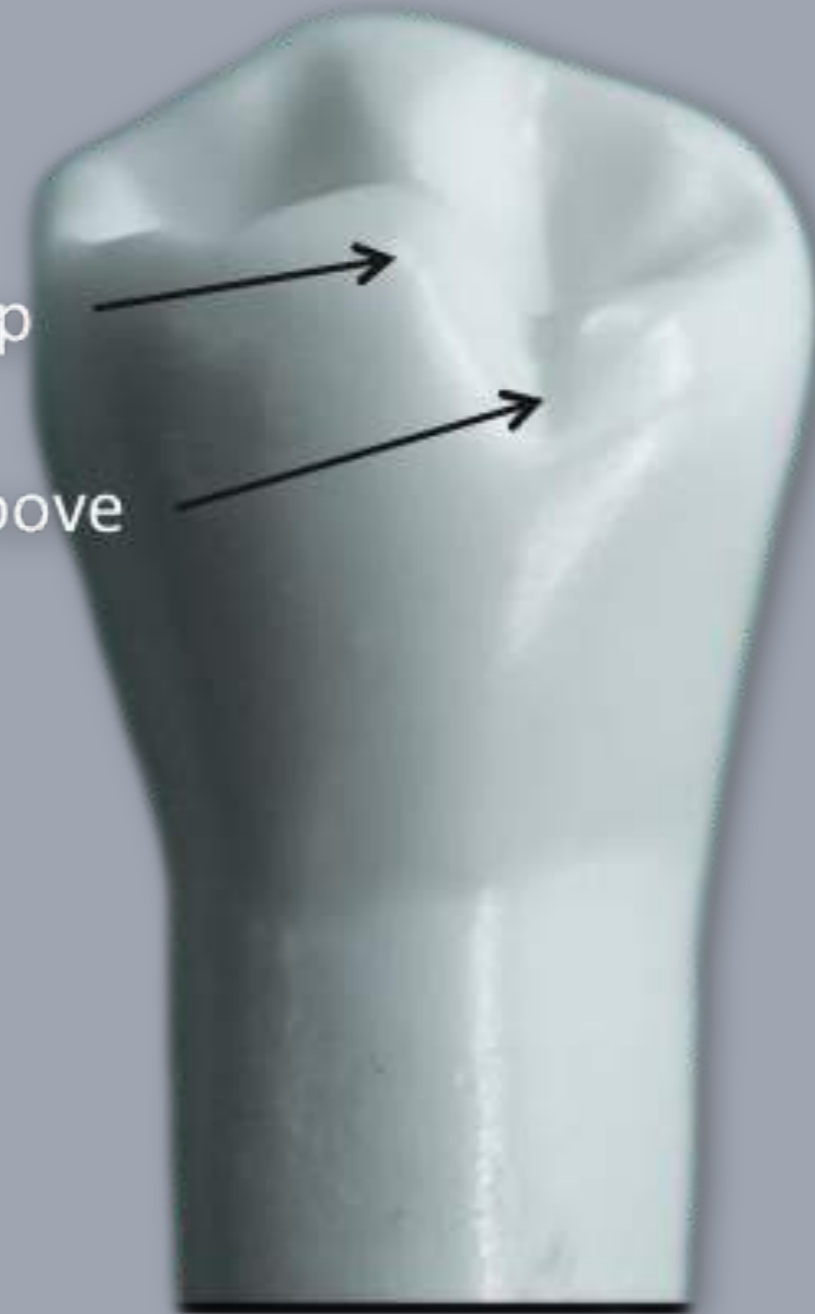
Lingual cusp

- Small and non-functional

Dental Anatomy and Occlusion

Notes

- Short, non-functional lingual cusp
- Mesio-lingual developmental groove



Dental Anatomy and Occlusion

Notes

Mesial View

*Another view of the small Lingual cusp and mesio-lingual Developmental groove

Distal marginal ridge



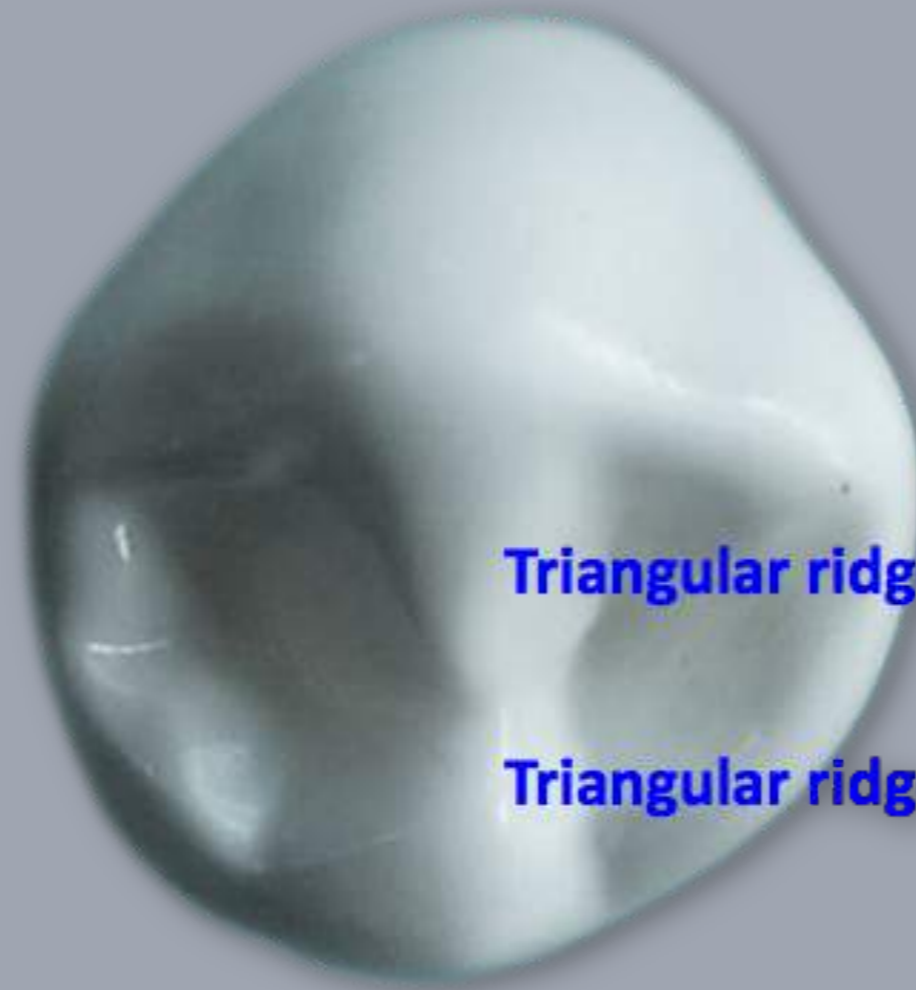
Mesial marginal ridge is more apical (lower) than the distal marginal ridge

*Much of the occlusal surface is visible from the mesial view

Dental Anatomy and Occlusion

Notes

Buccal cusp



Triangular ridge

Triangular ridge

Transverse
ridge

Lingual cusp

Dental Anatomy and Occlusion

Notes



Dental Anatomy and Occlusion

Notes

Heights of Contour



Dental Anatomy and Occlusion

Notes

Heights of Contour

Lingual



Buccal

Dental Anatomy and Occlusion

Notes

Interproximal Contacts

Mesial interproximal contact is more cervical (lower) than the distal interproximal contact
Unique to the mandibular first premolars



Dental Anatomy and Occlusion

Notes

Interproximal Contacts



Dental Anatomy and Occlusion

Notes

Mandibular Right 1st Premolar

#28

Buccal cusp

M

D

Lingual cusp



Dental Anatomy and Occlusion

Notes



Facial

Tooth #28



Distal



Lingual



Occlusal



Mesial

Dental Anatomy and Occlusion

Notes

Mandibular Left 2nd Premolar

- #20



Dental Anatomy and Occlusion

Notes

Mandibular Left 2nd Premolar

- 3 cusp type
- Majority of the time



Dental Anatomy and Occlusion

Notes

Mandibular Left 2nd Premolar

- Occlusal View
- Pentagonal in Shape
- More square towards the lingual



Dental Anatomy and Occlusion

Notes

Mandibular Left 2nd Premolar

- More rounded buccal cusp than the 1st premolar



Dental Anatomy and Occlusion

Notes

Mandibular Left 2nd Premolar

- Trapezoidal in shape, or....



Dental Anatomy and Occlusion

Notes

Mandibular Left 2nd Premolar

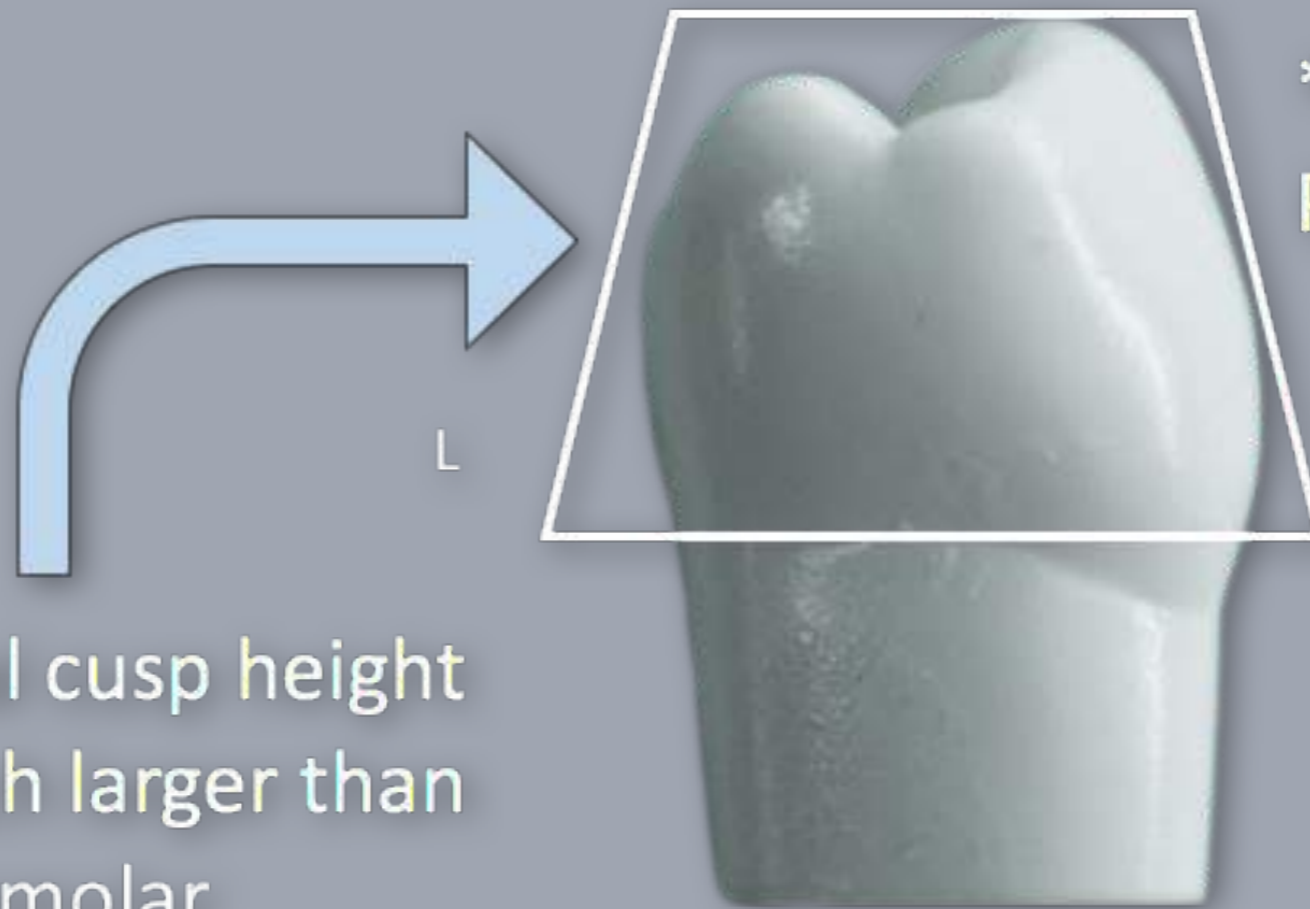
- ...Pentagonal in shape



Dental Anatomy and Occlusion

Notes

Mandibular Left 2nd Premolar



*Trapezoidal from Proximal view

Lingual cusp height is much larger than 1st premolar

Dental Anatomy and Occlusion

Notes

Mandibular left 2nd Premolar



Dental Anatomy and Occlusion

Notes

Mandibular Left 2nd Premolar

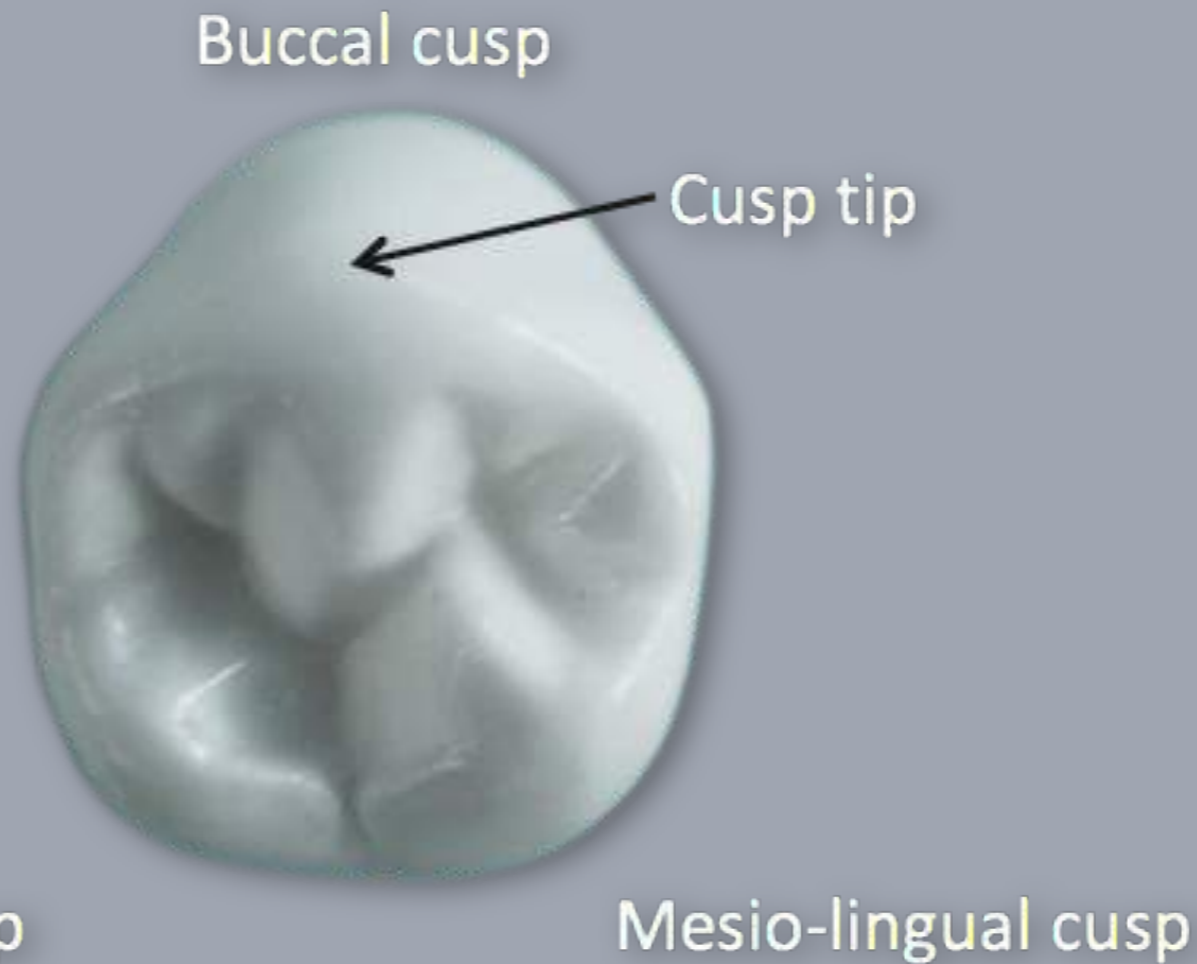


Dental Anatomy and Occlusion

Notes

Mandibular Left 2nd Premolar

3 cusp type
*Y-shape cusp &
groove anatomy



Dental Anatomy and Occlusion

Notes

Mandibular Left 2nd Premolar

Buccal cusp



Disto-Lingual cusp

Mesio-lingual cusp

Y shaped

Dental Anatomy and Occlusion

Notes

Mandibular Left 2nd Premolar

3 cusp type

Buccal cusp

Cusp tip

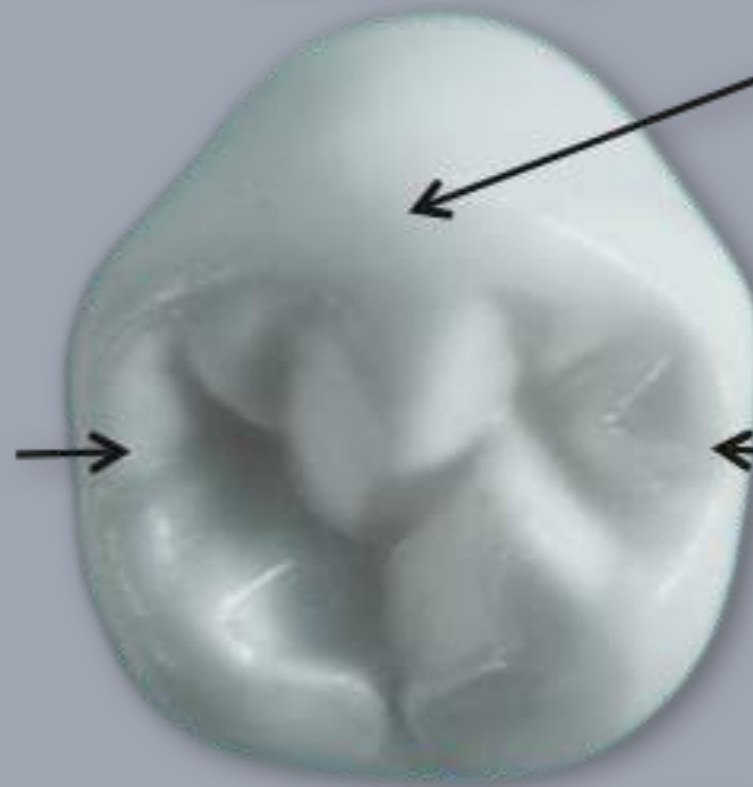
D.M.R.

M.M.R.

Disto-Lingual cusp

Mesio-lingual cusp

*Larger than DL cusp

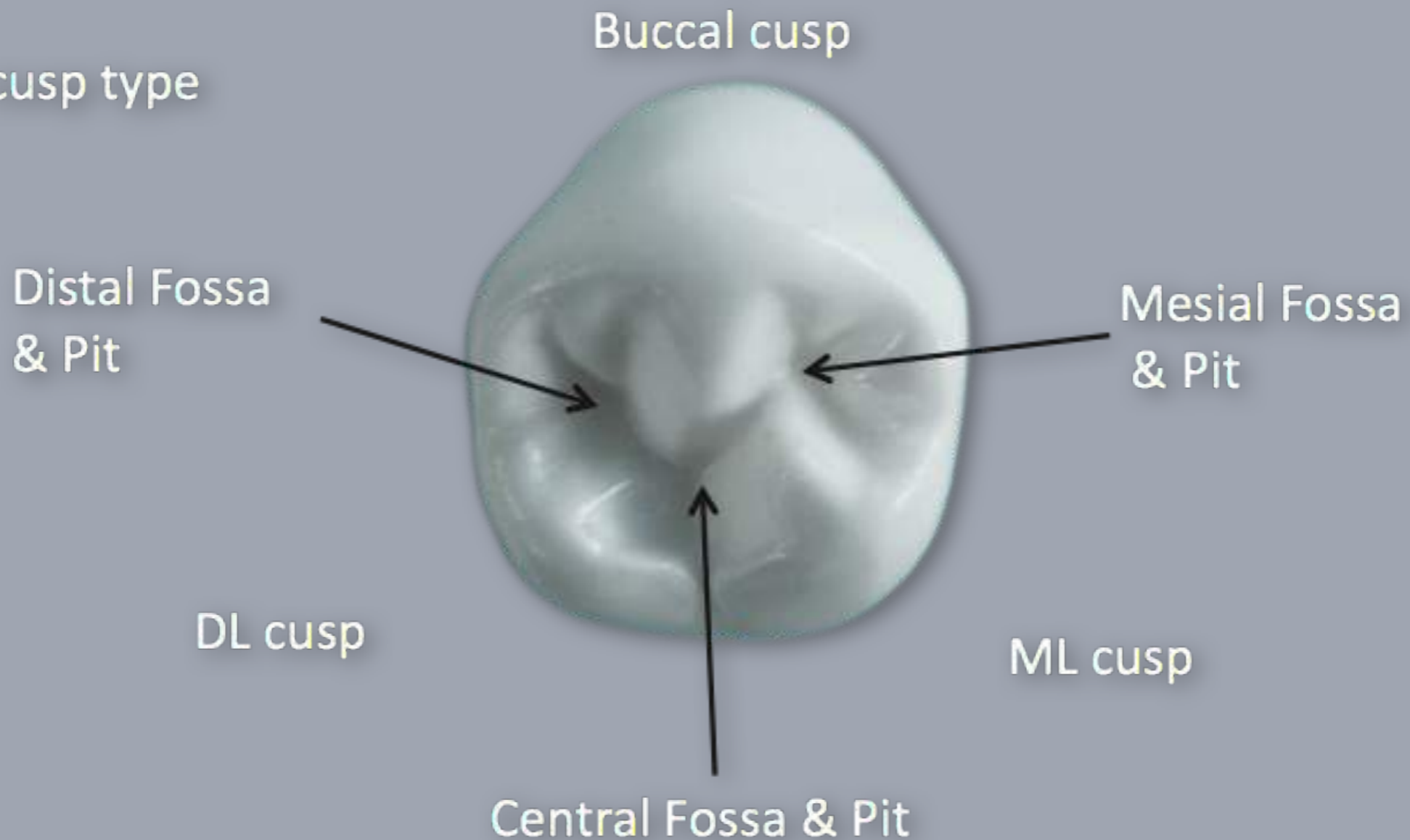


Dental Anatomy and Occlusion

Notes

Three Fossae and Three Pits

3 cusp type



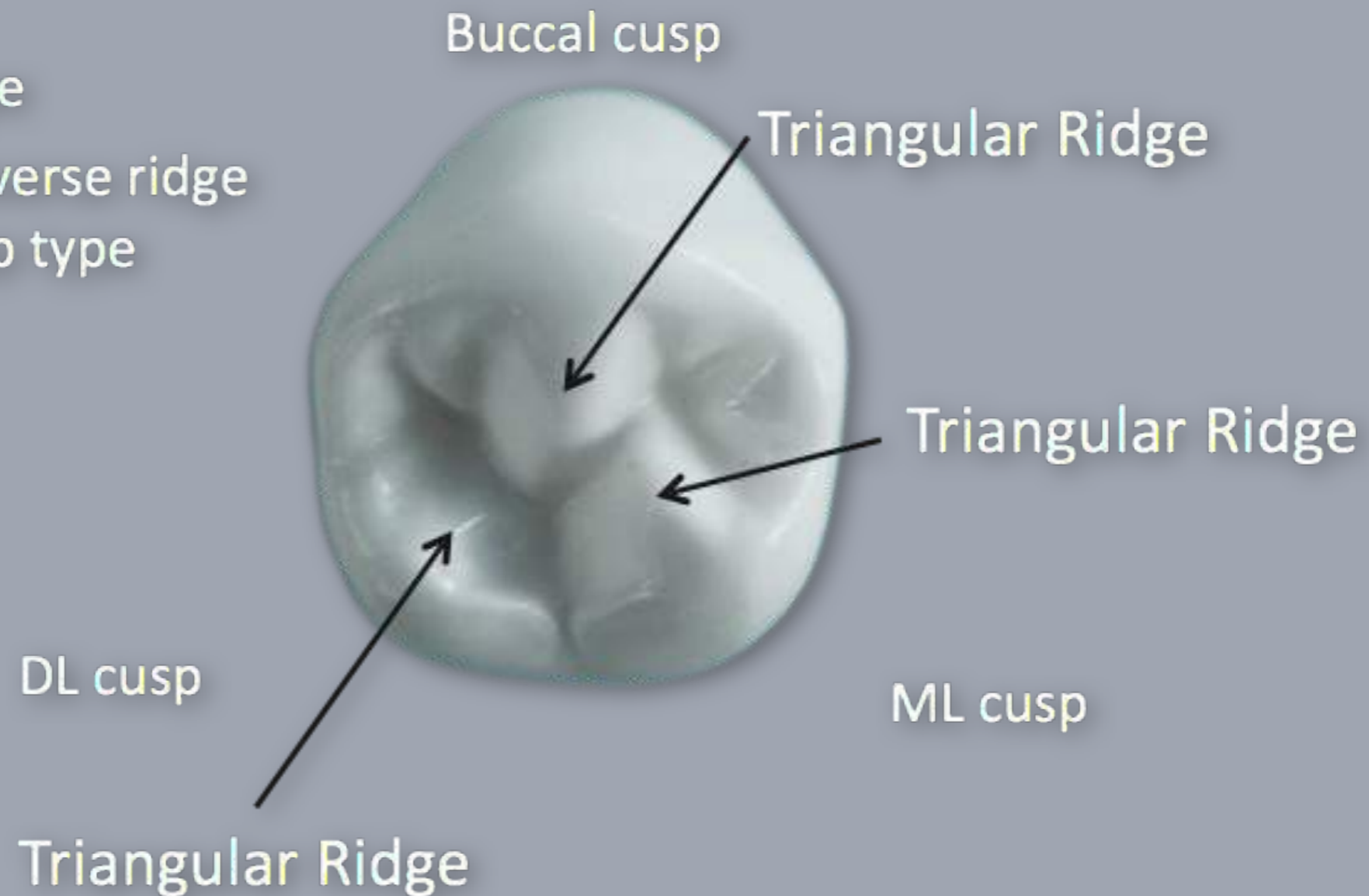
Dental Anatomy and Occlusion

Notes

Three Triangular Ridges

3 cusp type

*No Transverse ridge
on 3 cusp type

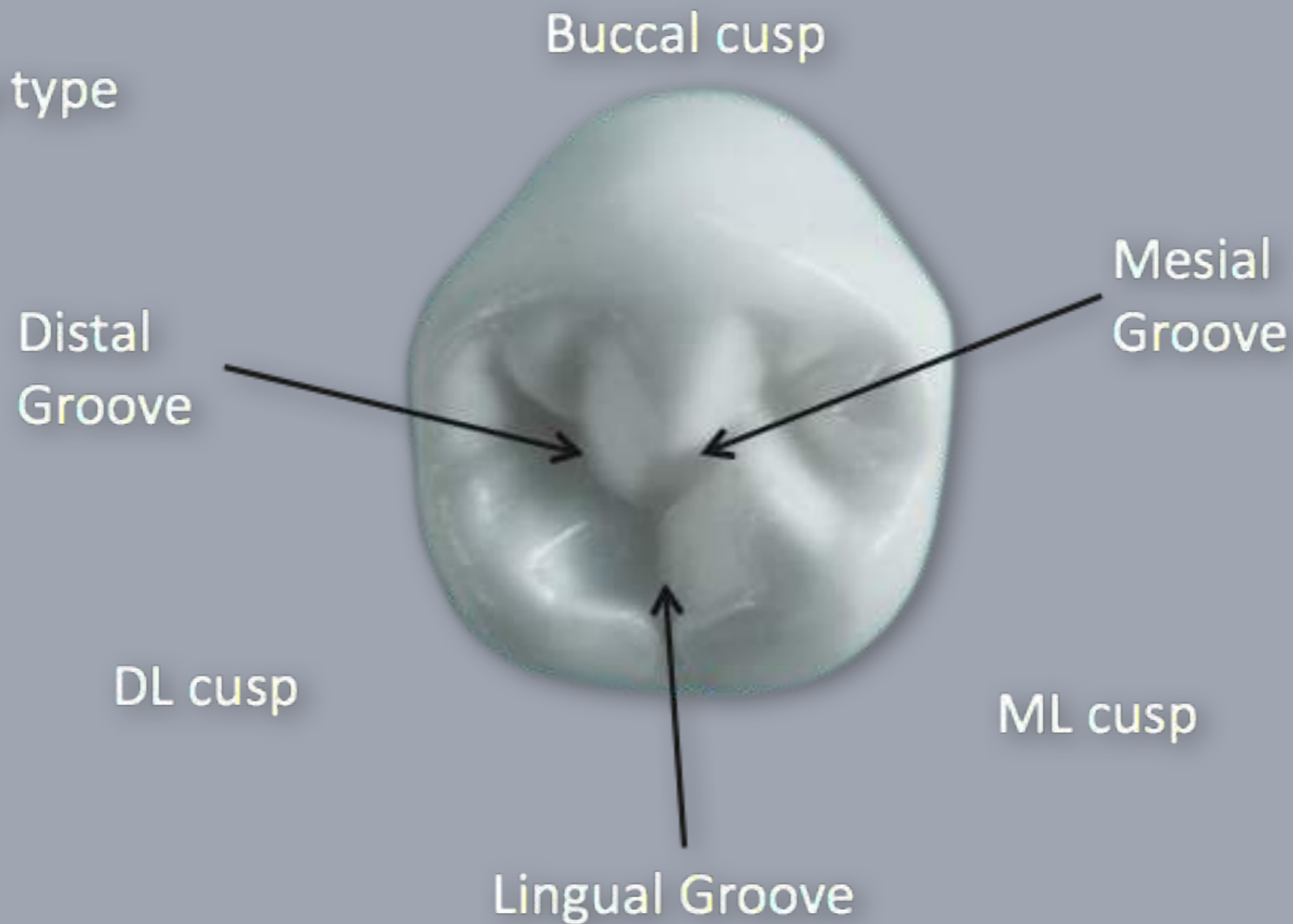


Dental Anatomy and Occlusion

Notes

Three Main Grooves

3 cusp type

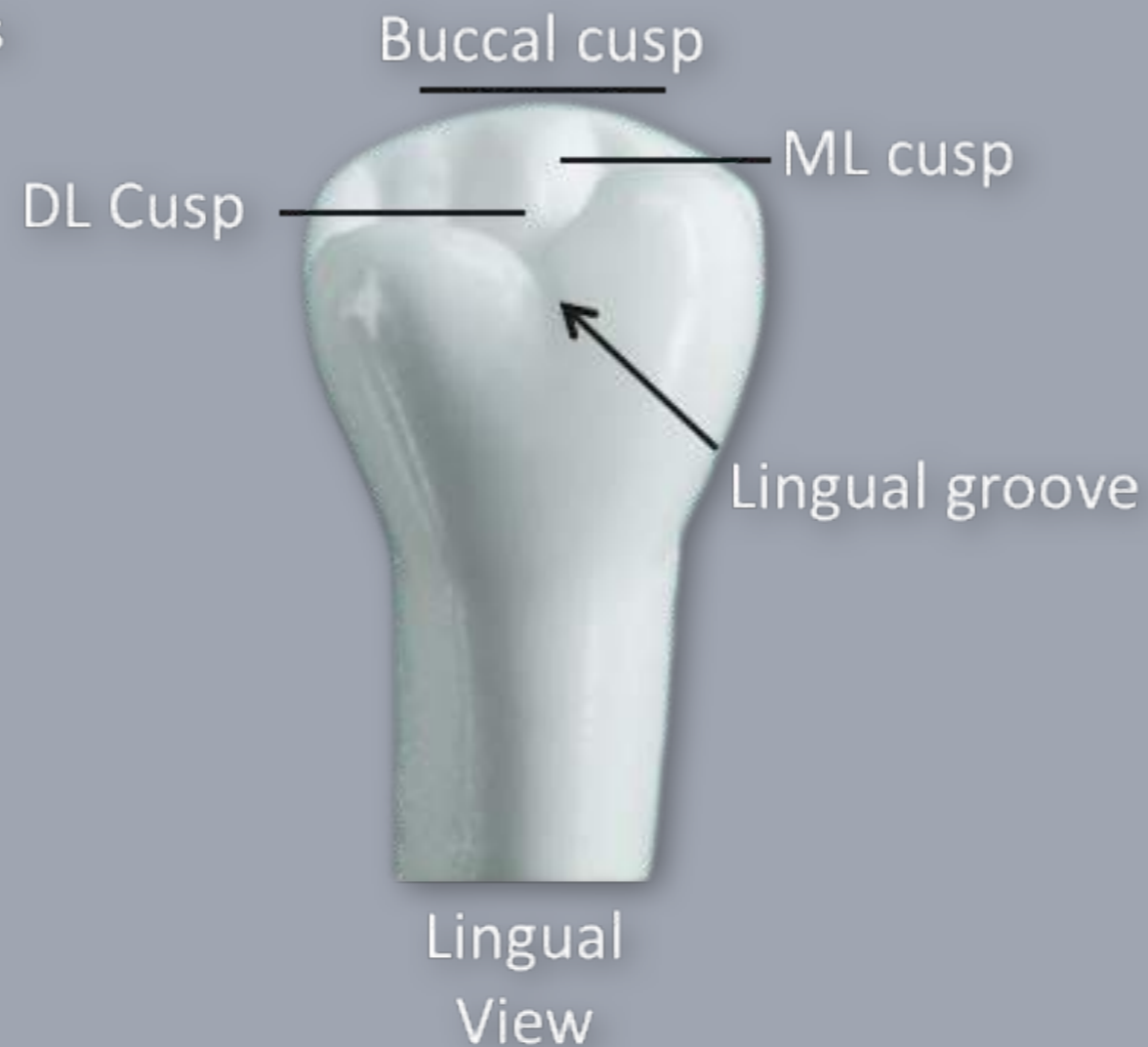


Dental Anatomy and Occlusion

Notes

Mandibular Left 2nd Premolar

- Cusp Heights



Dental Anatomy and Occlusion

Notes

Mandibular Left 2nd Premolar



Dental Anatomy and Occlusion

Notes

Mandibular Right 2nd Premolar



#29

Dental Anatomy and Occlusion

Notes

Mandibular Left 2nd Premolar Contact points & embrasure spaces



Dental Anatomy and Occlusion

Notes

Mandibular Left 2nd Premolar Contact points & embrasure spaces



Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar



#3

Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar



Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar

- The “cornerstone,” tooth in the maxillary arch.
- Complex crown anatomy.
- Form and function are very important



Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar

Rhomboidal Shape



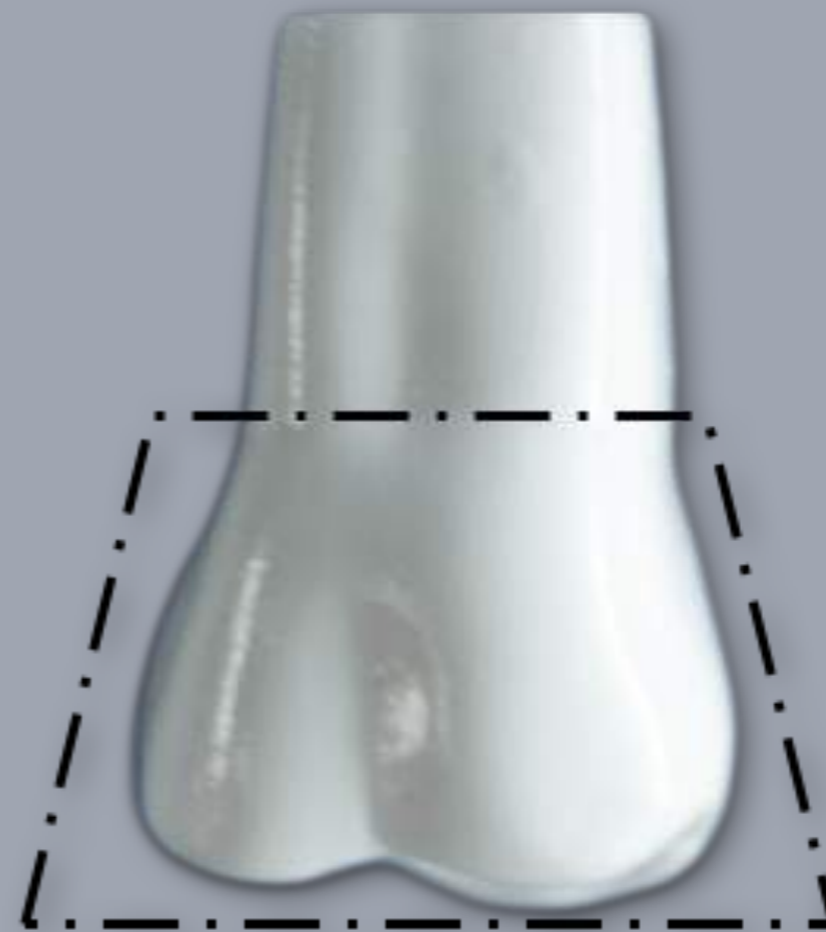
Occlusal View

Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar

Trapezoidal Shape



Buccal

Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar

Trapezoidal Shape



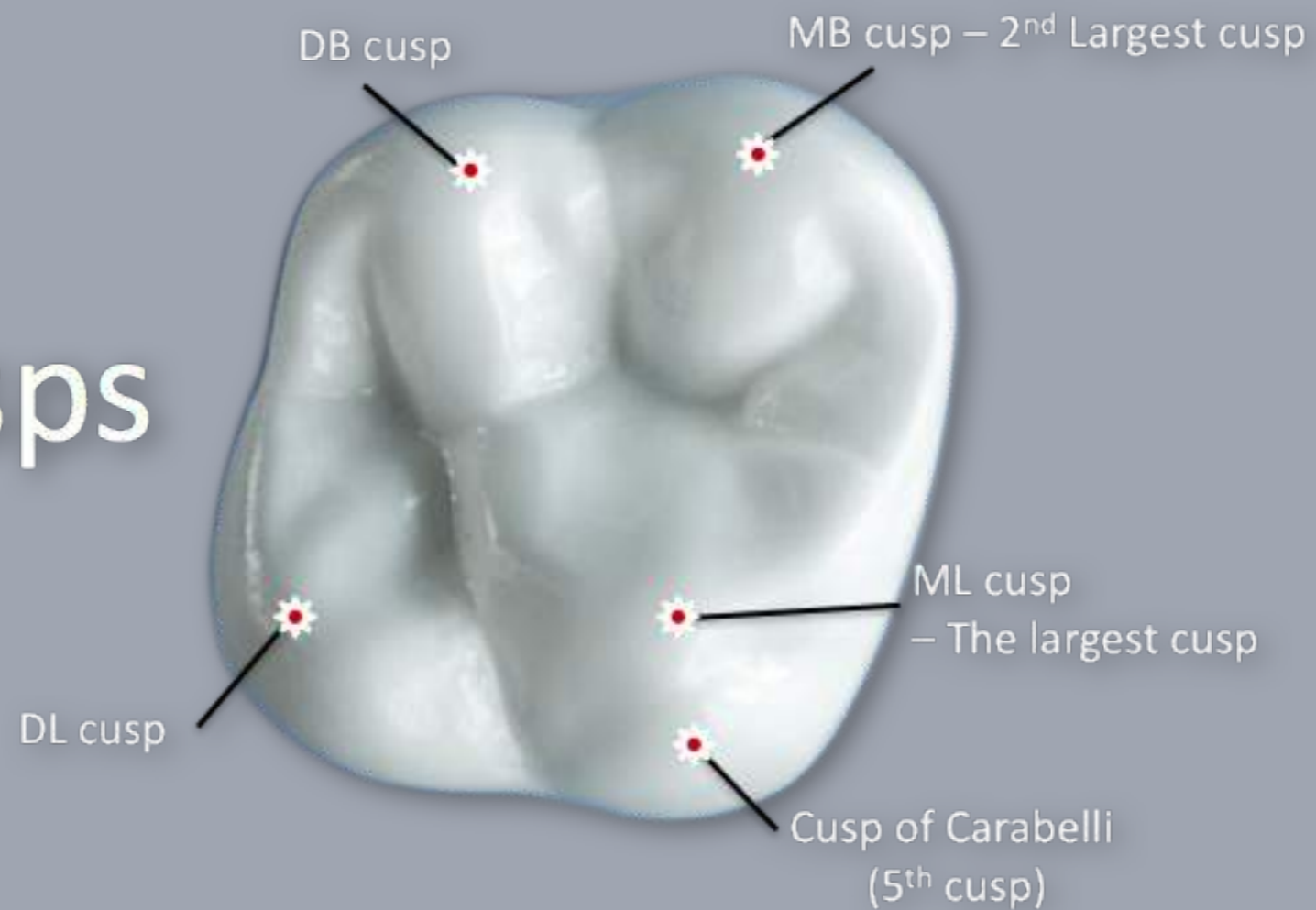
Mesial View

Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar

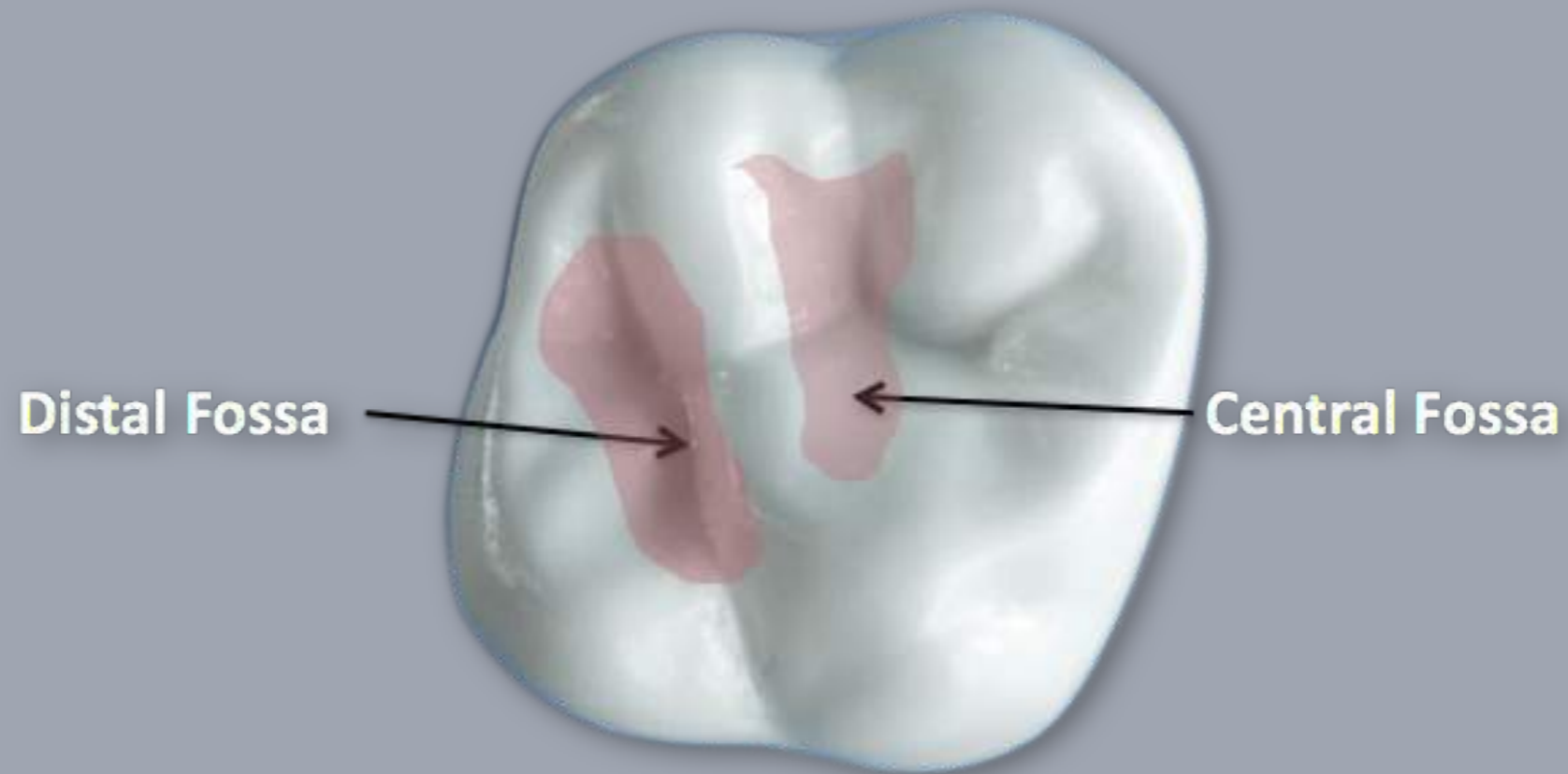
5 cusps



Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar



2 Major Fossae

Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar

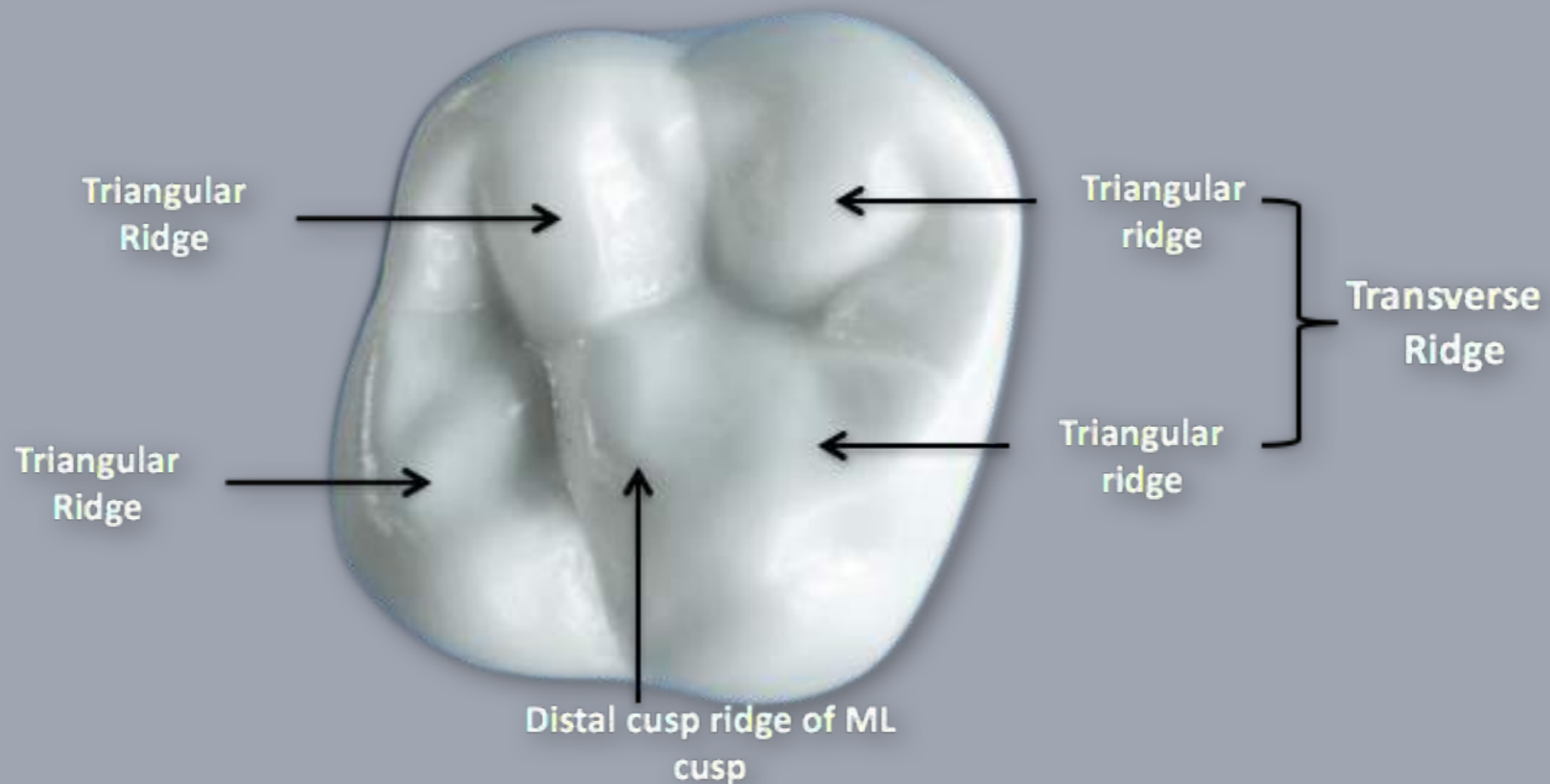


Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar

4 Triangular Ridges

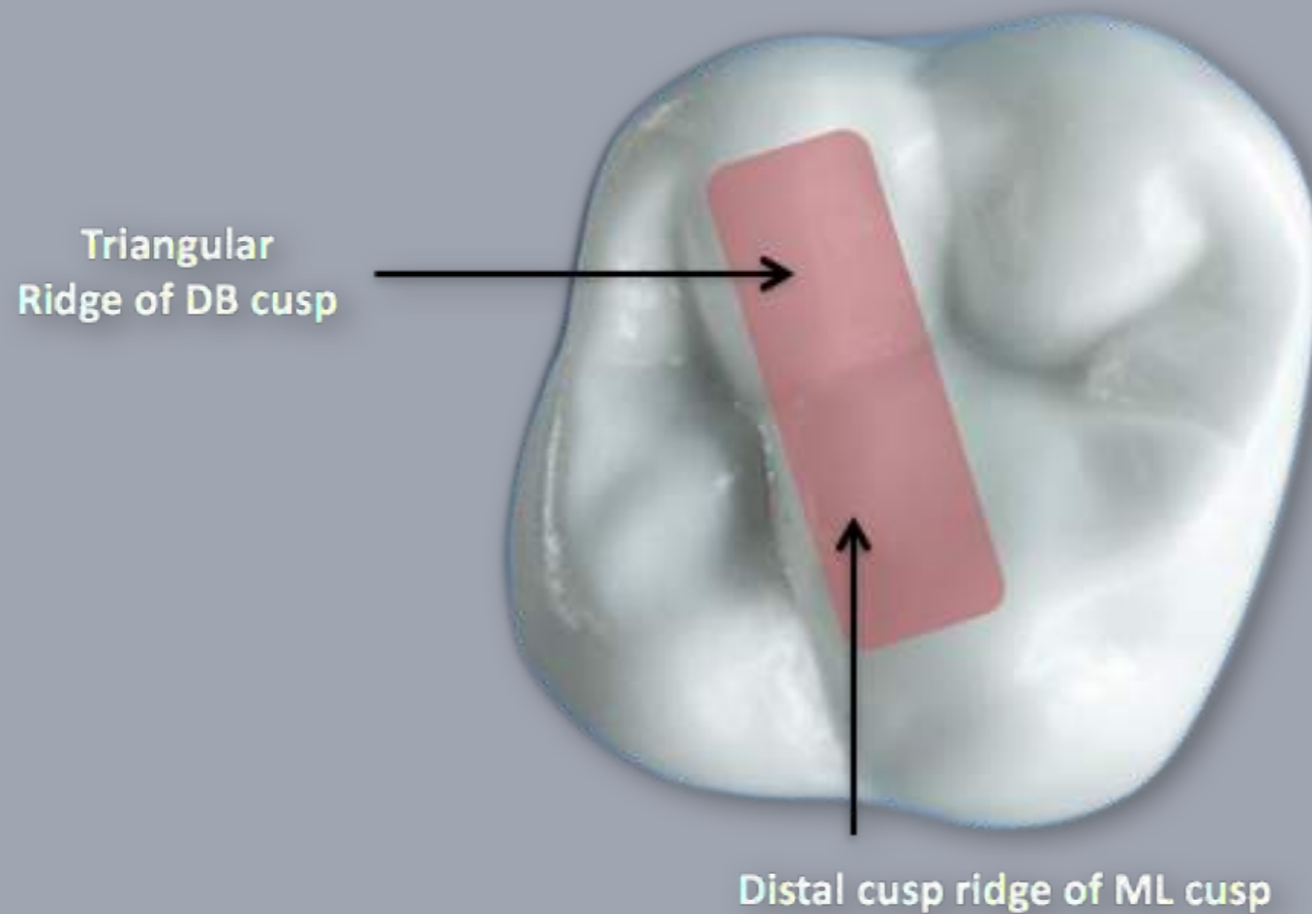


Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar

-Oblique Ridge – Unique to the maxillary molars

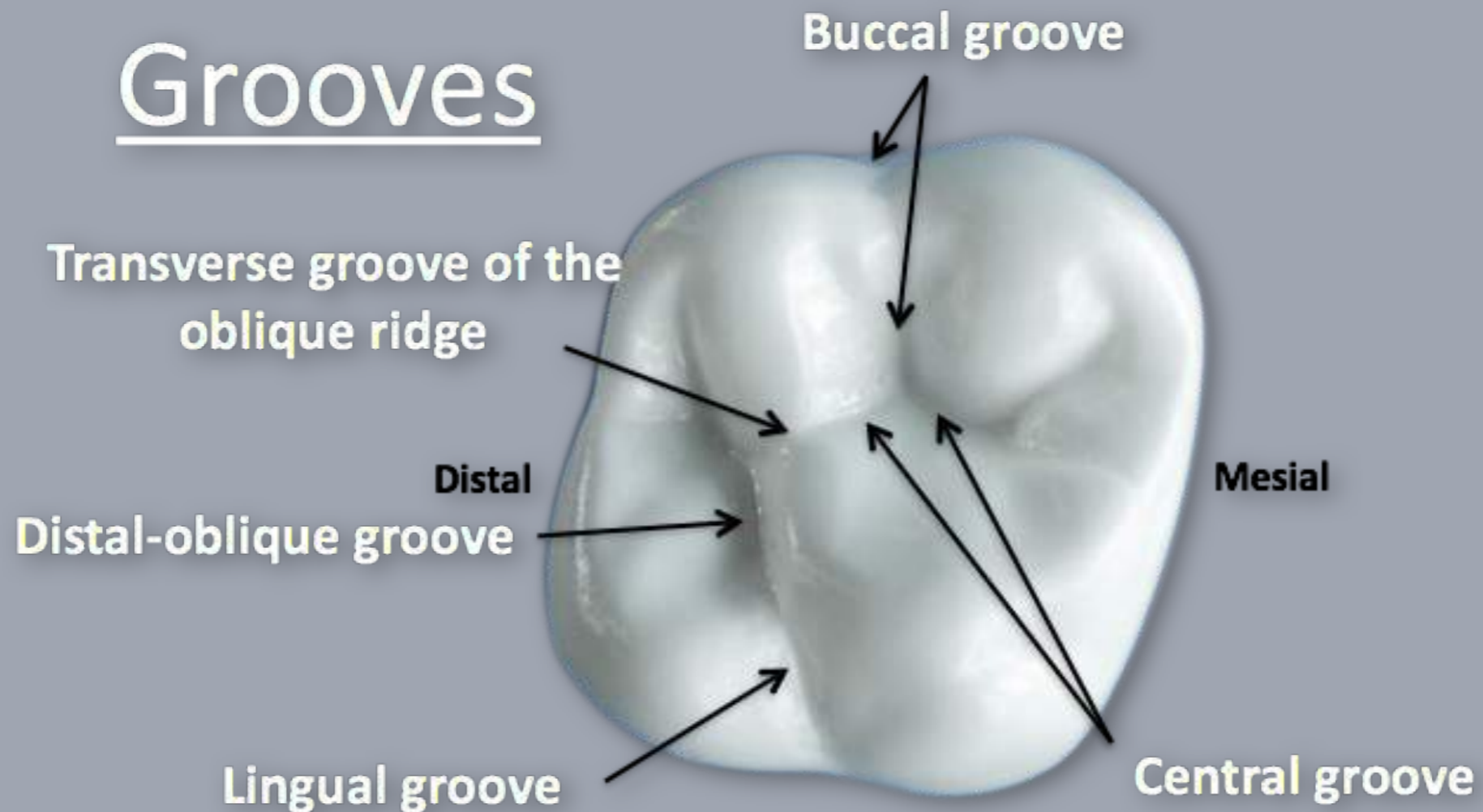


Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar

Grooves



Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar



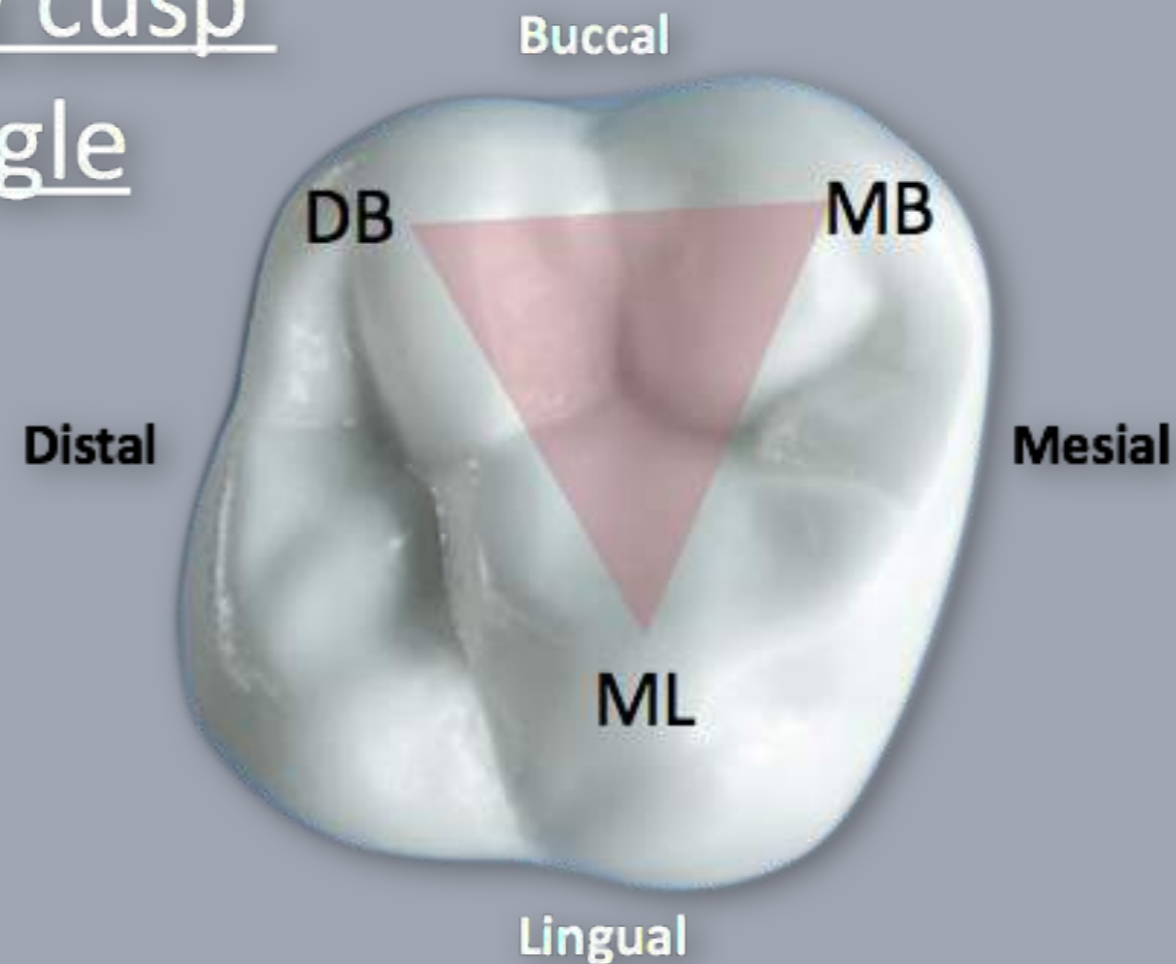
Occlusal View

Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar

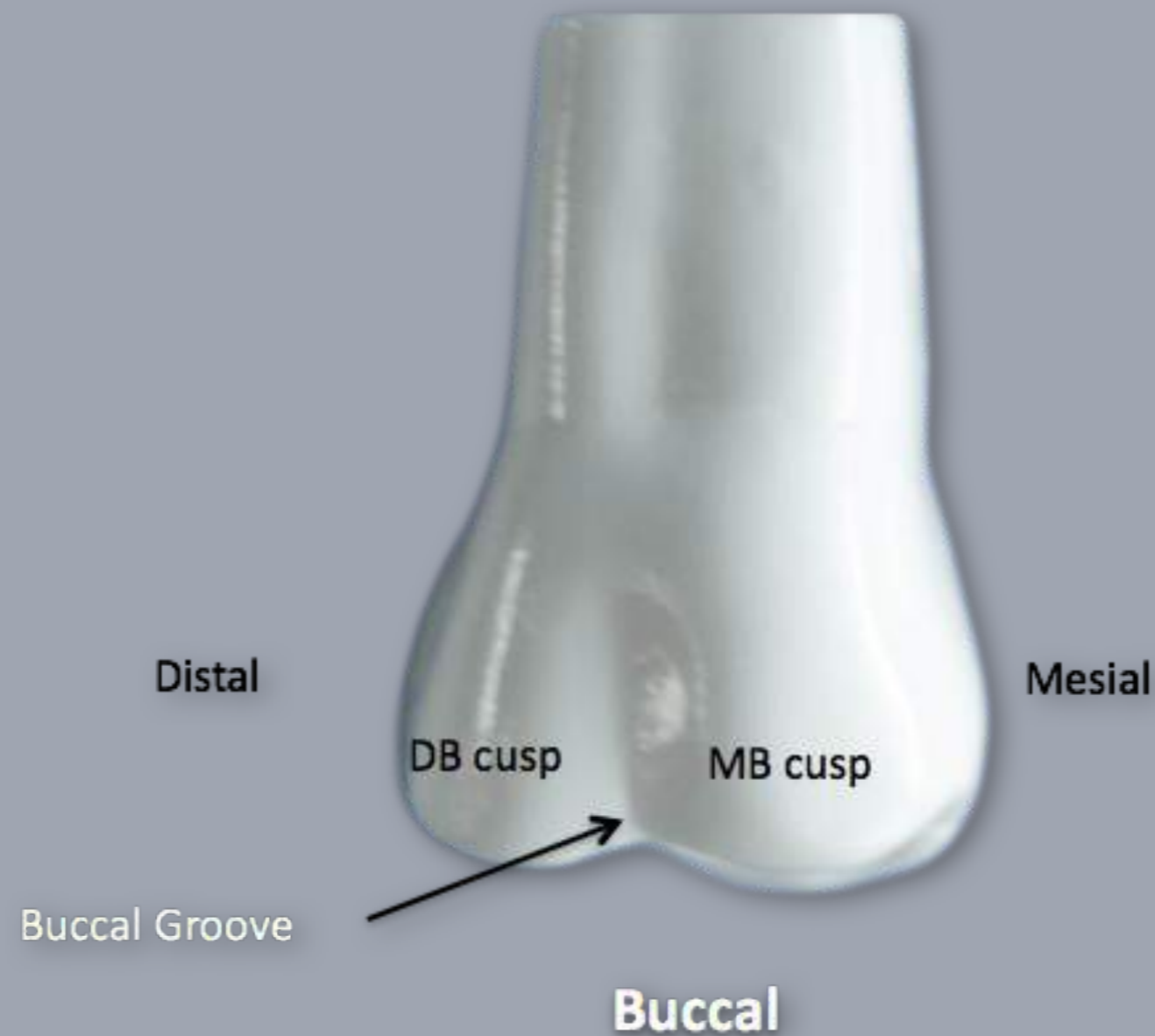
Primary cusp
Triangle



Dental Anatomy and Occlusion

Notes

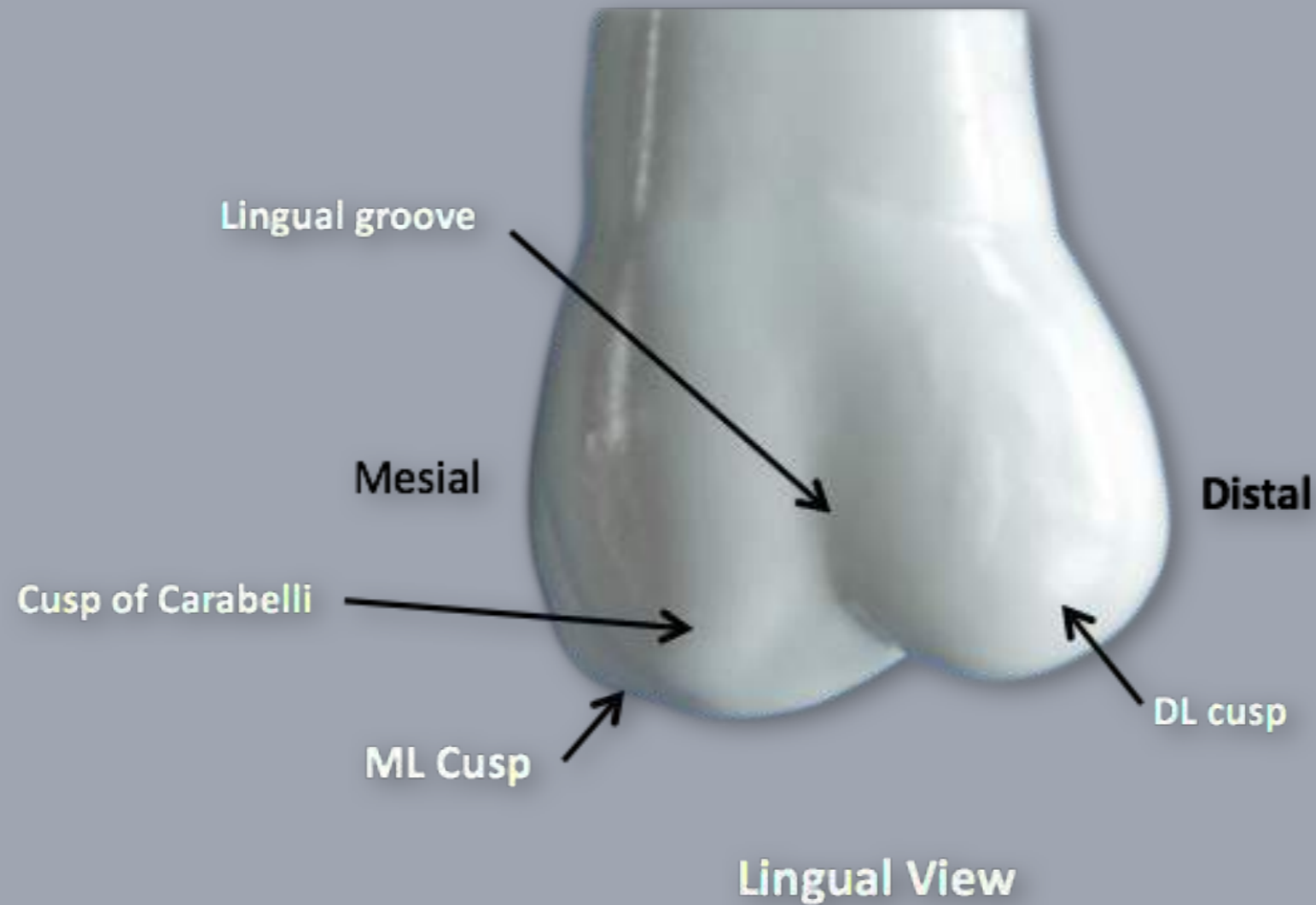
Maxillary 1st Molar



Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar



Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar

Heights of
Contour



Mesial View

Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar

Heights of
Contour

Distal



Mesial

Buccal

Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar



Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar

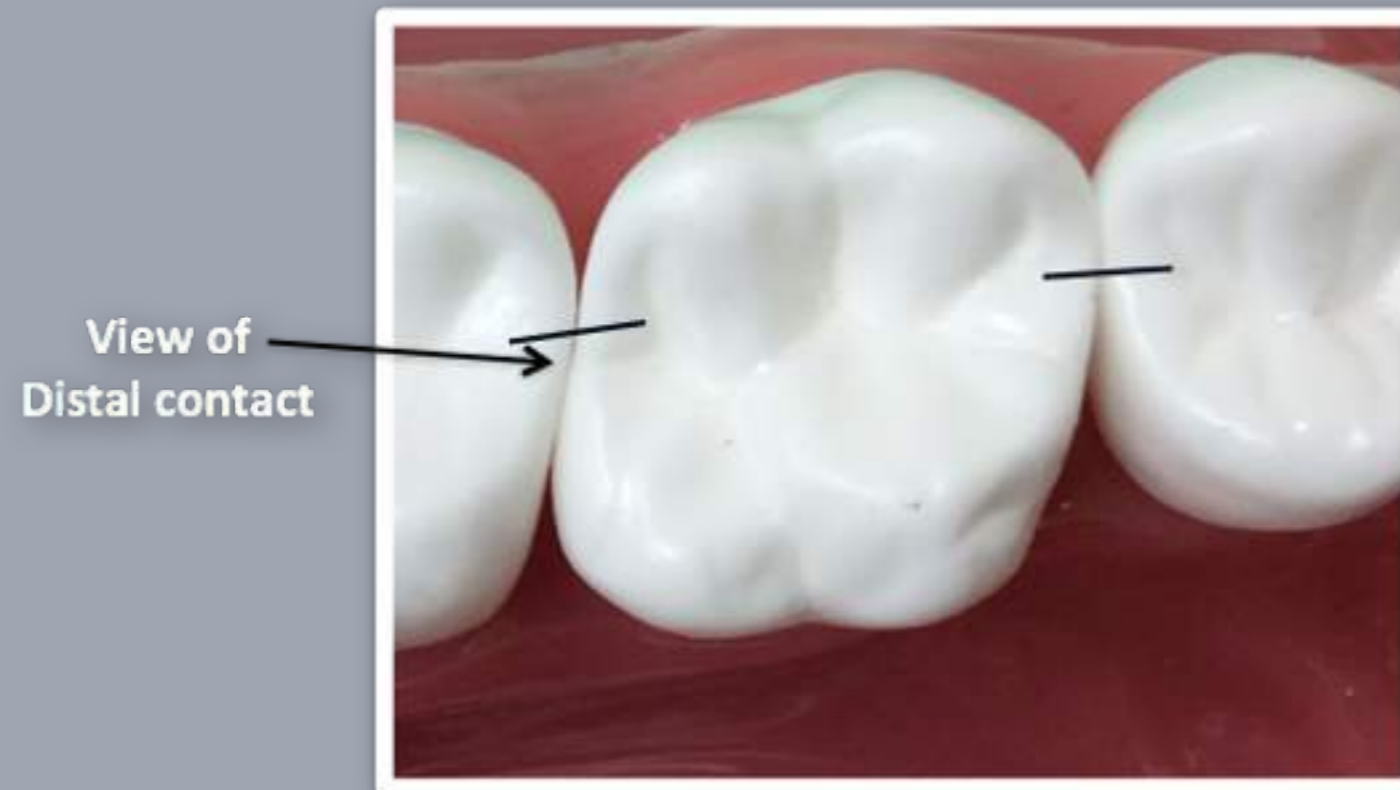


Interproximal Contacts & Embrasure spaces

Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar



Dental Anatomy and Occlusion

Notes

Maxillary 1st Molar



Dental Anatomy and Occlusion

Notes

Maxillary 2nd Molar

Tooth #2



Dental Anatomy and Occlusion

Notes

Maxillary 2nd Molar

Very similar to Maxillary 1st Molar

- Same occlusal pattern
- No cusp of carabelli (5th cusp)
- Smaller in size. Especially DL cusp



Dental Anatomy and Occlusion

Notes

Maxillary 1st/2nd Molars

Tooth #2



Tooth #3



Dental Anatomy and Occlusion

Notes

Mandibular Molars



Dental Anatomy and Occlusion

Notes

Mandibular 1st Molar

Left



Right



Dental Anatomy and Occlusion

Notes

Mandibular 1st Molar

Rectangular Shape
*Can also be
pentagonal

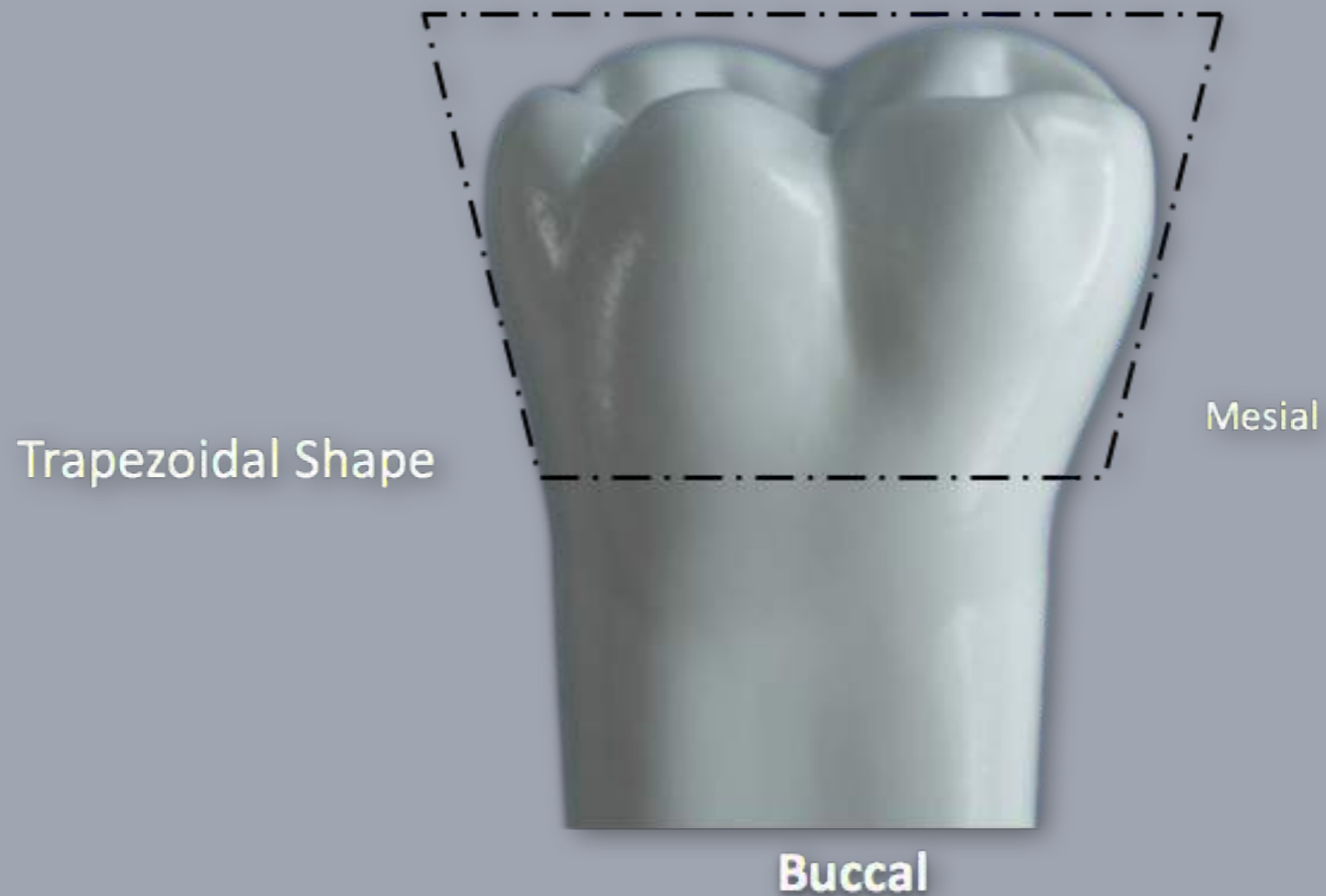


Occlusal View

Dental Anatomy and Occlusion

Notes

Mandibular 1st Molar



Dental Anatomy and Occlusion

Notes

Mandibular 1st Molar

Rhomboidal Shape

Buccal

Lingual



Mesial View

Dental Anatomy and Occlusion

Notes

Mandibular 1st Molar

Crest of contours

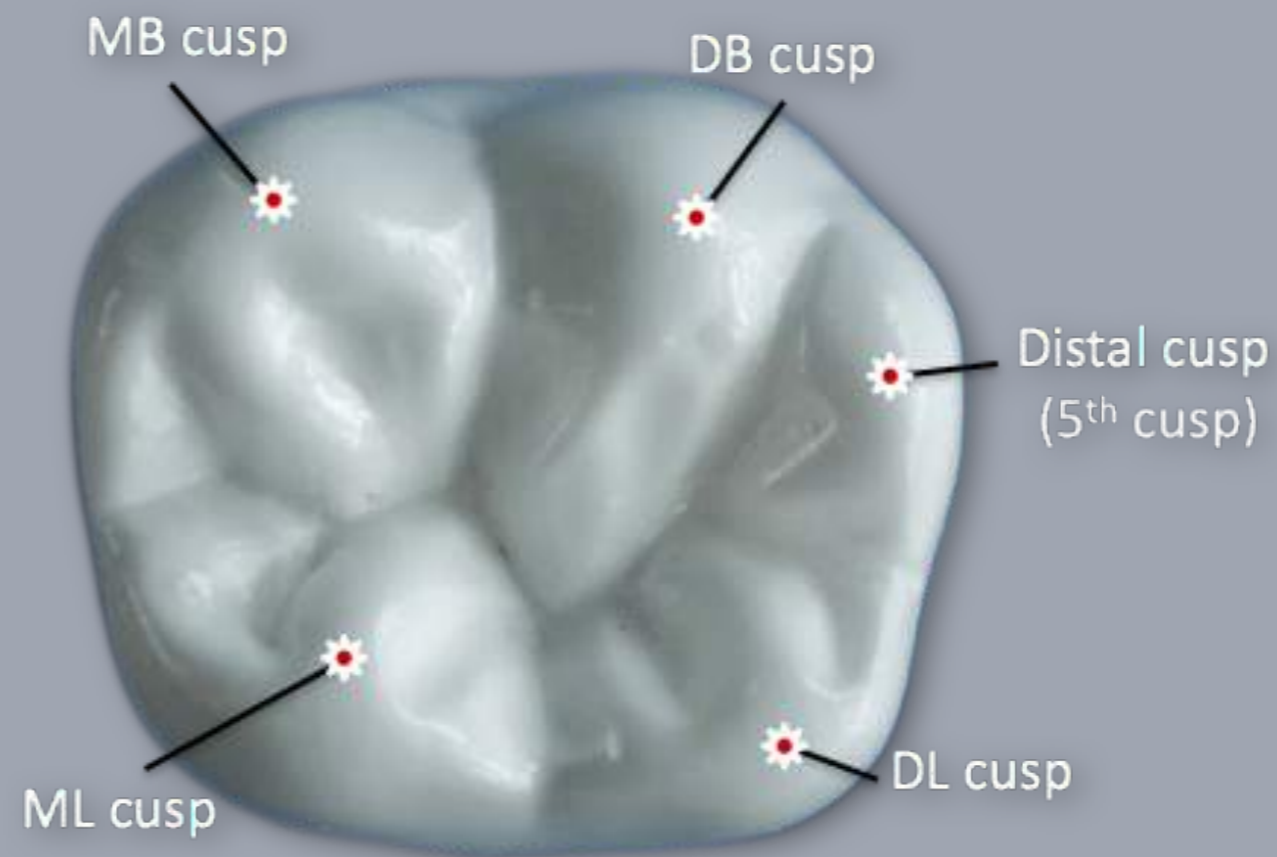


Dental Anatomy and Occlusion

Notes

Mandibular 1st Molar

5 cusps

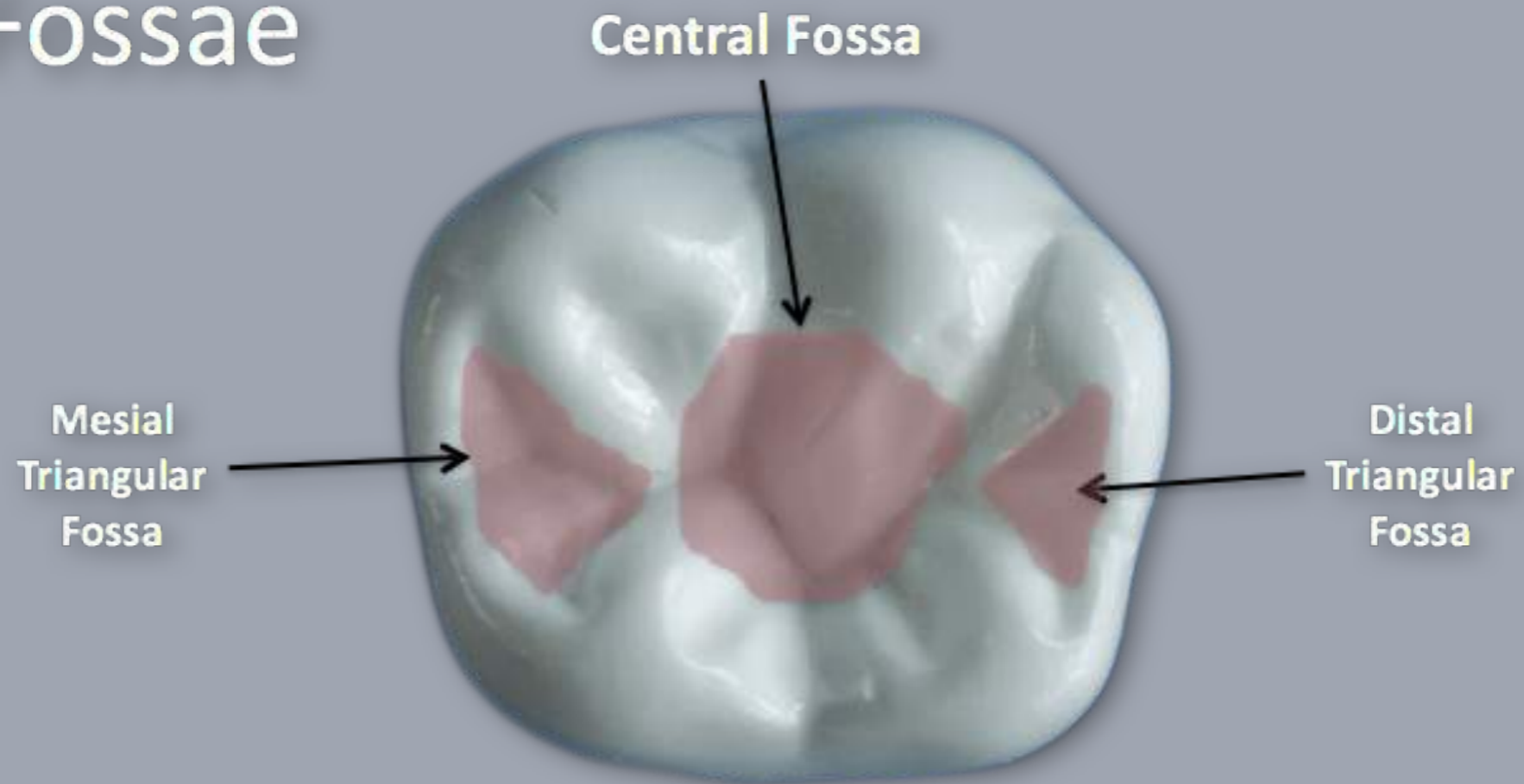


Dental Anatomy and Occlusion

Notes

Mandibular 1st Molar

3 Fossae

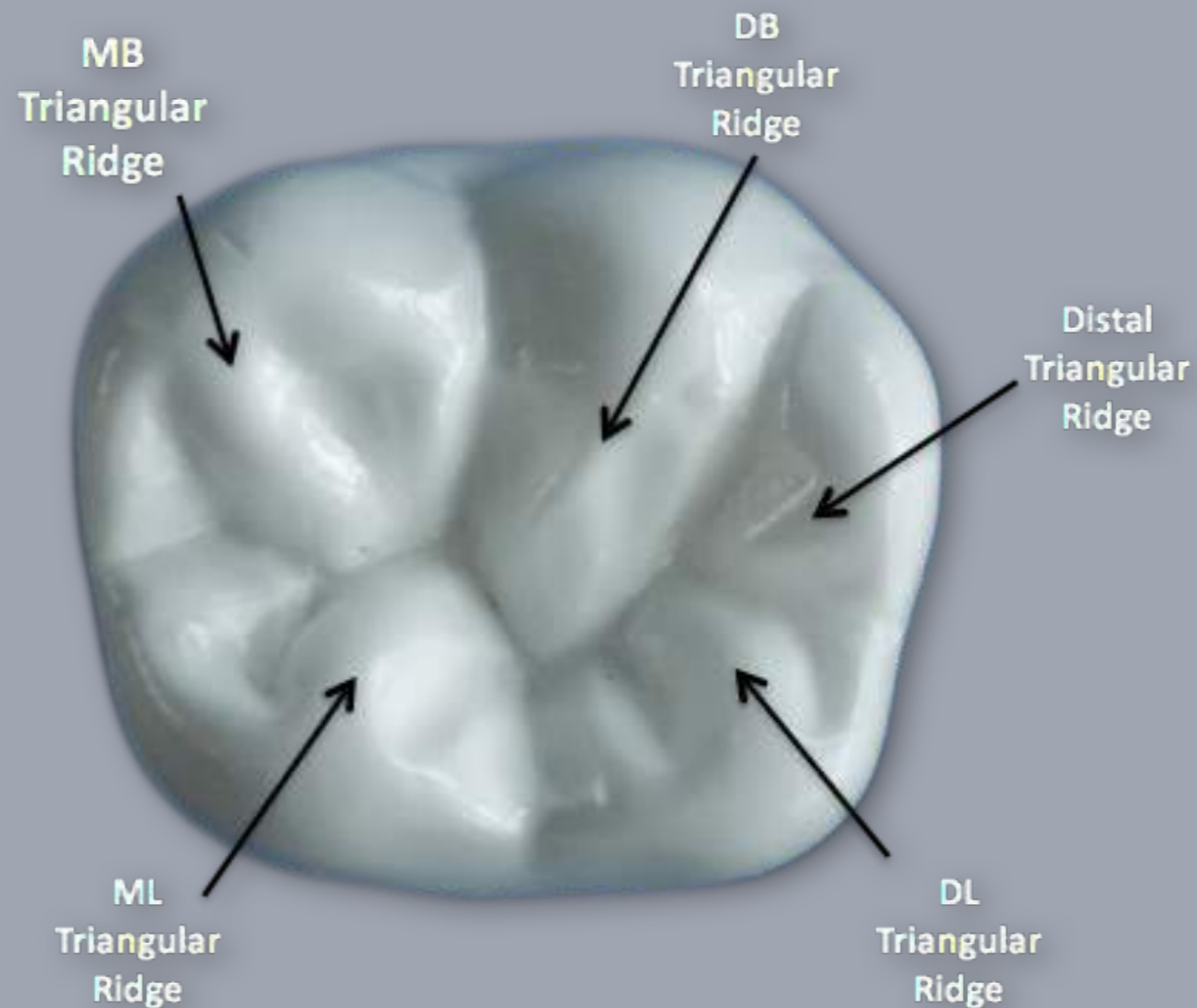


Dental Anatomy and Occlusion

Notes

Mandibular 1st Molar

5 Triangular Ridges

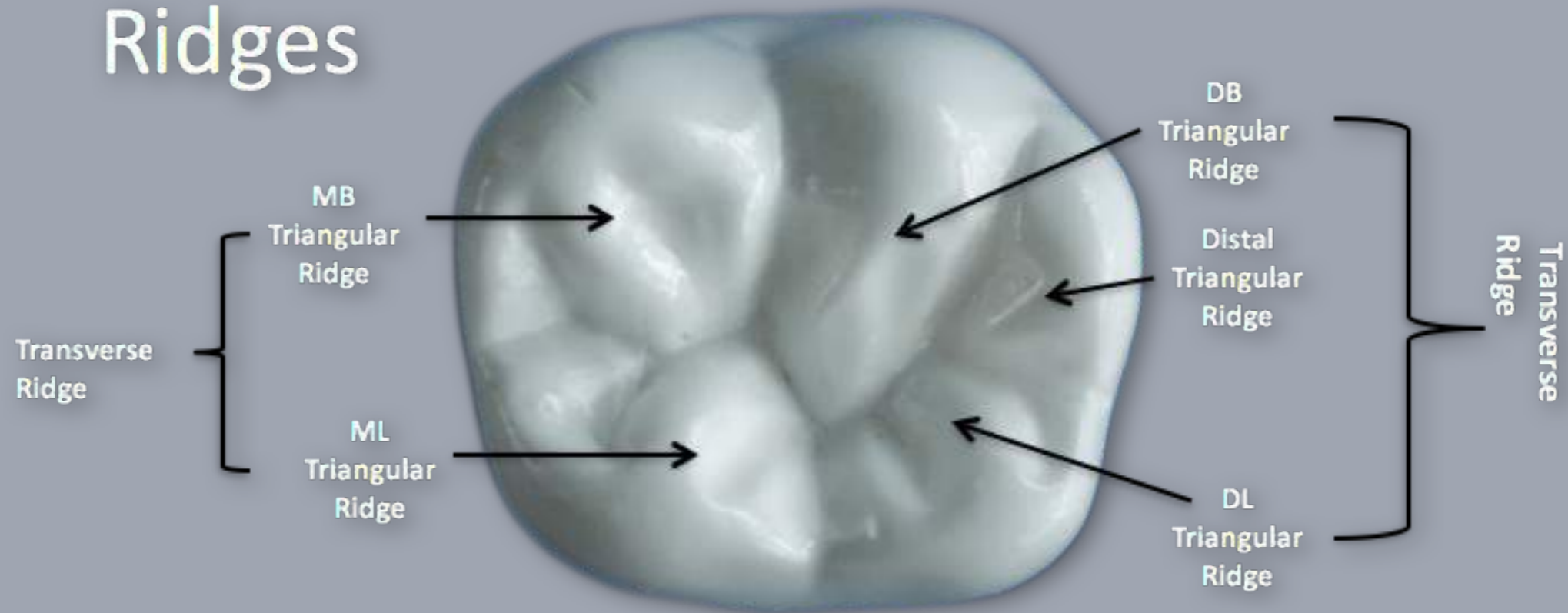


Dental Anatomy and Occlusion

Notes

Mandibular 1st Molar

2 Transverse Ridges

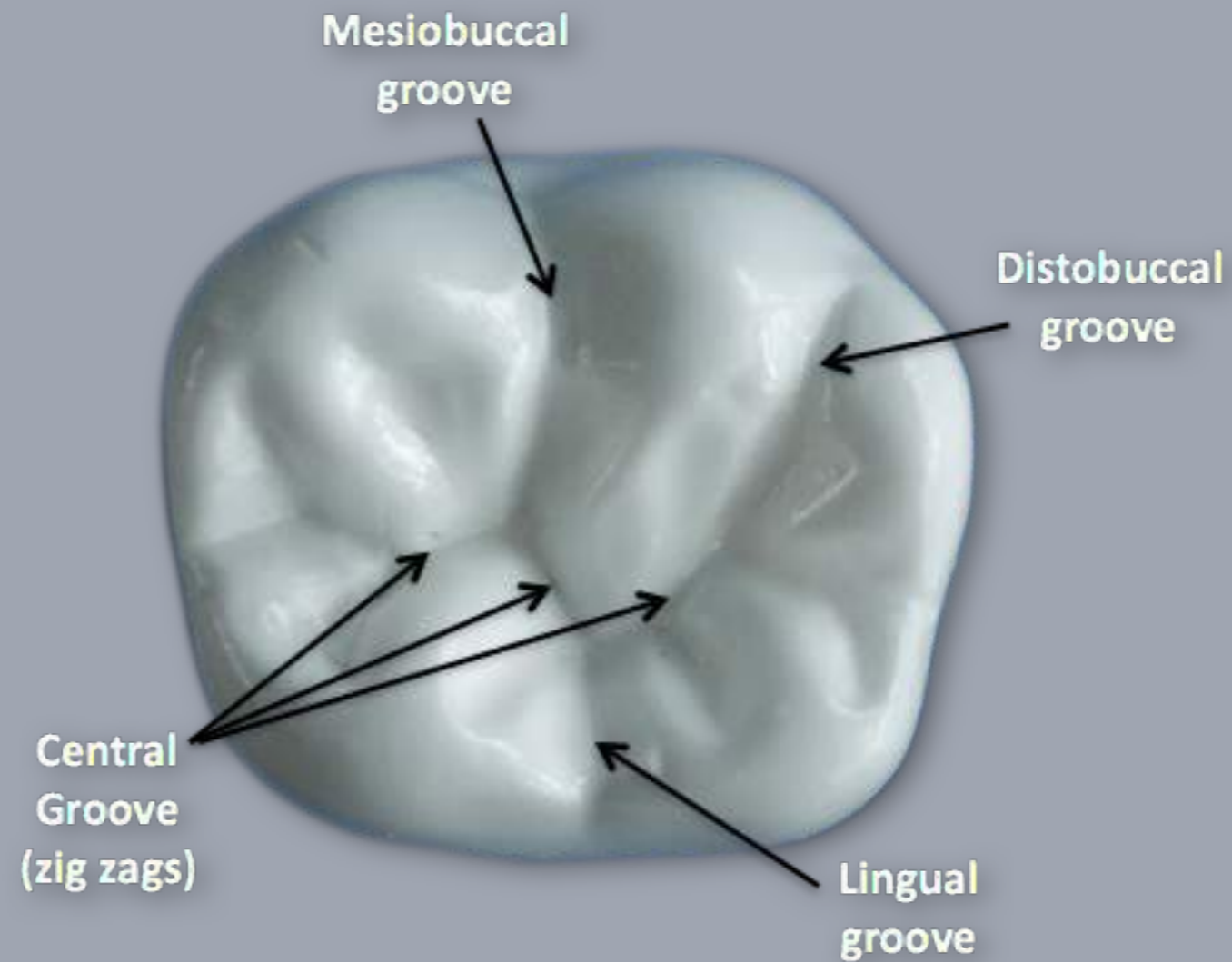


Dental Anatomy and Occlusion

Notes

Mandibular 1st Molar

4 Major Grooves



Dental Anatomy and Occlusion

Notes

Mandibular 1st Molar

Distal cusp
(5th cusp)



Buccal view of Distal Cusp

You can see how developed
and pointed it is



Buccal

Dental Anatomy and Occlusion

Notes

Mandibular 1st Molar

Can usually see all 5 cusps
from the buccal view



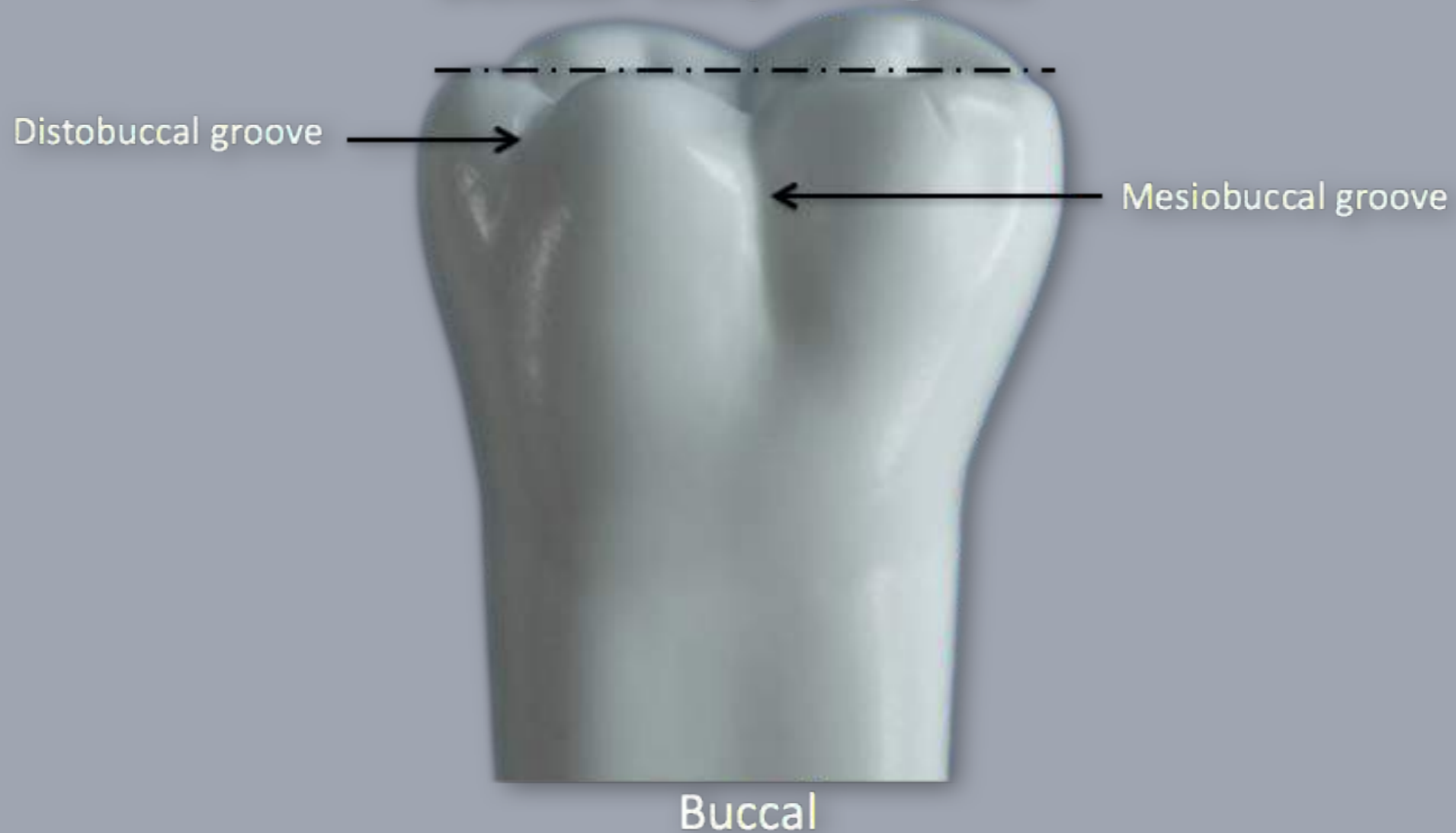
Buccal

Dental Anatomy and Occlusion

Notes

Mandibular 1st Molar

Buccal Cusp Heights



Dental Anatomy and Occlusion

Notes

Mandibular 1st Molar



#19



#30

Lingual view

Dental Anatomy and Occlusion

Notes

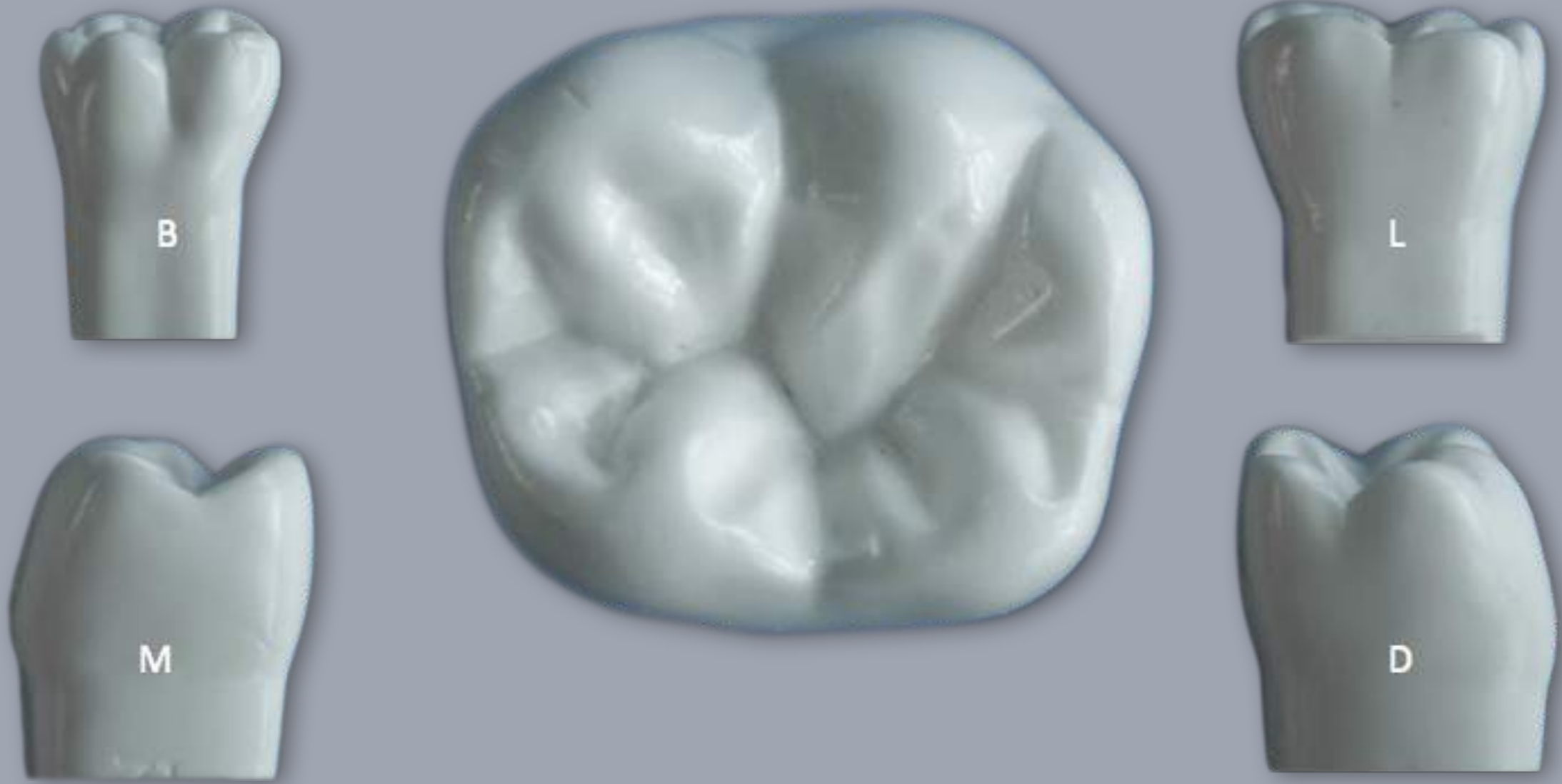
Mandibular 1st Molar



Dental Anatomy and Occlusion

Notes

Mandibular 1st Molar



Dental Anatomy and Occlusion

Notes

Mandibular 1st Molar

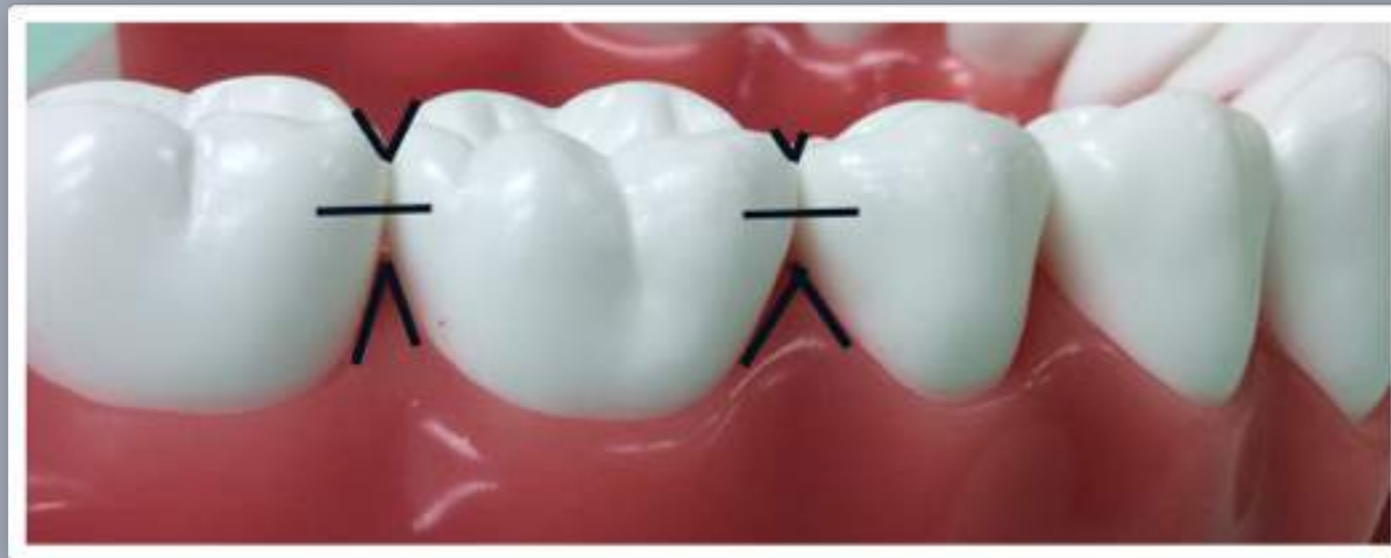


Proximal Contact Areas
& Embrasure Spaces

Dental Anatomy and Occlusion

Notes

Mandibular 1st Molar



Proximal Contact Areas
& Embrasure Spaces

Dental Anatomy and Occlusion

Notes

Mandibular Left 1st Molar



#19

Dental Anatomy and Occlusion

Notes

Mandibular 2nd Molar

- Usually smaller in size than the 1st Molar
- No Distal Cusp (5th cusp)



#18

Dental Anatomy and Occlusion

Notes

Mandibular 2nd Molar



*Square or rectangular in shape



Trapezoidal from buccal/lingual

Dental Anatomy and Occlusion

Notes

Mandibular 2nd Molar

All 4 cusp heights
are nearly equal

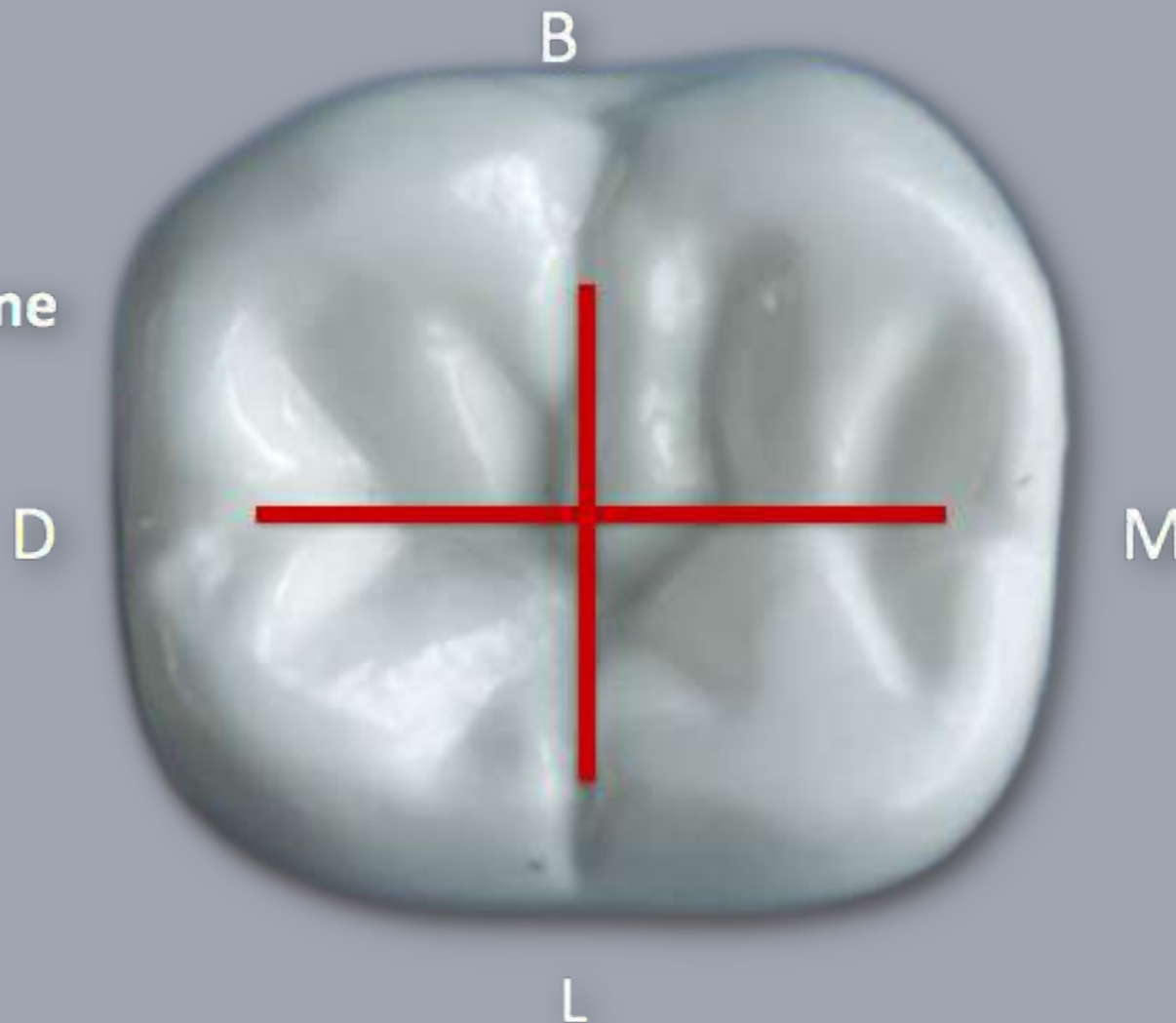


Dental Anatomy and Occlusion

Notes

Mandibular 2nd Molar

*The occlusal groove scheme is a cross or “+” sign



Dental Anatomy and Occlusion

Notes

Mandibular 2nd Molar



Dental Anatomy and Occlusion

Notes

Mandibular 2nd Molar



Dental Anatomy and Occlusion

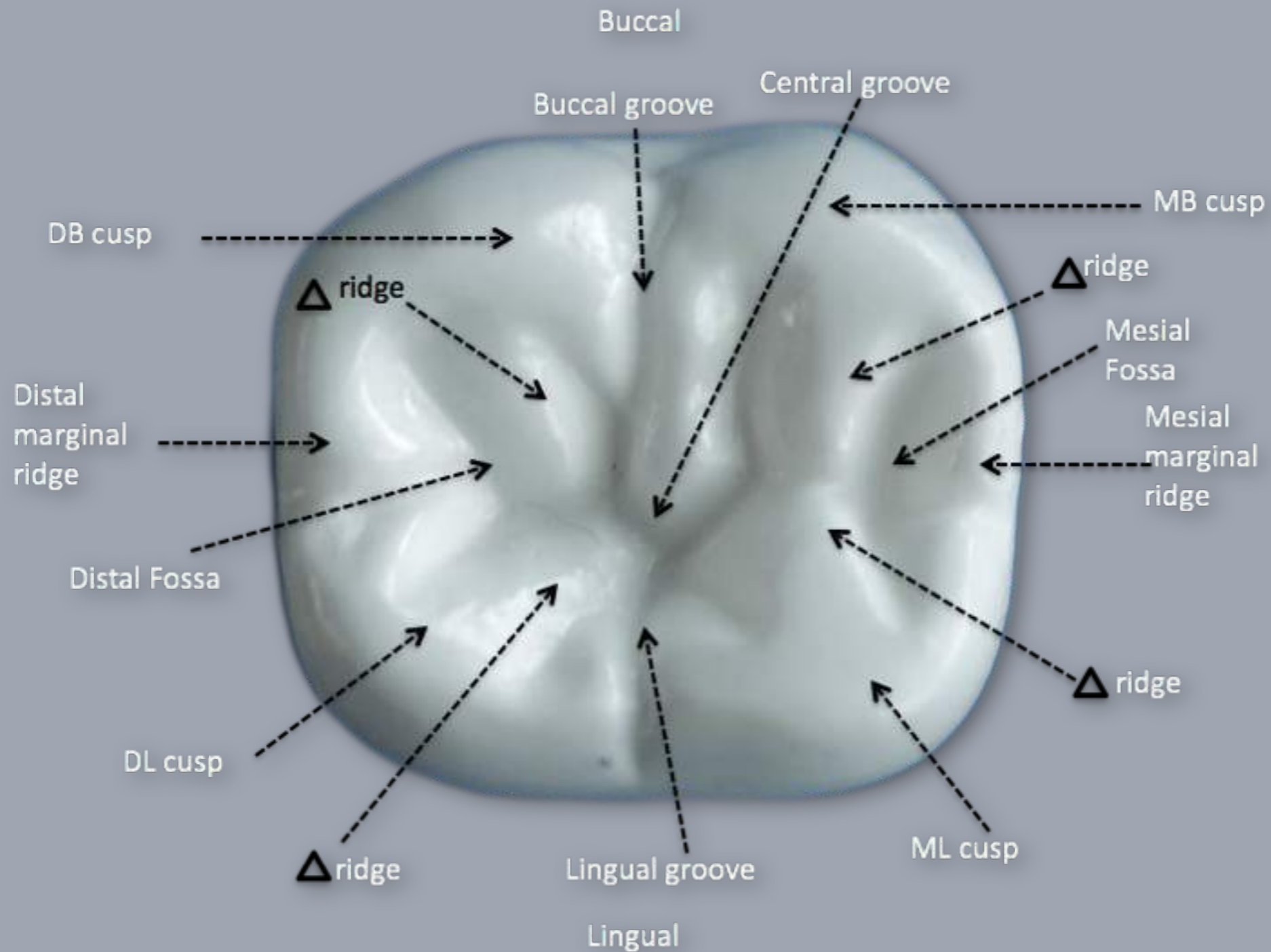
Notes

Mandibular 2nd Molar



Dental Anatomy and Occlusion

Notes



Dental Anatomy and Occlusion

Notes

Mandibular 2nd Molar



Contact points & embrasure spaces

Dental Anatomy and Occlusion

Notes

Mandibular 2nd Molar



Contact points & embrasure spaces

Dental Anatomy and Occlusion

Notes

Mandibular 2nd Molar



Contact points & embrasure spaces

Chapter 3

Periodontal Disease Process

Periodontal Disease Process

Introduction to Periodontal Disease Terms to Know



Bulbous: swollen or bulging.



Calculus: mineralized plaque that provides a rough surface for sticky plaque to adhere.



Furcation: the notch or space exposed between the roots of multirooted teeth.



Gingival recession: as periodontal disease progresses, the gingiva may recede, leaving portions of the roots of teeth exposed below the cementoenamel junction (CEJ).



Gingivitis: a bacterial infection that is confined to the gingiva. It is reversible.



Mobility: movement



Periapical: the area surrounding the end of the tooth root.

Periodontal Disease Process



Periodontal:

supporting and surrounding tissues around the tooth.



Periodontal disease:

inflammatory process of the gingival tissues and/or periodontal membrane of the teeth, resulting in an abnormally deep gingival sulcus, possibly producing periodontal pockets and loss of supporting alveolar bone.



Periodontal pocket:

indicates the presence of an abnormal depth of the gingival sulcus where the gingival tissue contacts the tooth. A normal sulcus measures 3mm or less.



Periodontitis:

a bacterial infection, with inflammation of the periodontium including the gingiva, periodontal ligament, bone, and cementum. Loss of attachment and tissue is irreversible.



Periodontium:

tissues comprising gingival, cementum, periodontal ligament, and alveolar bone that attaches, nourishes and supports the tooth.



Plaque:

a soft sticky substance that accumulates on teeth composed largely of bacteria and bacterial by-products. Plaque is the primary cause of gingival inflammation and most other types of periodontal diseases.

Periodontal Disease Process



Prophylaxis:

commonly referred to as prophylaxis or cleaning. It is the technical term for the removal of plaque, calculus and stain from tooth structures. It is intended to control local irritant factors.



Recession:

areas where the gingiva has moved away from the crown of a tooth.



Stippling or stippled:

textured surface of gingiva similar to the surface of an orange.



Subgingival calculus:

forms on root surfaces below the gingival margin and can extend into periodontal pockets.



Sulcus:








the natural space found between the tooth and the gum tissue; sulcular refers to the sulcus.



Supragingival calculus: found above the margin of the gingiva.

Periodontal Disease Process

Periodontal Probing Terms to Know

-  **Calculus:** mineralized plaque that provides a rough surface for sticky plaque to adhere.
-  **Cementoenamel junction (CEJ):** the area of a tooth where the cementum and enamel meet.
-  **Cementum:** hard connective tissue covering the outer surface of a tooth root.
-  **Clinical crown:** that portion of a tooth not covered by tissues.
-  **Coronal:** refers to the crown of a tooth.
-  **CPI:** Community Periodontal Index (CPI, formerly called the Community Periodontal Index of Treatment Needs or CPITN) was created in 1978 by the World Health Organization (WHO) to provide a global standard for screening periodontal disease in populations.
-  **Periodontal:** supporting and surrounding tissues around the tooth.

Periodontal Disease Process



Periodontal charting:

documentation of periodontal probing depth for six areas on each tooth, notation of tooth mobility, and other clinical periodontal findings which are measured, recorded, and monitored over time.



Periodontal disease:

inflammatory process of the gingival tissues and/or periodontal membrane of the teeth, resulting in an abnormally deep gingival sulcus, possibly producing periodontal pockets and loss of supporting alveolar bone.



Periodontal pocket:

indicates the presence of an abnormal depth of the gingival sulcus where the gingival tissue contacts the tooth. A normal sulcus measures 3mm or less.



Periodontal probe:

instrument used to locate and measure the depth of periodontal pockets. The tip is blunt or rounded and has markings in millimeters to measure the depth of the sulcus.



PSR:

Periodontal Screening and Recording index documents periodontal conditions prior to diagnosis and treatment.



Quadrant:

one of the four equal sections into which the dental arches can be divided; begins at the midline of the arch and extends distally to the last tooth.



Sextant:

one of the six relatively equal sections into which a dental arch can be divided, for example: tooth numbers 1-5; 6-11; 12-16; 17-21; 22-27; 28-32. Used for recording the CPI or PSR.

Periodontal Disease Process

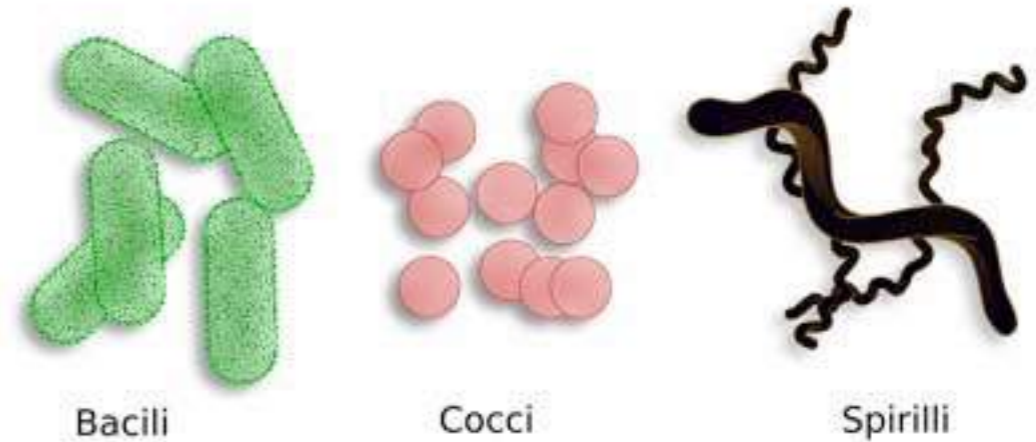
Prevalence

One out of every two American adults aged 30 and over has periodontal disease, according to recent findings from the Centers for Disease Control and Prevention (CDC). A study titled *Prevalence of Periodontitis in Adults in the United States: 2009 and 2010* estimates that 47.2 percent, or 64.7 million American adults, have mild, moderate or severe periodontitis, the more advanced form of periodontal disease. In adults 65 and older, prevalence rates increase to 70.1 percent.

The findings also indicate disparities among certain segments of the U.S. population. Periodontal disease is higher in men than women (56.4 percent vs. 38.4 percent). Current smokers (64.2 percent) had a much higher prevalence of



severe periodontitis. This is consistent with the 2004 *Surgeon General's Report on the Health Consequences of Smoking*, which infers a causal relationship between smoking and periodontitis. Other segments with high prevalence rates include those living below the federal poverty level (65.4 percent), and those with less than a high school education (66.9 percent).



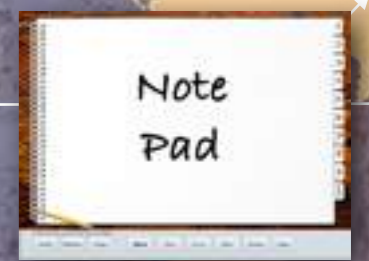
Causes

Bacteria in the mouth infect tissue surrounding the tooth, causing inflammation around the tooth leading to periodontal disease. When bacteria stay on the teeth long enough, they form a film called plaque, which eventually hardens to tartar, also called calculus. Tartar build-up can spread below the gum line, which makes the teeth harder to clean. Then, only a dental health professional can remove the tartar and stop the periodontal disease process.

Prevention and Treatment

According to the American Academy of Periodontology the best ways to prevent periodontal disease are to avoid smoking, maintain control of diabetes, have regular dental cleanings, and practice good oral hygiene.

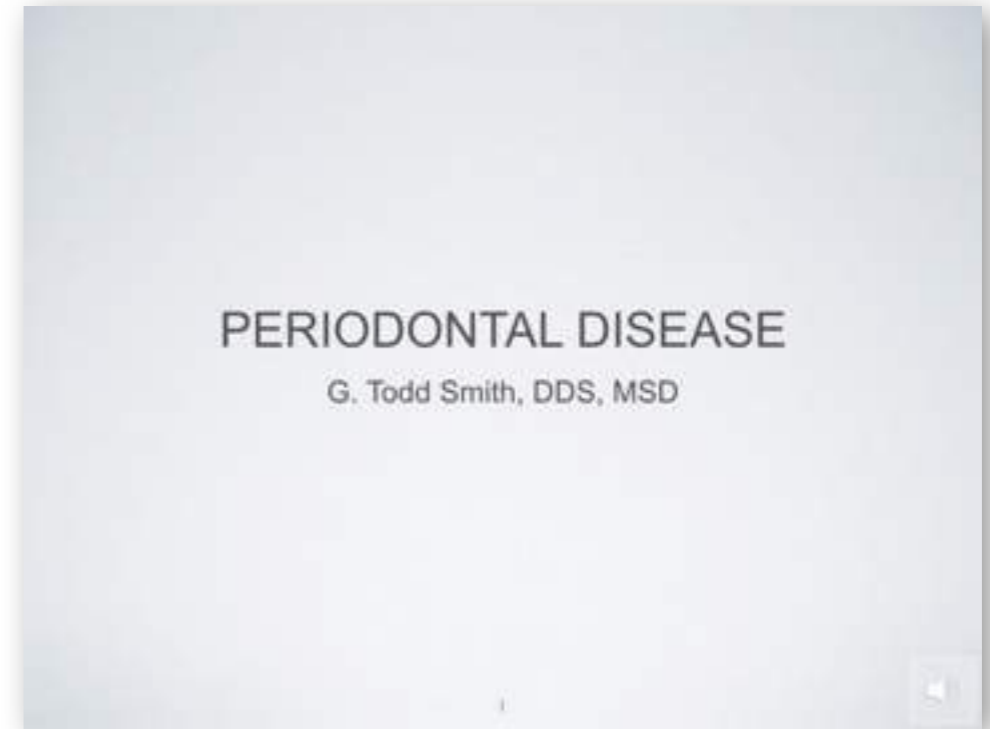
Periodontal Disease Process



Overview

- Periodontal diseases are mainly the results of infections and inflammation of the gums and bone that surround and support the teeth.
- In its early stage, called gingivitis, the gums can become swollen and red, and they may bleed.
- In its more serious form, called periodontitis, the gums can pull away from the tooth, bone can be lost, and the teeth may loosen or even fall out.

Presentation 3.1



Gingivitis



Healthy

Gingivitis

Periodontitis



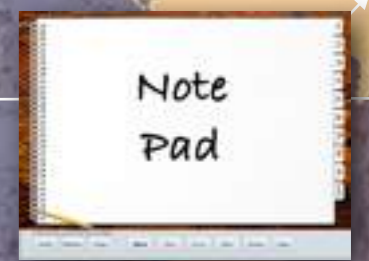
Periodontal Disease Process

Review 3.1

Question 1 of 14

Which statement describes a healthy periodontium?

- A. Gingiva is stippled.
- B. Papillae are blunt.
- C. Gingiva bleeds on probing.



Periodontal Disease Process

Field Guide 3.1

CODE 0 = COLORED BAND COMPLETELY VISIBLE
HEALTHY GUMS

CODE 1 = COLORED BAND COMPLETELY VISIBLE
BLEEDING ON PROBING

CODE 2 = COLORED BAND COMPLETELY VISIBLE
SUPRA OR SUBGINGIVAL CALCULUS
AND/OR DEFECTIVE MARGINS

CODE 3 = COLORED BAND ONLY PARTLY VISIBLE
CALCULUS AND BLEEDING MAY OR MAY
NOT BE PRESENT

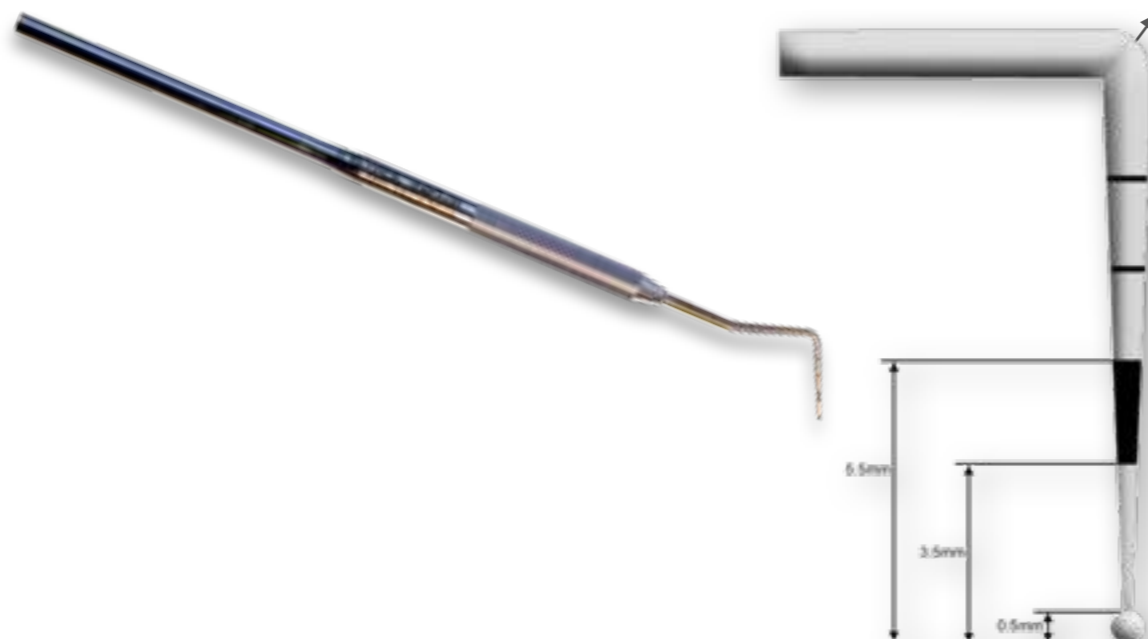
CODE 4 = COLORED BAND NOT VISIBLE
PROBING DEPTH GREATER THAN 5.5 MM



Presentation 3.2

PERIODONTAL PROBING

G.Todd Smith, DDS, MSD



Sextants



Periodontal Disease Process

Code 0



Code 1



Code 2



Code 3



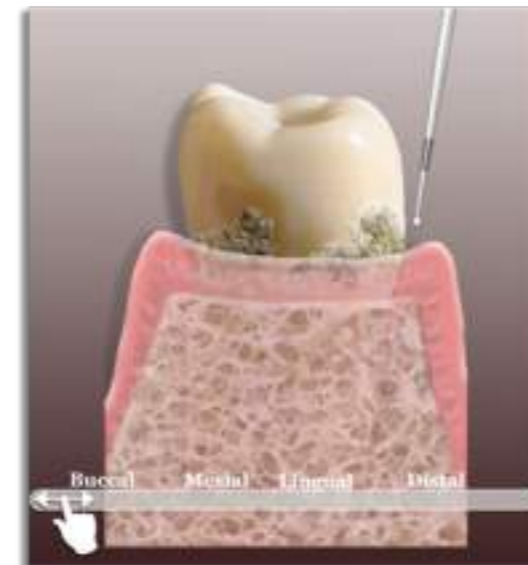
Code 4



Probing Technique

- Keep the tip of the probe against the tooth surface (parallel).
- Walk (bob) the tip of the probe around the tooth and into the sulcus until it meets resistance at the base of the pocket.
- Do not remove the probe from the sulcus when walking around a tooth.
- When probing the interproximal surfaces of the tooth, slant the probe slightly allowing the tip to reach under the contact into the sulcus.
- It is important to measure around the entire tooth circumference as measurements can vary in just a small space.
- Correct probing technique is necessary to gather accurate information.

Slider 3.1 Periodontal Probing



Click to view then drag the finger to view animation

Periodontal Disease Process

Flash Cards 3.1

Flash Cards

What PSR Code is it?



Instructions

Drag the image off of the stack to see the Code.
To return to the book tap the X in the upper left corner.

Periodontal Disease Process

Review 3.2

Question 1 of 10

Gingival sulcus is the space between the free gingiva and tooth.

T

F

Periodontal Disease Process

Review 3.3 Click to take the quiz

QUIZ

Periodontal Disease Process

Learning Objectives

- Explain 0-1-2-3-4-X PSR Codes
- Describe periodontal treatment flow for patients who are in the low, moderate or high risk categories

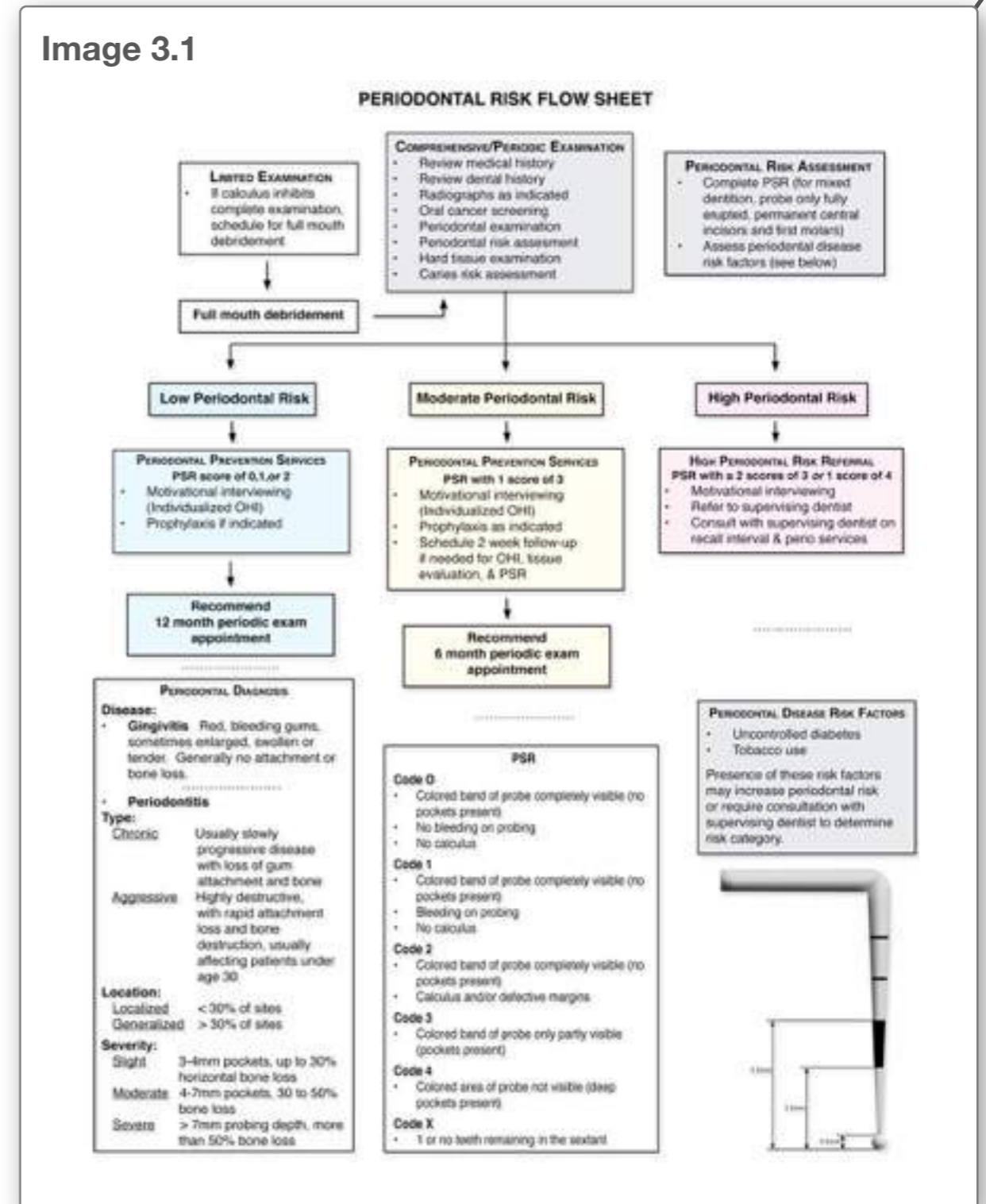
Putting It All Together

By following the steps outlined in the Periodontal Risk Flow Sheet you should now be able to arrive at a PSR Code and Risk Category for your patients. With this information you will be able to determine a treatment plan and course of action.

Study the logic of the flow sheet and in the pages that follow work through 3 sample patients that have differing risks and needs.



Image 3.1



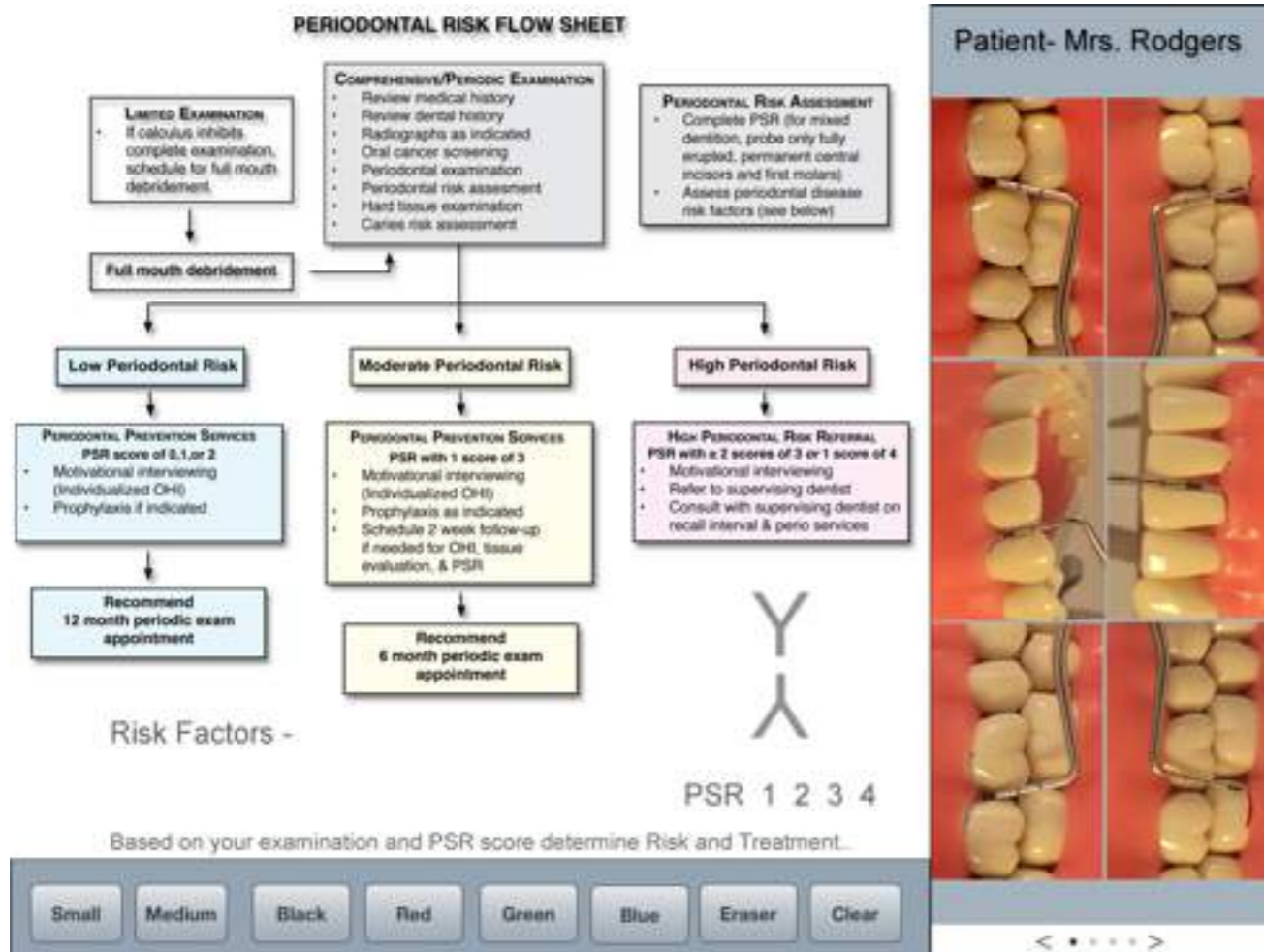
Periodontal Disease Process

Instructions:

Use the probing photographs to determine the patient's PSR score, and describe the recommended treatment outlined in the Periodontal Risk Flow Sheet.



Notes 3.1 Mrs. Rodgers



Review 3.4 Use your results to answer the questions.

Question 1 of 4

What is Mrs. Rodgers PSR Score?

- A. Code 0
- B. Code 1
- C. Code 2
- D. Code 3
- E. Code 4

Check Answer

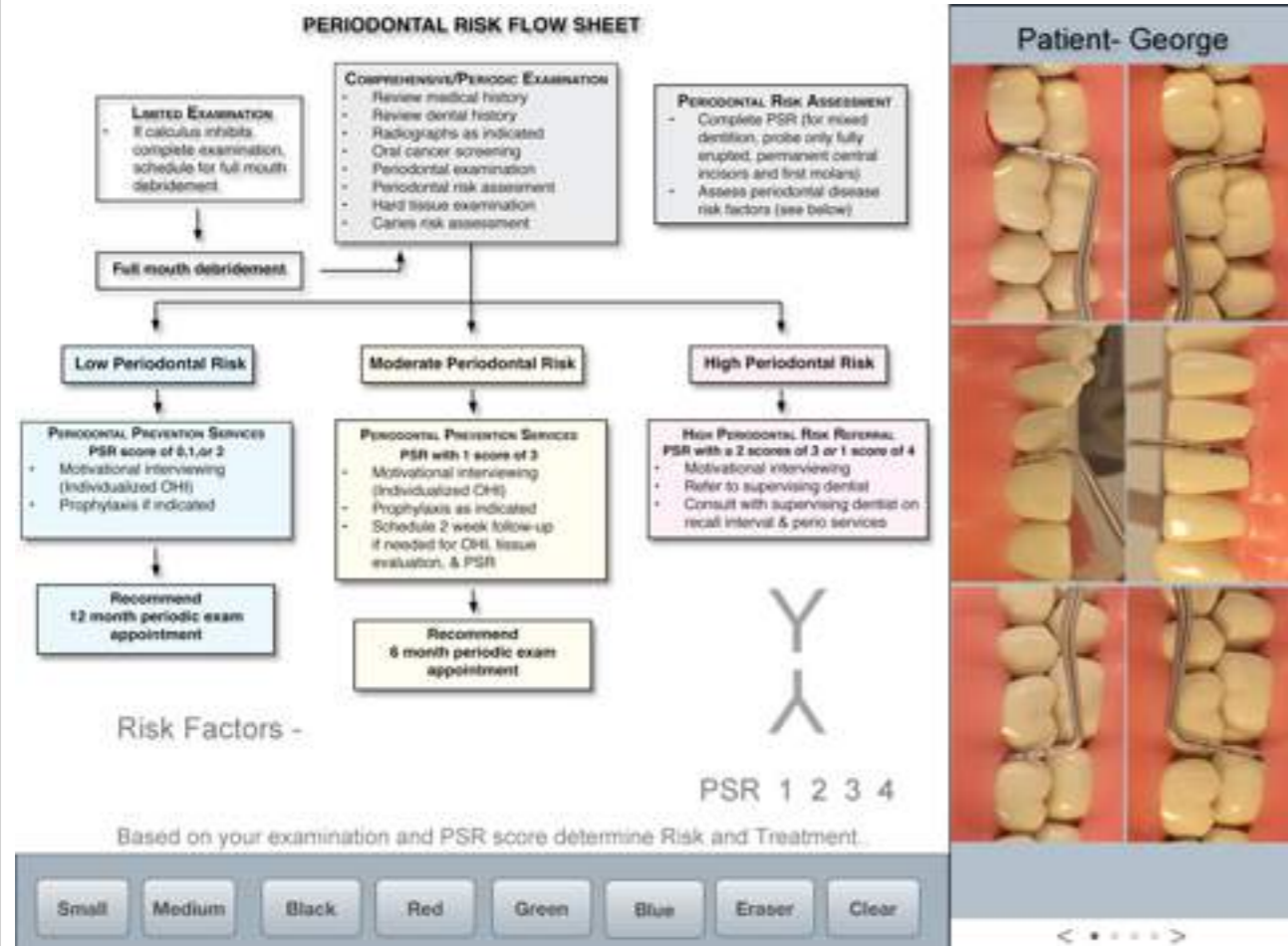
Periodontal Disease Process

Instructions:

Use the probing photographs to determine the patient's PSR score, and describe the recommended treatment outlined in the Periodontal Risk Flow Sheet



Notes 3.2 George



Review 3.5 Use your results to answer the questions.

Question 1 of 4

What is George's PSR Score?

- A. Code 0
- B. Code 1
- C. Code 2
- D. Code 3
- E. Code 4

Check Answer

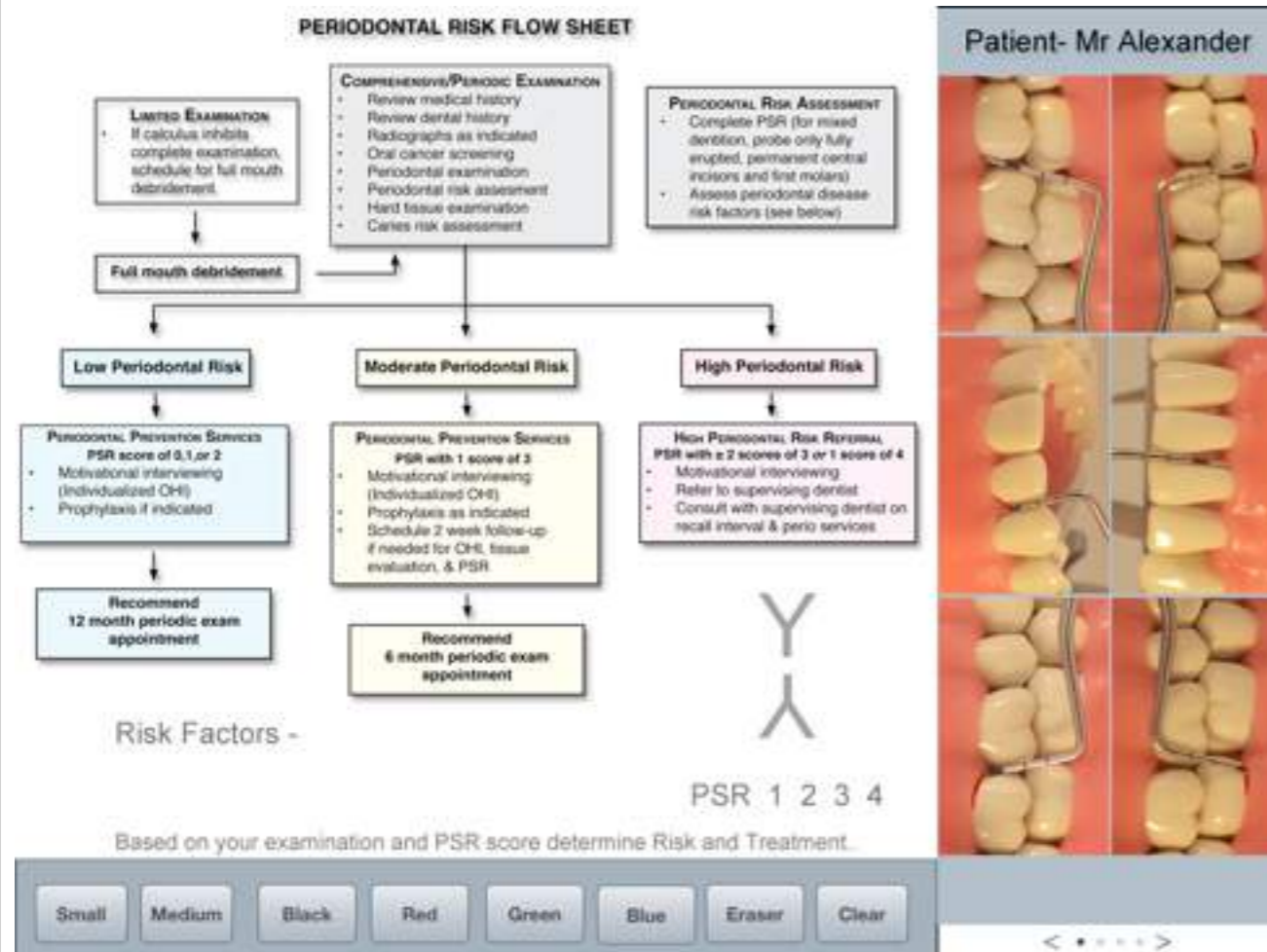
Periodontal Disease Process

Instructions:

Use the probing photographs to determine the patient's PSR score, and describe the recommended treatment outlined in the Periodontal Risk Flow Sheet



Notes 3.3 Mr Alexander



Review 3.6 Use your results to answer the questions.

Question 1 of 4

What is Mr. Alexander's PSR Score?

- A. Code 0
- B. Code 1
- C. Code 2
- D. Code 3
- E. Code 4

Check Answer

Periodontal Disease Process

Resources

US Department of Health and Human Services. Oral Health in America: A Report of the Surgeon General-- Executive Summary, Rockville, MD: US Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.

Alaska Native Tribal Health Consortium/University of Kentucky College of Dentistry, Primary Dental Health Aide Training Manuals and PowerPoint Presentations.

Bird, Doni L. and Robinson, Debbie S. Modern Dental Assisting. 10th ed. St. Louis, Missouri: Elsevier; 2012.

G. Todd Smith, DDS, MSD, IHS Periodontal Consultant, Narrated PowerPoint Presentations.

Introduction to Caries Disease Process



Terms to Know

Notes

Terms to Know



Acid: substance that has a pH of less than 7.



Alkaline: substance that has a pH greater than 7.



Buffer: a solution that resists changes in pH.



Caries process: the dynamic process of demineralization and remineralization that can lead to cavitation (breakdown) of tooth structure.



Cavitated: breakdown of tooth structure.



Contagious: disease spread from one person or organism to another by direct or indirect contact.



Demineralization: when pH is lowered it weakens the tooth structure. First signs of demineralization are white spot lesions.



Dental caries: dental term for the tooth decay process.



Dental plaque: a biofilm consisting of bacteria and bacterial by-products.

Terms to Know

Notes



Infectious:

the ability to spread infection from person to person.



Neutral:

pH of 7.



Neutralize:

make an acidic or alkaline substance chemically neutral.



Opaque:

white, chalky area that indicates demineralization of the tooth structure.



Remineralization:

the result of minerals in saliva buffering the acid, and strengthening the tooth. It can stop tooth destruction, and reverse demineralization.



White spot lesion:

an area of demineralized tooth structure that looks chalky or opaque.

Terms to Know

Notes

Word Search 4.1 Tap Help Button for Instructions

00:00:19 You have 848 points Help Restart +A -A

D	J	N	O	I	T	A	T	I	V	A	C	V	T	P
D	I	X	A	W	G	E	T	A	R	U	T	I	R	T
E	M	F	A	C	D	F	P	A	P	Y	Y	O	Y	H
N	L	A	J	X	I	T	M	L	Y	N	B	I	M	L
T	S	S	O	G	U	B	U	Y	I	E	C	I	O	M
A	M	L	T	Y	V	P	S	A	C	P	T	I	C	O
L	E	N	O	I	S	U	L	C	C	O	K	N	Y	P
H	A	M	S	R	E	I	L	P	N	O	T	T	O	C
A	R	S	Y	I	O	E	T	A	C	C	I	S	E	D
T	L	H	R	O	T	A	R	U	T	I	T	I	R	T
C	A	S	N	O	I	T	A	C	I	D	N	I	M	Y
H	Y	D	N	E	L	W	F	L	U	O	R	I	D	E
E	E	R	U	S	O	P	X	E	P	L	U	P	C	I
T	R	B	D	E	N	T	I	N	F	X	W	C	O	V
J	B	Z	J	P	C	E	T	I	B	G	U	V	V	V

- Bite-
- Dentin-
- Pulp-
- Occlusion-
- Probe-
- Triturator-
- Cavitation-
- Indications-
- Smear layer-
- Triturate-
- Desiccate-
- Fluoride-
- Dental hatchet-
- Pulp exposure-

Cotton pliers : Instrument used to hold articulating paper.

Caries Disease Process

Learning Objectives:

- Define dental caries
- Explain the dental caries process
- Discuss the demineralization and remineralization process
- Describe factors that contribute to demineralization of tooth enamel
- Describe factors that contribute to remineralization of tooth enamel

Definition of Caries



Dental caries is the scientific term for tooth decay or cavities. It is caused by specific types of bacteria. They produce acid that destroys the tooth's enamel and the layer under it, the dentin.



Dental caries is the dynamic process of demineralization and remineralization that can lead to cavitation (breakdown) of tooth structure.



What happens during the caries process?

It is a complicated story.



Caries Disease Process



Notes

Healthy permanent tooth



Caries permanent teeth



Healthy primary tooth



Caries primary teeth



Caries Disease Process

Notes

Review 4.1

Question 1 of 4

Select the answer that best describes the teeth pictured.

- A. Healthy primary teeth
- B. Healthy permanent teeth
- C. Caries primary teeth
- D. Caries permanent teeth



Caries Disease Process

Dental Caries is an infectious disease.

While many different types of bacteria live in the mouth, *Streptococcus mutans* and *Lactobacillus* are associated with dental caries.

These bacteria can be transmitted from person to person. Just like when strep throat is transmitted to another person.

For example, if a mom has *Streptococcus mutans* and *Lactobacillus* in her mouth, and tastes or chews food before feeding it to her baby, she transmits the bacteria to her baby. If a dad has these bacteria in his mouth, and his child puts his fingers into his dad's mouth, and then into his own mouth, bacteria are transmitted. This can also happen when kids share food and beverages or even when teenagers kiss.



Hot Spot 4.1



Dental Caries is an infectious bacterial disease!

Dental caries is called an infectious disease, because the bacteria that are involved in producing acid in the mouth can be transmitted from person to person.



Caries Disease Process

Bacteria

Notes

Streptococcus mutans and lactobacillus are bacteria that live and multiply very quickly in dental plaque. They rely on sugar to live. They love chips, crackers, hard candy, lollipops, sticky candy like gummy bears. They also love drinks like soda pop, Tang, and Kool-Aid as well as coffee or tea with sugar. The bacteria use sugary foods and beverages to reduce the pH in the mouth, and produce acids that break down the tooth enamel.



Caries Disease Process

pH

Acid, Neutral, or Alkaline?

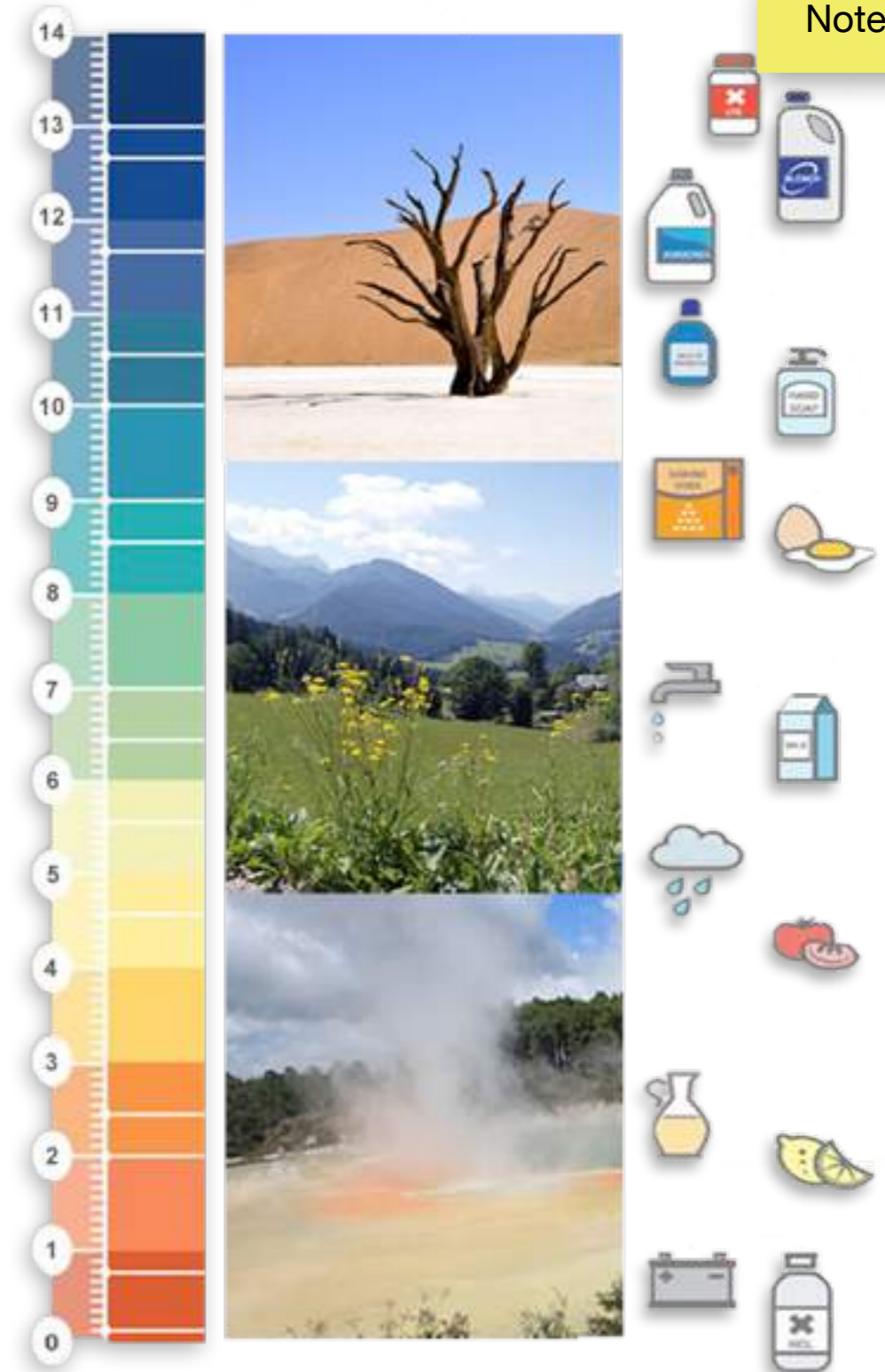
First some background information about pH. A pH scale measures whether a liquid is acidic or alkaline.

The measurements are from 0-14.

A pH below 7 is considered acidic, 7 is neutral, and above 7 is considered alkaline.

Saliva has a pH of 7 or more. The pH for the oral environment is usually between 6-7.

When the pH in the mouth dips below 5.5, acids can attack the teeth and enamel is at risk for demineralization.



Notes

Caries Disease Process

Measuring the pH of your mouth

Notes

Eating food or drinking beverages change the pH in the mouth.

PH after eating.



PH after brushing.



Place test strip in your mouth as directed.

Compare resulting color with the guide on the package to determine pH of mouth.

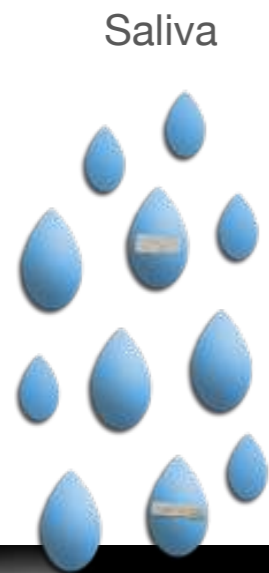


Caries Disease Process

If a tooth were made of bricks...

Imagine each brick is made out of calcium or phosphate. Acid lowers the pH, and removes bricks. Saliva can neutralize the acids and replace calcium and phosphate. If there is balance between the amount of bricks removed and replaced, a tooth is protected. If acid pulls out more bricks than saliva can replace, tooth structure is damaged.

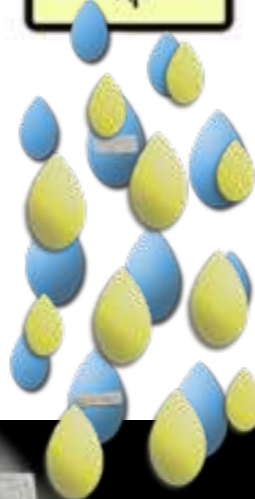
Notes



Saliva

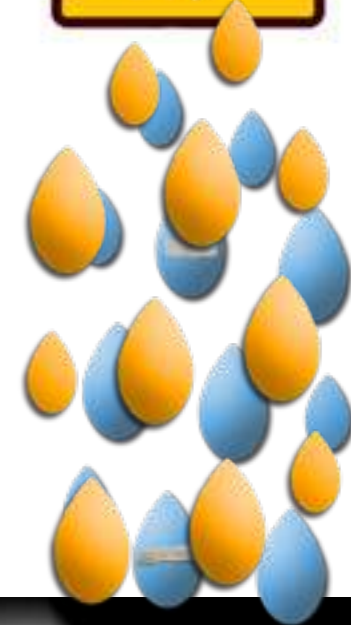
pH 7 to PH 5.6

Weak Acid

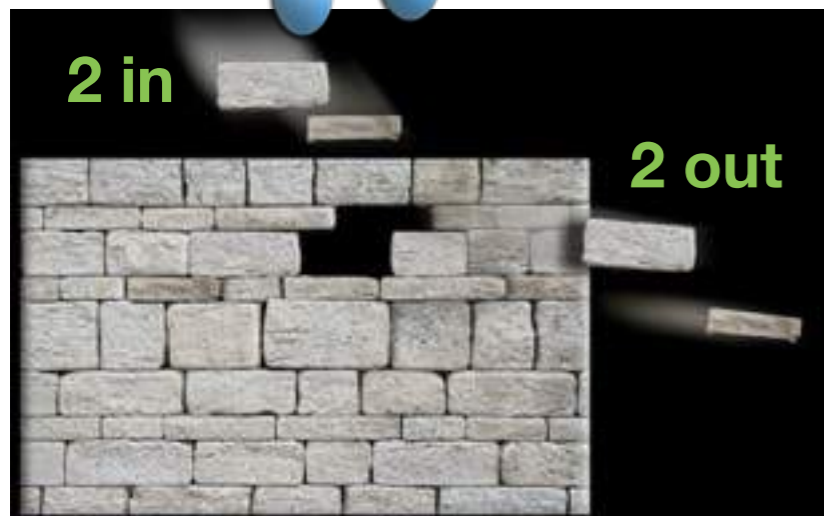


pH 5.5

Strong Acid



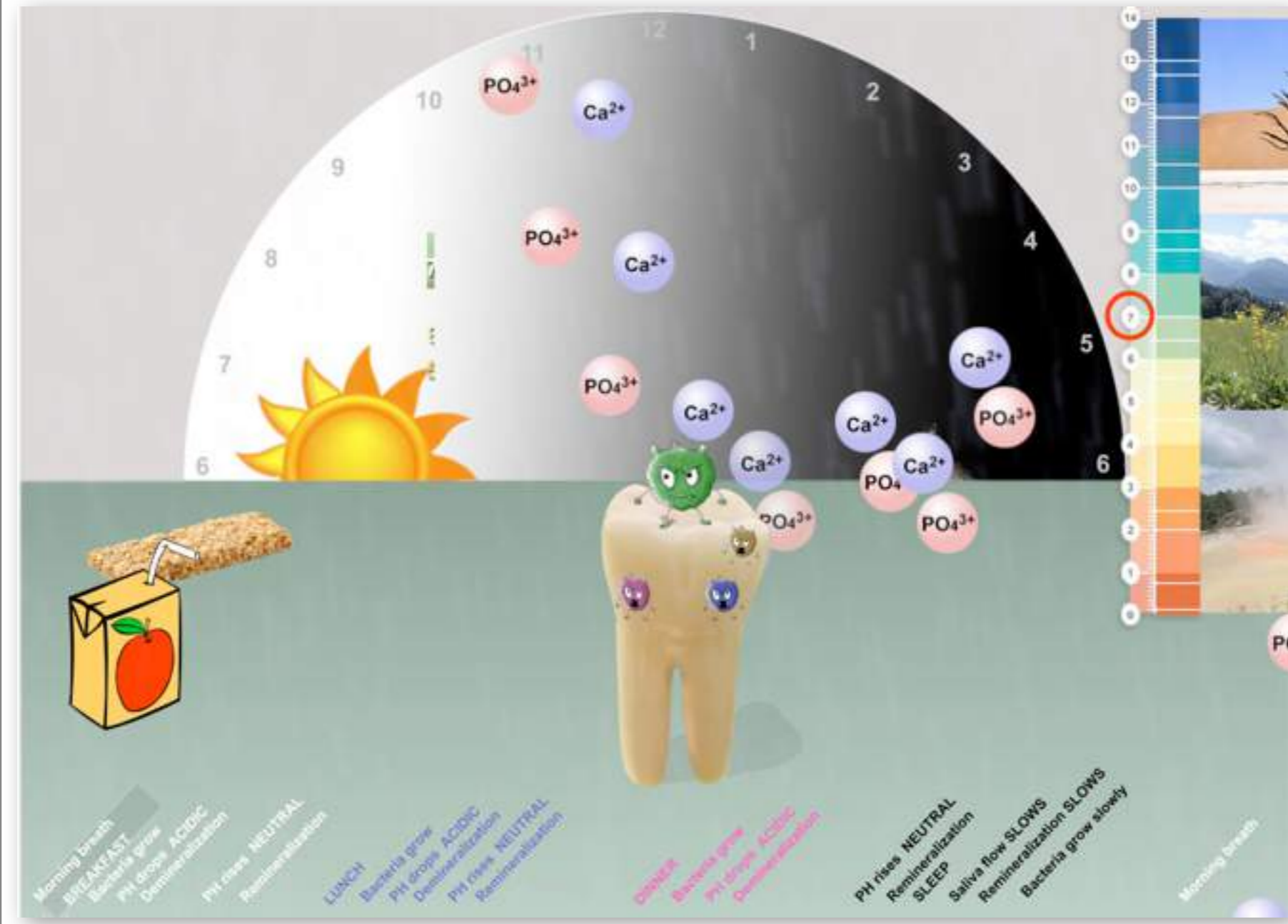
pH 4



Caries Disease Process

Notes

Hot Spot 4.2 Neutral pH Tap on the Red Squares and Circles to learn more.



Caries Disease Process

Demineralization - White Spot Lesions

As the bacteria eat sugary foods and drinks, they produce acids that dissolve tooth structure. This is called demineralization because minerals like calcium and phosphate are removed from the tooth enamel. The earliest sign of demineralization is a white spot lesion. This is an area of chalky, opaque enamel.

Eating food or drinking beverages change the pH in the mouth. When the pH in the mouth dips below 5.5, acids can attack the teeth and enamel is at risk for demineralization.

The alkaline properties of saliva allow it to neutralize the acid and raise the pH. It takes about 20-40 minutes for saliva to buffer the acid. During this time teeth are at risk.

The following factors contribute to demineralization of tooth enamel:

- Higher levels of bacterial plaque results in more acid production.
- Frequent eating and drinking allows more demineralization time.
- The shape and placement of the teeth can make it difficult to remove plaque.
- Poor oral hygiene increases plaque and sugar sticks longer to tooth surfaces.
- Decreased saliva increases the time enamel is exposed to acids.



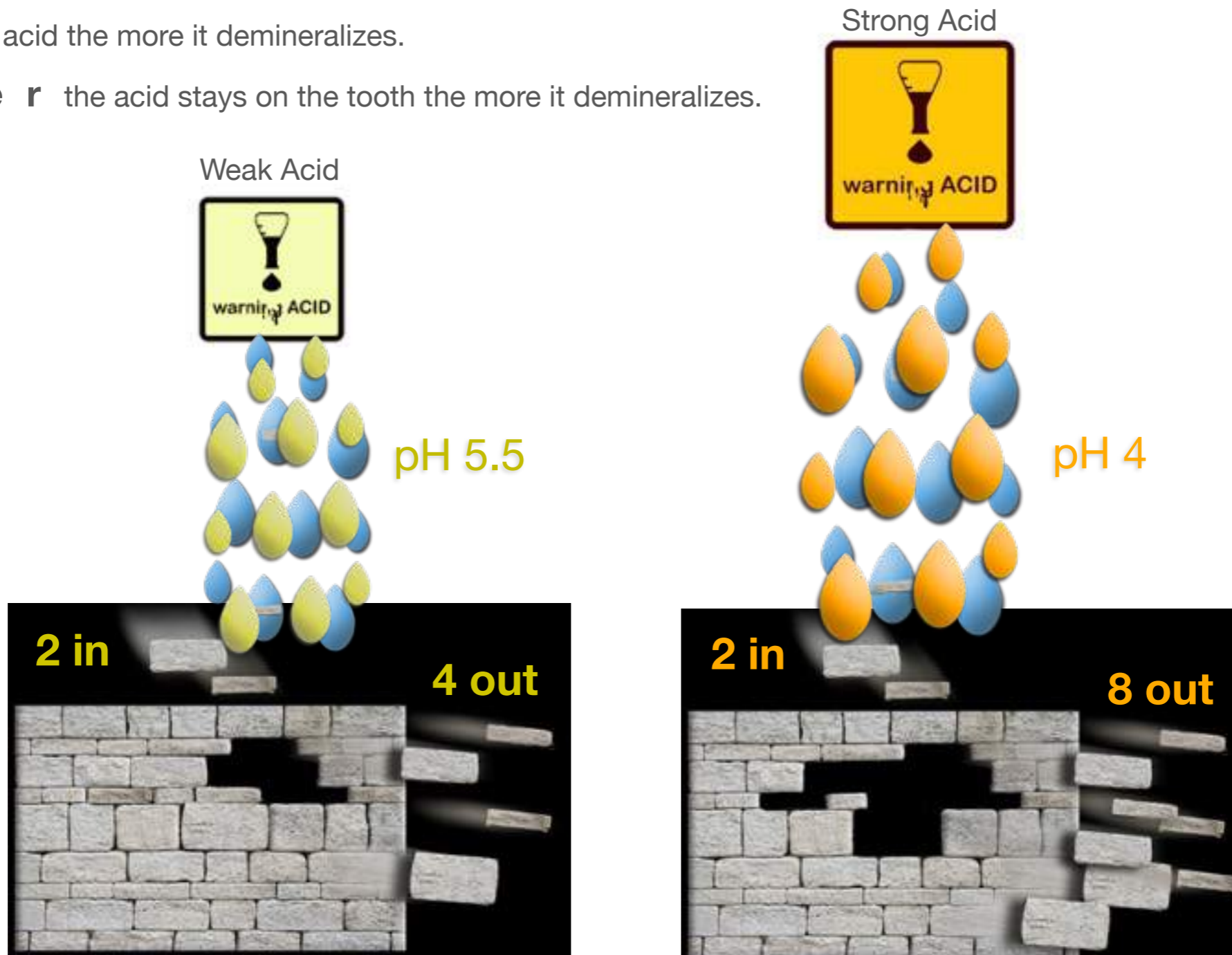
Caries Disease Process

Notes

Acids demineralizes !

The **stronger** the acid the more it demineralizes.

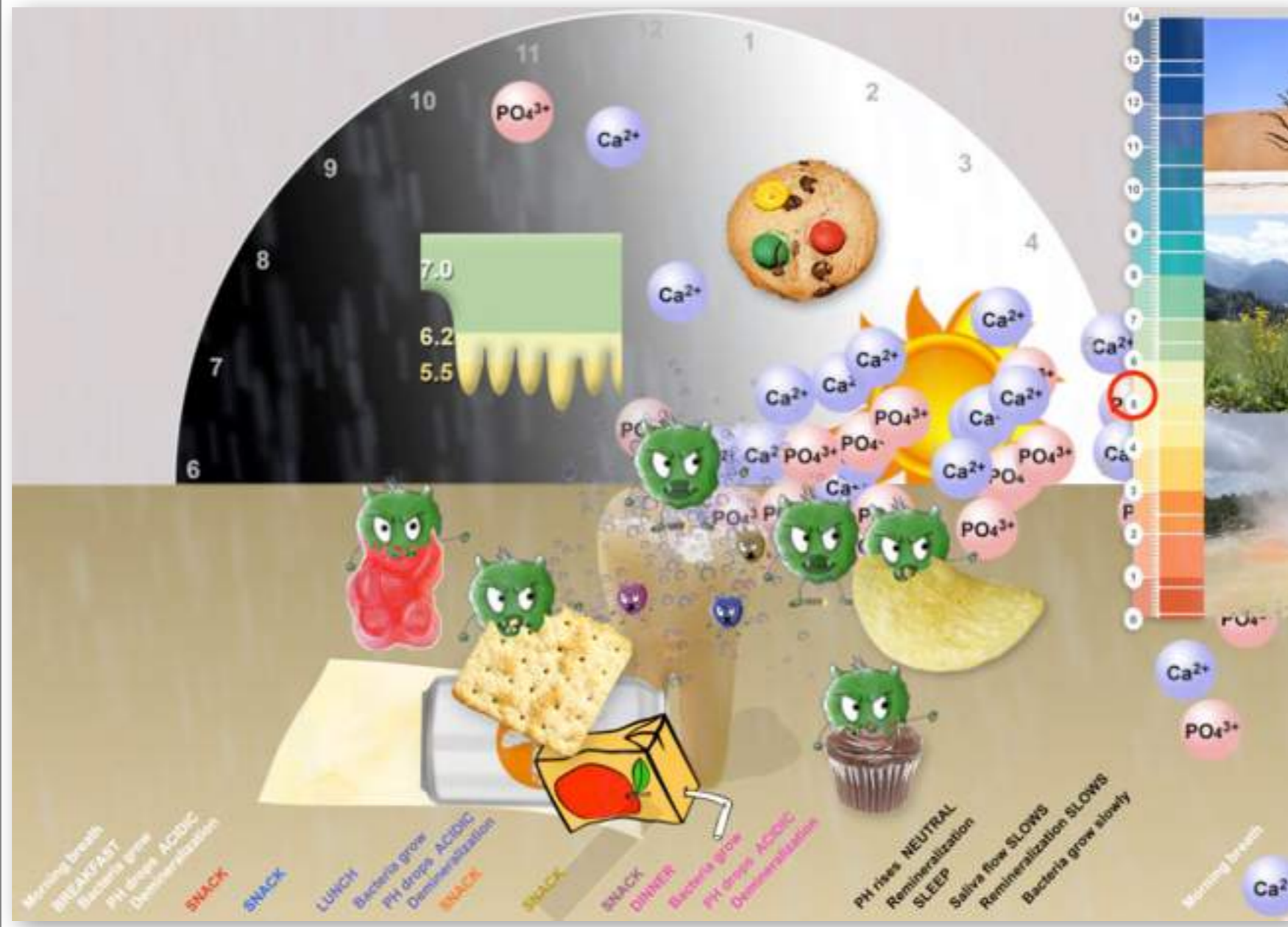
The **l o n g e r** the acid stays on the tooth the more it demineralizes.



Caries Disease Process

Notes

Hot Spot 4.3 Demineralization Tap on the Red Squares and Circles to learn more.



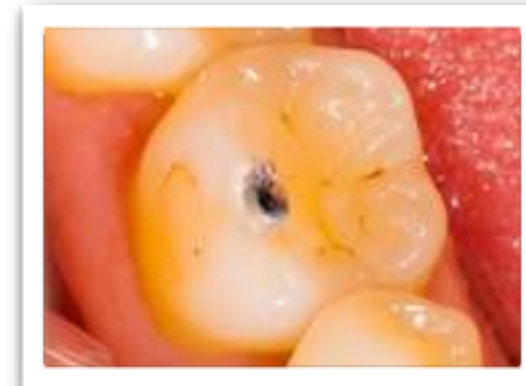
Caries Disease Process

Cavitation

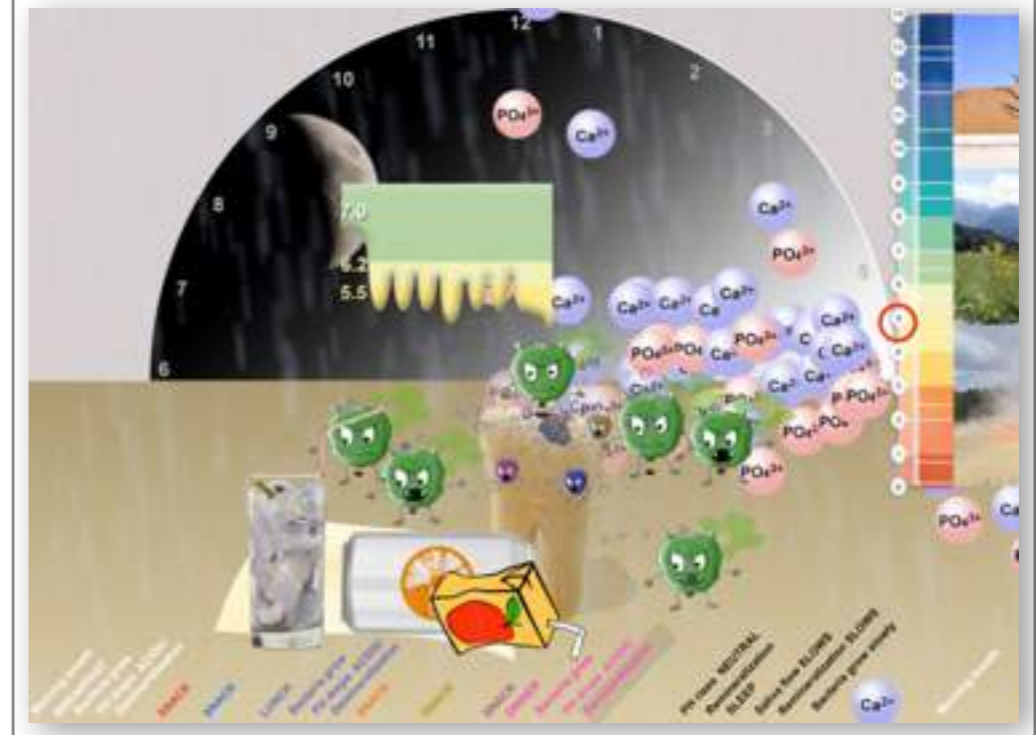
Notes

If a decalcified white spot areas become cavitated, tooth structure is lost, and a carious lesion is formed.

A dental professional must restore the tooth.



Hot Spot 4.4 Cavitation Tap on the Red Squares and Circles to learn more.



Caries Disease Process

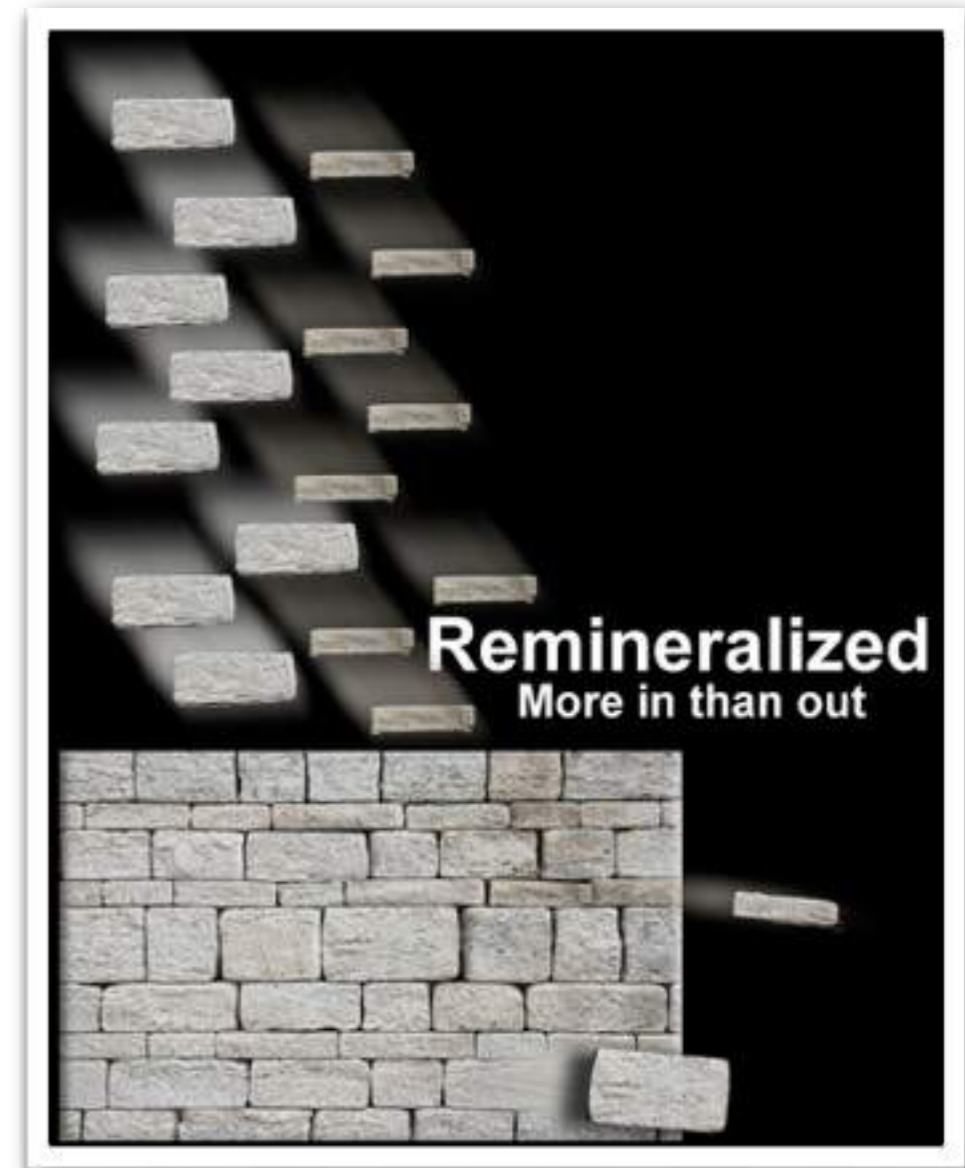
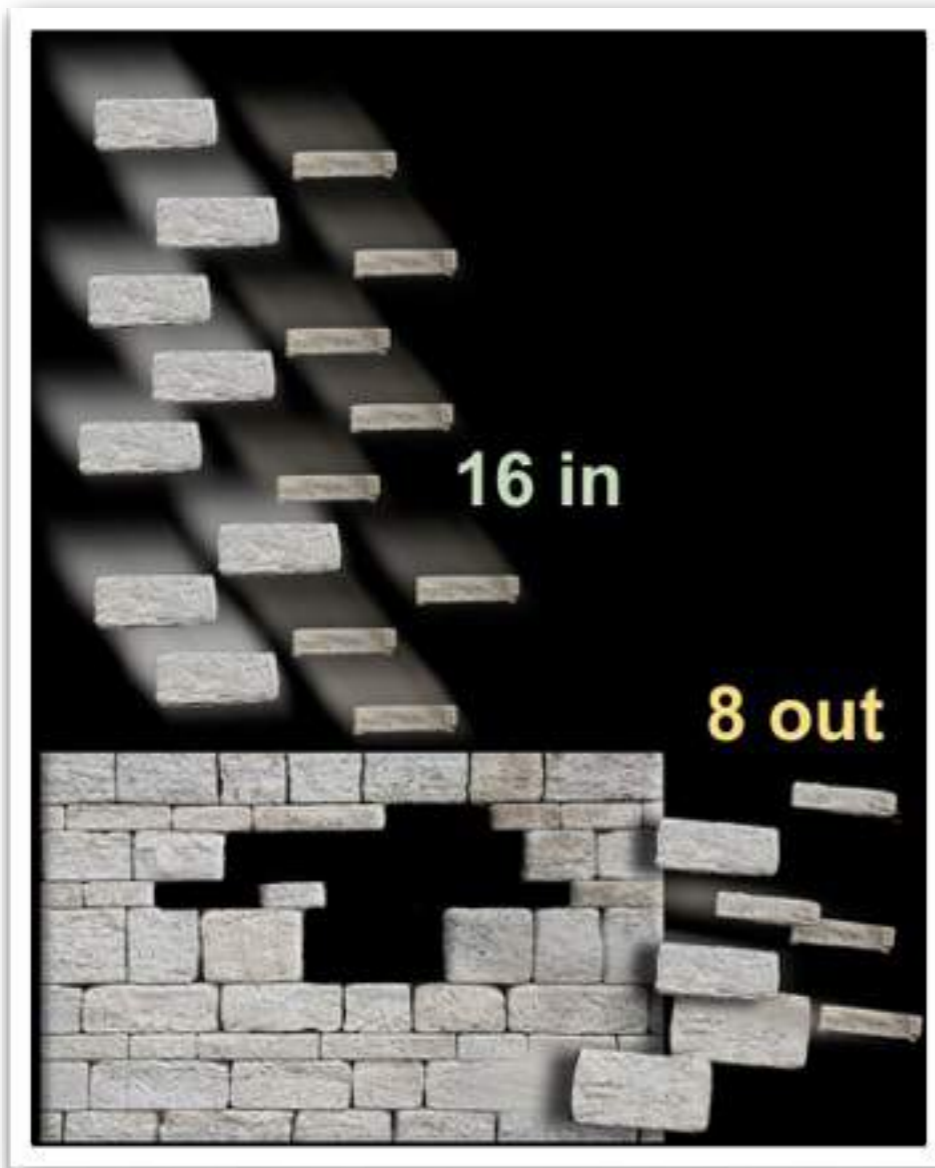


Remineralization - Repair

Notes

Saliva can neutralize the acids and add minerals like calcium and phosphate to tooth enamel.

This is called remineralization, and it can stop tooth destruction and reverse demineralization.

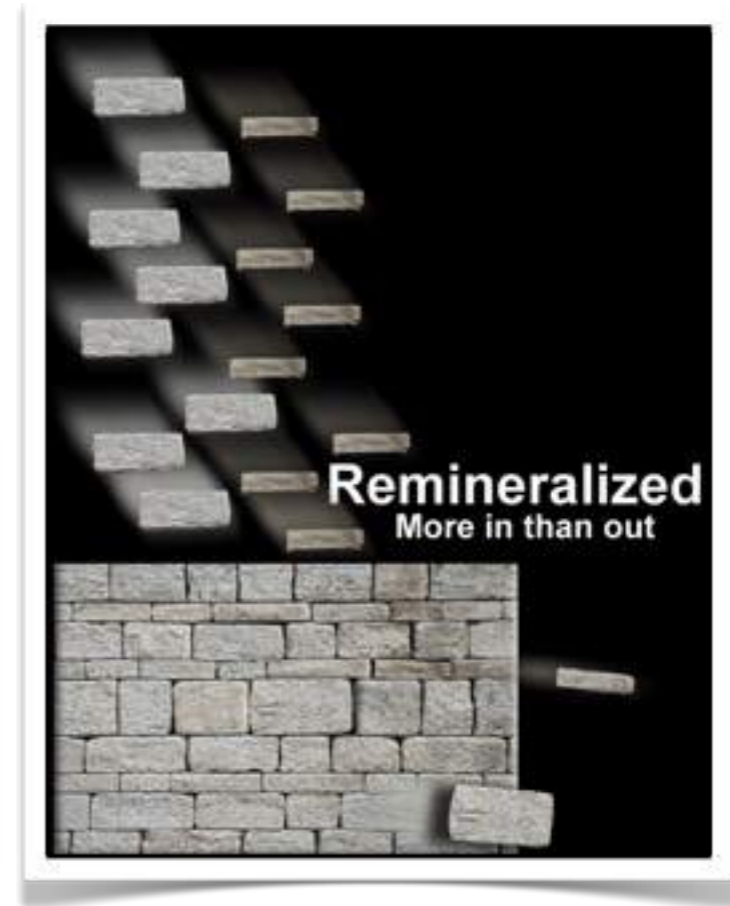


Caries Disease Process

The following factors contribute to remineralization of tooth enamel:

- Fluoride (toothpaste, mouthrinse, varnish, gel, foam).
- Reducing the intake of sugar foods and drinks.
- Limiting snacking.
- Good oral hygiene to remove bacterial plaque.

Notes



Caries Disease Process

Just to Summarize...

As the bacteria eat sugary foods and drinks, they produce acids that dissolve tooth structure.

This is called demineralization because minerals like calcium and phosphate are removed from the tooth enamel.

The earliest sign of demineralization is a white spot lesion. This is an area of chalky, opaque enamel.

Saliva can neutralize the acids and add minerals like calcium and phosphate to tooth enamel.

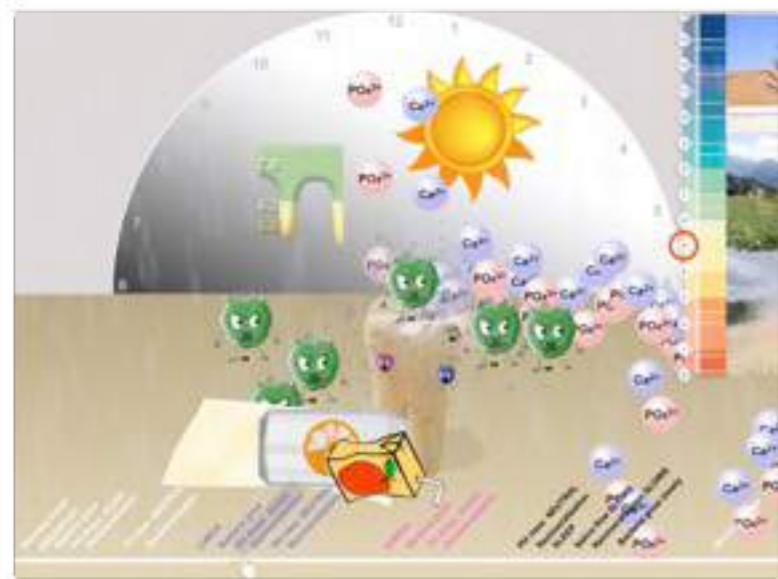
This is called remineralization, and it can stop tooth destruction and reverse demineralization.

Notes

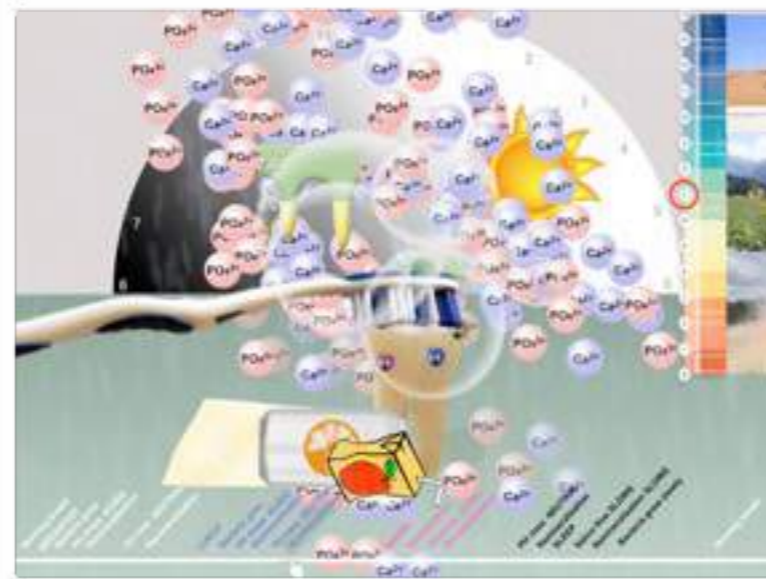
The following factors contribute to remineralization of tooth enamel:

- Fluoride (toothpaste, mouthrinse, varnish, gel, foam).
- Reducing the intake of sugary foods and drinks
- Limiting snacking
- Good oral hygiene to remove bacterial plaque

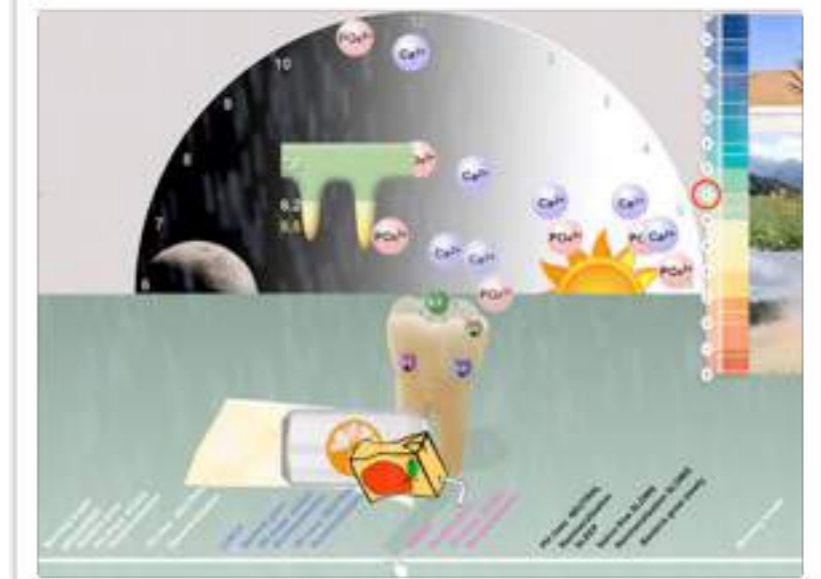
Calcium and phosphate removed by acid



Toothpaste and saliva replace them



White Spot remineralized



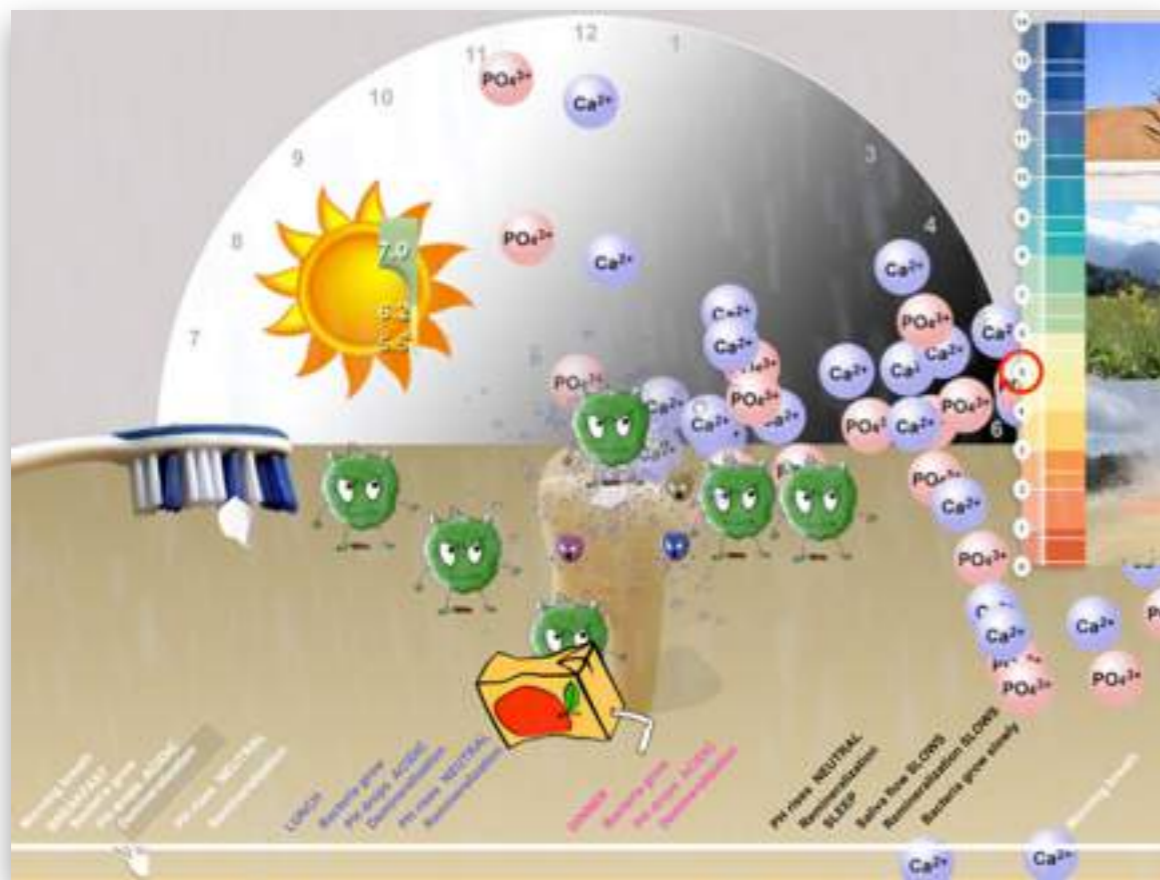
Caries Disease Process

A day in the life...

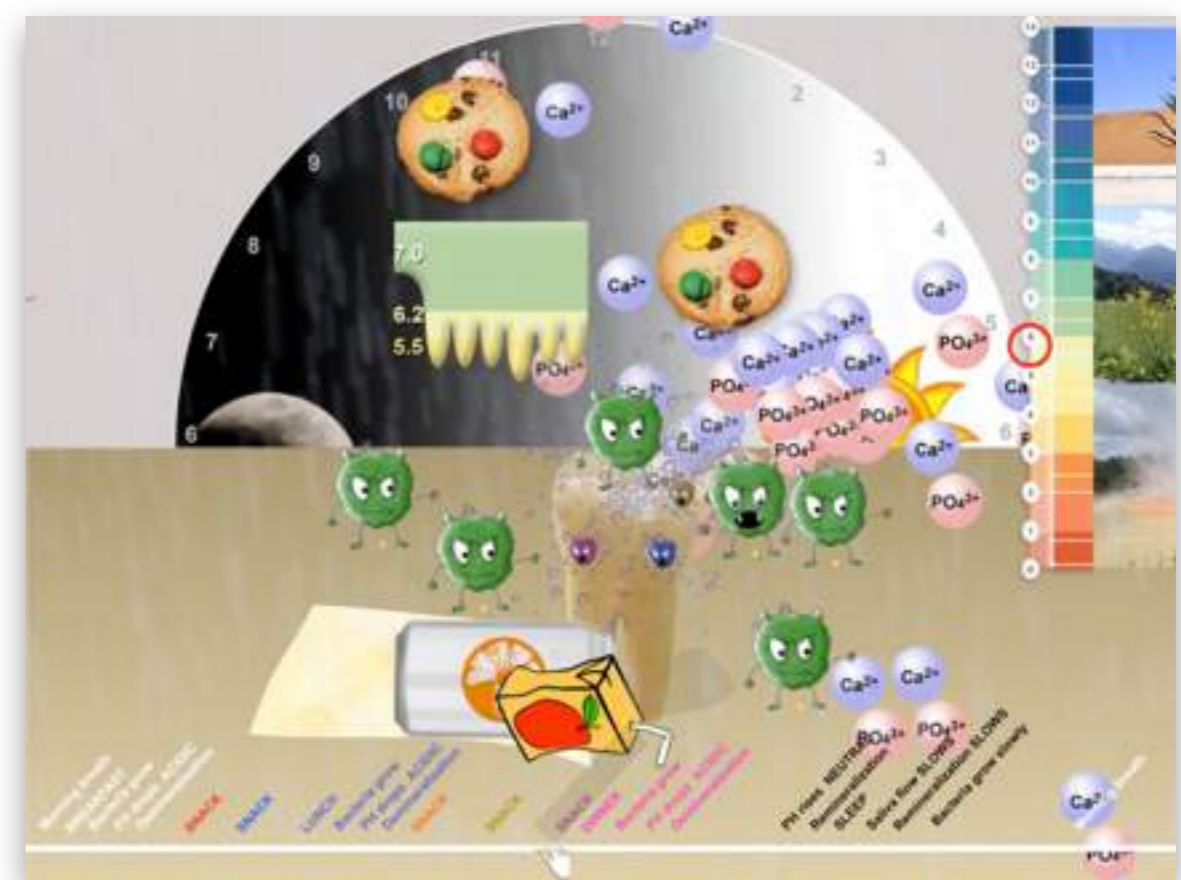
Notes

Open the Interactive Slider Widgets and Slide you finger to the right to learn what happens to a tooth during a day.

Slider 4.1 Brushing After Meals



Slider 4.2 Snacks and Brushing Before Bed



Caries Disease Process

Remember...

The caries process is when bacteria in dental plaque eat sugary foods and drinks to produce acid that demineralizes enamel.

A dynamic and continual battle between demineralization and remineralization takes place throughout the day.

Dental caries result when there is no longer a balance between demineralization and remineralization.



+



=

pH 5.5 ↓



+



=

pH 7



Caries Disease Process

Review 4.2 Review

Question 1 of 20
Dental caries is an infectious disease.

T

F

Caries Disease Process

Caries Risk Assessment

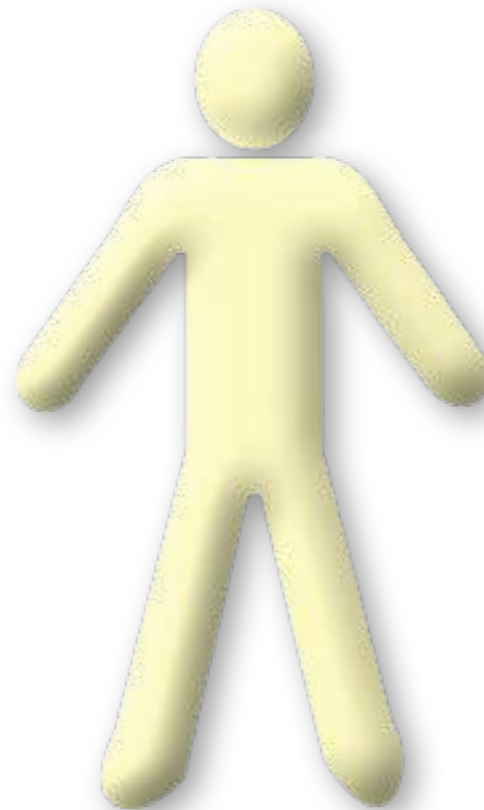
Learning Objectives

- Apply caries risk assessment form to determine a caries risk category for a patient
- Describe caries treatment flow for patients who are in the low, moderate or high risk categories
- Identify recommended recall intervals for different caries risk categories

Low Risk



Moderate Risk



High Risk



Caries Disease Process

Caries Risk Assessment and Caries Prevention Services

Notes

1. Read the scenario.
2. Determine the Caries Risk.
3. Decide which Caries Prevention Services are recommended.

Notes 4.1 Caries

CARIES RISK ASSESSMENT			
Caries Risk Indicators	Low Caries Risk	Moderate Caries Risk	High Caries Risk
Clinical conditions	<ul style="list-style-type: none"> No carious teeth during past 24 mos. No enamel demineralization No visible plaque 	<ul style="list-style-type: none"> Carious teeth during past 24 mos. 1 area of enamel demineralization Susceptible pits & fissures (< age 20) 	<ul style="list-style-type: none"> Carious teeth in past 12 mos. More than 1 area of enamel demineralization Radiographic caries Exposed root surfaces Wearing dental or orthodontic appliances Enamel hypoplasia Xerostomia
Environmental characteristics	<ul style="list-style-type: none"> Patient lives in community with fluoridated water No consumption of simple sugars Patient receives regular dental care 	<ul style="list-style-type: none"> Patient lives in a community with no fluoridated water, but receives recommended F₂ applications Occasional (< 2 times per day) between-meal snacks of simple sugars Eligible for Dental Kit Care Patient receives irregular dental care 	<ul style="list-style-type: none"> Patient lives in a community with no fluoridated water and receives no F₂ applications Frequent (> 3 times per day) between-meal snacks of simple sugars Eligible for Medicaid Patient receives irregular or no dental care Active caries present in household members
General health conditions			<ul style="list-style-type: none"> Special health care needs

Scenario 1
Mr. Gil has had no carious teeth during the past 24 months. He receives regular dental care, and has recently had radiation to his neck that resulted in xerostomia.

Notes



Draw Eraser Clear

Review 4.3 Mr. Gil has had no carious teeth during the past 24 months. He receives regular dental care, and has recently had radiation to his neck that resulted in xerostomia.

Question 1 of 3

What is the caries risk category?

- A. Low Risk
- B. Moderate Risk
- C. High Risk

Caries Disease Process

Caries Risk Assessment and Caries Prevention Services

Notes

1. Read the scenario.
2. Determine the Caries Risk.
3. Decide which Caries Prevention Services are recommended.

Notes 4.2 Caries

CARIES RISK ASSESSMENT			
CARIES Risk Indicators	Low CARIES Risk	Moderate CARIES Risk	High CARIES Risk
Clinical conditions	<ul style="list-style-type: none"> No carious teeth during past 24 mos. No enamel demineralization No visible plaque 	<ul style="list-style-type: none"> Carious teeth during past 24 mos. 1 area of enamel demineralization Susceptible pits & fissures (< age 20) 	<ul style="list-style-type: none"> Carious teeth in past 12 mos. More than 1 area of enamel demineralization Radiographic caries Exposed root surfaces Wearing dental or orthodontic appliances Enamel hypoplasia Xerostomia
Environmental characteristics	<ul style="list-style-type: none"> Patient lives in community with fluoridated water No consumption of simple sugars Patient receives regular dental care 	<ul style="list-style-type: none"> Patient lives in a community with no fluoridated water, but receives recommended F₂ applications Occasional (< 2 times per day) between-meal snacks of simple sugars Eligible for Denali Kid Care Patient receives irregular dental care 	<ul style="list-style-type: none"> Patient lives in a community with no fluoridated water and receives no F₂ applications Frequent (> 3 times per day) between-meal snacks of simple sugars Eligible for Medicaid Patient receives irregular or no dental care Active caries present in household members
General health conditions			<ul style="list-style-type: none"> Special health care needs

Scenario 2
Missy is 4 years old. She is eligible for Denali Kid Care. She had carious teeth in the last 12 months.

Notes

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v



Draw Eraser Clear

Review 4.4 Missy is 4 years old. She is eligible for Denali Kid Care. She had carious teeth in the last 12 months.

Question 1 of 3

What is the caries risk category?

- A. Low Risk
- B. Moderate Risk
- C. High Risk



Check Answer



Caries Disease Process

Caries Risk Assessment and Caries Prevention Services

Notes

1. Read the scenario.
2. Determine the Caries Risk.
3. Decide which Caries Prevention Services are recommended.

Notes 4.3 Caries

CARIES RISK ASSESSMENT			
Caries Risk Indicators	Low Caries Risk	Moderate Caries Risk	High Caries Risk
Clinical conditions	<ul style="list-style-type: none"> No carious teeth during past 24 mos. No enamel demineralization No visible plaque 	<ul style="list-style-type: none"> Carious teeth during past 24 mos. 1 area of enamel demineralization Susceptible pits & fissures (< age 20) 	<ul style="list-style-type: none"> Carious teeth in past 12 mos. More than 1 area of enamel demineralization Radiographic caries Exposed root surfaces Wearing dental or orthodontic appliances Enamel hypoplasia Xerostomia
Environmental characteristics	<ul style="list-style-type: none"> Patient lives in community with fluoridated water No consumption of simple sugars Patient receives regular dental care 	<ul style="list-style-type: none"> Patient lives in a community with no fluoridated water, but receives recommended F₂ applications Occasional (< 2 times per day) between-meal snacks of simple sugars Eligible for Denak Kit Care Patient receives irregular dental care 	<ul style="list-style-type: none"> Patient lives in a community with no fluoridated water and receives no F₂ applications Frequent (> 3 times per day) between-meal snacks of simple sugars Eligible for Medicaid Patient receives irregular or no dental care Active caries present in household members
General health conditions			<ul style="list-style-type: none"> Special health care needs

Scenario 3
 Michael is 16 years old. He has had no carious teeth in the last 24 months. He lives in a fluoridated community, and receives regular dental care including sealants.



Review 4.5 Michael is 16 years old. He has had no carious teeth in the last 24 months. He lives in a fluoridated community, and receives regular dental care including sealants.

Question 1 of 3

What is the caries risk category?

- A. Low Risk**
- B. Moderate Risk**
- C. High Risk**

Check Answer

Caries Disease Process

Caries Risk Assessment and Caries Prevention Services

Notes

1. Read the scenario.
2. Determine the Caries Risk.
3. Decide which Caries Prevention Services are recommended.

Notes 4.4 Caries

CARIES RISK ASSESSMENT			
CARIES Risk Indicators	Low CARIES Risk	Moderate CARIES Risk	High CARIES Risk
Clinical conditions	<ul style="list-style-type: none"> No carious teeth during past 24 mos. No enamel demineralization No visible plaque 	<ul style="list-style-type: none"> Carious teeth during past 24 mos. 1 area of enamel demineralization Susceptible pits & fissures (< age 20) 	<ul style="list-style-type: none"> Carious teeth in past 12 mos. More than 1 area of enamel demineralization Radiographic caries Exposed root surfaces Wearing dental or orthodontic appliances Enamel hypoplasia Xerostomia
Environmental characteristics	<ul style="list-style-type: none"> Patient lives in community with fluoridated water No consumption of simple sugars Patient receives regular dental care 	<ul style="list-style-type: none"> Patient lives in a community with no fluoridated water, but receives recommended F₂ applications Occasional (< 2 times per day) between-meal snacks of simple sugars Eligible for Dental Kit Care Patient receives irregular dental care 	<ul style="list-style-type: none"> Patient lives in a community with no fluoridated water and receives no F₂ applications Frequent (> 3 times per day) between-meal snacks of simple sugars Eligible for Medicaid Patient receives irregular or no dental care Active caries present in household members
General health conditions			<ul style="list-style-type: none"> Special health care needs

Scenario 4
Ben is 12 years old.
He has susceptible pit and fissures.
He likes occasional snacks of gummy bears.

Notes



Draw Eraser Clear

Review 4.6 Ben is 12 years old. He has susceptible pit and fissures. He likes occasional snacks of gummy bears.

Question 1 of 3

What is the caries risk category?

- A. Low Risk
 B. Moderate Risk
 C. High Risk

Check Answer

Caries Disease Process

Caries Risk Assessment and Caries Prevention Services

Notes

1. Read the scenario.
2. Determine the Caries Risk.
3. Decide which Caries Prevention Services are recommended.

Notes 4.5 Caries

CARIES RISK ASSESSMENT			
CARIES Risk Indicators	Low CARIES Risk	Moderate CARIES Risk	High CARIES Risk
Clinical conditions	<ul style="list-style-type: none">No carious teeth during past 24 mos.No enamel demineralizationNo visible plaque	<ul style="list-style-type: none">Carious teeth during past 24 mos.1 area of enamel demineralizationSusceptible pits & fissures (< age 20)	<ul style="list-style-type: none">Carious teeth in past 12 mos.More than 1 area of enamel demineralizationRadiographic cariesExposed root surfacesWearing dental or orthodontic appliancesEnamel hypoplasiaXerostomia
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General health conditions			<ul style="list-style-type: none">Special health care needs

CARIES Risk Category

High CARIES Risk: Presence of 1 or more risk indicators from the high risk category

Moderate CARIES Risk: Presence of at least 1 moderate risk indicator, no high risk indicators

Low CARIES Risk: Presence of no indicators from moderate risk or high risk categories

Scenario 5
Joy is 3 years old.
She has no carious teeth in the last 24 months.
Her older brother had early childhood caries (ECC).

Notes



Draw Eraser Clear

Review 4.7 Joy is 3 years old. She has no carious teeth in the last 24 months. Her older brother had early childhood caries (ECC).

Question 1 of 3

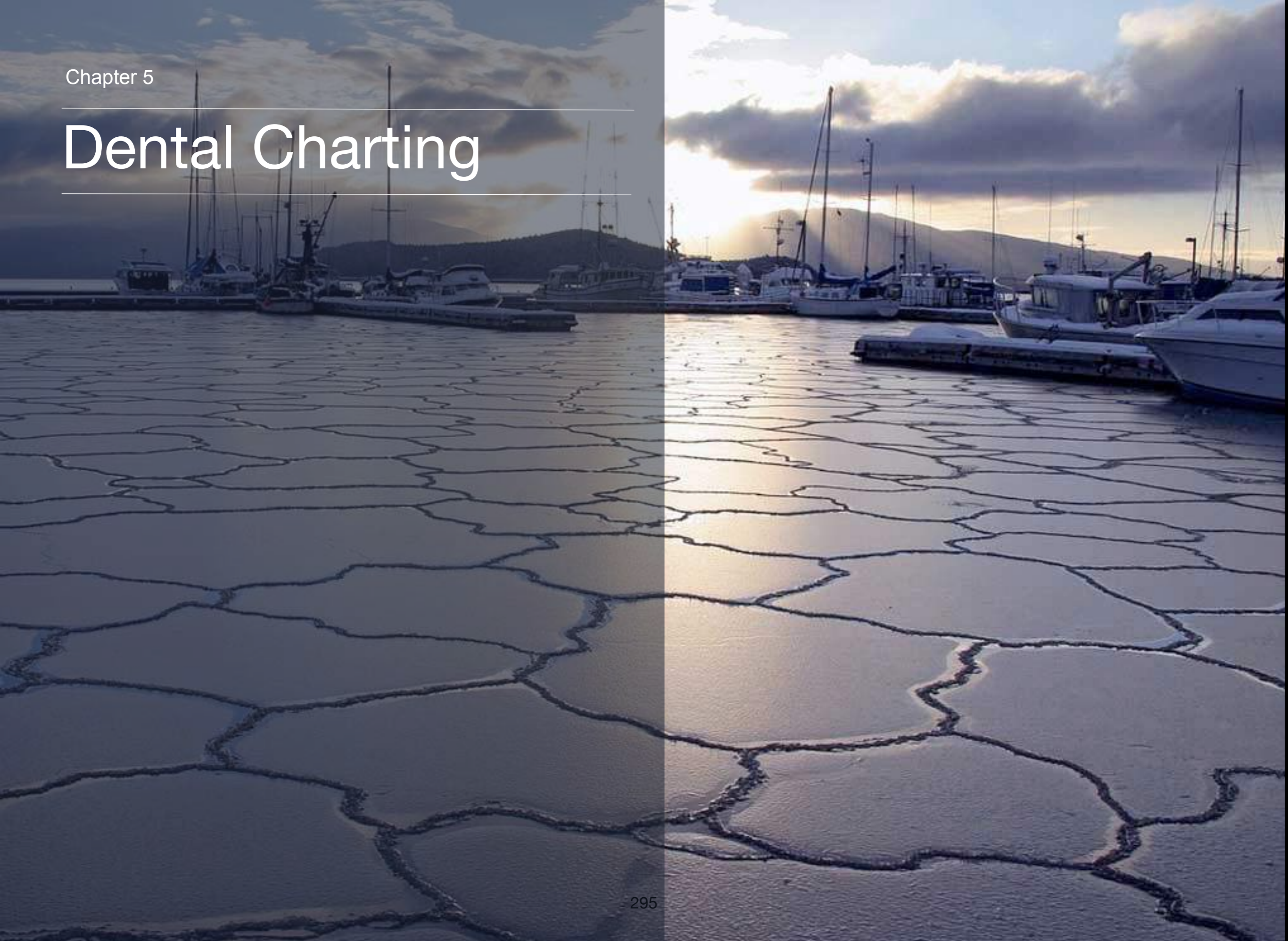
What is the caries risk category?

- A. Low Risk
- B. Moderate Risk
- C. High Risk

Check Answer

Chapter 5

Dental Charting



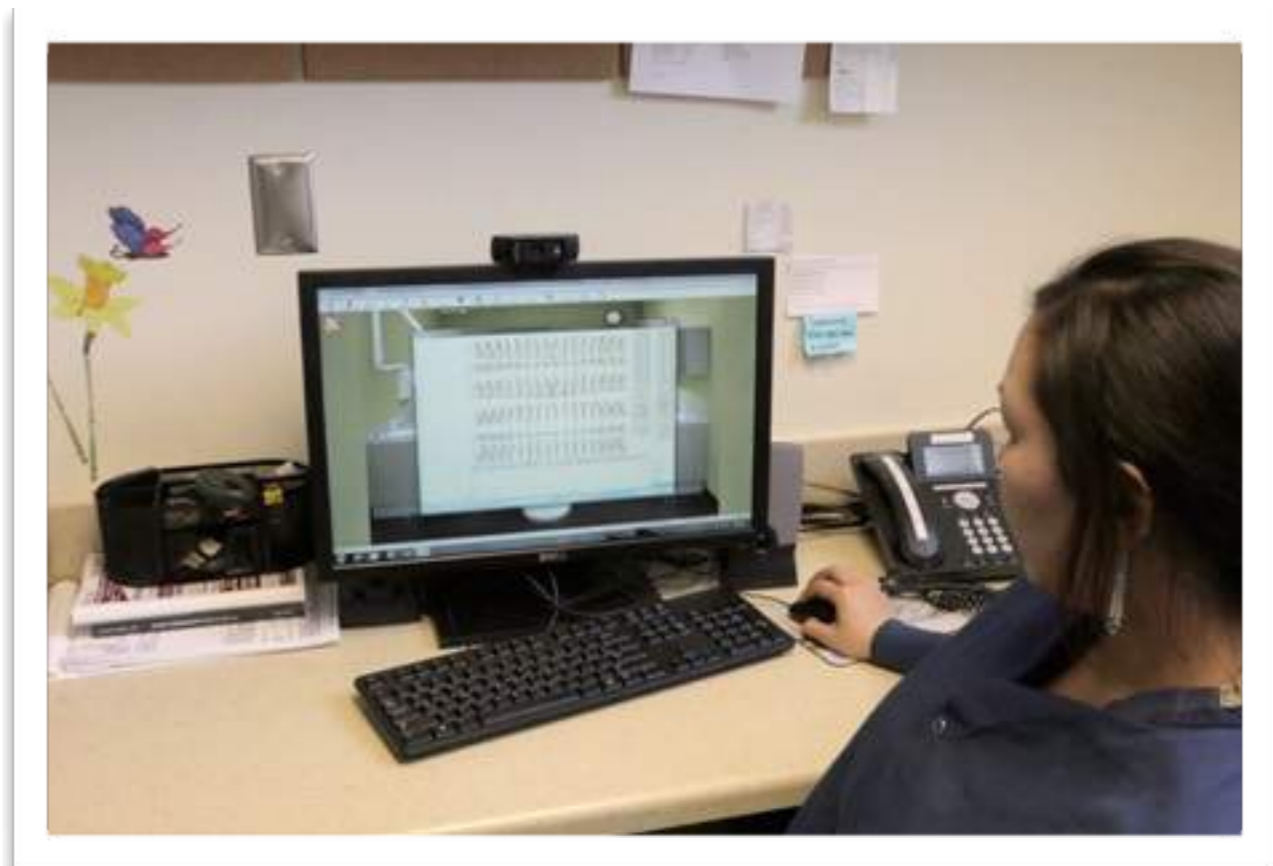
Dental Charting

Notes

Dental charting is a graphic method of organizing information about a patient's mouth. Conditions that may be documented in a dental chart include existing restorations, caries, missing teeth, abnormalities (rotations, erosion or abrasion), and the presence of prosthetics (partials, dentures, bridges, space maintainers).

Dental charting is usually done during a first visit and at recall visits. It can be done on a paper form or in a computer program. The dental chart shows every tooth whether the patient has a deciduous, permanent or mixed dentition.

Dental charts use the "Universal Numbering System" which is the official system adopted by the American Dental Association (ADA). Because upper and lower teeth have the same names, using a number system for permanent teeth and a letter system for primary teeth saves time and confusion.



Dental Charting

Dental Charting Key Example

Notes

RED Needed

BLUE Completed



Dental Charting

Notes

Exercise 5.1 Listen to the examination and practice charting.

The interface displays a 'DENTAL EXAMINATION RECORD' chart. The chart is organized into four rows of boxes, each representing a different tooth. The top row is labeled with letters A through J. The second row is labeled with numbers 1 through 16. The third row is labeled with numbers 32 through 17. The bottom row is labeled with letters T through K. A yellow pencil is positioned diagonally across the chart, and a yellow eraser is located at the bottom right. Below the chart is a control bar with buttons for 'Small', 'Medium', 'Large', 'Audio' (with a play/pause icon), 'Black', 'Red', 'Green', 'Blue', 'Eraser', and 'Clear'.

Select pen size and color. Tap Audio button to begin. Tap again to pause as needed.

Dental Charting

Exercise 5.2 Listen to the examination and practice charting.



Select pen size and color. Tap Audio button to begin. Tap again to pause as needed.



Dental Charting

Resources

Notes

- <http://www.healthline.com/health/dental-and-periodontal-charting#Expectations5>
- <http://www.colgate.com/en/us/oc/oral-health/life-stages/childrens-oral-care/article/sw-281474979351323>

Chapter 6

Patient Record Documentation



Patient Record Documentation

Notes

Terms to Know



Adverse reaction:

Unwanted, unexpected or dangerous effect.



CDT code:

Combination of letter and numbers to describe specific dental procedures. Updated annually by the American Dental Association (ADA).



Chronological:

Arranged in the order of time.



Confidential:

Intended to be kept secret.



Confidentiality:

A set of rules or a promise that limits access or places restrictions on certain types of information.



Forensic:

Scientific tests or techniques used in connection with the detection of crime.



HIPAA:

Health Insurance Portability and Accountability Act.



Litigation:

An action brought in court to enforce a particular right. The act or process of bringing a lawsuit.

Patient Record Documentation

Notes



Need to know:

Only individuals who are providing treatment to a patient have access to his/her dental records. Discussion of patient's care is limited to only those providers who are providing dental treatment.



NV:

An abbreviation for next visit.



PARQ:

An abbreviation for the informed consent process. The dentist discussed with the patient: the Procedure, Alternative treatment, Risks, and answered Questions.



Progress notes:

Permanent record of the patient's dental treatment.



Protected health information (PHI): Any information about health status, provision of health care, or payment for health care that can be linked to a specific individual.



Release of Information (ROI): Permission to allow information to be shared from the patient record to/from other agencies or given to the patient or the patient's representative.

Patient Record Documentation

Notes



RMH:

An abbreviation for reviewed medical history



Sequential:

A series of steps in a logical order



SOAPE:

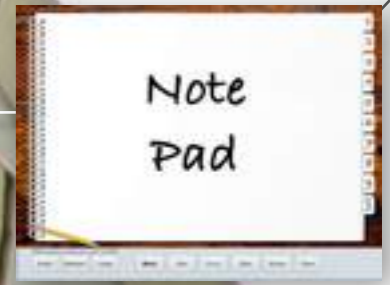
An acronym for subjective findings, objective findings, assessment, plan, and education that serves as a method to document patient visits in a patient record.



Tampering:

Altering or falsifying entries in a patient's record.

Patient Record Documentation



Notes

Movie 6.1 HIPPA



Presentation 6.1



Chapter 7

Instruments



Instruments

Set up

Notes

Drag on to the tray the instruments and supplies needed to complete the procedure.



Drag and Drop 7.1 Examination Setup

Drag & drop-Set up a tray for Examination.

Clear Supplies and Equipment
Items That Are Used Once and Discard

The screenshot displays a digital tray setup interface. On the left, there is a collection of various dental instruments and supplies, including probes, explorers, mirrors, toothbrushes, toothpaste, gauze, cotton balls, and other materials. On the right, there is a large, empty rectangular area representing the tray. Below the tray, there is a text box with the instruction: 'Clear Supplies and Equipment Items That Are Used Once and Discard'. An arrow points to the top right corner of the tray area, indicating where to drag and drop the items.

Instruments

Set up

Notes

Drag on to the tray the instruments and supplies needed to complete the procedure.



Instruments

Set up

Notes

Drag on to the tray the instruments and supplies needed to complete the procedure.



Instruments

Set up

Notes

Drag on to the tray the instruments and supplies needed to complete the procedure.

Drag and Drop 7.4 Fluoride Varnish Setup

Drag & drop- Set up a tray for Fluoride Varnish.

Using Supplies and Equipment Setup This for Dental Exam and Procedure

Instruments

Set up

Notes

Drag on to the tray the instruments and supplies needed to complete the procedure.



Instruments

Set up

Notes

Drag on to the tray the instruments and supplies needed to complete the procedure.



Instruments

Notes

Set up

Drag on to the tray the instruments and supplies needed to complete the procedure.



Instruments

Notes

Set up

Drag on to the tray the instruments and supplies needed to complete the procedure.



Instruments

Set up

Drag on to the tray the instruments and supplies needed to complete the procedure.



Instruments

Set up

Notes

Drag on to the tray the instruments and supplies needed to complete the procedure.



Chapter 8

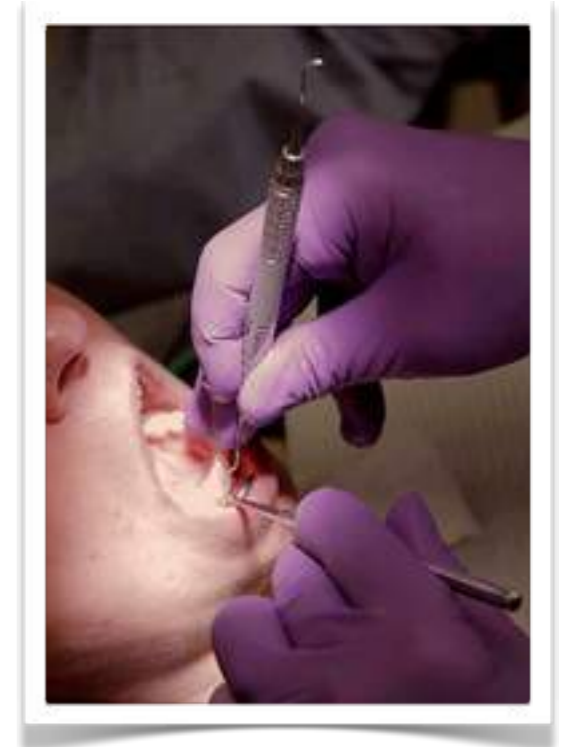
Ergonomics



Ergonomics

Ergonomics deals with adapting the work environment to the human body.

The goal of ergonomics is to help people stay healthy while performing their work more effectively



Ergonomics

LEARNING OBJECTIVES

- Describe the principles of positioning.
- Define ergonomics and list ergonomic risk factors that may lead to musculoskeletal disorders (MSD).
- Demonstrate sitting in a neutral seated position.
- Demonstrate placing the patient in supine and semi-supine positions.
- Adjust the overhead light for maxillary and mandibular arches.
- Demonstrate using the dental mirror for indirect vision, retraction, illumination, and transillumination.
- Select the correct operator position and patient's head position to access different treatment areas.



Ergonomics



Notes

Musculoskeletal Disorders (MSD)

- A condition where parts of the muscles, tendons and nerves are injured over time.
- Occur when too much stress is exerted on a body part causing pain.
- Risk factors include:
- Stool not adjusted for the clinician.
 - Torso twisted.
 - One shoulder higher than the other.
 - Elbows held above the waist and away from the body.
 - Back of patient chair is not parallel to the floor for maxillary arch.

MSD and Ergonomics

- Dental healthcare professionals are at high risk of musculoskeletal disorders when repetitive motions are combined with forceful movements, awkward postures, and insufficient recovery time.
- The science of ergonomics involves the adjusting and the design of tools, equipment, tasks and environments for safe, comfortable and effective human use.

Ergonomics



Notes

Neutral Position



- The ideal positioning of the body to prevent injuries.
- Is associated with decreased risk of MSD.
- Maintains the natural curves of the spine.

Ergonomics



Notes

Neutral Seated Position

- Forearms parallel to the floor.
- Weight evenly balanced.
- Thighs parallel to the floor.
- Feet are flat on the floor and about shoulder's width apart.
- Maintain trunk position with an imaginary straight line can be drawn connecting from the ear, shoulder, and hips.



Ergonomics

Notes

Neutral Neck Position

Goal:

- Head tilt of 0-15 degrees.
- The line from eyes to the treatment area should be as near to vertical as possible.

Avoid:

- Head tipped too far forward.
- Head tilted to one side.



Ergonomics

Notes

Neutral Back Position

Goal:

- Lean forward slightly from the waist or hips.
- Trunk flexion of 0-20 degrees

Avoid:

- Overflexion of the spine (curved back)



Ergonomics



Neutral Torso Position

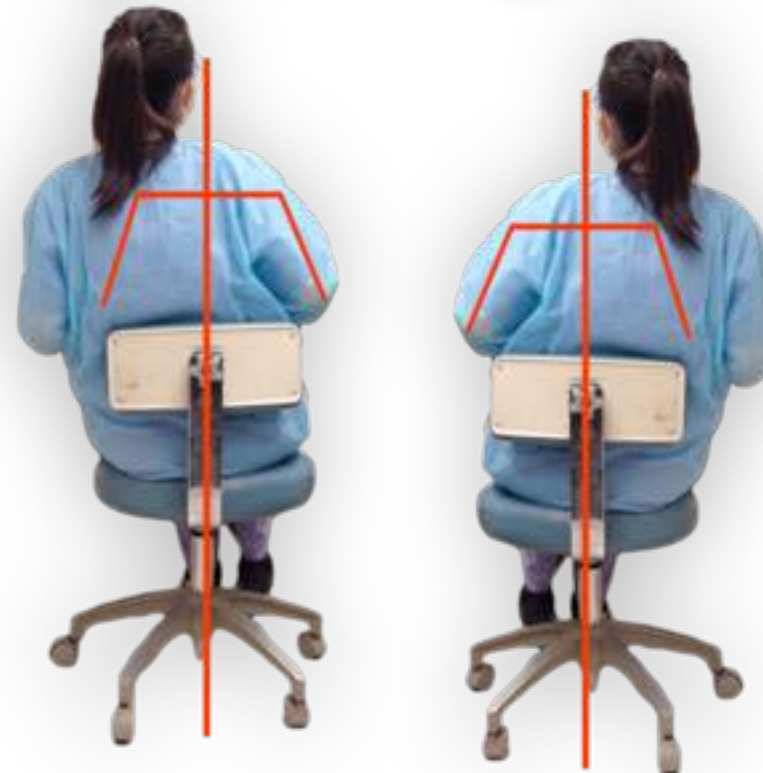
Goal:

- Torso in line with long axis of the body.

Avoid:

- Leaning to torso to one side.
- Twisting the torso.

Notes

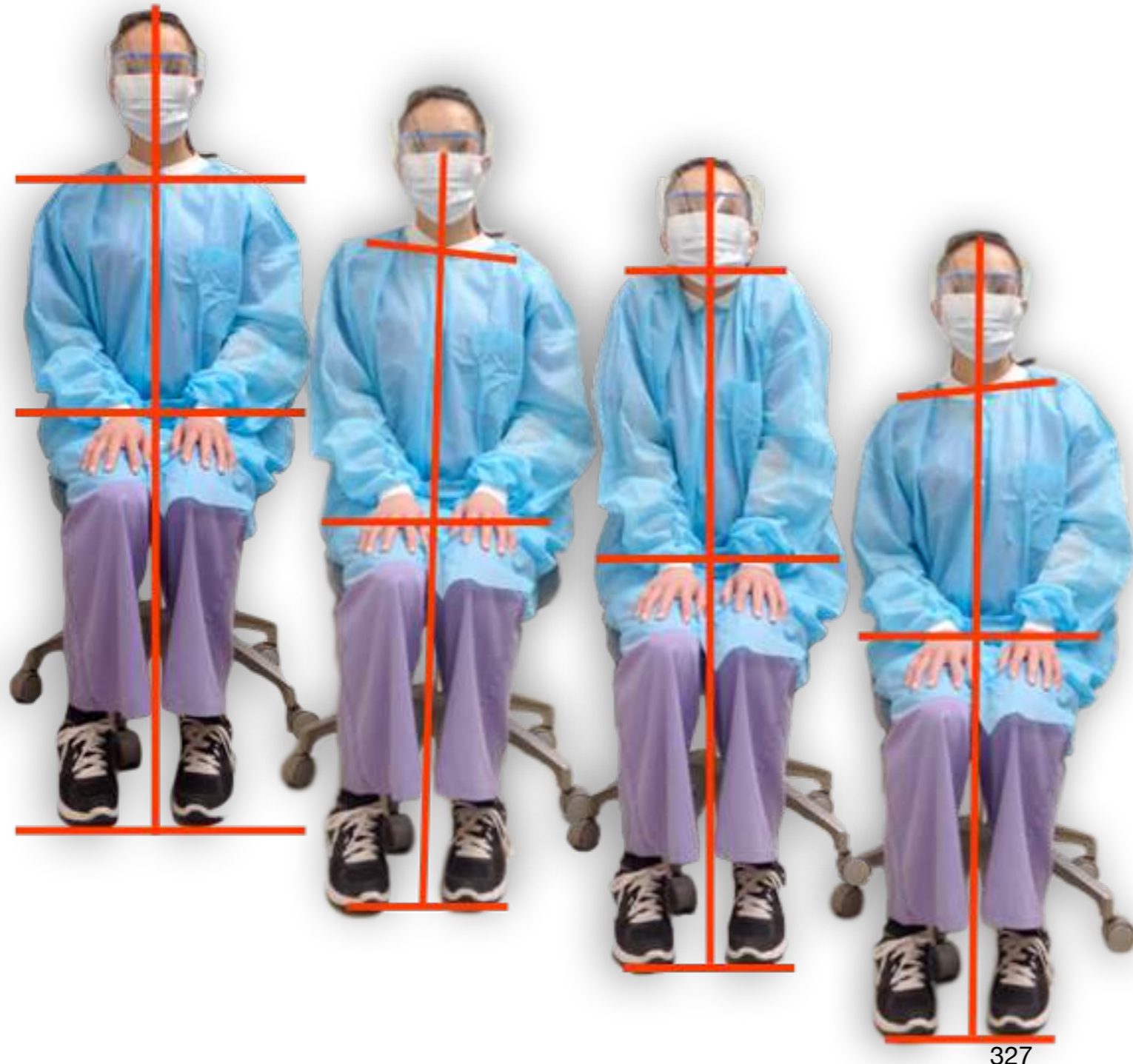


Ergonomics



Notes

Neutral Shoulder Position



Goal:

- Shoulders in horizontal line.
- Weight evenly balanced when seated.

Avoid:

- Shoulders lifted up toward ears.
- Shoulders hunched forward.
- Sitting with weight on one hip.

Ergonomics



Notes

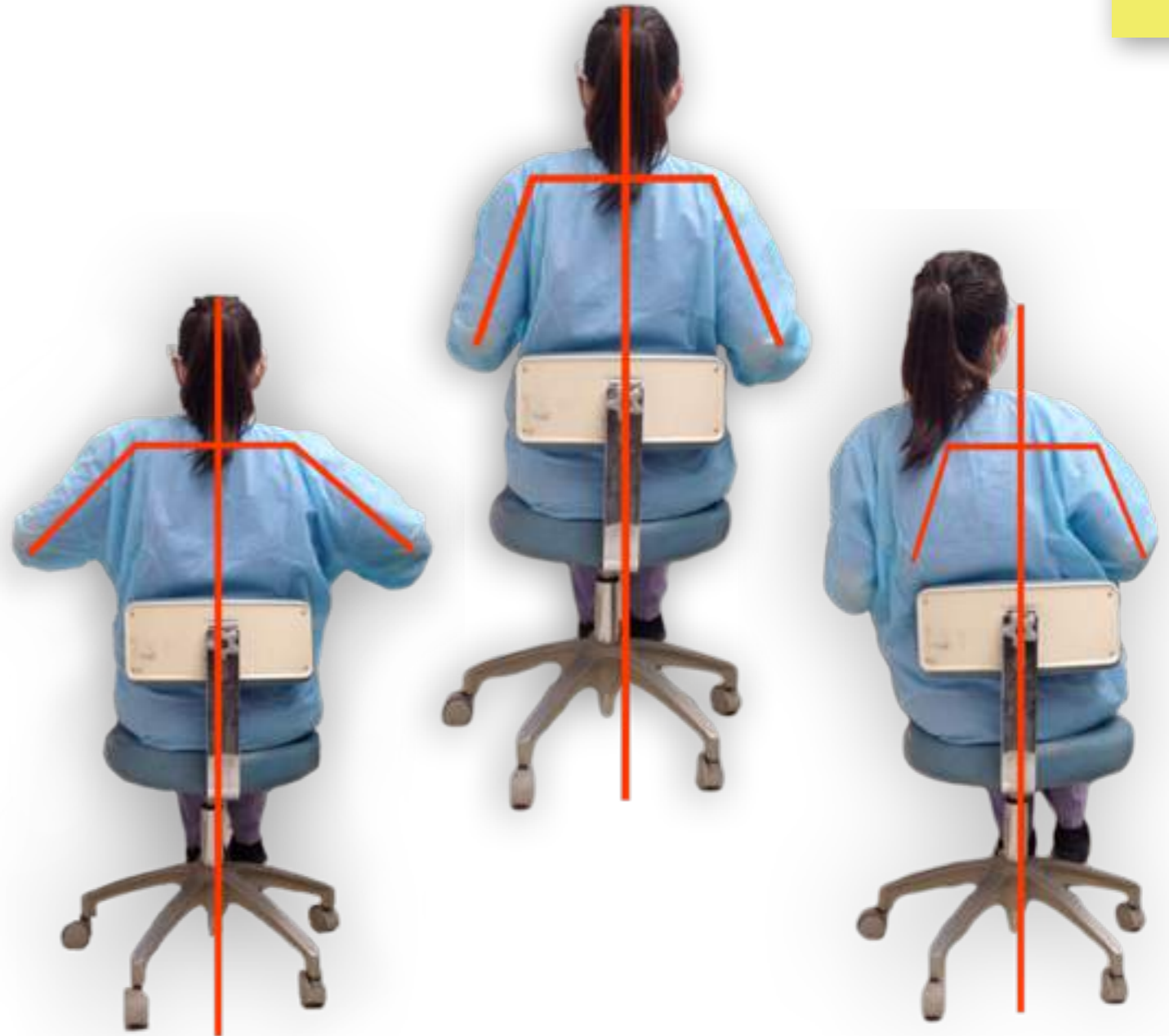
Neutral Upper Arm Position

Goal:

- Upper arms hang parallel to the long axis of torso.
- Elbows at waist level held slightly away from body.

Avoid:

- Greater than 20 degrees of elbow abduction away from the body.



Ergonomics

Notes

Neutral Forearm Position

Goal:

- Forearms parallel to the floor
- Forearms raised or lowered by pivoting at the elbow joint

Avoid:

Angle between forearm and upper arm is less than 60 degrees.



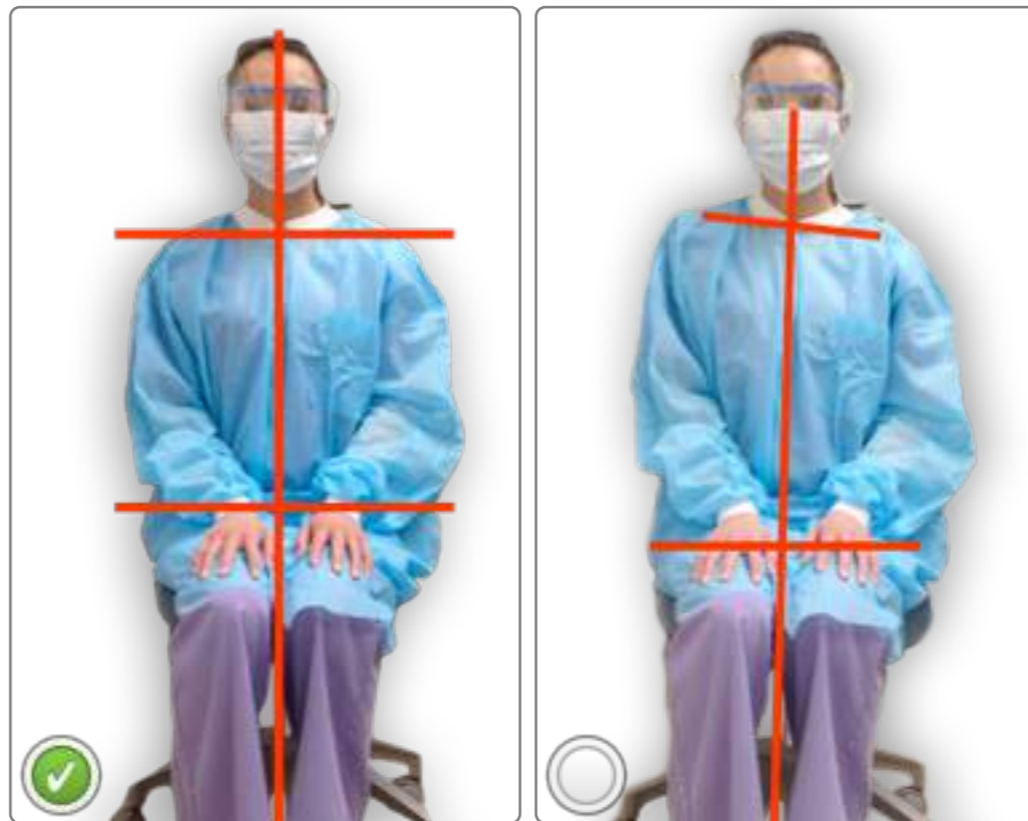
Ergonomics

Notes

Review 8.1 Position - Provider

Question 1 of 4

Which photograph shows good neutral seated positioning?



Check Answer



Ergonomics

Patient Position

Notes

The patient is placed in a comfortable reclined position.



Ergonomics



Patient Position

Maxillary Treatment Area

- Patient's feet even or slightly higher than the tip of nose.
- Chair back nearly parallel with the floor.
- Top of the patient's head is even with the upper edge of the headrest.
- Adjust headrest so patient is in a chin-up position.



Ergonomics

Patient Position

Mandibular Treatment Area

- Patient's feet even or slightly higher than the tip of nose.
- Chair back slightly raised above the parallel position.
- Top of the patient's head is even with the upper edge of the headrest.
- Adjust headrest so patient is in a chin-down position.



Ergonomics

Patient Head Position

- The clinician must be able to see and access the teeth in the patient's mouth.
- Patients can be asked to adjust their head positions to provide the best view of the treatment area.

Movie 8.1 Patient Head Position



Ergonomics

Dental Light

- Purpose: to illuminate the oral cavity during a procedure.
- It is important that the clinician not have to bend over or reach to access dental instruments or equipment.
- Position the light as far away from the patient's face as possible while still keeping it within easy reach.
- Mandibular arch: light is positioned directly over the patient's mouth.
- Maxillary arch: light is positioned from over the patient's mouth to the patient's neck.



Ergonomics



Notes

Dental Mirror

- It is important that the clinician maintain neutral seated position while working on different tooth surfaces.
- A dental mirror helps the clinician to easily see all areas in the patient's mouth.



- Indirect Vision
 - Used to view tooth surfaces or areas of the mouth that cannot be seen by direct vision.



- Retraction
 - Used to hold the patient's cheek, lip or tongue for safety and visibility.



- Illumination
 - Used to reflect light onto a tooth surface or dark area of the mouth.



- Transillumination
 - Used to direct light through the anterior teeth.

Ergonomics

Dental Mirror

Review 8.2 Review

Question 1 of 4
Indirect vision?



Check Answer



Ergonomics

Correct Clinical Positioning

Establishing Neutral Position in Relation to the Patient

- Sit alongside the patient with your arms against your sides and crossed at your waist. The patient's open mouth should be below the point of your elbow.
- With the patient in this position, you will be able to reach the mouth without placing stress on the muscles of your shoulders or arms.



Ergonomics

Notes

Correct Clinical Positioning

- Maintains neutral body positioning of the back, arms, wrist, and hands.
- Provides optimal sight of treatment areas.

Slider 8.1 Correct Clinical Positioning



Ergonomics



Notes

8 O'clock Position

- Torso Position: Sit facing the patient with your hip in line with the patient's upper arm.
- Leg Position: Your thighs should rest against the side of the patient chair.
- Arm Position: To reach the patient's mouth, hold your arms slightly away from your sides. Hold your lower right arm over the patient's chest. Note: Do not rest your arm on the patient's head or chest.
- Line of Vision: Straight ahead, into the patient's mouth.

Note: It is difficult to maintain neutral arm position when seated in the 8 o'clock position. For this reason, use of this position should be limited.



Ergonomics



8 O'clock Position

Patient in chin-down position

Patient in chin-up position

Notes



Ergonomics

Notes

9 O'clock Position

- Torso Position: Sit facing the side of the patient's head. The midline of your torso is even with the patient's mouth.
- Leg Position: Your legs may be in either of two acceptable positions:
 - Straddling the patient chair or
 - Underneath the headrest of the patient chair.Neutral position is best achieved by straddling the chair; however, you should use the alternative position if you find straddling uncomfortable.
- Arm Position: To reach the patient's mouth, hold the lower half of your right arm in approximate alignment with the patient's shoulder. Hold your left hand and wrist over the region of the patient's right eye.
- Line of Vision: Straight down into the patient's mouth.



Ergonomics



9 O'clock Position

Patient in chin-down position

Patient in chin-up position

Notes



9 O'clock



Ergonomics



9 O'clock Position Patient in chin-down position



Patient in chin-up position



Notes



Ergonomics

10 -11 O'clock

Notes

- Torso Position: Sit at the top right corner of the headrest; the midline of your torso is even with the temple region of the patient's head.
- Leg Position: Your legs should straddle the corner of the headrest.
- Arm Position: To reach the patient's mouth, hold your right hand directly across the corner of the patient's mouth. Hold your left hand and wrist above the patient's nose and forehead.
- Line of Vision: Straight down into the mouth.



Ergonomics



10 - 11 O'clock
Position

Patient in chin-down position



Patient in chin-up position



Notes

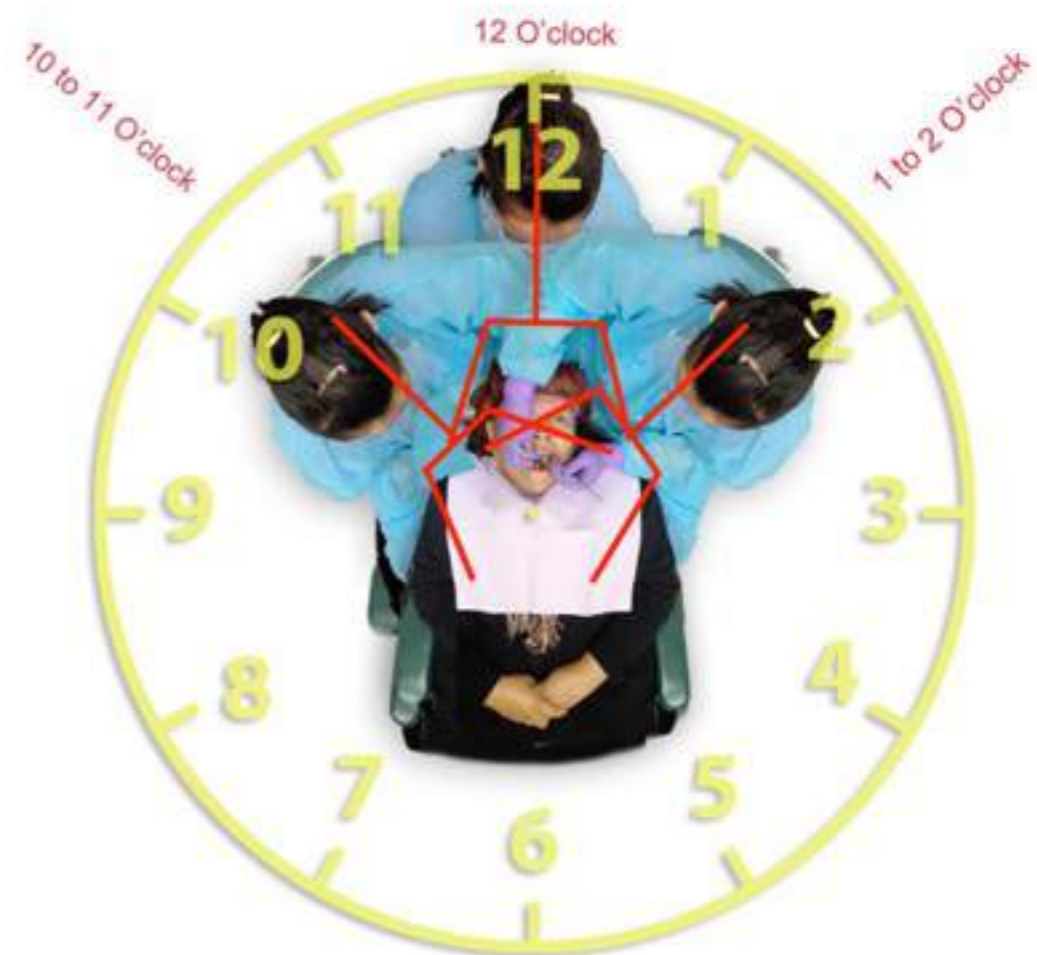


Ergonomics

10 -1 O'clock

Notes

- Torso Position: Sit behind the patient's head; you may sit anywhere from the right corner of the headrest to directly behind the headrest.
- Leg Position: Your legs should straddle the headrest.
- Arm Position: To reach the patient's mouth, hold your wrists and hands above the region of the patient's ears and cheeks.
- Line of Vision: Straight down into the patient's mouth.



Ergonomics



11 - 1 O'clock
Position

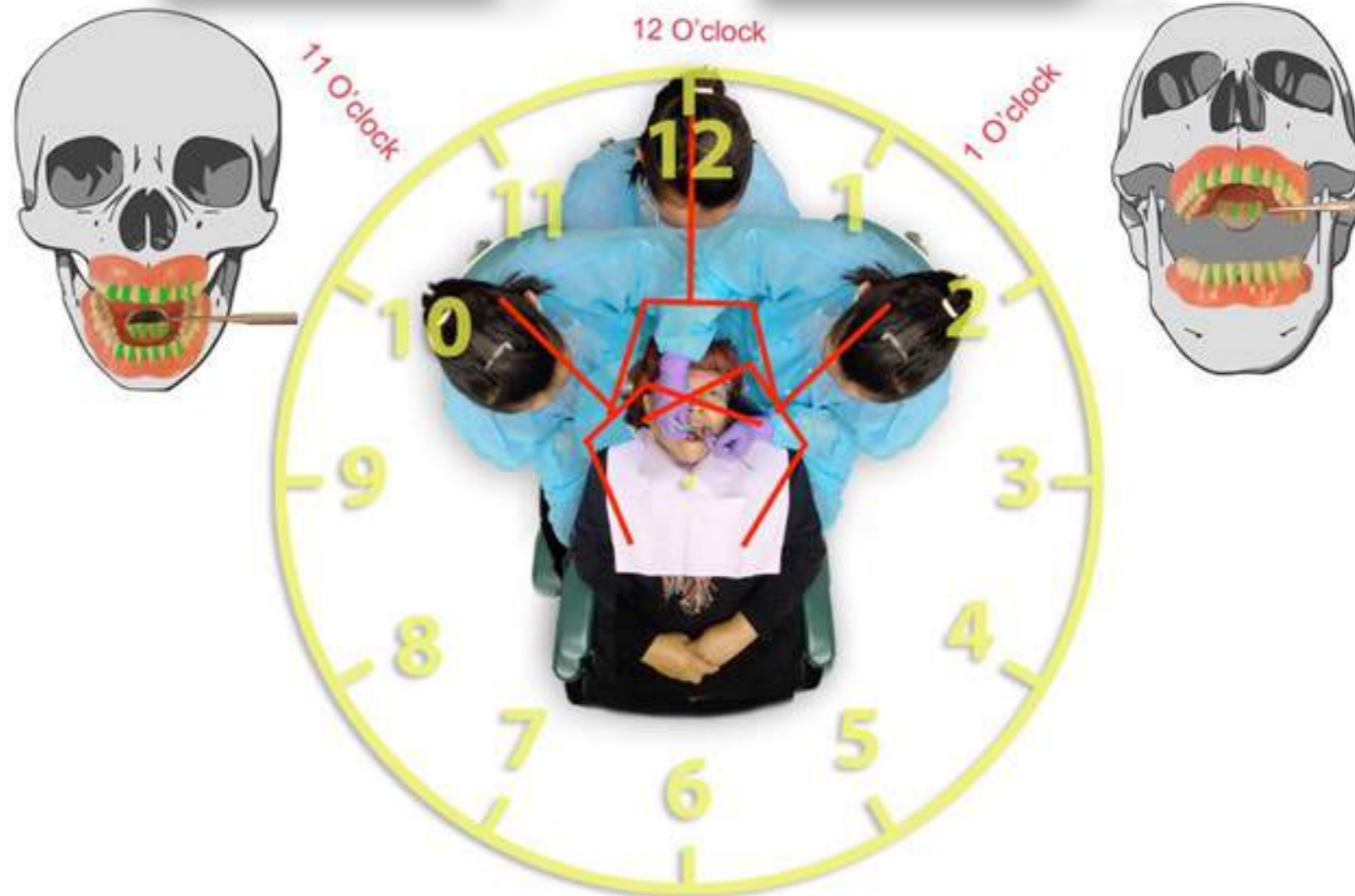
Patient in chin-down position



Patient in chin-up position



Notes



Ergonomics

Notes

Traditional Clock Positions - Positioning Summary

Slider 8.2 Positioning Summary



Slider 8.3 Positioning Summary 180 Degrees



Ergonomics

Notes

Summary

The neutral seated position is ideal to prevent MSD:

- Forearms parallel to the floor.
- Weight evenly balanced.
- Thighs parallel to the floor.
- Feet are flat on the floor and about shoulder's width apart.
- Maintain trunk position with an imaginary straight line can be drawn connecting from the ear, shoulder, and hips.

Don't forget to ask a patient to move their head to maintain a neutral seated position and improve access to different areas of the mouth.

- Chin-down for mandibular arch.
- Chin-up for maxillary arch.
- Head toward the clinician to access the left side of the patient's mouth.
- Head away from the clinician to access the right side of the patient's mouth.

Ergonomics

Notes

Summary

- Position the dental light to improve visibility when working in the patient's mouth.
- Use the dental mirror to keep neutral seated position. The mirror is helpful for:
 - Indirect vision to see lingual surfaces.
 - Retraction of cheek to protect soft tissue and to better access buccal surfaces of posterior teeth.
 - Illuminate lingual surfaces.
 - Transilluminate anterior teeth.

Ergonomics



Notes

References

- Fundamentals of Periodontal Instrumentation and Advanced Root Instrumentation, Seventh Edition, Jill S. Nield-Gehrig, Lippincott Williams & Wilkins, 2013

Ergonomics



Notes

Grasp and Fulcrum

Terms to Know



Extraoral:

outside of the mouth.



Finger rest:

a point of rest that provides support and allows the hand to pivot; also called a fulcrum.



Fulcrum:

a point of rest that provides support and allows the hand to pivot; also called a finger rest.



Grasp:

the correct way to hold a dental instrument.



Intraoral

inside the mouth.



Stability:

ability to keep a dental instrument steady and secure.



Tactile sensitivity:

ability to “feel” tooth smoothness and/ or roughness.

Ergonomics

Note
Pad

Notes

Purposes of fulcrum

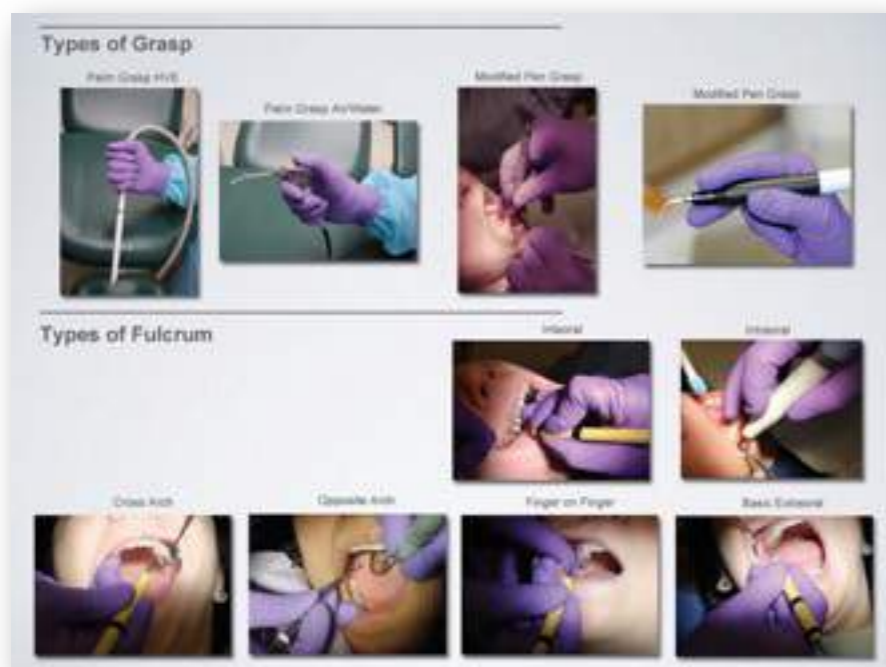
- A fulcrum is a point of rest that provides support and allows the hand to pivot.
- Provides stability for instrumentation.
- Prevents injury to patient and operator.
- Controls the length of the stroke – limits the instrumentation to where it is needed.
- The patient will feel confident in the clinician's ability when a fulcrum is used to make the instrument more stable.

Presentation 8.1

INSTRUMENT GRASP AND FULCRUM

G.Todd Smith, DDS, MSD

Field Guide 8.1



Purposes of instrument grasp

- Provides stability during instrumentation.
- Minimizes operator fatigue.
- Improves tactile sensitivity.

Ergonomics

Flash Cards 8.1

Flash Cards

What type of grasp or fulcrum?



Instructions

Drag the image off of the stack to see the name.
To return to the book tap the X in the upper left corner.

Ergonomics



Notes

Review 8.3 Click to take the quiz

QUIZ

Quiz Part 2



Ergonomics



Notes

Review 8.4

Question 1 of 4
The patient's chin, lips, and cheeks are mobile and flexible and therefore less reliable for stability.

<input type="radio"/>	<input type="radio"/>
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Instrument Processing



Handling and Sterilization of Instruments

One of the most important responsibilities of Dental Health Aides is to process contaminated instruments for reuse. Proper handling and processing of contaminated items prevents the spread of disease to patients and co-workers.

Learning Objectives

- Give examples of critical and semi-critical items
- Describe work practices to prevent the spread of contamination when processing instruments
- Explain appropriate PPE for handling contaminated instruments
- Describe the cleaning and packaging of instruments for sterilization
- Explain the different ways to monitor the sterilization process

Handling and Sterilization of Instruments

Terms to Know

**Aerosols:**

Fine mist commonly made in dentistry during use of handpieces, ultrasonic scalers, and air/water syringes.

**Aseptic:**

The absence of contamination from infectious materials.

**Bacteria:**

Type of microorganisms found in nature or in the bodies of plants and animals.

**Biological indicator:**

Device that verifies the sterilization process. Also called "spore test."

**Bloodborne disease:**

An illness transmitted by exposure to pathogens in the blood.

**Bloodborne pathogens:**

Disease-producing microorganisms spread by contact with blood or other body fluids contaminated with blood from an infected person. Examples include hepatitis B and C viruses and HIV.

**Chemical indicator:**

Device that monitors the sterilization process by changes in color with exposure to one or more sterilizing conditions (e.g., temperature, steam). Intended to detect potential sterilization failures due to incorrect packaging, incorrect sterilizer loading, or equipment malfunction.

Handling and Sterilization of Instruments

Notes



Clinical contact surface: Type of environmental surfaces that come into direct contact with hands or instruments during patient care. Examples include light handles, countertops, and control switches.



Contamination: The presence of microorganisms (usually those causing disease or infection) on living or nonliving surfaces.



Critical: The type of instruments that cut or penetrate bone or soft tissues, providing access to the bloodstream. Examples include anesthetic needles, surgical burs, and scalpel blades.



Date-related instrument storage: A process that distributes sterile instruments packs to the operatory using packs with the oldest date first. Sometimes referred to as "first in, first out".



Direct contact: Physical transfer of microorganisms between an infected person and a susceptible host.



Disinfection: Physical or chemical techniques used to destroy most pathogens but not spores.



Environmental surfaces: Include clinical contact surfaces like countertops, drawer handles, and instrument control panels; as well as housekeeping surfaces like floors and walls.



Event-related instrument storage: A process where it is assumed contents of a sterilized pack should remain sterile until some event causes it to become contaminated. The event may include dropping a pack or seeing a tear or moisture in the pack.

Handling and Sterilization of Instruments

Notes



Fungi:

Group of microorganisms that include yeasts, molds, and mildews.



Hand hygiene:

General term that describes the removal of debris and blood by handwashing and/or the use of an antiseptic agent.



Heat sterilization:

Temperature-driven process that destroys all microbial life, including spores.



Hepatitis:

Bloodborne disease that causes inflammation of the liver.



Hepatitis B virus:

Disease producing pathogen that causes Hepatitis B. Abbreviation is "HBV."



Hepatitis C virus:

Disease producing pathogen that causes Hepatitis C. Abbreviation is "HCV."



High-level disinfection:

Process that inactivates bacteria (like what causes tuberculosis), most fungi, and most viruses. It is ineffective against large numbers of spores.



HIV:

Abbreviation for the human immunodeficiency virus, which causes AIDS.



Hospital disinfectant:

A germicide registered by the U.S. Environmental Protection Agency (EPA) that inactivates the test microbes salmonella choleraesuis, staphylococcus aureus, and pseudomonas aeruginosa. Used on inanimate objects in dental and medical facilities.

Handling and Sterilization of Instruments

Notes



Housekeeping surface:

Type of environmental surface that is not involved in the direct delivery of dental care. Examples include floors, sinks, and walls.



Immunization:

Vaccines that protect a person against a disease.



Indirect contact:

Type of contact between a person and a contaminated object. An example is when a person with a cold sneezes into their hand, and touches a doorknob transmitting their germs. A second person touches the doorknob and is exposed to the first person's germs. The cold germs are transmitted from one person to another through the contaminated doorknob.



Intermediate-level disinfectant: A liquid chemical registered by the Environmental Protection Agency (EPA) as a hospital disinfectant. The label should indicate it has tuberculocidal activity.



Intermediate-level disinfection: Process that inactivates bacteria (like what causes tuberculosis), most fungi, and most viruses. It is ineffective against spores.



Low-level disinfection:

Process that inactivates most bacteria, some fungi, and some viruses. It does not inactivate resistant microorganisms such as spores and those bacteria that cause tuberculosis.



Microorganisms:

Living organisms (virus, bacteria or fungus) that are so small in size they can only be seen by using microscopes.

Handling and Sterilization of Instruments

Notes



Mode of transmission: Means by which pathogens are transferred from a source to a new host.



Other Potentially Infectious Materials (OPIM): Refers to body fluids or tissues that (a) may contain bloodborne pathogens (in dentistry, this includes saliva) or (b) are visibly contaminated with blood. It is an Occupational Safety and Health Administration term. The abbreviation is "OPIM."



Pathogen: Disease-producing microorganisms (virus, bacteria or fungus).



Patient-contact item(s): Instruments and supplies used to provide dental examinations, or treatment. Examples include handpieces, cotton rolls, sutures, and air-water syringes.



Percutaneous injury: An injury that penetrates the skin, such as a needlestick or a cut with a sharp object.



Personal protective equipment (PPE): Required clothing or devices worn by workers for protection against hazards. In dentistry, it includes wearing protective gowns or scrubs, masks/ face shields, gloves, and protective eyewear. The abbreviation is "PPE."



Spores: Highly resistant type of microorganism that can survive heat and adverse conditions. In dental clinics, spore tests are used to show the effectiveness of sterilization.

Handling and Sterilization of Instruments

Notes



Standard precautions:

Practices and procedures to protect healthcare workers and patients from pathogens that can be spread by blood or any other body fluids.



Sterilization:

A physical or chemical process that destroys all microorganisms, including spores.



Tuberculocidal:

Ability to kill the pathogens that cause tuberculosis.



Vaccination:

Immunizations to protect the individual against a disease.



Vaccine:

Administered through needle injections, by mouth, or by aerosol. Produces immunity, and protects individuals against disease.



Viruses:

Type of organisms that infect cells and cause disease. Examples include HBV, HCV, and HIV.

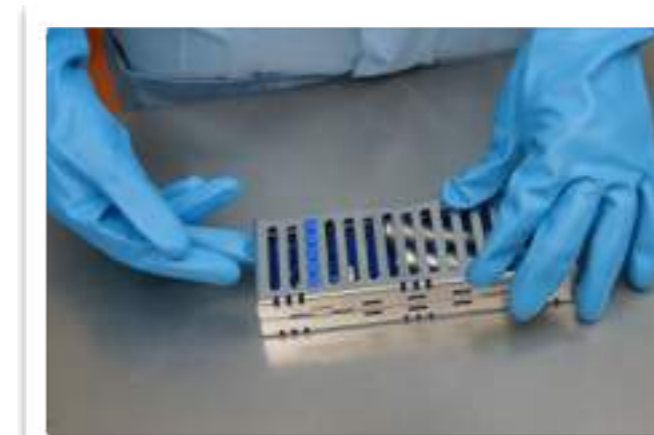
Handling and Sterilization of Instruments



Notes

Patient-care items are classified according to the degree of contact they have with patients. Critical and semi-critical items need to be cleaned and sterilized after patient use.

- **Critical items** cut bone or penetrate soft tissue. These items carry the highest risk of disease transmission. Examples of critical items include: dental instruments like sickle and curette scalers, powered device tips, explorers, periodontal probes, dental burs, and extraction forceps.
- **Semi-critical items** touch only mucous membranes. These items have a lower risk of transmission than critical items. Examples of semi-critical items include: film holders or sensors, dental hand pieces, and mouth mirrors.



Dirty Zone



Notes





Notes

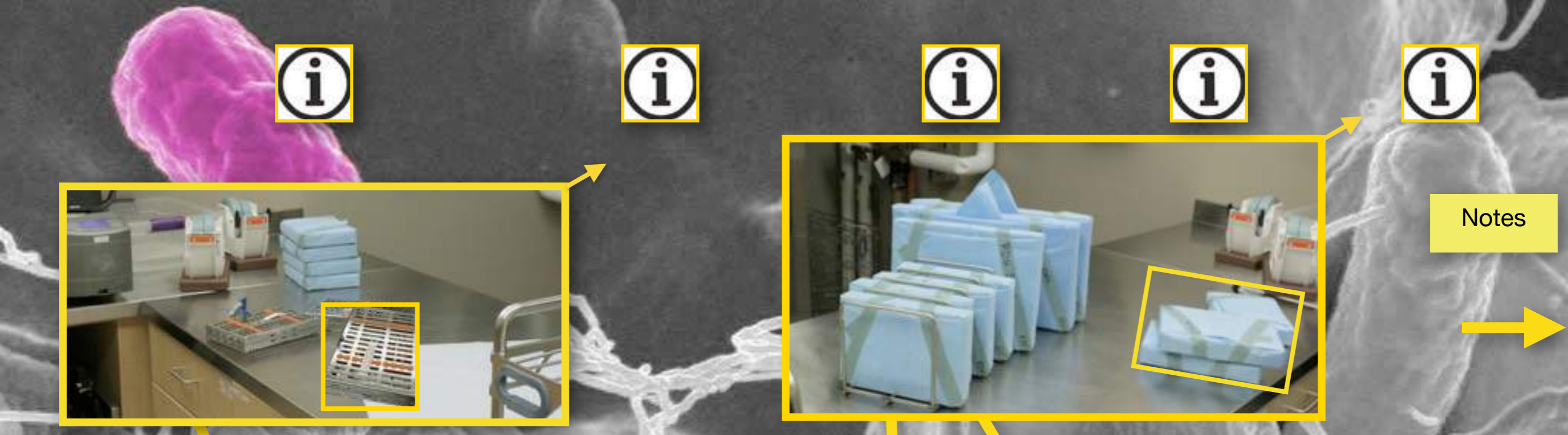


Preparation and Packaging



Notes





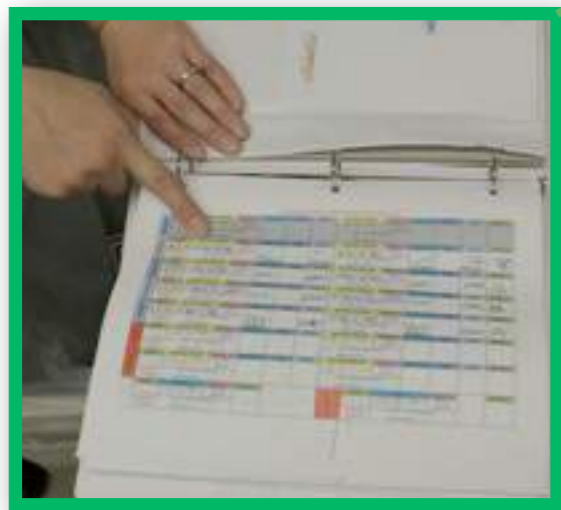
Sterilization



STERILE



Sterilization Monitoring



Notes



Summary

Critical and semi-critical items are cleaned and sterilized after patient use.

- Wear puncture, and chemical, resistant/heavy-duty utility gloves for instrument cleaning and decontamination procedures.
- Package instruments and cassettes with chemical indicators
- Label packs and cassettes with date and sterilizer information.
- Follow manufacture's instruction for proper loading of sterilizer and settings.
- Allow sterile packs to air dry before storing.
- Check sterilizer monitoring devices, and tape indicators on packs to assure sterilization occurred.
- Store sterile packs and cassettes.
- Set up operatory for patient treatment with sterilized cassettes and packs.

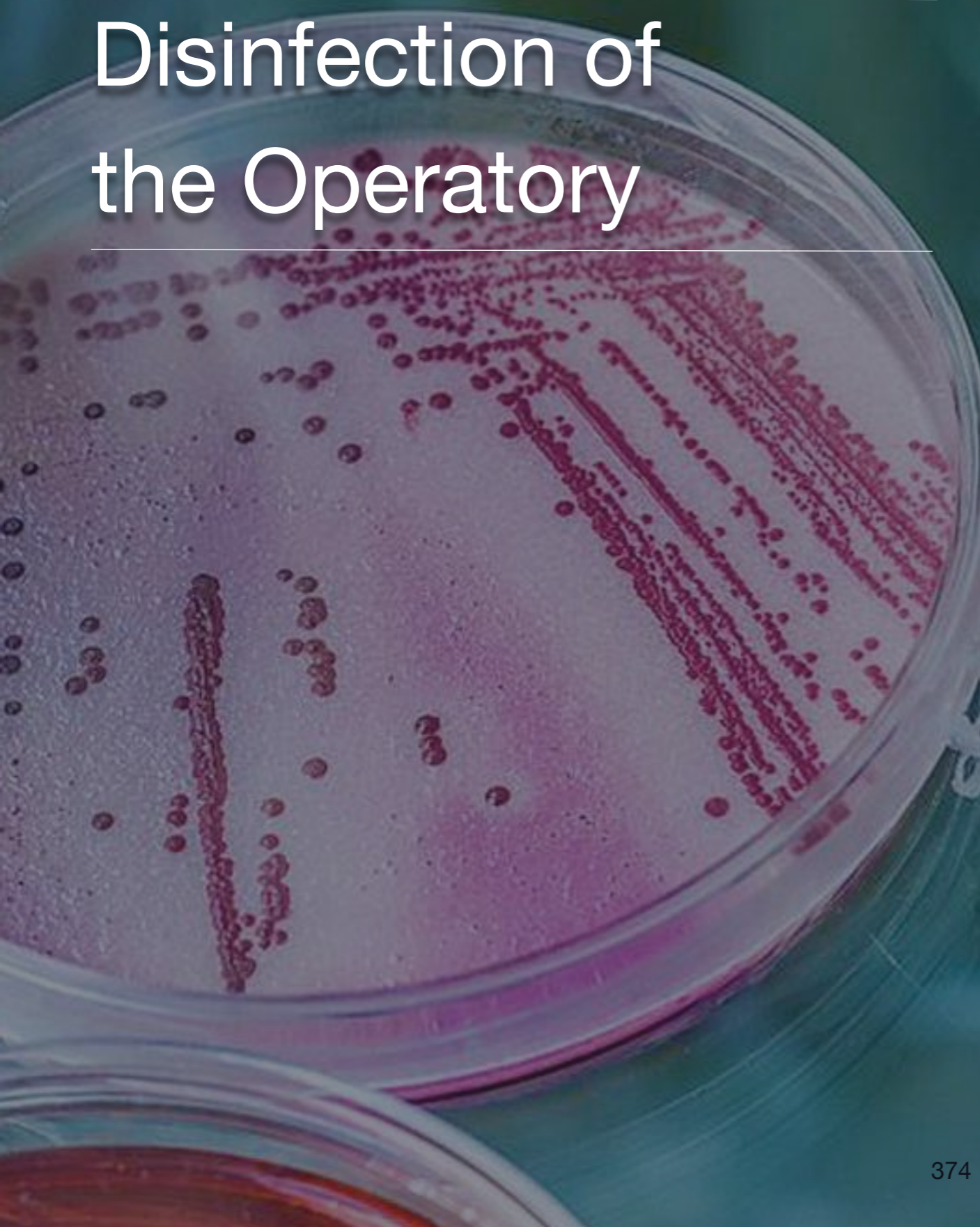


Summary of Tasks



Notes

Disinfection of the Operator



Disinfection of the Operatory

Diseases can be transmitted during routine dental treatment. Infection control and safety practices can greatly reduce the risk to patients and dental staff. These practices include wearing appropriate PPE, using proper disinfection techniques, products, and barriers. Additionally, the disposal of contaminated items must be handled in a manner that poses no threat of disease transmission to the dental staff and others.

Learning Objectives

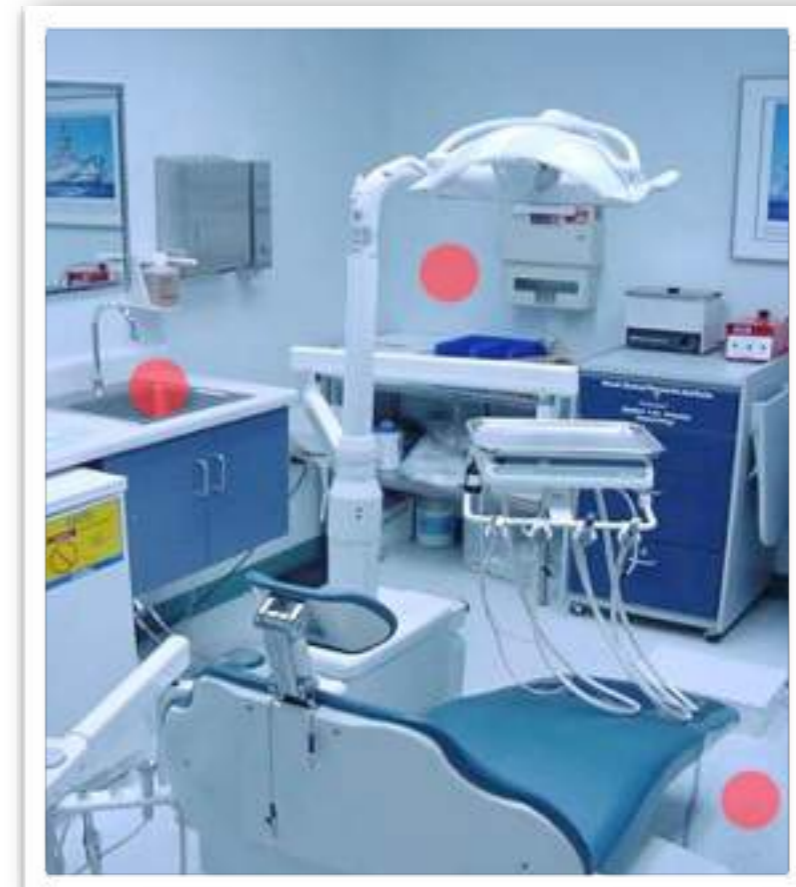
- Identify housekeeping and clinical contact surfaces in a dental operatory
- State the steps to manage a blood or body substance spill
- Discuss the disinfecting process for housekeeping surfaces
- Describe the disinfecting process for clinical contact surfaces
- Describe the process of using barriers on clinical contact surfaces
- Explain waste disposal of contaminated items used in the operatory

Disinfection of the Operator

Environmental surfaces in the dental operator are categorized as either housekeeping surfaces or clinical contact surfaces.

Clinical contact surfaces are those areas in the dental operator that are directly touched by contaminated instruments, devices, hands, or gloves. Examples of clinical contact surfaces include: light handles, switches, dental x-ray controls, countertops, computer keyboards and monitors.

Housekeeping surfaces include: walls, sinks, and flooring. These surfaces are not directly touched during the delivery of dental care. They are considered noncritical because they carry the lowest risk of disease transmission, but they still need to be cleaned regularly.



Disinfection of the Operatory

Housekeeping surfaces

To clean housekeeping surfaces:

- Clean floors, walls, sinks, and other housekeeping surfaces with a detergent and water (or an EPA-registered hospital disinfectant/detergent) on a routine basis or when visibly soiled.
- Clean mops and cloths after use and allow them to dry before reuse. Alternatively, use single-use, disposable mop heads or cloths.
- Prepare fresh cleaning or EPA-registered hospital disinfectant solutions daily and as instructed by the manufacturer.
- Clean walls, blinds, and window curtains in patient-care areas when they are visibly dusty or soiled.



Disinfection of the Operator

For managing spills of blood and body substances:

- Clean spills of blood or other potentially infectious materials and decontaminate the surface with an EPA-registered hospital disinfectant with low-level (HBV and HIV claims) to intermediate-level (tuberculocidal claim) activity, depending on the size of the spill and surface porosity.
- Wear appropriate personal protective equipment (PPE) when managing spills. Such equipment includes puncture, and chemical-resistant utility gloves; a protective gown; and protective



Disinfection of the Operator

Clinical contact surfaces

Clinical contact surfaces are those areas in the dental operator that are directly touched by contaminated instruments, devices, hands, or gloves. Examples of clinical contact surfaces include: light handles, switches, dental x-ray controls, countertops, computer keyboards and monitors.

Most dental facilities use a combination of disinfection and barriers to prevent the spread of disease from clinical care surfaces.



Disinfection of the Operator

Disinfection

After each patient appointment, clean and disinfect all clinical contact surfaces in the operator.

- Determine the degree of cleaning/disinfection required and select a product compatible with the surfaces to be cleaned and disinfected.
- Use an EPA-registered hospital disinfectant with a tuberculocidal claim (i.e., an intermediate-level disinfectant).
- Follow the label instructions on the product to clean and disinfect clinical contact surface.
- Be sure that cleaning/disinfecting products have been prepared correctly and are fresh. Read and follow label instructions regarding dilution, shelf life, use life and expiration date. Use only products that are registered with the Environmental Protection Agency (EPA) as hospital disinfectants.
- If using a pre-moistened towelette, check to see it is to be used for disinfection, and carefully follow label instructions.



The background of the slide features two petri dishes. The left dish contains a pinkish-red agar surface with numerous small, dark red bacterial colonies. The right dish contains a yellowish-orange agar surface with several larger, more distinct bacterial colonies.

Disinfection of the Operatory

Steps for Disinfection:

- Put on utility gloves, mask, protective eyewear, and protective clothing to prevent touching and splashing of the contaminants and chemicals.
- Spray the surface with a cleaning agent, and vigorously wipe the surface with paper towels OR wipe a premoistened cleaner-disinfectant towelette over the surface to be cleaned.
- After cleaning, disinfect the surface by spraying or wiping the disinfectant over the entire surface, using towels to reduce overspray. If using a premoistened towelette, saturate the surface.
- Let the surface remain moist for the contact time stated on the disinfectant or premoistened towelette product label.
- Disinfect contaminated utility gloves; remove the gloves and wash hands.

Clinical contact surfaces in the operatory should be cleaned and disinfected:

- At the beginning of the clinic day
- Between patient appointments
- At the end of the clinic day

The image shows two petri dishes. The left dish contains a pinkish agar with numerous small, dark red bacterial colonies. The right dish contains a yellowish agar with several larger, orange-brown bacterial colonies.

Disinfection of the Operatory

What to look for in a disinfectant?

- EPA registration number
- Labeled "Hospital Disinfectant"; i.e., germicide registered by EPA effective against *Salmonella choleraesuis*, *Staphylococcus aureus*, and *Pseudomonas aeruginosa* for use on nonliving objects in dental and medical facilities
- Compatibility with surfaces in your facility
- Cleaning as well as disinfecting properties
- Low allergy for both patients and dental team
- Ease of use -- ready to use or mixing required
- Clear, easy-to-follow instructions
- A reasonable contact time; i.e., 10 minutes or less
- Acceptable storage and disposal requirements
- Reasonable use and shelf life

Disinfection of the Operatory

Barriers

- At the beginning of the clinic day, clean and disinfect all clinical contact surfaces and place barriers.
- Between patient visits
- Wear gloves when removing surface covers after patient treatment.
- For removing contaminated barriers, exam gloves are sufficient. Utility gloves are also acceptable.
- Use care not to contaminate the surface underneath the barrier.
- If the surface is touched and contaminated when removing the cover, clean and disinfect the surface before placing a new barrier.
- If the surface has not been touched, it is not necessary to clean and disinfect the surface.
- Discard used covers in the trash.
- Remove and discard contaminated gloves, wash hands, and apply new barriers.

Disinfection of the Operator

Barriers



Disinfection of the Operatory

Waste Disposal

- Although any item that has been in contact with blood or body fluids may be infective, not all such waste requires special disposal. For example, plastic or paper barriers, gloves, masks, gowns and single-use items like saliva ejectors, and fluoride packets can be disposed in the trash.
- Federal, state, and local guidelines identify the specific categories of medical waste that are subject to regulation. Talk with your dental supervisor to determine what the clinic policies are on regulated waste.
- Sharp items should be disposed in containers that are puncture resistant, leak-proof, closable, and labeled with the biohazard symbol.
- Non-sharp disposable items saturated with blood or body fluids should be discarded into biohazard bags that are puncture resistant, leak-proof, and labeled with a biohazard symbol.



Disinfection of the Operatory

Resources

- Infection Control, CDC Guidelines: From Policy to Practice. Organization for Safety, Asepsis and Prevention (OSAP).
- Centers for Disease Control and Prevention Guidelines for Infection control in dental settings, 2003

Acid

substance that has a pH of less than 7.

Related Glossary Terms

Drag related terms here

Index

Find Term

Chapter 4 - Terms to Know

Adverse reaction

Unwanted, unexpected or dangerous effect.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 6 - Terms to Know

Aerosols

Fine mist commonly made in dentistry during use of handpieces, ultrasonic scalers, and air/water syringes.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 9 - Terms to Know

Alkaline

substance that has a pH greater than 7.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 4 - Terms to Know

Aseptic

The absence of contamination from infectious materials.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 9 - Terms to Know

Bacteria

Type of microorganisms found in nature or in the bodies of plants and animals.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 9 - Terms to Know

Balancing or non-working cusps

The cusps that do not occlude with the opposing teeth during centric occlusion or maximum intercuspation. Remember B.U.L.L. (Buccal upper, lingual lower)

Related Glossary Terms

Drag related terms here

Index

Find Term

Chapter 1 - Dental Occlusion Terms to Know

Biological indicator

Device that verifies the sterilization process. Also called "spore test."

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 9 - Terms to Know

Bloodborne disease

An illness transmitted by exposure to pathogens in the blood.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 9 - Terms to Know

Bloodborne pathogens

Disease-producing microorganisms spread by contact with blood or other body fluids contaminated with blood from an infected person. Examples include hepatitis B and C viruses and HIV.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 9 - Terms to Know

Buffer

a solution that resists changes in pH.

Related Glossary Terms

Drag related terms here

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Chapter 4 - Terms to Know

Bulbous

swollen or bulging.

Related Glossary Terms

Drag related terms here

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Chapter 3 - Terms to Know

Calculus

mineralized plaque that provides a rough surface for sticky plaque to adhere.

Related Glossary Terms

Drag related terms here

Index

Find Term

Chapter 3 - Terms to Know

Canine Guidance

Occlusion in which the occlusal contacts of the canine teeth cause the posterior teeth to disclude or separate during lateral or excursive movements.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 1 - Dental Occlusion Terms to Know

Caries process

the dynamic process of demineralization and remineralization that can lead to cavitation (breakdown) of tooth structure.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 4 - Terms to Know

Cavitated

breakdown of tooth structure.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 4 - Terms to Know

CDT code

Combination of letter and numbers to describe specific dental procedures. Updated annually by the American Dental Association (ADA).

Related Glossary Terms

Drag related terms here

Index

Find Term

Chapter 6 - Terms to Know

Cementoenamel junction (CEJ)

the area of a tooth where the cementum and enamel meet.

Related Glossary Terms

Drag related terms here

Index

Find Term

Chapter 3 - Terms to Know

Cementum

hard connective tissue covering the outer surface of a tooth root.

Related Glossary Terms

Drag related terms here

Index

Find Term

Chapter 3 - Terms to Know

Chemical indicator

Device that monitors the sterilization process by changes in color with exposure to one or more sterilizing conditions (e.g., temperature, steam). Intended to detect potential sterilization failures due to incorrect packaging, incorrect sterilizer loading, or equipment malfunction.

Related Glossary Terms

Drag related terms here

Index

Find Term

Chapter 9 - Terms to Know

Chronological

Arranged in the order of time.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 6 - Terms to Know

Clinical contact surface

Type of environmental surfaces that come into direct contact with hands or instruments during patient care. Examples include light handles, countertops, and control switches.

Related Glossary Terms

Drag related terms here

Index

Find Term

Chapter 9 - Terms to Know

Clinical crown

that portion of a tooth not covered by tissues.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 3 - Terms to Know

Confidential

Intended to be kept secret.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 6 - Terms to Know

Confidentiality

A set of rules or a promise that limits access or places restrictions on certain types of information.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 6 - Terms to Know

Contagious

disease spread from one person or organism to another by direct or indirect contact.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 4 - Terms to Know

Contamination

The presence of microorganisms (usually those causing disease or infection) on living or nonliving surfaces.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 9 - Terms to Know

Coronal

refers to the crown of a tooth.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 3 - Terms to Know

CPI

Community Periodontal Index (CPI, formerly called the Community Periodontal Index of Treatment Needs or CPITN) was created in 1978 by the World Health Organization (WHO) to provide a global standard for screening periodontal disease in populations.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 3 - Terms to Know

Critical

The type of instruments that cut or penetrate bone or soft tissues, providing access to the bloodstream. Examples include anesthetic needles, surgical burs, and scalpel blades.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 9 - Terms to Know

Date-related instrument storage

A process that distributes sterile instruments packs to the operatory using packs with the oldest date first. Sometimes referred to as "first in, first out".

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 9 - Terms to Know

Demineralization

when pH is lowered it weakens the tooth structure. First signs of demineralization are white spot lesions.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 4 - Terms to Know

Dental caries

dental term for the tooth decay process.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 4 - Terms to Know

Dental plaque

a biofilm consisting of bacteria and bacterial by-products.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 4 - Terms to Know

Direct contact

Physical transfer of microorganisms between an infected person and a susceptible host.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 9 - Terms to Know

Disinfection

Physical or chemical techniques used to destroy most pathogens but not spores.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 9 - Terms to Know

Environmental surfaces

Include clinical contact surfaces like countertops, drawer handles, and instrument control panels; as well as housekeeping surfaces like floors and walls.

Related Glossary Terms

Drag related terms here

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Find Term

Chapter 9 - Terms to Know

Event-related instrument storage

A process where it is assumed contents of a sterilized pack should remain sterile until some event causes it to become contaminated. The event may include dropping a pack or seeing a tear or moisture in the pack.

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Extraoral

outside of the mouth.

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Finger rest

a point of rest that provides support and allows the hand to pivot; also called a fulcrum.

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Forensic

Scientific tests or techniques used in connection with the detection of crime.

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Fulcrum

a point of rest that provides support and allows the hand to pivot; also called a finger rest.

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Fungi

Group of microorganisms that include yeasts, molds, and mildews.

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Furcation

the notch or space exposed between the roots of multirooted teeth.

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Gingival recession

as periodontal disease progresses, the gingiva may recede, leaving portions of the roots of teeth exposed below the cementoenamel junction (CEJ).

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Gingivitis

a bacterial infection that is confined to the gingiva. It is reversible.

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Grasp

the correct way to hold a dental instrument.

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Hand hygiene

General term that describes the removal of debris and blood by handwashing and/or the use of an antiseptic agent.

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Heat sterilization

Temperature-driven process that destroys all microbial life, including spores.

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Hepatitis

Bloodborne disease that causes inflammation of the liver.

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Hepatitis B virus

Disease producing pathogen that causes Hepatitis B. Abbreviation is "HBV."

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Hepatitis C virus

Disease producing pathogen that causes Hepatitis C. Abbreviation is "HCV."

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High-level disinfection

Process that inactivates bacteria (like what causes tuberculosis), most fungi, and most viruses. It is ineffective against large numbers of spores.

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HIPAA

Health Insurance Portability and Accountability Act.

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HIV

Abbreviation for the human immunodeficiency virus, which causes AIDS.

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Hospital disinfectant

A germicide registered by the U.S. Environmental Protection Agency (EPA) that inactivates the test microbes salmonella choleraesuis, staphylococcus aureus, and pseudomonas aeruginosa. Used on inanimate objects in dental and medical facilities.

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Housekeeping surface

Type of environmental surface that is not involved in the direct delivery of dental care.
Examples include floors, sinks, and walls.

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Immunization

Vaccines that protect a person against a disease.

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Indirect contact

Type of contact between a person and a contaminated object. An example is when a person with a cold sneezes into their hand, and touches a doorknob transmitting their germs. A second person touches the doorknob and is exposed to the first person's germs. The cold germs are transmitted from one person to another through the contaminated doorknob.

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Infectious

the ability to spread infection from person to person.

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Intermediate-level disinfectant

A liquid chemical registered by the Environmental Protection Agency (EPA) as a hospital disinfectant. The label should indicate it has tuberculocidal activity.

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Intermediate-level disinfection

Process that inactivates bacteria (like what causes tuberculosis), most fungi, and most viruses. It is ineffective against spores.

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Intraoral

inside the mouth.

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Lateral or excursive movements

Shifting of the mandible and mandibular teeth to the right or left (lateral) against the maxillary teeth.

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Litigation

An action brought in court to enforce a particular right. The act or process of bringing a lawsuit.

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Low-level disinfection

Process that inactivates most bacteria, some fungi, and some viruses. It does not inactivate resistant microorganisms such as spores and those bacteria that cause tuberculosis.

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Mandibular working cusps

The buccal cusps. They occlude or contact with the fossae and marginal ridges of maxillary teeth. Remember B.L.L.U. (Buccal lower, lingual upper)

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Maxillary working cusps

The lingual cusps. They occlude or contact with the fossae and marginal ridges of mandibular teeth.

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Maximum intercuspation

The maximum contact of the teeth while biting the teeth together. Cusp to Fossa relationship.

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Microorganisms

Living organisms (virus, bacteria or fungus) that are so small in size they can only be seen by using microscopes.

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Mobility

movement.

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Mode of transmission

Means by which pathogens are transferred from a source to a new host.

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Need to know

Only individuals who are providing treatment to a patient have access to his/her dental records. Discussion of patient's care is limited to only those providers who are providing dental treatment.

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Neutral

pH of 7.

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Neutralize

make an acidic or alkaline substance chemically neutral.

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NV

An abbreviation for next visit.

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Occlusion

The way the teeth “fit,” together. The way the occlusal and incisal surfaces of maxillary and mandibular teeth contact each other or move against each other.

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Opaque

white, chalky area that indicates demineralization of the tooth structure.

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Other Potentially Infectious Materials (OPIM)

Refers to body fluids or tissues that (a) may contain bloodborne pathogens (in dentistry, this includes saliva) or (b) are visibly contaminated with blood. It is an Occupational Safety and Health Administration term. The abbreviation is "OPIM."

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PARQ

An abbreviation for the informed consent process. The dentist discussed with the patient: the Procedure, Alternative treatment, Risks, and answered Questions.

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Pathogen

Disease-producing microorganisms (virus, bacteria or fungus).

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Patient-contact item(s)

Instruments and supplies used to provide dental examinations, or treatment.
Examples include handpieces, cotton rolls, sutures, and air-water syringes.

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Percutaneous injury

An injury that penetrates the skin, such as a needlestick or a cut with a sharp object.

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Periapical

the area surrounding the end of the tooth root.

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Periodontal

supporting and surrounding tissues around the tooth.

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Periodontal charting

documentation of periodontal probing depth for six areas on each tooth, notation of tooth mobility, and other clinical periodontal findings which are measured, recorded, and monitored over time.

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Periodontal disease

inflammatory process of the gingival tissues and/or periodontal membrane of the teeth, resulting in an abnormally deep gingival sulcus, possibly producing periodontal pockets and loss of supporting alveolar bone.

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Periodontal pocket

indicates the presence of an abnormal depth of the gingival sulcus where the gingival tissue contacts the tooth. A normal sulcus measures 3mm or less.

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Periodontal probe

instrument used to locate and measure the depth of periodontal pockets. The tip is blunt or rounded and has markings in millimeters to measure the depth of the sulcus.

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Periodontitis

a bacterial infection, with inflammation of the periodontium including the gingiva, periodontal ligament, bone, and cementum. Loss of attachment and tissue is irreversible.

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Periodontium

tissues comprising gingival, cementum, periodontal ligament, and alveolar bone that attaches, nourishes and supports the tooth.

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Personal protective equipment (PPE)

Required clothing or devices worn by workers for protection against hazards. In dentistry, it includes wearing protective gowns or scrubs, masks/ face shields, gloves, and protective eyewear. The abbreviation is "PPE."

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Plaque

a soft sticky substance that accumulates on teeth composed largely of bacteria and bacterial by-products. Plaque is the primary cause of gingival inflammation and most other types of periodontal diseases.

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Progress notes

Permanent record of the patient's dental treatment.

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Prophylaxis

commonly referred to as prophylaxis or cleaning. It is the technical term for the removal of plaque, calculus and stain from tooth structures. It is intended to control local irritant factors.

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Protected health information (PHI)

Any information about health status, provision of health care, or payment for health care that can be linked to a specific individual.

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Protrusive movements

Shifting of the mandible and mandibular teeth forward against and past the maxillary teeth.

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PSR

Periodontal Screening and Recording index documents periodontal conditions prior to diagnosis and treatment.

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Quadrant

one of the four equal sections into which the dental arches can be divided; begins at the midline of the arch and extends distally to the last tooth.

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Recession

areas where the gingiva has moved away from the crown of a tooth.

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Release of Information (ROI)

Permission to allow information to be shared from the patient record to/from other agencies or given to the patient or the patient's representative.

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Remineralization

the result of minerals in saliva buffering the acid, and strengthening the tooth. It can stop tooth destruction, and reverse demineralization.

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RMH

An abbreviation for reviewed medical history

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Sequential

A series of steps in a logical order

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Sextant

one of the six relatively equal sections into which a dental arch can be divided, for example: tooth numbers 1-5; 6-11; 12-16; 17-21;22-27;28-32. Used for recording the CPI or PSR.

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SOAPE

An acronym for subjective findings, objective findings, assessment, plan, and education that serves as a method to document patient visits in a patient record.

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Spores

Highly resistant type of microorganism that can survive heat and adverse conditions. In dental clinics, spore tests are used to show the effectiveness of sterilization.

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Stability

ability to keep a dental instrument steady and secure.

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Standard precautions

Practices and procedures to protect healthcare workers and patients from pathogens that can be spread by blood or any other body fluids.

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Sterilization

A physical or chemical process that destroys all microorganisms, including spores.

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Stippling or stippled

textured surface of gingiva similar to the surface of an orange.

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Subgingival calculus

forms on root surfaces below the gingival margin and can extend into periodontal pockets.

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Sulcus

the natural space found between the tooth and the gum tissue; sulcular refers to the sulcus.

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Supragingival calculus

found above the margin of the gingiva.

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Tactile sensitivity

ability to “feel” tooth smoothness and/ or roughness.

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Tampering

Altering or falsifying entries in a patient's record.

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Tuberculocidal

Ability to kill the pathogens that cause tuberculosis.

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Vaccination

Immunizations to protect the individual against a disease.

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Vaccine

Administered through needle injections, by mouth, or by aerosol. Produces immunity, and protects individuals against disease.

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Viruses

Type of organisms that infect cells and cause disease. Examples include HBV, HCV, and HIV.

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White spot lesion

an area of demineralized tooth structure that looks chalky or opaque.

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Working Cusps

Also known as Functional Cusps. They are the cusps that contact when the patient bites into their habitual or “normal bite.”

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