

RADY FACULTY OF HEALTH SCIENCES

Occlusion

Restorative Techniques for Dental Hygienists

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Occlusion

Following completion of this session, participants will be able to:

- Identify and define the following terms: Occlusion, Centric Occlusion, Intercuspation, Functional Cusps, Non-Functional Cusps, Canine Guidance, Group Function, Malocclusion, Lateral Interference
- Describe and demonstrate the proper two step technique for assessing and adjusting occlusion following restoration placement



Occlusion – Terminology Review

- **Occlusion**

- The relationship of the mandibular and maxillary teeth when the teeth are closed together or during excursive movements when the teeth are touching.

- **Centric Occlusion**

- The habitual way that the teeth come together. It is the jaw position that affords the greatest interdigitation of the teeth. It is related to tooth occlusion and not determined by muscle or bone.
- also referred to as acquired centric occlusion, habitual occlusion, convenience occlusion, or intercuspal position (ICP)

Occlusion – Terminology Review

- **Intercuspatation**

- The mesial-distal and buccal-lingual relationships that determine how the upper teeth will touch, hit, and interlock with the lower teeth



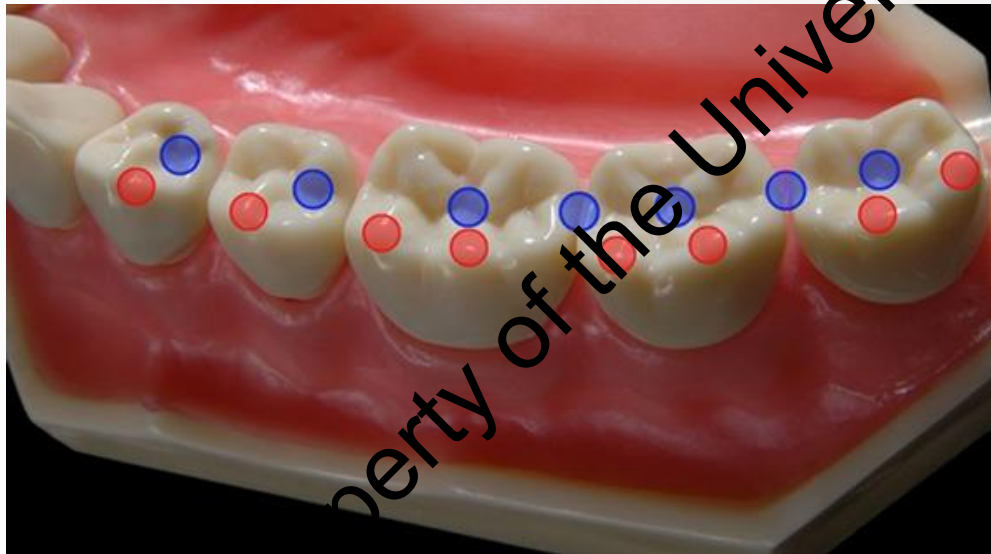
Occlusion – Terminology Review

- **Functional Cusps** (working cusps, centric cusps)
 - the buccal cusps of mandibular posterior teeth and the lingual cusps of the maxillary posterior teeth
 - these cusps occlude in the central fossa and maintain the occlusal vertical height
- **Non-Functional Cusps** (balancing cusps)
 - the lingual cusps of mandibular posterior teeth and the buccal cusps of the maxillary posterior teeth
 - guide the mandible in lateral movement



Maxilla

The contacts of the occlusal parts of the masticatory teeth: cusp-fossa and cusp-marginal ridge type contacts



Mandible

The contacts of the occlusal parts of the masticatory teeth: cusp-fossa and cusp-marginal ridge type contacts

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Occlusion – Terminology Review

- **Canine Guidance**

- During lateral mandibular movement (i.e. lateral excursion) the opposing upper and lower canines of the working side contact thereby causing disclusion of all posterior teeth on the working side and balancing side

<https://www.youtube.com/watch?v=8ngvyEbifg>



Image: <http://www.italiandentalacademy.com>

Occlusion – Terminology Review

• Group Function

- If when you slide laterally a number of teeth on your working side are in contact at the same time, all sharing the load, this is called group function. This might happen if your canines have worn down over time, or are crooked.
- This is considered “second best” occlusion.
- With group function, the heaviest loads should ideally be near the most anterior of these teeth, and lighter loads near the back.

Occlusion – Terminology Review

- **Malocclusion**

- A deviation from normal occlusion of one or more teeth in the dental arches.

- **Lateral Interference**

- A discrepancy in natural occlusion detected on lateral excursion
- Can cause significant bite sensitivity

Brand, A. and Isselhard, D. (2014). Anatomy of Orofacial Structures: A Comprehensive Approach (7th ed). Elsevier Mosby. St. Louis, MO.



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Assessing Occlusion – Two-Step Method

Check occlusion in the supine AND seated position

1. Dry the teeth with gauze
2. Using articulating paper, have the patient “tap, tap, tap” on the paper
3. Flip the paper over and have the patient “gently grind from side to side”
4. Ask the patient: “How does that feel? Does it feel like you are biting on anything?”
5. Based on your patient’s feedback and the images on your registration paper, adjust accordingly
 - Determine the intensity of the markings – are all markings the same?
 - #6 or #8 round bur, green or white stone

Brand, A. and Isselhard, D. (2014). Anatomy of Orofacial Structures: A Comprehensive Approach (7th ed). Elsevier Mosby. St. Louis, MO.

TIP: If you are having difficulty getting your articulating paper to mark, apply a smear of vaseline to the surface of the paper!



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Assessing Occlusion – Two Step Method

<https://www.youtube.com/watch?v=DYiiVAAtaKU>

<https://www.youtube.com/watch?v=CYqVnAdpz80>

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Occlusion – Putting it all together

https://www.youtube.com/watch?v=ruj_5MrQIUM

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Summary

- Occlusion
- Centric Occlusion
- Intercuspatation
- Functional Cusps
- Non-Functional Cusps
- Canine Guidance
- Group Function
- Malocclusion
- Lateral Interference
- Two step technique for assessing and adjusting occlusion following restoration placement

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Breakout!

- Each participant will now practice assessing the occlusion on two separate areas using the two step method of occlusal assessment

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