

OCCLUSION

Occlusal theory
Temporomandibular disorders
Occlusal disease
Osteoarthritis of TMJ
Disease of lateral pterygoid muscle (provisional name)
Disease of retrodiscal tissue (provisional name)
Centric relation
Determining of centric relation
Malocclusion
Occlusal analysis
Occlusal equilibrations
Examinations and diagnosis for occlusal equilibration

Method of occlusal equilibration
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Occlusal plane
Vertical dimension
Smile design
Anterior guidance
Long centric
Bruxism
Noise of TMJ
Occlusal splint
Ideal occlusion



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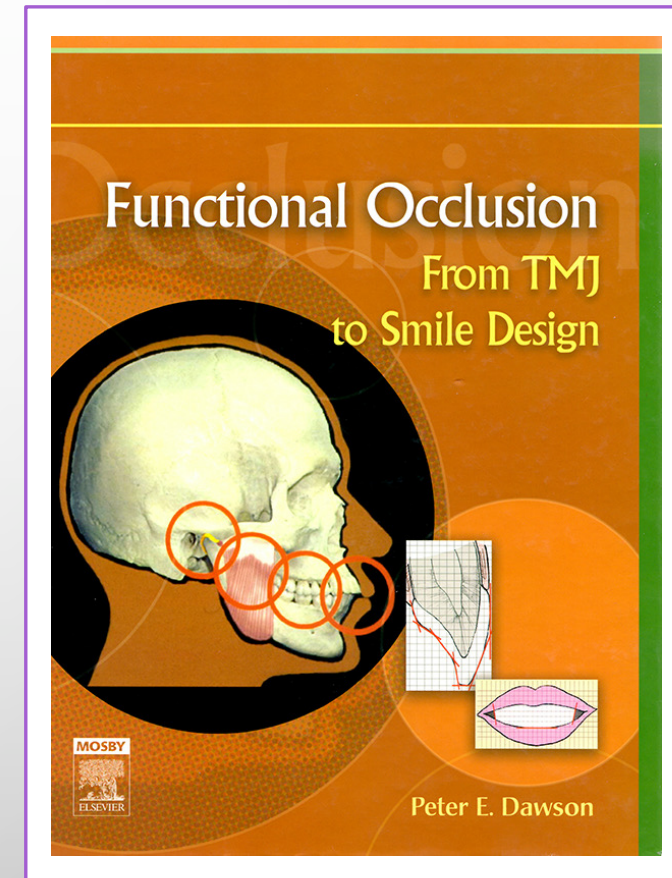


Long centric

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Reference



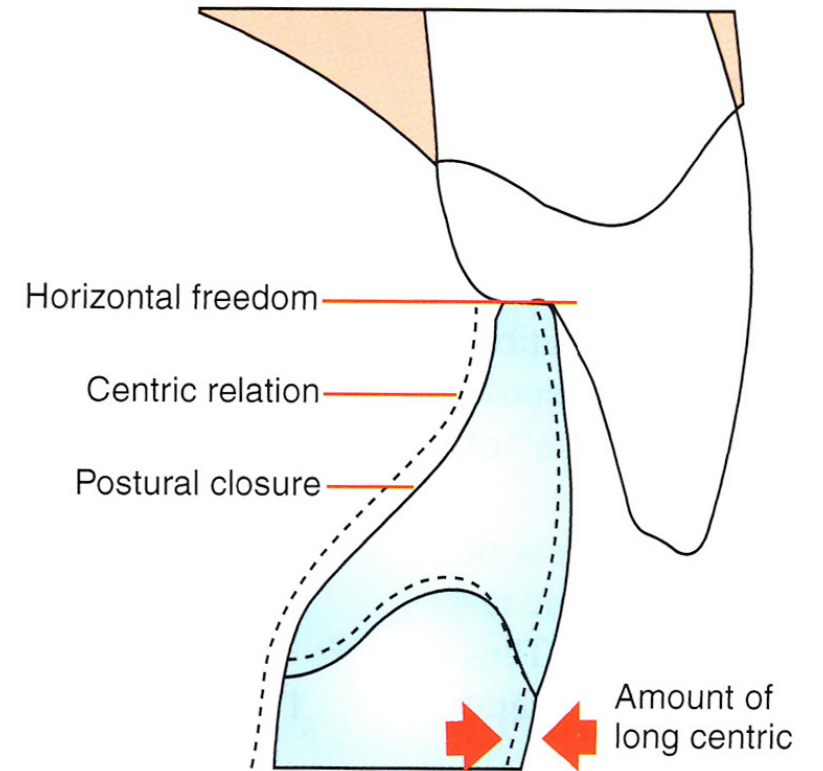
(LONG CENTRIC)



1. Definition

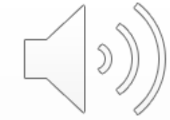
Long centric was introduced by Schuyler and is used as a term for the point-centric claimed by Gnathology.

As shown in the right photo, Dawson will define the term long centric as: freedom to close the mandible either into centric relation or slightly anterior to it without varying the vertical dimension at the anterior teeth.



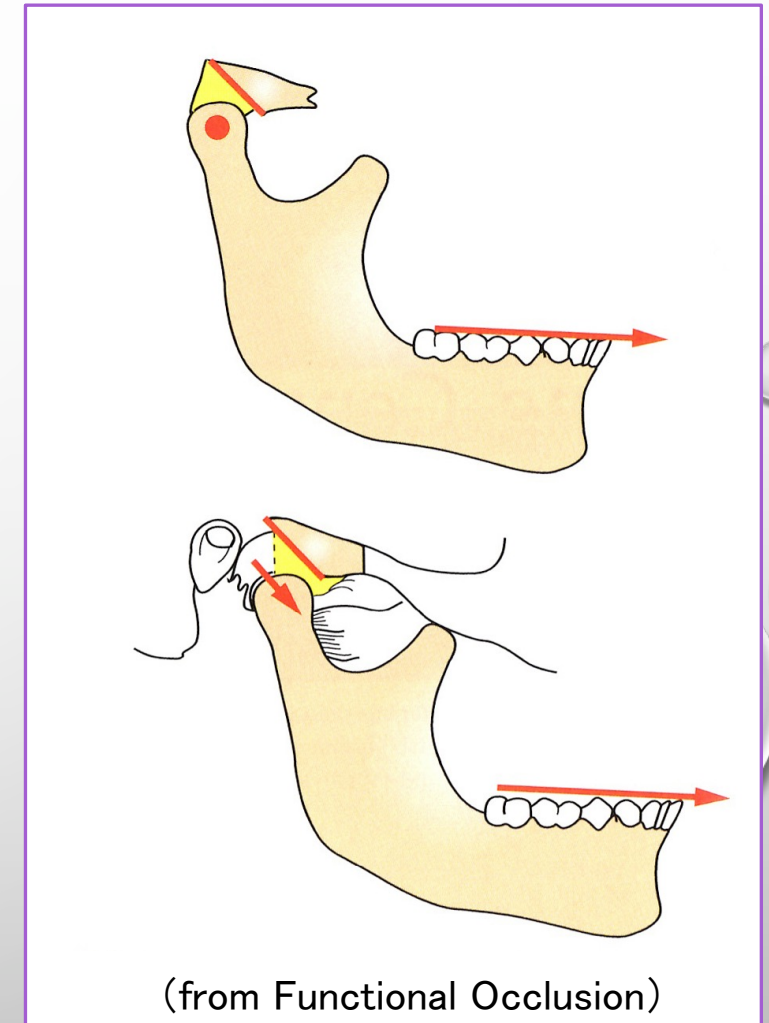
(from Functional Occlusion)

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2. Reasons for not setting long centric on molars

The long centric is provided primarily on the anterior teeth. As shown in the upper right illustration, the mandibular condyle moves anteriorly and downward when the mandible moves forward, even if the anterior guidance is horizontal, as shown in the lower right illustration. As a result, the mandibular molars move downward with the mandibular condyle. Therefore, even if the anterior movement of the anterior teeth is flat, the posterior teeth, especially the molars, are not flat. Therefore, long centric are not provided on the posterior teeth.

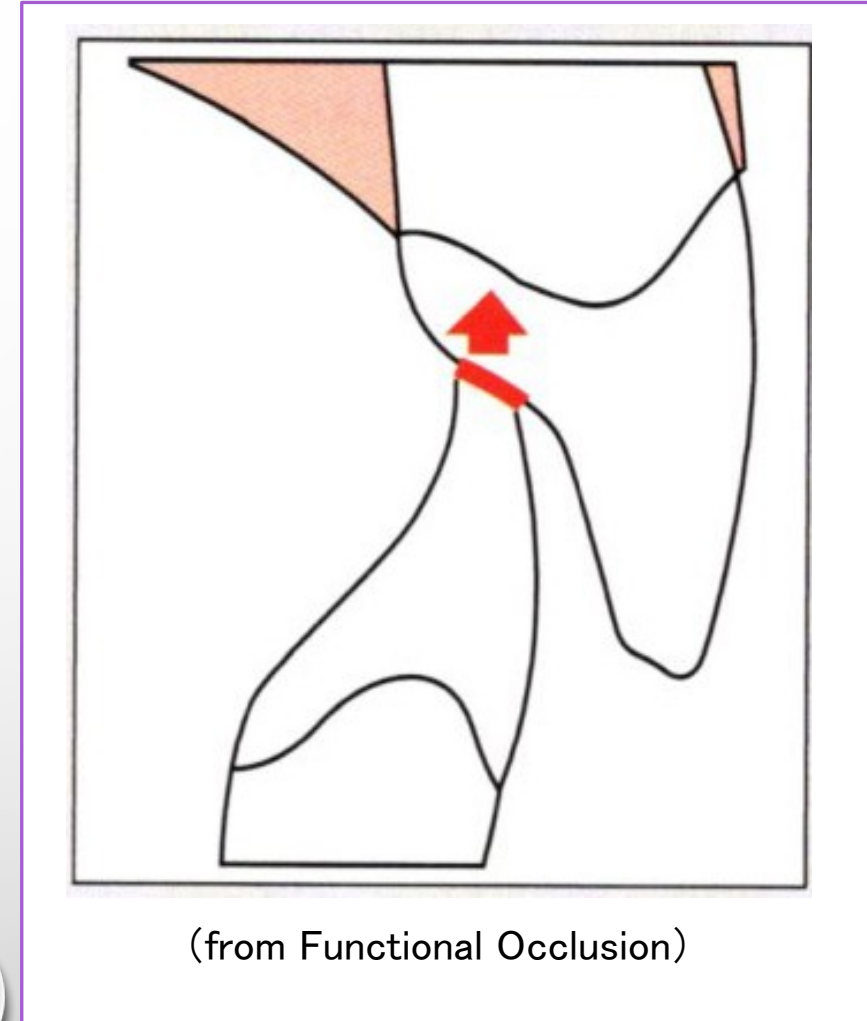


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3. Setting long centric on anterior teeth

(1) Contact in centric relation

Before long centric can be recorded, all posterior interferences to centric relation must be completely eliminated so anterior contact in centric relation can be verified.

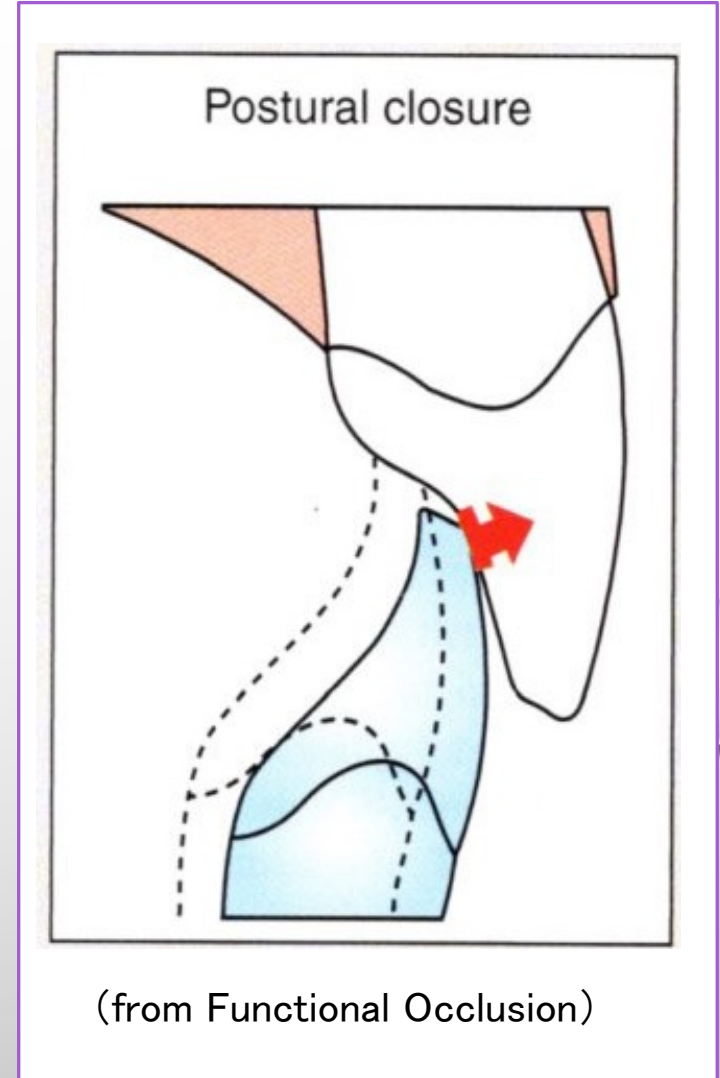


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3. Setting long centric on anterior teeth

(2) Postural closure

With the patient in an upright, relaxed, postural position, gentle tapping of the teeth together should not result in striking the upper lingual incline before complete closure to the most closed position.



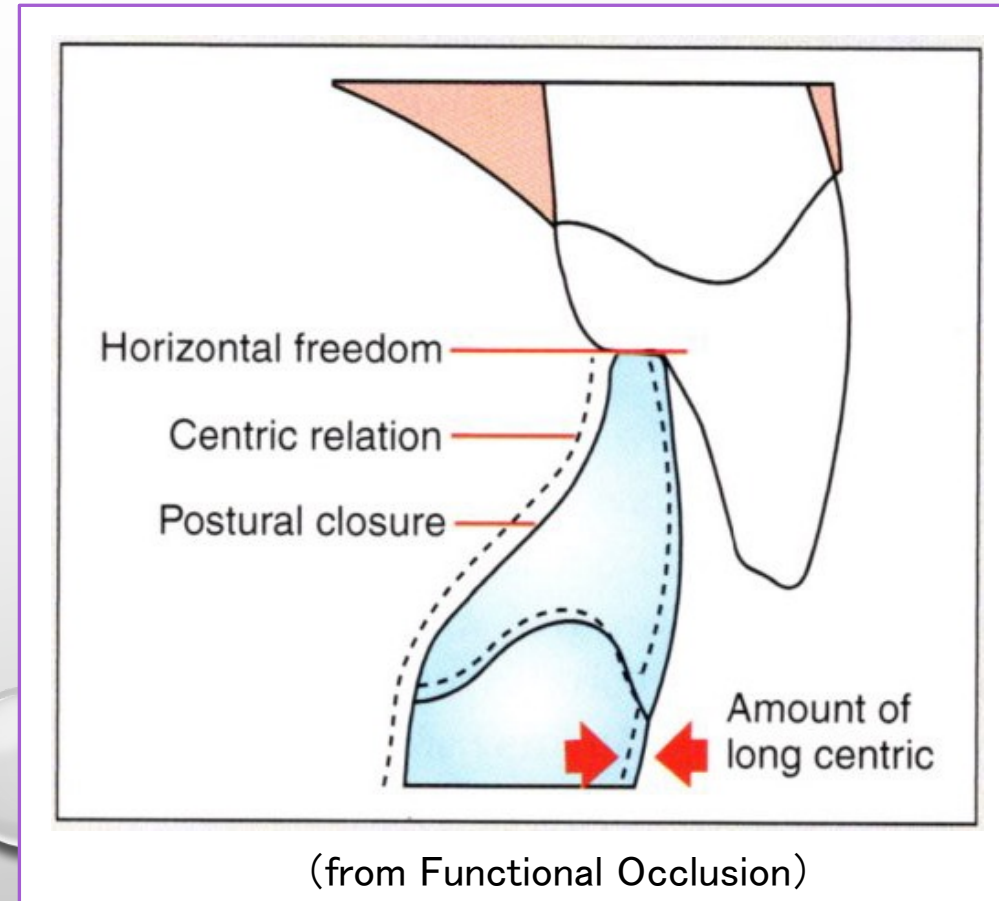
(LONG CENTRIC)



3. Setting long centric on anterior teeth

(3) Clearance for long centric

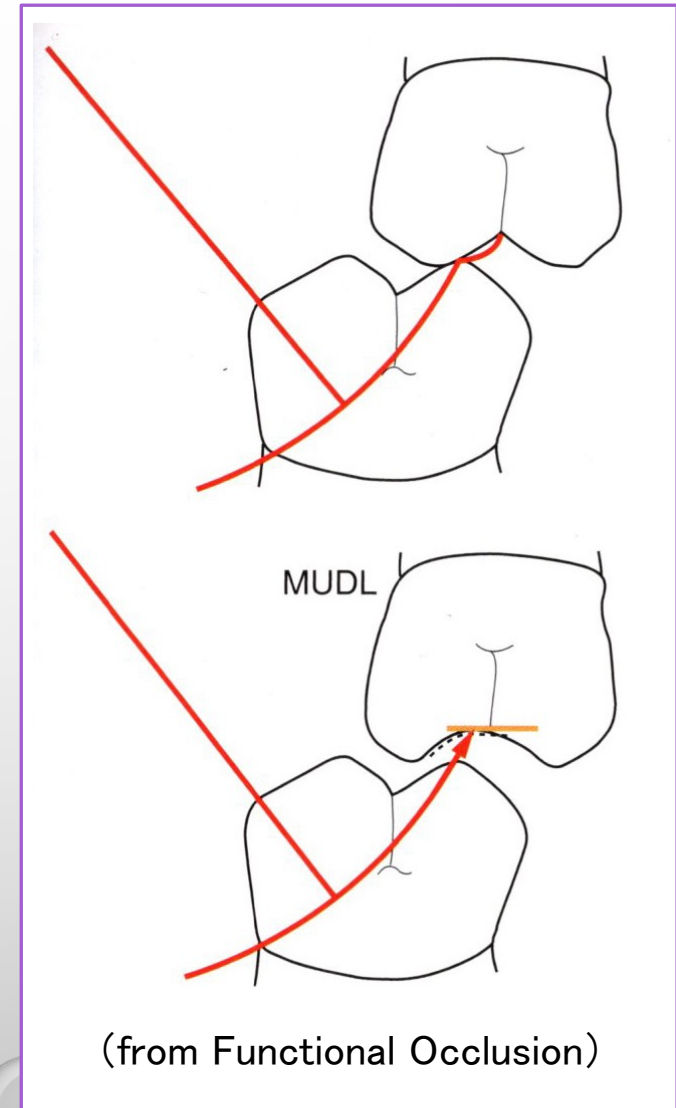
The goal is for the patient to be able to close either into centric relation or slightly protruded during gentle postural closure without striking the lingual incline. This means a slight extension of the centric stop on the upper anterior teeth.



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4. Providing long centric by equilibration

When interferences to centric relation are eliminated by equilibration, long centric is usually provided automatically unless the vertical dimension is closed. If the vertical dimension of the acquired occlusion is maintained, the first step in equilibration consists simply in eliminating all interferences from that point back to centric relation. The result is a long centric area that goes from centric relation all the way to the point of the original "acquired centric", as shown in the upper right illustration. The equilibrated patient is then free to close either into centric relation or into his or her original convenience position, or anywhere in between, as shown in the lower right illustration.



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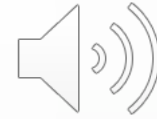


5. Reading the marks

By using a blue ribbon for postural closure and then using a red ribbon to manipulate for centric relation closure, you may compare the centric contacts with the contacts made by allowing the patient to close from the rest position. Variations in marking may occur if blue is used for light closure from rest and red is used for a manipulated centric marking. The following is a list of the various marking combinations along with the interpretation and treatment suggestions for each combination.



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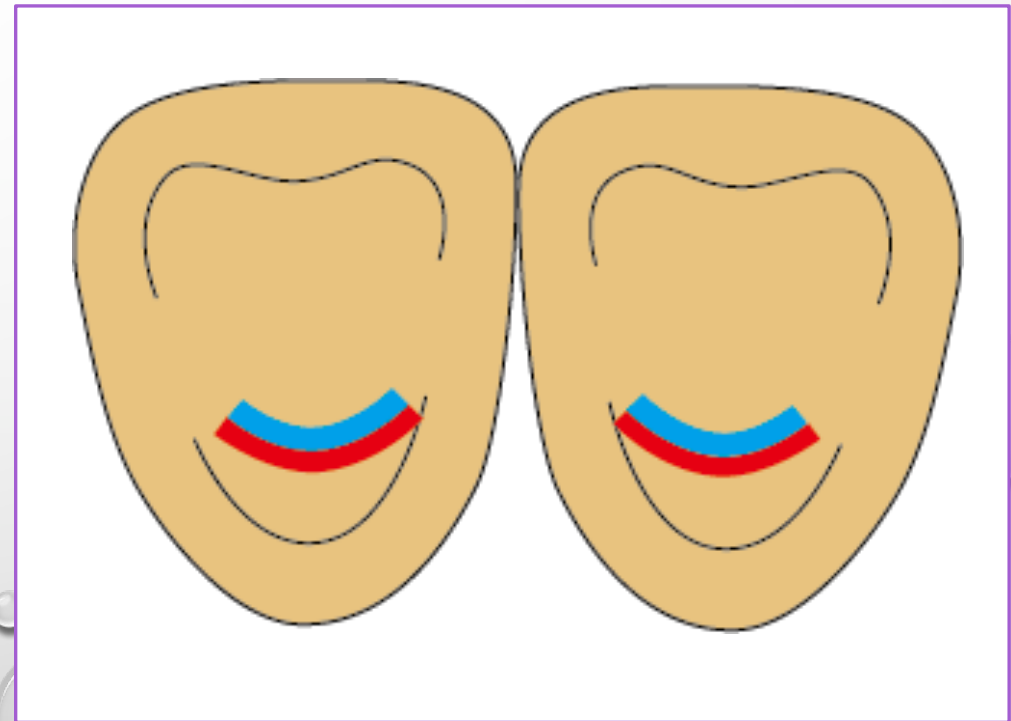


5. Reading the marks

(a) Blue and red markings match

As shown in the right illustration, when each red mark is covered by the black centric mark. Exact coverage would indicate that terminal hinge closure and light closure from rest are identical. A long centric is not essential in such cases.

Not all patients need long centrics. In approximately 50% of patients, the mouth can be closed directly into the centric relation in the sitting position without occlusal interference.



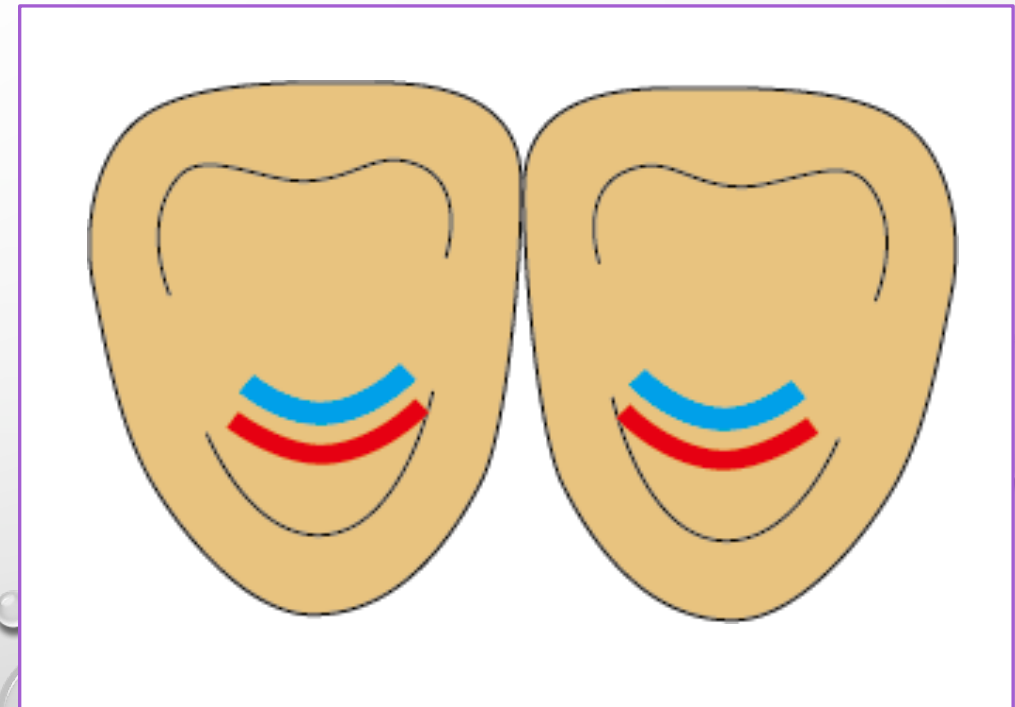
(LONG CENTRIC)



5. Reading the marks

(b) If the blue color is located in front of the red marker

When blue marks extend forward from red centric marks. Forward extension would show a need for long centric. To provide the necessary amount, each centric stop should be extended forward at the same vertical for the length of the blue mark. One should not grind the black centric marks. Equilibration for long centric is complete when there are no blue marks on inclines. Allowing the patient to tap the teeth together should not cause movement of any tooth.



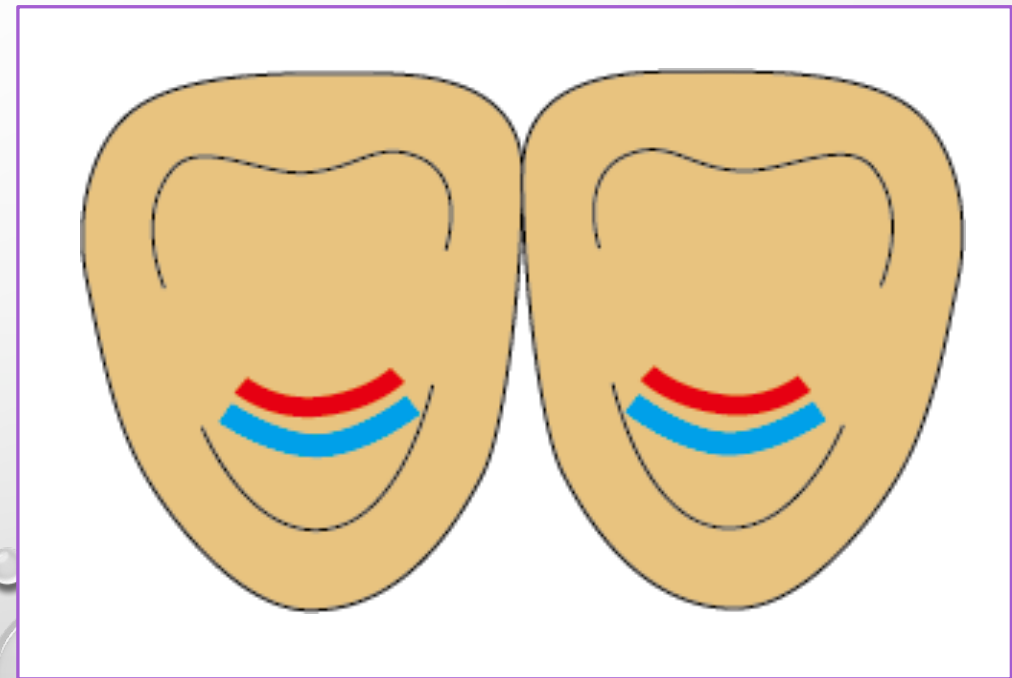
(LONG CENTRIC)



5. Reading the marks

(c) If the blue color is located behind the red marker

When blue marks extend backward from red centric marks. Backward extension can mean only one thing: the dentist has not manipulated correctly into centric closure. The red marks made by correct manipulation into centric closure will always be at the red border of any blue mark. The blue mark may be the same as the red mark, but it cannot be behind it.



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If you have any questions or doubts, please leave them in the public comment section below.

The next topic will be ” Bruxism ”.