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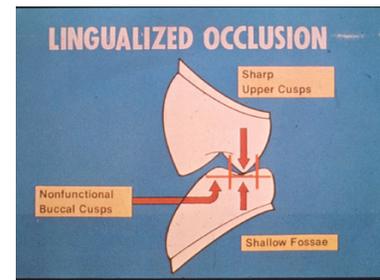
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Lingualized Occlusion

If I had to choose the one thing that's had the greatest effect on the success of the dentures and partial dentures I construct for my patients, it would be lingualized occlusion. From a functional standpoint, it goes without saying, that the occlusion you provide to a patient will always have the most profound effect on the success or failure of any prosthesis. If the occlusion is simple to arrange, simple to adjust and esthetically pleasing, what more could you ask for?

Just what is lingualized occlusion? In its simplest form, a sharp upper lingual cusp functions in a shallow fossa of a lower tooth. *There is no function between the buccal cusps of either tooth.* A longer and sharper lingual cusp produces better function. The open fossa of the lower tooth has wall inclinations of 10 to 12 degrees. The lingual cusp functions in an area 2 to 3 millimeters in diameter around the centric stop. Lingualizing the occlusion over the crest of the lower ridge seats both upper and lower prostheses and reduces tipping forces during function.



Lingualized occlusion can have a very natural look, particularly since my maxillary teeth of choice are Trubyte Bioform 33° porcelain posteriors. These teeth have the longest and sharpest lingual cusp of commonly available teeth on the market.

The mandibular teeth I use are Trubyte Bioform 20° porcelain posteriors. The occlusal surfaces are ground out to produce a shallow, open fossa of approximately 10 to 12 degrees. This allows the upper lingual cusp to function in an area 2 to 3 millimeters around the centric stop. *There is no function between the buccal cusps of either tooth.*

You say you don't use porcelain teeth? That's okay, because the Trubyte Bioform teeth are available in an IPN material and there are a number of other manufacturers that produce teeth for lingualized occlusion set-ups. Ivoclar/Vivadent has the Ortholingual DCL and Vita has its new Lingiform Posterior, to name two. As with the Bioform teeth, I find that even these specially designed lingualized teeth have too much anatomy and cusp form on the lower posterior occlusal surfaces. The central fossae will need to be adjusted to produce a shallow, open and more functional occlusion as demonstrated in the following two pictures.



This laboratory view from the lingual side of an upper and lower set-up demonstrates how the upper lingual cusps are seated in the shallow open fossae of the lower teeth.

In this view, the surfaces of the first bicuspid have been reshaped to open their fossae and to reduce occlusal anatomy. The second bicuspid has yet to be reshaped.

In case you haven't noticed, all adjustments are done to the lower teeth only.



What does the laboratory do to set your case up in lingualized occlusion?

The maxillary posterior teeth are arranged with their lingual cusps on the occlusal plane.....with the exception of the disto-lingual cusp of the first molar and the lingual cusp of the second molar. These are raised off the plane to create a compensating curve. The necks of the teeth are canted inward slightly to likewise raise the buccal cusps off of the plane.



The lower posterior teeth are reshaped to create shallow, open fossae and to provide a centric stop for each of the five upper lingual cusps. Any lateral interferences between the buccal cusps are removed by reducing and reshaping the buccal cusps of the lower teeth.

What needs to be accomplished chairside?

At delivery, your job is to make sure that the five upper lingual cusps contact the lower posterior teeth somewhere along the central groove.....not always dead center.....variations anteriorly or posteriorly will occur depending on the patient's occlusal classification. *Adjust only the lower teeth.*



What about function?



Again, *adjust only the lower teeth.*

Forget about BULL and those other rules for working and non-working function. Cover the lower posterior teeth with Kerr Occlusal Indicator Wax and have the patient chew several pieces of canned peach, or banana or seedless grapes. Remove any contacts outside of an area 2 to 3 millimeters around the centric stop and you're done.

Lingualized occlusion....simple and functional....what more could you ask for? *Maginnis the Dentist*