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**Dr. Morley S. Rubinoff,**  
Prosthodontist  
Implant Dentistry

Suite 100, 2001 Sheppard  
Avenue East  
Toronto, Ontario, M2J 4Z7

Office: 416 499-1704  
Cell: 416 838-1622  
Fax: 416 751-1045

Email:  
drmorleyrubinoff@bell.net  
drmorleyrubinoff@gmail.com

Fellow: International Team for  
Implantology (Canada Section)



Need help with a case in your office? Please don't hesitate to contact me. I am always happy to help a colleague with treatment and/or diagnosis:

# Vertical Dimension of Occlusion:

So much to say and so little space to say it. The topic of Vertical Dimension of Occlusion (VDO) could occupy several chapters in a text book. Within the confines of just two pages, let's focus on some of the key points with a great take away message that you can use in your office tomorrow.

## CASE ONE:

Our first patient hates his smile. His teeth are worn down in the upper anterior region. He is referred for prosthodontist care by his family dentist because the treatment regimen is troublesome. Do we open the bite 2mm on all of the upper teeth, fabricating crowns on all 14 upper teeth or just crowns in the maxillary anterior region?



The four upper anterior crowns are made to match the two existing crowns #22,23. All ceramic crowns would have been preferred.

Several questions need to be asked as part of our diagnosis:

- ◆ If we "open" the bite, will the patient continue to speak normally or will the patient have difficulty with speech?
- ◆ If we do not "open" the bite, how will we provide space for the additional tooth material in the maxillary anterior region?
- ◆ Is para-function a concern here?

## Easy assessment of the correct VDO?

Many dental faculties have taught students a simple method to assess lost vertical dimension of occlusion. A technique featuring an occlusal splint has been used to "test the vertical".

**The Technique:** Deliver an occlusal overlay splint and monitor the splint for 1 month to evaluate patient's adaptation to the new VDO.



**The Problem:** Temporomandibular dysfunction is not usually at issue here. Our patients cannot speak or eat with this prosthesis. Isn't there a simpler way to assess VDO?

## Treatment approaches to correct VDO that really work:



Our patient is deemed to be over closed by 4 mm in this case. We will restore the occlusion by opening the bite by 3mm using the sibilant sound "S". The technique is described on page 2.

About my Ceramist:

Masoud Niknejad of Picasso Dental Studios is a Master Ceramist. He maintains his own laboratory in Richmond Hill, Ontario.



FUTURE BLOGS:

- ◆ Cowboys vs “Followers”- Surgical Considerations
- ◆ Cowboys vs “Followers” - Prosthetic Considerations
- ◆ Occlusal Considerations in Restorative Dentistry
- ◆ The “hype” on fancy “gadgets” to check occlusion.
- ◆ Bikini Dentures vs functional stability in removable Prosthodontics
- ◆ Training Tissues in Implant Dentistry (Emergence Profile)
- ◆ The Perils of “Thin\Scalloped” Gingiva -a Restorative Perspective.

EDITOR'S NOTE:

Blogs are a great way to share information. We all know that there are many ways to complete treatment in dentistry.

Please do not hesitate to contact me if you have any questions with regards to concepts described in my blogs. Further, I am always happy to assist you with patient care concerns from your own office.

The following scenarios are frequently seen in combination with lost VDO.

- ◆ Over-closure, signs of attrition and para-function habits
- ◆ Over-closure with no signs of attrition
- ◆ No sign of over-closure, signs of attrition with para functional habits
- ◆ Presence or absence of over closure, signs of attrition , para-function with heavy deposition of bone around teeth.



Heavy bone deposition in conjunction with attrition & lost VDO



Over-closure with no sign of attrition. Treatment included maxillary anterior crown lengthening in conjunction with opening the VDO by 3mm.



No sign of over-closure, signs of attrition with para functional habits. Patient is a horizontal bruxer. The only way we can make longer teeth here is to complete crown lengthening.

Establishing VDO using the phonetics (sibilant sound “S”)

It was the work of Prosthodontist Sidney Silverman that high lighted this simple technique. Viewing the patient making an “S” sound (count from 60 to 70), we note that in a normal occlusion, the lower jaw will drop 1 to a maximum of 2 mm from the habitual closure position. Should our patient open (for example) 4mm from the habitual closed position, we can state that the occlusion may be opened a total of 3mm and our articulator pin may be opened 3mm. Be assured that if this technique is used, our patient will not encounter any difficulty with speech when the final prosthesis is inserted.

NORMAL OPENING

OVER CLOSED WITHOUT ATTRITION



A: Habitual closure position (HCP)

B: Pencil mark shows overlap at A (Habitual closure position)

C: Second pencil mark when patient makes sibilant sound “S”

D: Lower pencil line (HCP). Upper pencil line (correct VDO). About 1.5mm open from HCP. This is a normal sibilant sound opening.