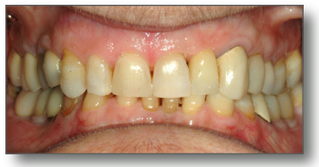
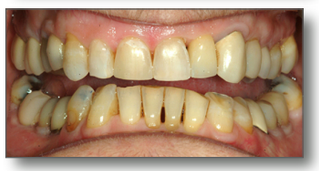
Types of Dental Wear

There are three main types of dental wear: End to End, Pathway and Crossover.

End to End wear is what my dad had. This is where the incisal edges and occlusal surfaces of all the teeth are worn down. Either the bite has collapsed, or the teeth have super-erupted to compensate without a loss of vertical dimension. The wear can be accelerated by acid erosion or abrasive foods. The bite is 'free' to move in any direction without restriction.

Pathway wear is what my mom has. This is where the movement of the jaws is restricted by the teeth. It can be a complication of a class II occlusion, or missing or poor inclination of the teeth with lack of arch space. The lingual surfaces of the maxillary teeth, and the facial surfaces of the mandibular teeth can be severely worn.





The last type of wear is ***Crossover*** wear. This is where the mandible can move beyond the edge to edge position and wear is formed at angles on the anterior teeth, and / or on the facial surface of the maxillary teeth, and lingual surface of the mandibular teeth.

The manner in which you treat each can be complicated and there are many factors to consider. We will focus on End to End wear in this newsletter.

Phased Full Mouth Reconstruction

Why is a periodontist writing about full mouth reconstruction?

This newsletter is about my journey with my dad, about making dentists aware of how to find information to make your lives easier and more fun, and about improving the lives of your patients through your increased knowledge.

This newsletter will show you how I treated my dad. It involves challenges that you each may face, from finances or skill level to time and resources.

To begin at the beginning, I am a study club leader through SpearEducation. Dr. Frank Spear may be well known to some of you. He is a prosthodontist in Seattle who now has a continuing education facility in Scottsdale Arizona. Calling it a facility is an understatement as it is a state of the art teaching Mecca with hands on laboratory and clinical areas, in addition to a lecture auditorium and catered breakfast and lunch.

I reluctantly became a leader off of the gentle and persistent nudging of a referring dentist. Besides the enjoyment of growing together through learning and travel with the dentists in my club, the wealth of information at Spear is astounding. The manner in which it is disseminated makes hard to understand concepts manageable, and hard to achieve outcomes attainable. Regardless of sounding like a sales person, I hope you each will consider learning more about Spear Education in order to enhance your lives and the lives of your patients. I hope that this newsletter will speak for itself. And I hope you will enjoy this story.

Pamela A Nicoara DDS MSD PLLC

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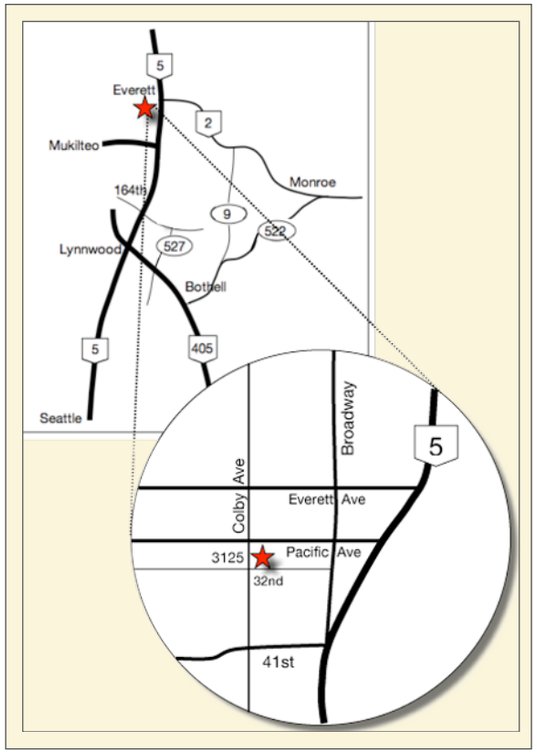

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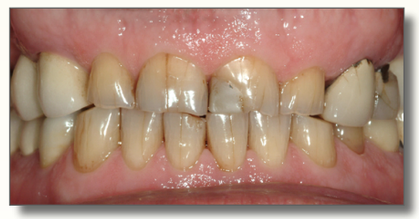
Probe Tips

A Quarterly Periodontal Newsletter

By Pamela Nicoara DDS MSD

Full Mouth Reconstruction
Case of the Quarter



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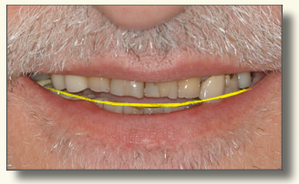
Full Mouth Reconstruction

Where to Begin

For any case that is more complicated, the best place to start is with the face. Where should the teeth fit in the face?

For my dad, on full smile he shows 3-4mm of the teeth. His teeth are only 5-6mm long, so we have room to lengthen the teeth without making him look like a rabbit.

You can test out the desired incisal edge position with a mock up made from a wax up. You



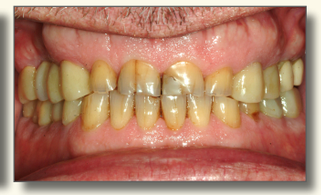
can wax up just the 6 anterior teeth to make sure you are on the right track before committing to a full mouth wax up. Below are facial photos with and without the mock up. Esthetically, longer teeth will suit him.

Before MockUp

Bite Sized Work

The next step technically would be to make a full contour wax up from which you can temporize to a new occlusal plane. My dad's occlusion is undulating, so a new occlusal plane as well as an increased vertical dimension will be established in order to match the intended maxillary incisal edge length. In my case, because his existing full coverage restorations were from eastern Europe, I was afraid of what I'd find under them. So instead, I went one quadrant at a time removing old restorations, making sure buildups and endodontic treatments were sound, and temporizing to his existing occlusal plane. This allowed me to be comfortable taking on amounts of work that I could handle, and would also help spread out the cost of treatment for someone who cannot commit to full treatment all at once. We started November 2013.

Before



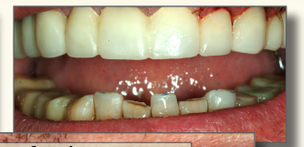
After temporization of posterior teeth

A New Vertical Dimension

Once this phase was completed, the full contour wax up was made. The next step for my dad is to prepare all the remaining maxillary anterior teeth, and fit new temporaries at the desired occlusal plane and vertical dimension. The mandible would then follow, but the mandibular anterior teeth would be built up in composite.

A shell was made from the wax up of the maxillary teeth that would be relined, and segmented into 3 sextants. There were 3 implants to include as part of the temporization. Unfortunately, there was a cant in the occlusal plane. This was corrected using a Sharpie to visualize the problem when looking at the face in order to more easily correct in the mouth, then adjusted with a bur.

On the second day, the mandible was treated. The posterior teeth were re-temporized to a new vertical position. The anterior teeth were built up in composite using a guide from the wax up.



A soft 3mm biocryl occlusal guard was fabricated in order to protect his teeth in the interim. The big test now was to see if anything would break in the meantime. His temporaries were placed in November 2014 and he returned in February for final impressions. Only the implant temporaries broke due to lack of material strength (a shell filled with reline material with an access through the center to screw retain the crowns).

Final Restorations and Follow Up

Dad returned in June 2015 for cementation of his zirconia crowns. Panavia was used in the maxilla where it is easier to isolate the teeth, starting with the centrals and working backwards. Then the mandibular restorations were cemented with Rely X as it would be more forgiving where the tongue and saliva would be a challenge. A new bite guard was made and Dad and I couldn't be happier with the results.

Since that time, the only complication has been the screw retained crowns on implants #13 and 14. There was a material failure of the zirconia bond to the stock metal cylinder for both sites at different times. They have since been remade with longer custom metal cylinders with a better bond.