



The Restorative / Periodontal Interface: Biologic Reshaping (Part 1)

In the last two continuing education events, **Drs. Danny Melker (Periodontist) and Howard Chasolen (Prosthodontist)** reviewed their methodology and protocol for establishing an ideal restorative / periodontal interface using **biologic reshaping**.

This first newsletter will explore critical biologic reshaping and traditional crown lengthening principles with regards to predictable perio-restorative care. A series of case studies will provide an overview of the biologic reshaping concept. Additional newsletters will review other biologic reshaping principles to include diagnosis; restorative cores; tooth provisionals; lab communication; and final restorations.

Traditional Crown Lengthening and Biologic Reshaping Principles

Traditional

*General Concept: More bone recontouring / removal
 Less tooth reduction*

Pros

- Removes bone and tissue apically away from the restorative margin for clean impressions
- In cases with excessive bone at or near the CEJ(s), bone removal will expose more clinical crown structure for improved access, axial retention, and esthetics

Cons

- Deep caries may require excessive bone removal which can worsen the C:R ratio and open up furcations and root concavities
- Furcations, grooves, concavities remain unchanged which can trap plaque and calculus (cause of gingival inflammation)
- Chamfer or shoulder restorative margin placement very important to avoid chronic irritation from biologic width impingement

Biologic Reshaping

*General Concept: Less Bone recontouring / removal
 More tooth reduction*

Pros

- Helps avoid major axial bone recontouring (minimize impact on C:R ratio)
- Eliminates plaque retentive areas like furcations, grooves, and root concavities
- Smooths root surfaces to eliminate plaque retention / accumulation
- Easier impressions and restorative steps
- Feather margins allow for ease of control of restorative margin location

Cons

- Reproducible but technique sensitive
- Requires excellent cores and provisionals
- Requires specific lab communication protocol to ensure ideal crown contours

Biologic Reshaping Case Study



Crowns removed. Prognosis determined. Calculus noted in concavities.



Biologic reshaping smooths the tooth and eliminates the concavities



New final restorations with feather margins to control location of restorative interface with respect to biologic width

Additional Illustrations of Biologic Reshaping Principles

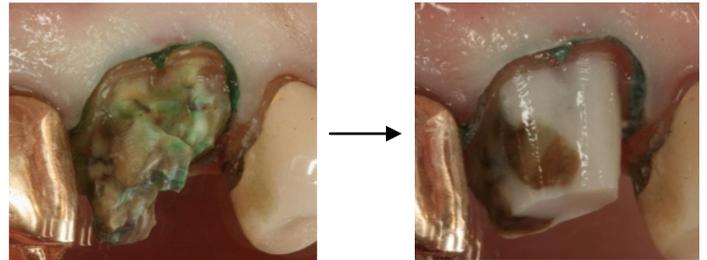
Complete caries removal

- Helps assign prognosis first (by dentist)
- Establishes the apical extent of the caries



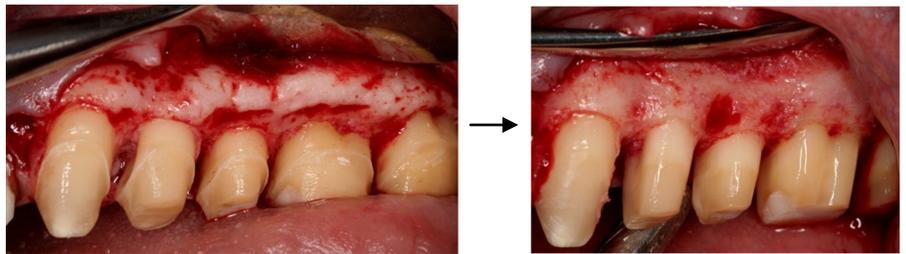
Stable cores

- Broad cores needed for feather margins
- Protects the pulp with a uniform thickness layer of restorative material
- Provides a template for biologic reshaping



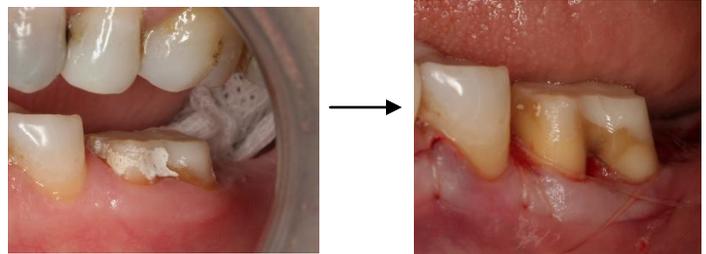
Reshape tooth

- Feather restorative margin
- Eliminate furcations, grooves, concavities



Increase axial retention

- Improve crown stability and retention mechanically
- Establishes more vertical space for more ideal crown emergence profiles



Conclusion

This first newsletter reviews biologic reshaping and crown lengthening principles critical for successful perio-restorative care. The following points review important information about the biologic reshaping protocol:

1. Remove caries and assign the prognosis first. A solid core and provisional will provide a template for the amount of crown lengthening and biologic reshaping.
2. Reshaping creates a feather margin to provide flexibility with the location of the restorative margin(s) relative to the gingival margin(s) (prevents biologic width impingement).
3. The step-by-step protocol can be found in pdf format at our website. **Please feel free to download at** <https://www.northstateperio.com/wp-content/uploads/Dr-Chasolen-North-State-Perio-9-15-17.pdf>

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