

142ND ANNUAL MEETING

INSESSION

WISCONSIN'S LARGEST DENTAL STUDY CLUB



STEPHEN D. POSS, DDS

THURSDAY, MAY 10, 2012

2:00 TO 5:00 PM

ANTERIOR ESTHETIC RESTORATIONS

Co - SPONSORED BY

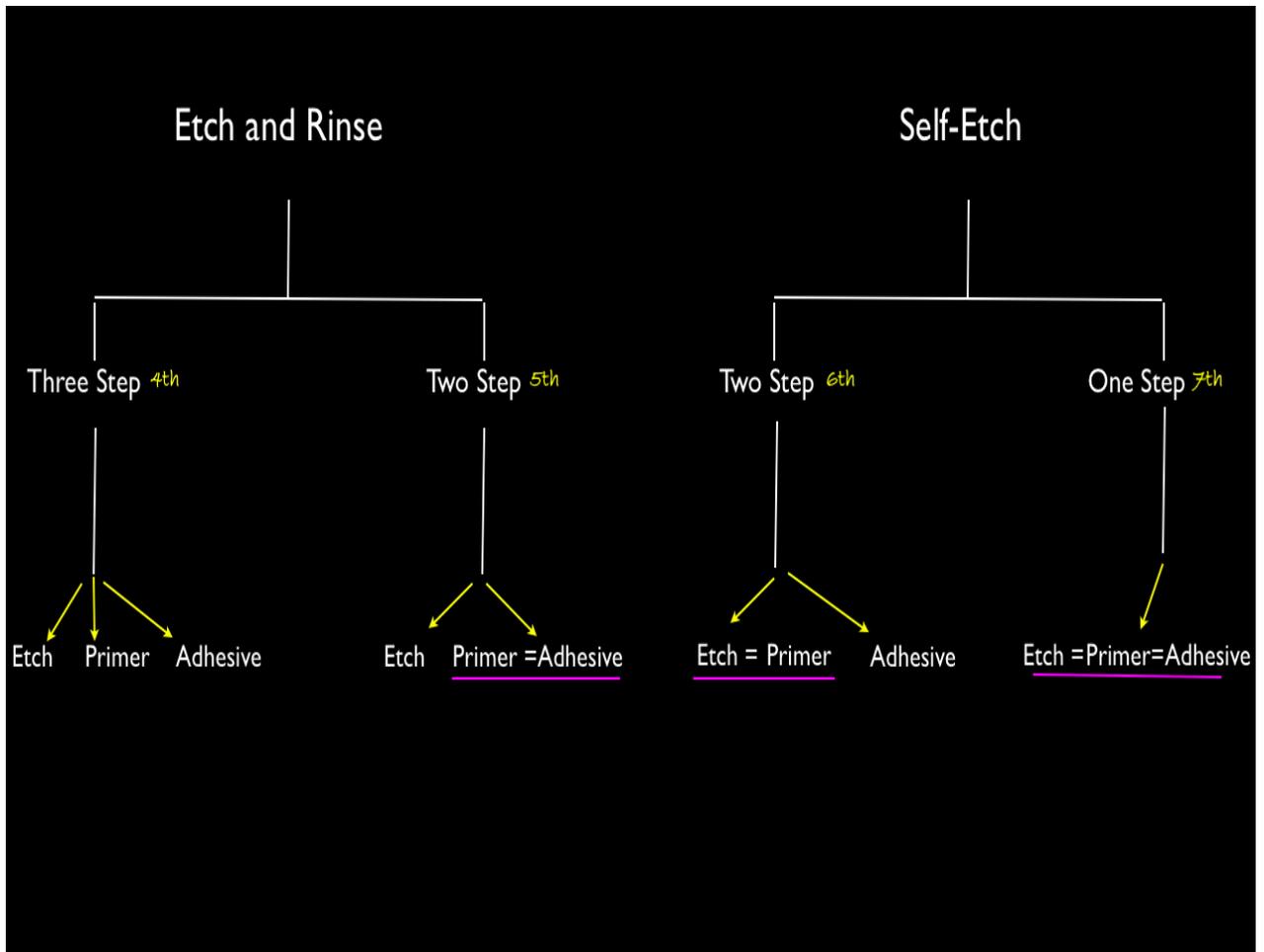
DENTSPLY CAULK

Advanced Aesthetic Restorations

Stephen D. Poss DDS

The following pages contain a summary of information designed to assist you with the armamentarium, preparation, and placement of anterior and posterior aesthetic direct restorations. This will include preparation design, adhesives, and dental materials used to complete these aesthetic restorations.

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Total Etch vs Self Etch

Total -Etch 32-37% phosphoric acid monomer

Total -Etch 32-37% requires rinsing

Total -Etch 32-37% could over etch to

Self Etch acidic

Self Etch acidic no

Self Etch not possible

Self-Etch No sensitivity does not necessarily mean restoration properly done. The application procedures can greatly influence performance more so than total-etch

Self-Etch ability to bond to unground enamel lower than total -etch

Total-etch Chlorhexidine applied as wetting agent can preserve longevity of adhesion

Total Etch Technique

Self-Etch Adhesive Technique

Clean with chlorhexidine 15 seconds and rinse

Clean with chlorhexidine 15 seconds rinse and dry

Place 30%+ phosphoric acid on enamel first and then drop down to the dentin do not leave on dentin more than 15 seconds then rinse

Apply Xeno IV to the prepared enamel/dentin 15 seconds

Optional* place wetting agent now

Reapply air Xeno IV thin, light cure

Apply XP Bond or P&B NT for 20 seconds, air thin, cure

Place Composite

Place Composite

Caution! Adding disinfectant to water supply can decrease bond strength up to 22%

Very important that solvents in bonding agents be evaporated because if not there is the dilution factor

If using air a gentle breeze about 1cm away also evaporate reduces film thickness 5+ seconds

Always shake bottle or unidose before use because separation of components

Total Etch Technique vs Self-Etch Adhesive Technique

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Optional* place wetting agent now

Apply XP Bond or P&B NT for 20 seconds, air thin, cure

Place Composite

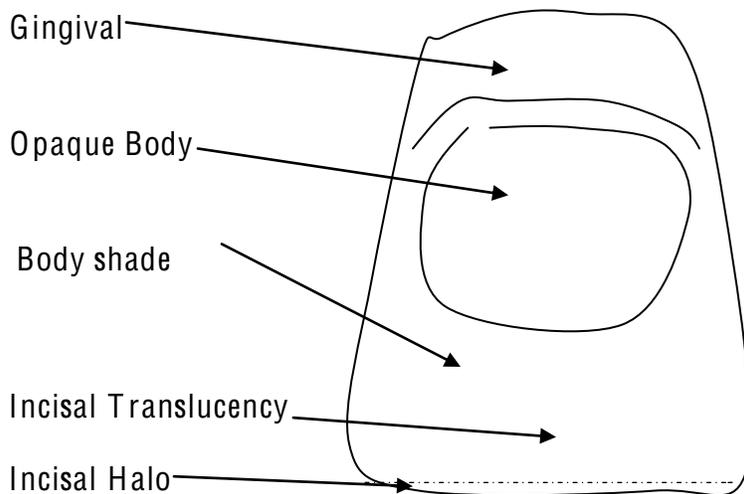
Clean with chlorhexidine 15 seconds rinse and dry

Apply Xeno IV to the prepared enamel/dentin 15 seconds evaporate excess

Reapply a Xeno IV thin, light cure

Place Composite

Anterior Direct Composite



The following are just guide lines to what different shade segments to a tooth:

Gingival: Generally 1-3 shades lower in Value than the incisal. Unless there is decay or doing a full veneer this portion of the tooth is not usually affected.

Opaque Body: This portion is usually in the center of the tooth more in a gingival direction. There is usually replaced in a severe class IV. Clinician should use caution not to place too much of this or the tooth will look too bright. Usually there is a body shade and/or translucency that is layered over this.

Incisal Translucency: Generally younger people have more of this and as you age there is less. If doing a class IV this is determined what the surrounding teeth look like. **Depending on the tooth there could be some body shade in “Lobes” with translucency layer over it.**

Incisal Halo: **In a small percent of the population there is a “halo” this is enhanced by the translucency especially in young people. Tints, or an incisal shade can be used in very small amounts usually encompassed with translucency.**

Keep the above anatomical shades in mind when replacing anterior tooth structure. Also the facial surface anatomy or texture is very important. No matter how perfect of shade match that is done it is critical to match the surface anatomy.

Laboratory Options and Cementation

Pressed Ceramics

- IPS Empress @200MPa+ when bonded in very aesthetic crowns and veneers, inlays and onlays
- Finesse All –low fusing porcelain similar properties as Empress Crowns veneers inlays, onlays
- Preparation: 2mm occlusal .5mm + for veneers/crown on facial

Zirconia

- Cercon 900MPa + Crowns, large bridges can not etch internal aspects of framework Can create entire arches with proper support Best if not more than 2 pontic between abutments
- Lava 900MPa + Crowns, large bridges can not etch internal aspects of framework Can be very esthetic. Up to 6 unit bridges
- ZirPress Pressed ceramics onto zirconia framework Limited size due to pressing

Lithium Disilicate

E.Max

- E Max Pressed @ 400 MPa single crowns, premolar bridges
- E max Cad/Cam @360 MPa mainly single crowns

- OPC lithium disilicate 190-205MPa Crowns veneers anterior bridge work
- Preparation 2mm occlusal .6-.8+mm facial

Laboratory Options and Cementation

Pressed Ceramics/Feldspathic Porcelain?

- Total Etch with Light cure resin cements
- Self-etch adhesives with light cure/dual cure resin cements (***Not recommended***)
- Self-etch adhesive resin luting cements (***Not recommended***)

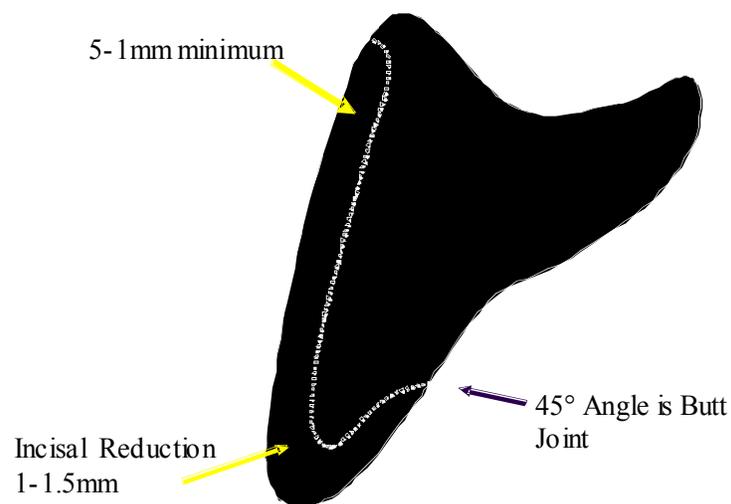
Lithium Disilicate (E-Max)

- Total Etch with Light cure/dual cure resin cements
- Self-etch adhesives with light cure/dual cure resin cements
- Self-etch adhesive luting cements (SmartCem)

Zirconia (Cercon, Lava)

- Total Etch with Light cure/dual cure resin cements
- Self-etch adhesives with light cure/dual cure resin cements
- Self-etch adhesive luting cements (SmartCem)

Typical Veneer Preparation



Preparation Sequence For Veneers

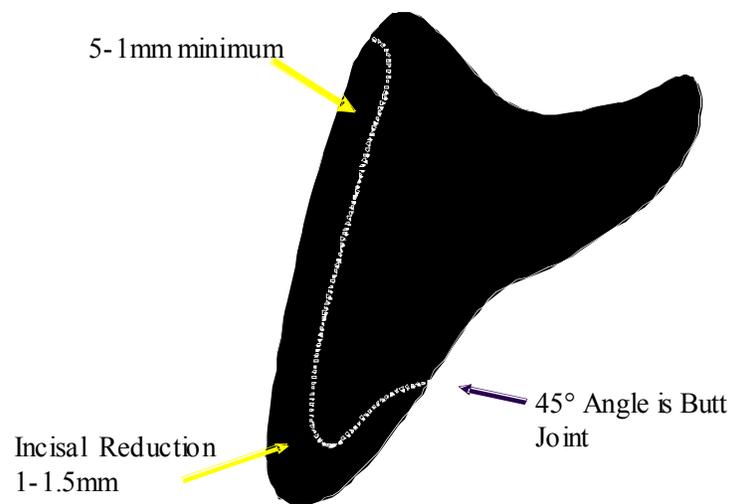
- Determine the shape and shade that patient desires and have a laboratory wax-up, preparation matrix, and template for temporary veneers.
- Round arch first. Take away anything facial or lingual to the ideal arch form
- Place depth cuts
- Prepare teeth, smooth margins and round line angles
- Verify occlusion, clearance and take impression
- Determine stump shade (Photo would be ideal)
- Clean teeth with chlorhexidine air dry then place Glumma and air dry, Do not rinse
- Load laboratory matrix made from the lab with desired Bis-Acrylic material like Integrity place in mouth appropriate time
- Carefully remove matrix while leaving the bis-acrylic in the mouth
- Trim margins with 7901 carbide bur, verify occlusion and polish with composite polishing points and burs
- Place Lasting Touch over temporaries and light cure
- Take impressions and photos of temporaries for the lab

- Call patient in 24-48 hours to confirm shape and phonetics

Sequence For Cementation For Veneers

- Clean teeth with chlorhexidine and rinse
- Etch 2-3 teeth at a time
- Place wetting agent (Optional)
- Place a coat of desired adhesive XP Bond or Prime and Bond NT and evaporate solvent and cure
- Place light cure resin cement only and place luting cement Calibra in veneer in the two central incisors and firmly place on teeth
- Use tacting tip and cure at apical portion for 3-5 seconds
- Place veneers 7,6,5 then 10,11,12, and tact to place
- Carefully floss each veneer and light cure completely
- Using scalers clean off excess cement. Then clean cervical margins with Enhance cups

Typical Veneer Preparation



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