

Porcelain Restorations

Inlays, Onlays & Onlay Veneers

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Presentation
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PORCELAIN INLAYS AND ONLAYS

Patient information

Informed consent

Dental materials

Discuss various options

Benefits of porcelain

- Conservative preparation (tooth conservation)
- Strengthens teeth
- Esthetic

Risks with porcelain

- Breakage
- Bruxers
- Ice chewers

Prep design (creative prep designs)

No undercuts – block out with cavity liner

No sharp angles

Avoid creating long thin prep wall. Flatten incisal cusps to create an onlay in such cases

Check opposing teeth for sharp opposing cusps and plasty to avoid “ice-pick” effect

Check contacts on adjacent teeth and flatten if possible

Sturdy flat proximal floor for teeth with a large proximal space

No narrow isthmuses or bow-tie preps

No reverse curves at proximal line angle (use a thin straight finishing diamond)

Bevels rarely and only in esthetic areas

Cavity liner with glass ionomer cement

Final impressions

Temporization

Preliminary impression (if tooth fractured, fill-in with block-out first)

Use preliminary impression for provisional fabrication with Intregrety

Remove, adjust and polish

Removing provisional's (when necessary, notch for engaging spoon)

Cementation and Cements

Tempbond

Duralon with vasoline

Spot bond (rarely and only when necessary)

Cavit temporary can rarely be used.

Give patient written post operative instructions

Rx

Shade and shade details i.e. block out amalgam stain, opacity, occlusal stain etc.

Include all details or special considerations i.e. idealize occlusion, adj. on opposing

Porcelain restoration

Inspect inlay for adequate thickness or air bubbles

Know information regarding your lab's porcelain conditioning

At seat appt. silane restoration 60 sec., coat with unfilled resin, and air thin extensively

Keep restoration covered to prevent excessive light exposure

Try-in

Use light pressure

Check contact and margins for complete seat

Remove with caution

Keep restoration covered to prevent excessive light exposure

Cementation

Clean and disinfect preparation

Shrink wrap (remove before placing restoration)

Etch (15 sec.)

Rinse thoroughly and lightly dry

Glumma or Microprime G (30 sec.) light air for evaporation (Keep off tissue)

Resin (unfilled, rub on prep for 10 sec., air thin, **do not** cure, remove shrink wrap)

Dual cure cement placed in prep, place restoration (brush excess off towards margins)

Tack cure (apply moderate pressure on occlusal before and while tack curing)

Clean off excess, floss through contacts – use separating saw if necessary

Deox and complete curing

Occlusion

Check occlusal contacts (centric and lateral excursions)

Light occlusal contact

Minimal or no contacts on marginal ridges

Polishing

Do not attempt to adjust margins interproximal (adjustments should be made at try-in)

Use finishing diamonds when necessary

No not over-heat

Polish with porcelain cups, points or discs

Resealing or repairing fractured porcelain with composite

Minimal prep - only to knock off irregular edges

Micro-etch (air abrasion), use caution and protect adjacent areas

Etch porcelain with 9% hydrofluoric acid (60 sec.)

Etch tooth structures with phosphoric acid (15 sec.)

Silane - 60 sec. & air dry

Coat with unfilled resin, air thin and cure

Place flowable resin on margins for resealing or

Place composite resin for porcelain repair (chip or fractured porcelain missing)

Cure

Polish

Replacing a fractured porcelain segment (2 steps)

Step 1

Try in and orient the fractured segment

Remove fractured porcelain segment & Micro-etch (air abrasion)

Etch porcelain with 9% hydrofluoric acid (60 sec.) fractured porcelain segment

Silane – 60 sec. & air dry

Coat with unfilled resin, air thin (DO NOT CURE) and cover in light protected box

Step 2 (see cementation for details)

Micro-etch (air abrasion), use caution and protect adjacent areas

Etch porcelain (9% hydrofluoric acid, 60 sec.), Etch tooth (phosphoric acid, 15 sec.)

Silane porcelain 60 sec. (tooth will become silanated too) air thin

Place wetting agent (glumma or microprime g)30 sec. & air thin

Coat with unfilled resin, air thin and DO NOT CURE

Place dual cure resin into prep, position fractured segment, cure and finish

HOME CARE INSTRUCTIONS FOR YOUR PROVISIONALS

After the preparation of a crown, bridge, inlay, onlay or veneer, a provisional is placed to temporarily keep the area covered. The following instructions should be observed:

1. Rinses with warm salt-water 2 to 3 times a day for several days. The recommended mix is 1 tsp. per 8oz. Of lukewarm water.
2. Do not floss the area or tooth-picks.
3. Continue with cautious brushing in the area treated.
4. Avoid sticky items such as gum, chewy bread, health-bars and sticky cheese.
5. Avoid crunchy items such as nuts and hard candy.
6. It is common for the treated area to be sensitive to cold and pressure for a few days. If there is discomfort, Advil or Tylenol type tablets may be used as directed. You may obtain these at any drugstore.
7. If you feel an increase in discomfort or anything unusual, do not hesitate to call our office.

Our goal is to help you maintain function and comfort while you are wearing your provisionals. These suggestions should aid you and make you more comfortable.

Armamentarium

Inlay and Onlay Preparation

- Genie: Berry heavy body impression material
- Maxima : Bite tray posterior side less (provisional Impression)
- Ultradent : LC block out resin
- Axis : NTL diamonds Bucket, MFG: NO.8 45KR, Size 1/10mm = 025, Length mm = 4.0
- Premier : Stubby flat tip, FG 701.7 coarse
- Tanaka : Big bite diamond cutting instruments burs 1-5
- Ultradent : Sable seek caries indicator
- Ultradent : Astringedent in syringe with metal dento-infusor tip
- Ultradent : Ultrapak retraction cords
- GC : Fuji Lining LC
- Direct Dental : Posterior Tri-bite trays (final impression)
- Dentsply : Integrity temporary material
- 3M ESPE : Protemp plus (temporary material)
- Dentsply : Integrity Temp Grip (temporary cement)
- Dentsply : Enhance finishing system (pogo's)
- Ultradent : Jiffy composite polishing brush

Inlay and Onlay Seat

- George Taub Products and Fusion Co. : Fusion chemical bonding agent (silane)
- Ultradent: Silane

- PFingst : Busch silent stone
- Axis Dental: NTI white pre-polishing – porcelain, MFG.NO. P0301, size 1/10 mm 220
- Brasseler : Ceramipro Dialite extra- oral wheels R17D , size 170 , length mm 2.5
yellow polish (straight hand piece shank)
- Ultradent : Consepsis chlorhexidine antibacterial solution
- Ultradent : ICB brush, intercoronal bristle brushes
- Ultradent: PropGard (mouth prop) and tongue guards
- Ultradent : Ultra-Etch 35% phosphoric acid
- Heraeus : Gluma comfort bond
- Centrix: Microbrush applicators
- Microprime G Danville
- Ultradent : Perma Quick bonding resin
- Ivoclar Vivadent : Dual cement catalyst and base
- Centrix: Bendable brushes
- Ultradent : DeOx oxygen barrier solution
- Horico : Interproximal saw
- E Z contact Serrated dental strip I white
- Brasseler : Diamond Strips extra fine yellow
- Brasseler : ET series USNO. ET6F , cutting length mm 014, head size (1/10 mm)6.0
- Brasseler : Feather edge flame 888, cutting length mm 8.0, head size (1/10 mm)
012 extra fine yellow
- Brasseler : Football cutting length mm 3.5, head size (1/10 mm) 016 extra fine
- Brasseler : Football cutting length 5.0 , head size (1/10 mm) 023 extra fine
- Axis Dental : NTI white pre polishing , MFG. NO. P0355 , Size 1/10mm
- Axis Dental : NTI pink high shine , MFG. NO. P0365 , Size 1/10mm Danville

Producer of Products

- Axis Dental: 1-800-355-5063 www.axisdental.com
- Ultradent : 1-800-552-5512 WWW.ultradent.com
- Premier : 1-888-670-6100 www.Premusa.com
- Tanaka Dental : 1-800-325-5266 www.tanakadentalproducts.com
- Dentsply: 1-800-877-0020 www.dentsply.com
- Direct Dental : 1-800-342-5337 www.directdentalsupply.com
- 3M ESPE : 1-888-364-3577 www.solutions.3m.com
- George Taub Products and Fusion Co. 1-800-828-2634 www.taubdental.com
- Ivoclar Vivadent : 1-800-533-6825 www.ivoclarvivadent.us
- SS White : 1-800-535-2877 www.sswhiteburs.com
- Heraeus : 1-800-431-1785 www.heraeus-dental-us.com
- Horico : www.horico.com
- Brasseler : 1-800-841-4522 www.brasselerusa.com
- PFingst : 1- 908-561-6400 www.pfingstco.com
- Danville 1-800-827-7940 www.danvillematerials.com
- EZ Contact 1-360-694-1000 www.contactEZ.com
- GC America: 1-800-323-7063 www.gcamerica.com