

Pediatric Restorations

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Restoring the Primary Teeth

- When choosing a restorative procedure and material for the primary teeth, consider:
 - Patient's age
 - Caries risk
 - Child's ability to cooperate
 - Characteristics of different materials

Choice of Material

- Vast array of materials available
- What is the best available option for each clinical situation
- What material will provide the characteristics you want
- What technique can be completed successfully with minimal psychological trauma to the child

Age

- What can the child handle?
 - Rubber dam
 - Local anesthetic
 - Length of attention span
- How long will the restoration need to last

Caries Risk

- Number of carious teeth
- Size of lesions
- Likelihood of further acid attack
- Need for caries control first?
- Fluoride-releasing materials desired?
- Motivation and compliance of patient and caregiver
- Oral hygiene
- Diet

Cooperation of Child

- Nature of child's behavior
- Highly technique-sensitive procedures may be inappropriate in children whose behavior is not conducive
- Consideration of caries control procedures (Interim Therapeutic Restorations or fluoride varnish clinics)

Restorative Materials Used in Pediatric Dentistry

- Amalgam
- Stainless Steel Crowns
- Composite Resins
- Glass Ionomer Cements
- Resin-Modified Glass Ionomer Cements
- Nano-Ionomers

Amalgam

- Durable
- Economic
- Quick
- Simple
- Not technique sensitive

Amalgam

- Not adhesive
- Frequently need local anesthetic
- Need for mechanical retention
- Environmental/occupational hazard
- Relatively high Class II failure rate in primary teeth
- Poor aesthetics

Uses for Amalgams in Primary Teeth

- Class I preparations with mechanical retention
- Stainless Steel Crown repairs
- Undesirable environment
- When complete removal of decay is possible



Stainless Steel Crowns

- Most reliable and durable
- Protection and support for remaining tooth structure
- Best for endodontically-treated teeth
- Minimal leakage
- Rarely needs redo if done correctly
- Can be the only option for severely decayed teeth

Stainless Steel Crowns

- Need local anesthesia
- Longer procedure
- Need some degree of patient cooperation
- Not aesthetic

Uses for Stainless Steel Crowns in Primary Teeth

- Large caries/high risk
- Likelihood of future acid attack is great
- On teeth that have received pulp therapy
- Some degree of patient cooperation for local anesthesia and longer procedure
- Lack of dental support for any other material
- In anterior if gingival health isn't compromised









Resin-Based Composites

- Adhesive
- Aesthetic
- Reasonable wear properties
- Light cure
- Flowable vs. filled

Resin-Based Composites

- Technique sensitive
- Expensive
- Good isolation necessary
- Can be brittle
- Polymerization shrinkage with curing

Uses of Resin-Based Composites in Primary Teeth

- When esthetics are high priority
- When there is enough remaining, decay-free tooth to support it
- Fluoride release isn't an important factor
- Fairly good patient cooperation
- In non-fracture locations













Glass Ionomer Cements

- Adhesive
- Aesthetics have improved greatly
- Fluoride leaching
- Fluoride recharge
- Coefficient of thermal expansion similar to dentin
- Virtually no polymerization shrinkage
- Perfect for ITRs

Glass Ionomer Cements

- Not light cured
- Brittle
- High rate of occlusal wear

Uses for Glass Ionomers in Primary Teeth

- Caries control procedures (ITRs)
- When fluoride release is high priority
- When esthetics aren't major issue
- Very young/uncooperative children







Resin-Modified Glass Ionomers

- Glass ionomer and resin
- Adhesive
- More aesthetic than plain GI
- Light cure
- Simple, quick technique
- Better wear properties than traditional glass ionomers
- Some polymerization shrinkage







Nano-Ionomers

- Latest generation of resin-modified glass ionomer
- Improved aesthetics and polishability
- High fluoride release
- Easy and quick
- Increased resistance to wear (higher filler content)
- Light cure

Helpful Hints

- Start em' young
- Seal ASAP
- Consider Fluoride Varnish Clinics
- Caries control in young, pre-cooperative children
- Shorter appointments
- Easy to hard

Helpful Hints

- Don't use local anesthetic if you don't have to
- Know your materials
- Dial down the anxiety
- Know when to refer
- Educate at each appointment