

Single Tooth Direct Restorations

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[➔ Instructions for Use](#)

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Related Dental Policies

- [Core Buildup, Post and Core, and Pin Retention](#)
- [Non-Surgical Endodontics](#)

Coverage Rationale

Direct Restorations

Direct Restorations are indicated for the following:

- To replace tooth structure lost to caries or trauma
- To replace restorative material lost in the course of accessing pulp chamber for endodontic therapy
- To replace existing restorations that exhibit recurrent decay, fracture, or marginal defects

In addition to the above, **Glass Ionomer** restorations are indicated for the following:

- When teeth cannot be isolated properly to allow placement of resin restorations
- As an alternative to resin sealants when the teeth cannot be properly isolated (patient cooperation, partially erupted teeth)
- [Class I, II, III, and V](#) restorations on primary teeth
- Class III and V restorations on permanent teeth that cannot be isolated in high-risk patients
- As a caries control plan for high-risk patients using atraumatic techniques

Direct Restorations are not indicated for the following:

- Teeth with a hopeless prognosis ([McGuire's Classification](#))
- Incipient (enamel only) lesions
- Primary teeth that are near exfoliation or less than 50% of the tooth root remains
- Composite resin restorations are not indicated for patients with heavy bruxism
- Composite resin restorations are not indicated for patients with extensive active caries, or high caries risk
- [Amalgam](#) restorations are not indicated for placement on teeth in which they will have contact with gold restorations

Interim Direct Restoration

An interim Direct Restoration is indicated for the following:

- To relieve pain
- To promote healing
- To prevent further deterioration
- To retain tissue form
- During the disease control phase of treatment

An interim Direct Restoration is not indicated for the following:

- As a liner or base for a definitive restoration
- For endodontic access closure

- For pulp capping
- As a definitive restoration

Resin Infiltration of Incipient Smooth Surface Lesions

[Resin Infiltration](#) of incipient smooth surface lesions is considered cosmetic and not indicated.

Definitions

Amalgam: An alloy used in direct dental restorations. It is typically composed of mercury, silver, tin, and copper along with other metallic elements added to improve physical and mechanical properties. (ADA)

Composite: A dental restorative material made up of disparate or separate parts (e.g., resin and quartz particles). (ADA)

Direct Restoration: A restoration fabricated inside the mouth. (ADA)

Glass Ionomer: Polyelectrolyte cement in which the solid powder phase is a fluoride-containing aluminosilicate glass powder to be mixed with polymeric carboxylic acid. The cement can be used to restore teeth, fill pits and fissures, lute, and line cavities. It is also known as glass polyalkenoate cement, ionic polymer cement, polyelectrolyte cement. (ADA)

G.V. Black's Classification of Dental Caries and Restorations (Boushell, Roberson, Walter, 2013):

- Class I: All pit-and-fissure preparations, these include preparations on occlusal surfaces of premolars and molars, occlusal two-thirds of the facial and lingual surfaces of molars, and the lingual surfaces of maxillary incisors.
- Class II: Preparations involving the proximal surfaces of posterior teeth.
- Class III: Preparations involving the proximal surfaces of anterior teeth that do not include the incisal angle.
- Class IV: Preparations involving the proximal surfaces of anterior teeth that include the incisal edge.
- Class V: Preparations on the gingival third of the facial or lingual surfaces of all teeth.
- Class VI: Preparations on the incisal edges of anterior teeth or the occlusal cusp tips of posterior teeth.

McGuire Classification of Tooth Prognosis (Levi, 2016):

- Good: Teeth with adequate periodontal support where the etiologic factors can be controlled, including systemic factors.
- Fair: No more than 25% attachment loss with Grade 1 furcation invasion which can be maintained. Plaque control and systemic factors can be maintained.
- Poor: As much as 50% bone loss with Grade II furcation invasions, poor crown: root ratio; mobility greater than Miller Class I; systemic factors; poor patient participation in treatment.
- Questionable: Teeth with greater than 50% attachment loss; Grade II or III furcation involvements; the tooth is not easily maintained either with professional hygiene or by the patient.
- Hopeless: Inadequate attachment loss to support the tooth; Class III or IV furcation involvement; Miller Class III mobility; the tooth cannot be maintained with adequate plaque control by the clinician or by the patient.

Resin Infiltration: Application of a resin material engineered to penetrate and fill the sub-surface pore system of an incipient caries lesion to strengthen, stabilize, and limit the lesion's progression, as well as mask visible white spots. (ADA)

Therapeutic: Of or pertaining to therapy or treatment; beneficial. Therapy has as its goal the elimination or control of a disease or other abnormal state. (ADA)

Applicable Codes

The following list(s) of procedure and/or diagnosis codes is provided for reference purposes only and may not be all inclusive. Listing of a code in this guideline does not imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by the member specific benefit plan document and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment. Other Policies and Guidelines may apply.

CDT Code	Description
D2140	Amalgam – one surface, primary or permanent
D2150	Amalgam – two surface, primary or permanent

CDT Code	Description
D2160	Amalgam – three surface, primary or permanent
D2161	Amalgam – four or more surfaces, primary or permanent
D2330	Resin-based composite – one surface, anterior
D2331	Resin-based composite – two surface, anterior
D2332	Resin-based composite – three surface, anterior
D2335	Resin-based composite - four or more surfaces (anterior)
D2390	Resin-based composite crown, anterior
D2391	Resin-based composite – one surface, posterior
D2392	Resin-based composite – two surface, posterior
D2393	Resin-based composite – three surface, posterior
D2394	Resin-based composite – four or more surfaces, posterior
D2410	Gold foil – one surface
D2420	Gold foil – two surface
D2430	Gold foil – three surface
D2940	Placement of interim direct restoration
D2990	Resin infiltration of incipient smooth surface lesions
D2999	Unspecified restorative procedure, by report

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Description of Services

Direct Restoration procedures are the placement of restorative material directly into the defective, injured, or diseased tooth to re-establish normal form and function. Tooth preparation, all liners or bases, etching, and curing, as well as occlusal adjustments are inclusive. Preventive resin restorations are a conservative approach to restore a tooth that has active caries in pits and fissures that has not extended into the dentin. Interim Direct Restorations are placed to relieve pain, prevent further deterioration, and promote healing. They are not considered a permanent restoration. These types of restorations are used to stabilize a tooth or teeth until definitive treatment can be completed.

Resin Infiltration of smooth surface incipient lesions and discoloration caused by orthodontics, fluorosis, or trauma refers to a proprietary product called Icon Smooth Surface (DMG America, Ridge Park, NJ), which is a microinvasive treatment that fills, reinforces, and stabilizes demineralized enamel up to the first third of dentin. The product perfuses the porous enamel with resin arresting lesion progression by occluding the microporosities. These discolorations are typically considered cosmetic in nature (Manoharan et al., 2019).

Pursuant to CA AB2585: While not common in dentistry, nonpharmacological pain management strategies should be encouraged if appropriate.

Clinical Evidence

Resin Infiltration of Smooth Surface Incipient Lesions

In a 2020 systematic review and meta-analysis, Bakdach et. al reviewed the current evidence on the management of orthodontically induced white spot lesions (OIWSLs). Thirteen publications were included. The interventions reported in the management of OIWSLs were topical fluorides, casein phosphopeptide-amorphous calcium phosphate (CPP-ACP)-containing products, fluoride containing bonding materials, laser therapy, resin infiltration, and micro-abrasion. The methodological quality of the reviews ranged between moderate and critically low. The results showed that casein phosphopeptide-amorphous calcium phosphate (CPP-ACP)-containing products were effective in preventing and reversing these lesions, and there was a lack of reliable evidence for the efficacy of resin infiltration.

Gözetici et al. (2019) conducted a randomized controlled trial to compare the therapeutic effects of the resin infiltration technique, self-assembling peptide (P11-4), and fluoride varnish application on white spot lesions (WSLs) on buccal surfaces based on LF pen measurements and LAA-ICDAS scores. The lesions of 113 patients from a total of 319 patients with at least four visible WSL on buccal surfaces were assessed by LAA-ICDAS and laser fluorescence (LF pen). To be included in the study, participants were required to have at least 4 buccal WLSs, each in different quadrants, with an LF

pen score ≥ 8 . Twenty-one patients were included in the study based on the laser fluorescence values. The lesions were randomly assigned into 4 groups: IG (Icon), CRG (Curodont Repair), DG (Duraphat), and CG (control) groups. The treatment protocols were applied, but the control group received no treatment except regular brushing. Lesions were scored by LAA-ICDAS after 3 and 6 months and LF pen after 1 week, 3 and 6 months. The results showed a statistically significant decrease in LF pen measurements of the control and the intervention groups after 6 months when compared to baseline. The greatest lesion regression was observed with IG, which differed statistically significantly from CRG, DG and CG, followed by DG which differed statistically significantly from CG. Statistically significant differences were observed in the activity status of the lesions between baseline and 6 months, except for the control group. The authors concluded that in this study, the lesion regression rates shown by mean LF pen values in all groups after six months encourages the management of non-cavitated smooth surface caries lesions with non-operative treatment approaches. Regular brushing and professional tooth cleaning seem to be effective for the management of WSLs on buccal surfaces, and resin infiltration or fluoride varnish might enhance the improvement of these lesions in moderate- to high-caries-risk individuals.

Clinical Practice Guidelines

American Dental Association (ADA)

In 2023, an expert panel convened by the ADA Council on Scientific Affairs together with the ADA Science and Research Institute's program for Clinical and Translational Research conducted a systematic review and developed the following recommendations for the treatment of moderate and advanced cavitated caries lesions in patients with vital, nonendodontically treated primary and permanent teeth:

- Direct restorative materials for primary teeth:
 - For moderate and advance caries lesions on vital anterior primary teeth requiring a Class III (approximal) restoration, the guideline panel suggests the use of either nanocomposite or hybrid resin composite (conditional recommendation, very low certainty).
 - For moderate and advance caries lesions on vital anterior primary teeth requiring a Class V (cervical third of facial or lingual) restoration, the guideline panel suggests the use of either conventional GIC, hybrid RC, or resin-modified GIC (conditional recommendation, very low certainty).
 - For moderate and advanced caries lesions on vital posterior primary teeth requiring a Class I (pit and fissure) restoration, the guideline panel suggests prioritizing the use of resin-modified GIC, RCs, conventional GIC, or preformed crowns over compomer or dental amalgam (conditional recommendation, very low certainty).
 - For moderate and advanced caries lesions on vital posterior primary teeth requiring a Class II (approximal) restoration, the guideline panel suggests prioritizing the use of resin-modified GIC, RCs, or preformed crowns over compomer, conventional GIC, or dental amalgam (conditional recommendation, very low certainty).
 - For moderate and advanced caries lesions on vital posterior primary teeth requiring a Class V (cervical third of facial or lingual) restoration, the guideline panel suggests the use of either conventional GIC, hybrid RC, or resin-modified GIC (conditional recommendation, very low certainty).
- Direct restorative materials for permanent teeth:
 - For moderate and advanced caries lesions on vital anterior permanent teeth requiring a Class I (lingual pit and fissure) restoration, the guideline panel suggests the use of either conventional GIC, hybrid RC, or resin-modified GIC (conditional recommendation, very low certainty).
 - For moderate and advanced caries lesions on vital anterior permanent teeth requiring a Class III (approximal) restoration, the guideline panel suggests the use of either nanocomposite or hybrid RC (conditional recommendation, very low certainty).
 - For moderate and advanced caries lesions on vital posterior primary teeth requiring a Class I (pit and fissure) restoration, the guideline panel suggests prioritizing the use of resin-modified GIC, RCs, conventional GIC, or preformed crowns over compomer or dental amalgam (conditional recommendation, very low certainty).
 - For moderate and advanced caries lesions on vital posterior primary teeth requiring a Class II (approximal) restoration, the guideline panel suggests prioritizing the use of resin-modified GIC, RCs, or preformed crowns over compomer, conventional GIC, or dental amalgam (conditional recommendation, very low certainty).
 - For moderate and advanced caries lesions on vital posterior primary teeth requiring a Class V (cervical third of facial or lingual) restoration, the guideline panel suggests the use of either conventional GIC, hybrid RC, or resin-modified GIC (conditional recommendation, very low certainty) (Dahr et al., 2023).
- Definition of certainty of evidence:
 - Very low: Very little confidence in the effect estimate; the true effect is likely to be substantially different from the estimate of effect.
- Definition of conditional recommendations:
 - For patients: Most patients in this situation would want the suggested course of action, but many would not.
 - For clinicians: Recognize that different choices will be appropriate for individual patients and that clinicians must help each patient arrive at a management decision consistent with values and preferences. Decision aids may be useful in helping patients making such decisions.

Furthermore, the ADA supports the FDA recommendations regarding high-risk groups for dental amalgam as good practice.

American Academy of Pediatric Dentistry

In the clinical guidelines for pediatric restorative dentistry, the AAPD makes the following recommendations:

- Prior to any restorations, the estimated time to exfoliation must be considered.
- Management of dental caries should include identification of an individual's risk for caries progression understanding of the disease process for that individual, and active surveillance to assess disease progression and intervention with appropriate preventive services, supplemented by restorative therapy when indicated.
- Resin infiltration is indicated as an adjunct to preventive measures for primary and permanent teeth with small, noncavitated interproximal caries lesions to reduce lesion progression and for white-spot lesions to improve their clinical appearance.

U.S. Food and Drug Administration (FDA)

This section is to be used for informational purposes only. FDA approval alone is not a basis for coverage.

On September 24, 2020 the FDA issued recommendations for certain high-risk groups regarding dental amalgam. These groups may be at higher risk of potential harmful health effects from mercury vapor and should avoid amalgam when possible and appropriate. These higher risk groups include:

- Pregnant women and their developing fetuses
- Women who are planning to become pregnant
- Nursing women and their newborns and infants
- Children, especially those younger than six years of age
- People with pre-existing neurological disease such as multiple sclerosis, Alzheimer's disease, or Parkinson's disease
- People with impaired kidney function
- People with known heightened sensitivity (allergy) to mercury or other components of dental amalgam

Refer to the following website for further information: <https://www.fda.gov/news-events/press-announcements/fda-issues-recommendations-certain-high-risk-groups-regarding-mercury-containing-dental-amalgam>. (Accessed March 2, 2026).

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Policy History/Revision Information

Date	Summary of Changes
05/01/2026	<ul style="list-style-type: none"><li data-bbox="337 369 971 401">• Routine review; no change to coverage guidelines<li data-bbox="337 401 911 432">• Archived previous policy version DCP023.14

Instructions for Use

This Dental Clinical Policy provides assistance in interpreting UnitedHealthcare standard and Medicare Advantage dental plans. When deciding coverage, the member specific benefit plan document must be referenced as the terms of the member specific benefit plan may differ from the standard dental plan. In the event of a conflict, the member specific benefit plan document governs. Before using this policy, check the member specific benefit plan document and any applicable federal or state mandates. UnitedHealthcare reserves the right to modify its Policies and Guidelines as necessary. This Dental Clinical Policy is provided for informational purposes. It does not constitute medical advice.