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## Direct composite restorations

### Extended use in anterior and posterior situations

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With the use of contemporary restorative techniques, it is possible to restore teeth with direct composite restorative systems, with good functional and esthetic outcomes, and in ways which save tooth structure. Indications for the use of direct composite systems vary according to specific circumstances, but have expanded enormously in recent years. Specific indications include:

#### A) Restoration of tooth structure and contour

1. Minimally invasive restorations in the restoration of intracoronal defects, replacing diseased and otherwise damaged tooth structure. Such restorations are an alternative to conventional restorations and may be considered to include restorations restoring moderate-sized defects involving one or more tooth surfaces.
2. Tooth structure saving restorations in teeth including larger defects. These restorations may be considered an alternative to indirect restorations, including onlays and partial crowns.
3. Repairs to existing restorations with limited defects as an alternative to much more invasive restoration replacement techniques.

DGZ = German Scientific Association for Operative Dentistry  
EFCD = European Federation of Conservative Dentistry

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#### B) Changes to tooth form and enhancement of esthetics

1. Shape-changing restorations to enhance function, esthetics, and oral hygiene as an alternative to indirect restorations, including veneers and crowns
2. Space closure restorations to close or at least reduce diastema
3. Stabilization restorations, including splints and restorations to facilitate retention and occlusal stability, as an alternative or adjunct to orthodontic, prosthodontics, functional, and periodontal interventions

These forms of restoration, unlike alternative forms of indirect restorations, typically involve little, if any, removal of tooth tissue—preparation being limited to surface treatments to promote resin bonding.

#### C) Combination restorations

Restorations which simultaneously restore lost tooth tissue and effect change to tooth form and esthetics. In many countries remuneration systems for restorative dentistry continue to focus on the use of traditional materials and techniques, recognizing only part of the spectrum of treatment options possible with direct adhesive restorations. The widely accepted features of modern direct composite restoration techniques not fully exploited by existing remuneration systems include:

- The extent to which tooth tissue may be saved by the use of modern preparation and surface treatment techniques
- The efficacy and expanding range of multi-adhesive procedures in bonding to enamel and dentin and, where indicated, existing restorations, both metallic and nonmetallic
- The versatility and scope of application of new and emerging composite resin systems, providing oppor-

tunity to adopt minimally invasive techniques in the treatment of patients of all ages

- The development of new types of restorations which achieve many different outcomes, including reshaping, widening, lengthening, and improvements in esthetics, function, and oral hygiene, in addition to the restoration of lost tooth tissue

To date, remuneration systems have reflected a traditional approach to restorative dentistry—cavity preparation and restoration with conventional filling materials. In moving to fund a modern approach to restorative dentistry, with its many added benefits and increased

probability of giving patients teeth for life, fees must reflect the high cost of new materials, instrumentation, and related devices and, above all else, the increased time required to place state of the art restorations.

The evidence base for the application and benefits of direct composite restorations in terms of preserving teeth and meeting patients' expectations is considerable. While it is accepted that further long-term findings are required, in particular for newer techniques, it is considered that more than sufficient evidence exists to demonstrate advantages and cost benefits through the expanded use of direct composite restorations in both anterior and posterior situations.

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