

## 3M<sup>SM</sup> Health Care Academy

# Amalgam replacement using a new bulk fill restorative with increased opacity.

by Dr. Giuseppe Marchetti

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Every day, patients present to the dental office in need of posterior restorations. Each clinical case requires a decision whether a direct or indirect approach is best suited. Support for making the right decision is offered by StyleItaliano™. According to the group, minimally invasive direct techniques are preferred whenever possible.

In this case, follow a step by step guide which details an efficient procedure using a new bulk fill restorative to create a favourable aesthetic result.

Day in, day out, patients present in dental offices with the need for restorative treatment in the posterior region. Every time, we have to decide whether a direct or indirect treatment approach is best suited for the specific case. Support for making the right decision is offered by StyleItaliano. According to the group, minimally invasive direct techniques should be preferred whenever possible. Thus, there is no indication for inlays, while overlays should be chosen instead of crowns in cases with severely decayed tooth structure (e.g. following endodontic treatment).

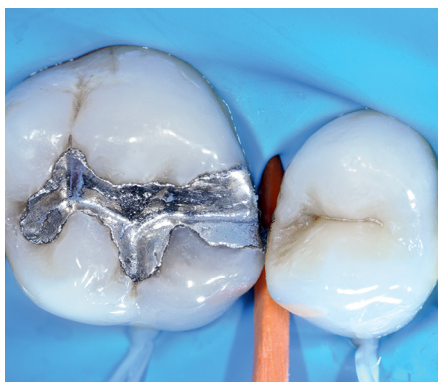


**Figure 1:** Initial situation: First molar with insufficient amalgam restoration and pre-molar with primary caries lesion.

Direct composite restorations are not only preferred due to maximum preservation of healthy tooth structure, they also show a high clinical success over time, provided that the basic rules including proper isolation of the working field and correct use of adhesive techniques, are respected during treatment. In addition, innovative restorative materials like bulk fill composites enable the dental practitioner to adopt an efficient procedure.

## Efficient procedure, aesthetic results

With the most recent innovation, 3M™ Filtek™ One Bulk Fill Restorative, even the aesthetic impairment caused by a higher material translucency is a thing of the past. A true sample of this enhancement is shown in the following clinical case. The maxillary right first molar of this patient was restored with an insufficient amalgam restoration that had to be replaced, while the adjacent premolar showed a primary carious lesion needing treatment.



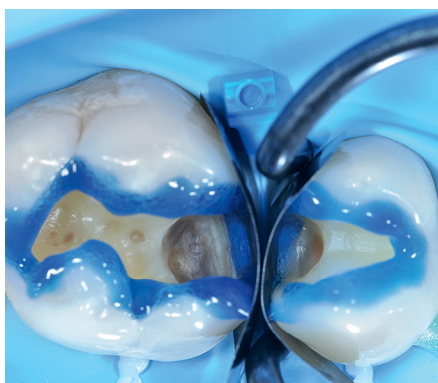
**Figure 2:** Placement of rubber dam and separation of teeth with a wedge for easier preparation access.



**Figure 3:** Final preparation after complete removal of the amalgam restoration and caries.



**Figure 4:** Adaptation of a sectional matrix.



**Figure 5:** Selective enamel etching using 3M™ Scotchbond™ Universal Etchant for 15 seconds.



**Figure 6:** Application of 3M™ Scotchbond™ Universal Adhesive. It is rubbed in for 20 seconds, air-dried until the solvent has evaporated and light cured for 10 seconds.



**Figure 7:** Direct application of 3M™ Filtek™ One Bulk Fill Restorative in the shade A2 into the cavity. As the material may be placed in layers of up to 5mm thickness, one increment is sufficient to fill the cavity.



**Figure 8:** Restoration directly after light curing from the occlusal, buccal and lingual surfaces for a minimum of 10 seconds each with the 3M™ Elipar™ DeepCure-S LED Curing Light.



**Figure 9:** Polishing with the 3M™ Sof-Lex™ Diamond Polishing System. It works very well on moist surfaces and does not need paste to obtain a natural gloss.



**Figure 10:** Final occlusal check. The bulk fill restorative has a tooth-like opacity and colour.





**Figure 11:** Final restoration at a check-up visit. Smooth and high-gloss restoration surface for a natural aesthetic appearance. Different from other bulk fill materials, the discoloured underlying tooth structure does not shine through.

## Conclusion

This case shows that, if a dental practitioner follows some simple rules and protocols and selects high-quality materials it is easy to obtain brilliant treatment results in terms of aesthetics and function. This is what StyleItaliano refers to as feasible, teachable and repeatable dentistry.



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Dr. Giuseppe teaches the degree course in Dentistry and Masters Degree in endodontics and Restorative Dentistry, at the University of Siena. He also teaches at the Faculty of Medicine, Master of Science in Dentistry at the “Université the Méditerranée” in Marseille (France).

He is an active member of StyleItaliano Group, IAED (Italian Academy Of Aesthetic Dentistry) and IAC (Italian Academy Of Conservative) and is a specialist of restorative and prosthetic, with a special interest in aesthetic dentistry.

He is the author of publications on the subject of restorative dentistry and his techniques are studied and appreciated in Italy and internationally.

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