

Photopolymerization: Management and performance

Photocuring dental composites are the most used restorative materials. Several studies demonstrated the importance of an adequate degree of conversion and depth of cure on the performance of composite restorations, as they affect the mechanical properties of the material. The degree of conversion and depth of cure are influenced by many factors, such as the composite formulation and the photocuring light.

The major issue of photopolymerization is represented by the volumetric contraction and subsequent stress developing during the conversion reaction, which is transferred to the dental substrate and may cause enamel fractures or the failure of the adhesive interface.

This presentation will describe the photopolymerization techniques, the types of curing lights and their application and will analyse the causes of stress, its clinical implications and the procedures that the clinician can apply to guarantee the clinical success of the adhesive restorations.



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