Title: self healing composites
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Abstract: Despite numerous preventive oral health strategies, dental caries remains a significant oral health problem. Although dental amalgam is still considered a cost effective material, use of composite resins has grown significantly as a material of choice for replacing amalgam as a restorative material for posterior restorations. Modern composite resins have not yet achieved the level of mechanical properties found in dental amalgam. This has led to shorter clinical service and narrower clinical indications for composite resin materials compared to amalgam. The most frequently cited reason for restoration replacement is recurrent decay around or adjacent to an existing restoration. It is likely that fracture at the margin can lead to a clinical environment at the interface between a restoration and the tooth that collects dental plaque and thus promotes decay. Therefore, improving the fracture resistance of a dental restorative might not only reduce failures due to fracture but also recurrent caries as well. Numerous strategies have been used in the drive to develop resin based materials with greater mechanical properties and thus better resistance to fracture failure. The early efforts of self healing concentrated on structural composites. In this article, we reviewed the efficacy of these new composites in modern dentistry.

self healing composites, fracture resistance
Presentation: Poster