

## Dental Sealants: Plastic Coatings Placed on the Chewing Surface of the Permanent Back Teeth

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### INTRODUCTION

Dental sealants, often known as pit and fissure sealants or just fissure sealants, are a preventative dental procedure. On the biting surfaces of teeth, there are recesses; back teeth have fissures (grooves), while certain front teeth have coagulum pits. Because food and germs stick in these pits and cracks and because they are difficult to clean, they are the most sensitive to tooth decay [1]. Dental sealants are compounds that are placed in these pits and fissures to fill them in and provide a smooth, easy-to-clean surface. Dental sealants are typically applied as soon as the adult molar teeth emerge in children who are at a higher risk of tooth decay. Dental caries occurs when the balance between mineral loss and growth on a tooth surface is disrupted. Minerals are lost from the teeth due to bacteria in the mouth digesting foods and making acids, whereas the tooth obtains minerals from our saliva and fluoride present in the mouth [2].

### DESCRIPTION

Dental sealants are a preventive procedure that falls under the minimal intervention dentistry. These sealants are a plastic material that is placed in the pits and fissures of molar and premolar teeth in the rear of the mouth, whether they are primary (baby) or permanent (adult). Because of the architecture of the chewing surfaces of these teeth, which prevents protection from saliva and fluoride and instead favors plaque formation, these molar teeth are regarded the most susceptible teeth to dental caries. This method permits preventive and early intervention in order to halt or halt the progression of dental caries before it reaches the final stage of the disease, commonly known as a "hole" or cavitation of a tooth [3].

The specific procedure is determined on the material used, and a proper application technique will improve retention, allowing sealants to persist longer on the teeth. In general, each quadrant is treated separately with a four-handed method and the manufacturer's guidelines in mind. To protect themselves from chemicals and the curing light, the patient should wear safety glasses. After the patient has been prepared, the tooth's surface must be cleansed to allow the etch and dental sealant to make

the most contact with the enamel surface. A rubber dam can be used to keep saliva from contaminating the area that needs to be sealed, but this isn't always done, especially with younger children. Resin-based sealants have more difficult time controlling moisture than glass-monomer sealants. The area has been cleansed and dried [4].

Resin sealants require a phosphoric acid solution (etch) to produce microscopic porosity into which the sealant material can flow, enhancing retention, surface area, and the strength of the sealant to tooth surface connection. Depending on the product, the etching time can range from 15 to 60 seconds. The tooth must then be properly cleaned and dried for 15 to 20 seconds. The presence of a chalky look on the dried tooth indicates that it has been adequately etched. The etching process must be repeated if the tooth does not have this chalky appearance. Using a disposable device given by the manufacturer, the sealant is next applied to the tooth by carefully inserting the sealant material into the created pits and fissures. To keep occlusal adjustment to a minimum, avoid overfilling the tooth. Prior to curing, the material is left for 10 seconds after insertion to allow the sealant material to penetrate fully into the pores generated by the etching technique. Finally, a curing light is used to solidify the sealant, which normally takes 20 to 30 seconds. Although glass monomer does not require light curing, it will cure faster if you use a curing light. As resin-based sealants require a perfectly dry surface until polymerization is complete, salivary contamination of the sealant location is critical.

### CONCLUSION

Fissures and pits caries-prevention sealants are utilized as effective controls. Sealants form a barrier that keeps biofilm from adhering to the occlusal surface. When compared to a traditional dental filling, which may entail a local anaesthetic injection and the use of a dental drill, the application of dental sealants is far less invasive and is generally regarded quick and painless. The surgery is completely painless, though the patient may suffer some little discomfort.

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