

# Reducing the risk of cavities with sealants



All teeth have a coating of bacteria on them. It is called plaque. When this plaque comes in contact with sugars in foods or drinks, it produces acid that can break down the tooth and cause cavities.

## DEVELOPING CAVITIES

Cavities can develop as soon as the first tooth breaks through the gums. One study found that almost 1 of 4 teeth in children 2 to 5 years of age had treated or untreated cavities. As children got older, the number of cavities doubled.<sup>1</sup>

Many of the older children in this study had their permanent molars, the big teeth in the back of the mouth. These teeth develop most of the cavities. These teeth are at higher risk of cavities because the chewing surfaces are not smooth. These surfaces have deep pits and grooves that can trap food and plaque, creating a space for cavities to develop.

## PREVENTING CAVITIES

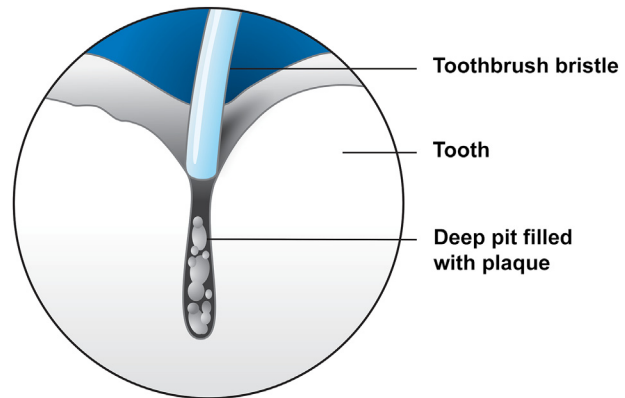
Brushing your teeth twice per day with a fluoride toothpaste is a good way to reduce the risk of cavities. Unfortunately, the pits and grooves on molars are too small for a toothbrush bristle to get into (Figure), and so the food and plaque can build up.

Sealants are plastic coatings that your dentist can paint over the molars' surfaces. They can help reduce the risk of cavities on molar surfaces. Before applying the sealant, the dentist will clean the surface of the molar and treat it so that the sealant will stay in place. When they dry, sealants provide a smooth surface and cover the pits and grooves to block them from the build-up of food and plaque.

Sealants can offer protection for a number of years. Researchers have found that sealants protect against 80% of cavities over the first 2 years after placement.<sup>2</sup>

## GETTING SEALANTS

It is best if sealants are applied to permanent molars soon after they come into the child's mouth. Once they dry, sealants can last a number of years. Although they typically remain in place, it is possible for them to come off or wear down. Because of that, if your child's dentist notices a sealant is missing or worn at a regular dental visit, he or she may recommend replacing it.



**Figure.** Deep pits and grooves on the surfaces of molars are too small to allow a toothbrush bristle in to clean bits of food and plaque.

## CONCLUSION

Most cavities develop on the chewing surfaces of permanent molars. Deep pits and grooves on the surfaces can trap food and plaque where toothbrush bristles cannot reach. Sealants can cover these surfaces, preventing the build-up of cavity-causing foods and plaque. Talk to your child's dentist about the use of sealants. ■

<https://doi.org/10.1016/j.adaj.2023.07.006>

Prepared by Anita M. Mark, senior scientific content specialist, ADA Science and Research Institute, Chicago, IL.

**Disclosure.** Ms. Mark did not report any disclosures.

Copyright 2023 © American Dental Association. Unlike other portions of JADA, the print and online versions of this page may be reproduced as a handout for patients without reprint permission from ADA Publishing. Any other use, copying, or distribution of this material, whether in printed or electronic form, including the copying and posting of this material on a website, is prohibited without prior written consent of ADA Publishing.

"For the Patient" provides general information on dental treatments. It is designed to prompt discussion between dentist and patient about treatment options and does not substitute for the dentist's professional assessment based on the individual patient's needs and desires.

You can find more information for patients at [ADAstore.org](https://www.ada.org/ADAstore) or at [MouthHealthy.org](https://www.mouthhealthy.org).

1. Fleming E, Afful J. Prevalence of total and untreated dental caries among youth: United States, 2015-2016. *NCHS Data Brief*. 2018;307:1-8.
2. CDC Vital Signs: dental sealants prevent cavities—effective protection for children. Centers for Disease Control and Prevention. Accessed June 23, 2023. <https://www.cdc.gov/vitalsigns/pdf/2016-10-vitalsigns.pdf>