

New tooth decay treatment guideline released

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A new American Dental Association (ADA) clinical practice guideline suggests conservative methods to treat tooth decay in primary and permanent teeth could lead to better outcomes when used with common restorative materials like fillings or caps. An expert panel of dentists

developed the first-ever guideline on this topic after extensive review of approximately 300 published studies.

The guideline, published in the July issue of *The Journal of the American Dental Association*, contains 16 recommendations regarding treatment of moderate and advanced [tooth decay](#) in primary and permanent teeth that have not received endodontic treatment, such as a root canal. It indicates conservative carious tissue removal (CTR)—in which a dentist removes infected tissue while preserving as much of the original tooth structure as possible—is less likely to result in adverse outcomes like nerve exposure or a failed filling.

The recommendations also identify selective CTR as an effective treatment option in most cases of moderate or advanced decay in primary and permanent teeth. This method involves removing most, but not all, of the decayed tissue before sealing the tooth with a filling or cap. The bacteria left behind under the new filling or cap no longer has what it needs to multiply, which stops tooth decay.

Additionally, the guideline affirms the efficacy of the most common restorative materials for treating moderate or advanced tooth decay, such as tooth-colored fillings, silver-colored fillings (amalgam) or preformed caps in children. It suggests specific materials for primary and permanent teeth depending on the extent of the decay.

Lead author Vineet Dhar, B.D.S., M.D.S., Ph.D., is clinical professor and chair of orthodontics and pediatric dentistry at the University of Maryland School of Dentistry and a member of the ADA Council on Scientific Affairs. He said the recommendation encapsulates restorative dentistry's two main objectives: maintaining healthy tooth structure and protecting the soft tissue inside the tooth.

"While research had already confirmed that selectively removing

decayed tissue is an effective approach to treating early tooth decay, dentists needed an evidence-based guideline to provide them with a range of treatment choices for patients with moderate to advanced tooth decay," Dr. Dhar said. "These recommendations can now inform restorative care strategies in the U.S. and on a global level."

This is the ADA's second [clinical practice guideline](#) in a series on caries treatment. The new guideline was developed by the ADA Council on Scientific Affairs and the Clinical and Translation Research team within the ADA Science and Research Institute, which convened a panel of experts to review the best-available scientific evidence around treatments and materials. The new restoration guideline and existing recommendations on non-restorative treatment for tooth decay can be found at ada.org/cariesguidelines.

More information: Vineet Dhar et al, Evidence-based clinical practice guideline on restorative treatments for caries lesions, *The Journal of the American Dental Association* (2023). [DOI: 10.1016/j.adaj.2023.04.011](https://doi.org/10.1016/j.adaj.2023.04.011)

Provided by American Dental Association

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