

Use of Pit and Fissure Sealants: Evidence-Based Clinical Recommendations¹

Levels of evidence and strength of recommendations:

Each recommendation is based on the best available evidence. The level of evidence available to support each recommendation may differ. Lower levels of evidence do not mean the recommendation should not be applied for patient treatment.

Correlate these colors with the text below.



Should I consider sealants for my patients?

	Consider sealants for prevention when there is no lesion but tooth or individual is at risk ¹	Consider sealants to limit progression in early non-cavitated lesions
Children	Primary teeth (D) Permanent teeth (B)	All teeth (B)
Adolescents	Permanent teeth (B)	All teeth (B)
Young Adults	Permanent teeth (D)	All teeth (B)
Adults		All teeth (D)

Monitor periodically and reapply as needed (D) (Change in caries susceptibility can occur)

If you decide to apply sealants

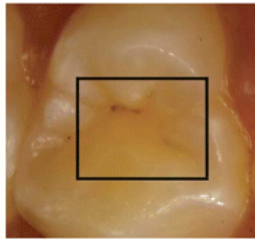
- Routine clinical situations use Resin-based sealants (A)
- Moisture control concerns use Compatible one bottle bonding agent after acid etching (B) OR GI Cement (D)
- Routine mechanical preparation of enamel before acid etching is NOT recommended (B)
- When possible use a four-handed technique for placement of resin-based sealants (C) OR glass-ionomer cements (D).

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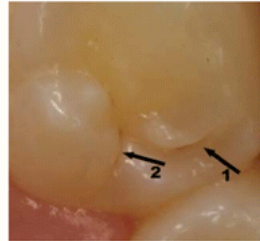
These images² are examples of non-cavitated lesions that may be considered for sealants. Non-cavitated lesion refers to pits and fissures in fully erupted teeth that may display discoloration not due to extrinsic staining, developmental opacities or fluorosis. The discoloration may be confined to the size of a pit or fissure or may extend to the cusp inclines surrounding a pit or fissure. The tooth surface should have no evidence of a shadow indicating dentinal caries, and, if radiographs are available, they should be evaluated to determine that neither the occlusal nor the proximal surfaces have signs of dentinal caries.



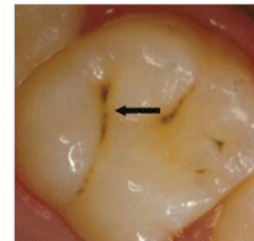
Tooth surface with an early (noncavitated) carious lesion that exhibits a white demineralization line around the margin of the pit and fissure and /or a light brown discoloration within the confines of the pit-and-fissure area.



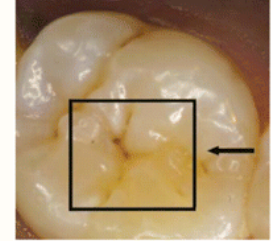
A small, distinct, dark brown early (noncavitated) carious lesion within the confines of the fissure.



A deep fissure area (arrow 1) and another area exhibiting a small light brown pit and fissure (arrow 2). Note that the lesion does not extend beyond the confines of the pit and fissure.



A more distinct early (noncavitated) carious lesion (arrow) that is larger than the normal anatomical size of the fissure area.



A more distinct early (noncavitated) carious lesion (arrow) that is larger than the normal anatomical size of the fissure area.

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¹ ADA Council on Scientific Affairs. Use of Pit and Fissure Sealants: Evidence-based clinical recommendations. JADA 2008;139(3):257-68. Copyright © 2008 American Dental Association. All rights reserved. Adapted with permission. To see the full text of this article, please go to <http://jada.ada.org/cgi/content/abstract/139/3/257>.

² Images provided courtesy of Dr. Amid I. Ismail, the Detroit Dental Health Project (National Institute of Dental and Craniofacial Research grant U-54 DE 14261-01).

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