



MICHIGAN MEDICINE
UNIVERSITY OF MICHIGAN

Root Caries: A Guide for Patients

What are root caries?

Tooth decay (caries) is not just a problem for children but may develop at any age. In fact, decay on the root surface of teeth is actually more common as we age. Unlike the decay that occurs on the white portion of the tooth known as the crown, root caries occurs on the darker root surface which may become visible in the mouth when the gums pull away (recede) from the teeth.

What causes root caries?

Root caries occurs when bacteria have access to the roots of teeth which may occur if you have pockets in your gums or gum recession. The bacteria consume the sugars that you eat and produce a film called plaque as well as acid which may weaken the tooth and form a hole (cavity). Unlike the crown of the tooth that is covered by a hard substance known as enamel, the root is made of cementum and dentin which are much softer and make the surface less resistant to decay. Cleaning your mouth regularly with a soft bristled toothbrush, limiting processed foods in your diet, and having healthy saliva which contains nutrients for your teeth may help prevent development of decay, even if your roots are exposed.

If you do not brush enough, brush too hard, consume a diet high in sugar, and/or develop changes in the quality and/or amount of saliva in your mouth, you may be at increased risk for developing caries. Changes in your saliva may have occurred if you have been told or notice that your mouth is dry or your saliva is thick. This often occurs due to medications, chemotherapy, radiation treatments, and some diseases which can cause your salivary glands to not make enough saliva.

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How do I know if I have root caries?

Root caries may be challenging to detect, because the decay may occur at or below your gum line. Warning signs that you have a problem with your teeth such as sensitivity to cold or sweets may be absent or occur when the decay has become advanced. Often, a dentist or hygienist notice the decay before the patient does. It is important for you to see a dentist and a dental hygienist regularly (at least every 6 months) so that any problems on your teeth, including the root surface, may be identified. Dental x-rays may be needed in order to find root caries between your teeth.

What can be done to repair the damage to the tooth?

Root caries may be very deceptive and difficult to treat. Even when the cavity can be seen with the eye, the problem often appears small and not very alarming. However, root caries cause damage to the foundation of the tooth and even a little damage can weaken the entire tooth and put the tooth at risk for breaking. Additionally, the root surface is more challenging to repair due to the location of the damage and lower ability for dental fillings to stay in place. Damage may have gone all the way to the pulp (inside) of the tooth and may require endodontic therapy (root canal) to prevent pain and infection. At times, so much damage has been done that the tooth must be removed. In order to avoid as many problems as possible, it is best to try to prevent caries and important to have frequent exams so that root caries can be found early if they do develop.

What can be done to prevent root caries?

Since root caries is caused from bacteria, the most important thing you can do is to **keep your teeth clean every day**. Make sure to use a soft-bristled toothbrush with fluoride-containing toothpaste using gentle toothbrush strokes. In addition to using over-the-counter fluoride containing toothpaste, your dentist may prescribe an extra strength fluoride toothpaste or gel depending on your needs. Avoid brushing too hard or using abrasive

toothpaste such as those made for whitening which may cause wear to your teeth, especially your softer root surface. Have your dentist or hygienist watch your technique and provide guidance depending on your specific needs. If you have limitations that make it more difficult to clean your teeth, please talk with your dentist or hygienist so that modifications may be recommended.

In addition to keeping your mouth clean, it is important to maintain a healthy diet and avoid grazing throughout the day. Foods and beverages that are higher in sugar as well as frequent snacking or sipping on anything other than plain water may increase your risk for decay. If you have dry mouth and drink fluids throughout the day, make sure only to consume plain, non-carbonated water.

Finally, frequent professional cleanings and exams can help prevent root caries or find it early when it can be more easily repaired. Your dental team may recommend that you see them every 3-6 months for cleanings depending on your specific needs. Please call as early as possible if any questions or concerns arise as your dental team is eager to help you!

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