

POST-TREATMENT TOOTH SENSITIVITY



MY TOOTH DIDN'T HURT UNTIL THE DENTIST TOUCHED IT!

Every once in a while we have a patient who reports sensitivity to cold, hot, or biting after we do a filling or a crown. Why does this happen? To better understand this, we first have to talk a little bit about tooth anatomy and dental pain.

HOW DO TEETH FEEL PAIN?

Dentinal pain: One of the theories of tooth pain is that some of the cells that live within the dental pulp have extensions that project into the dentinal tubules. Fluid movement in these tubules due to temperature changes or chemical stimulus triggers these cells, causing pain.

Root pain: Teeth are surrounded by a ligament and if this tissue gets inflamed or infected, the tooth could become painful to chewing or tapping.



EVERY FILLING OR CROWN IS A SMALL SURGERY!

When a tooth needs a filling or a crown, the dentist performs an operation to the tooth. It usually involves using a drill to modify the enamel to be able to access the tooth decay and to create the appropriate shape for the filling or crown. Damaged or decayed dentin then is removed with drills and hand instruments.

Once the tooth is adequately shaped for the filling or crown, and all of the damaged/decayed dentin is removed, the tooth is ready for a filling or crown. This involves BONDING the restoration to the tooth, which is one of the steps where post treatment tooth sensitivity can occur.

If decay or fracture is close to the nerve, post-treatment pain is likely; if the sensitivity is severe or does not go away, a root canal is needed.

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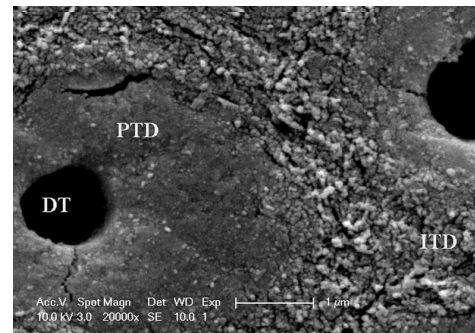
BONDING AND THE "SMEAR" LAYER

When a tooth has decay, the "dentinal tubules" are often plugged up and covered by necrotic tissue, so there might actually not be very much pain. The procedure to remove the decay creates a sludge that enters the tubules, which is called the "smear layer". The first step of the bonding process is to remove this smear so the adhesives can properly penetrate the dentin. This opens up previously plugged up tubules and can result in post-operative sensitivity, that usually goes away on its own.

"Smear Plug"



Treated for Bonding



source: wikimedia commons

BUT IT HURTS WHEN I BITE!

The periodontal ligament which surrounds the tooth can be a very sensitive tissue. If a filling or crown left a little "high" and is causing the tooth to jostle during chewing, inflammation of the periodontal ligament can result. This often needs a simple bite adjustment to resolve.

WHAT CAN THE DENTIST DO TO PREVENT POST OPERATIVE SENSITIVITY.

Post-treatment tooth sensitivity is unpredictable and can happen even if all the right steps are taken. At our office we use high quality drills and drill bits with ample water cooling to ensure that the tooth preparations are as gentle as possible and we use proven bonding systems according to manufacturer's directions for use. If the decay is close to the nerve, we can medicate the pulp in a procedure called a "pulp cap" to help build dentin. Sometimes, even the best of fillings can result in tooth sensitivity.

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WHAT CAN WE DO IF THERE IS SENSITIVITY AFTER A TREATMENT?

If you are having tooth sensitivity after a treatment we have provided you, please give us a call so we can check things out!

It could be as simple as giving the bite a quick adjustment, or checking a crown for residual cement and scaling it away. If we notice there is some sort of deficiency in the filling or crown, such as a gap at the junction of the restoration and tooth, or a void within the filling, we will redo it! I am not going to leave you with something that I think is substandard.

WHAT IF THE SENSITIVITY DOES NOT GO AWAY?

In cases where we know the tooth decay or fracture is close to the nerve, a "pulp cap" is often performed, which is the placement of a calcium product over the deepest part of the filling in hopes of stimulating dentin growth inside the tooth, thus calming the nerve. **This, however, is not 100% successful and a tooth can remain painful, requiring a root canal.**

*In a very small number of cases, even if everything looks good with the filling or crown, there could still be sensitivity that does not go away. This tooth would need assessment for root fracture, and if not suspected, a root canal would be required to get rid of the sensitivity. **This is a rare and unpredictable scenario.***

We do recommend that you avoid any dental work if you know you are going away for an extended period to ensure you are available for a follow-up if post-treatment sensitivity were to occur.

For more information about the root canal procedure, or information about cracked teeth, please visit our resources/forms tab on our website, or call us if you have any questions.