

## FOR PATIENTS



### Pain After a Root Canal

You've probably heard people say they have a "high tolerance for pain" and others who admit to being a wimp when it comes to pain associated with a dental procedure.

Pain tolerance is a lot more complicated than how wimpy or tough you are. There are many different inherent characteristics of people and of dental procedures that can affect how much pain we might feel.

Dentists in the National Dental Practice-Based Research Network are studying differing levels of pain in their patients after a root canal. Their goal is to better understand and treat post-procedure pain.



Your dentist is part of the  
National Dental Practice-

Based Research Network, a group of dental  
practices that treat patients and also do  
dental research. For more information go to  
[www.nationaldentalpbrn.org](http://www.nationaldentalpbrn.org).



#### What is a root canal?

Root canal therapy is a common procedure performed when tooth decay, cracks, chips, or other damage leads to an infection of the pulp (tissues inside the tooth), which is made up of tiny blood vessels and nerves. During root canal treatment, a dentist removes the pulp and bacteria from inside the tooth. Without treatment, the tooth would likely cause pain and/or infection resulting in the need to remove the tooth. Pain after a root canal is usually manageable with over-the-counter medications such as ibuprofen and acetaminophen. It usually goes away within a week or less.



#### What affects how much pain you feel?

Studies show that when you're hurt, your body sends messages to your brain. Sometimes the wrong message is sent and it makes you perceive the pain as worse than you should. Genetic differences may account for some differences in how much pain is felt. Anxiety and how you think about pain also contribute.

Remember: Having these traits doesn't mean you would definitely have a lot of pain after a root canal. Always talk to your dentist about any fears or concerns you have about a dental procedure.

To ensure excellent dental care, the Network carries out its studies in real-world settings—like your dentist's office—with regular patients like yourself who volunteer to participate. The studies wouldn't be possible without the involvement of our wonderful patients.

**Thanks to everyone who participated in this and all of our studies!**



### Pain After a Root Canal

In a recent study, researchers asked **1,459** root canal patients about themselves and about how much pain they experienced after the procedure. It turns out that patients who had reported severe pain had some traits in common:



They were more apt to catastrophize, which means to worry a lot about the pain and that it will never go away. Giving patients proper pain treatment and psychological counseling can help.



They were less optimistic about the outcome of the root canal. People who were optimistic and expected that the outcome of the procedure will be “very good” tended to have less pain.



It’s unclear why, but women were 50 percent more likely to have severe pain, compared to men. Other studies have found that women also have more chronic pain than men.



Before the root canal treatment, they had jaw pain or the pain in their tooth was particularly severe.



### Why is there a link between emotions and pain?

Emotions and pain are experienced in overlapping parts of the brain, research shows. When you’re scared, anxious, or angry, the parts of the brain that process these emotions may also increase how much pain you feel. But other parts of our brain can also help to decrease pain.

To help prevent or ease pain:

- An anti-inflammatory, such as Advil, can help relieve pain.
- If the ibuprofen isn’t enough, you can also take acetaminophen, such as Tylenol, either at the same time as the ibuprofen or between doses.
- If ibuprofen and acetaminophen don’t help reduce your pain, call your dentist or endodontist.
- Talk to your doctor about the correct dosage of pain relievers for you.

For more information on root canals, see *Root Canal* at <https://medlineplus.gov/ency/article/007275.htm>.

Funded by National Institutes of Health grant U19DE22516

#### References:

- Katz J, Seltzer Z. Transition from acute to chronic postsurgical pain: risk factors and protective factors. *Expert Review of Neurotherapeutics*. 2009;9(5):723-744.
- Law AS, Nixdorf DR, Aguirre AM, Reams GJ, Tortomasi AJ, Manne BD, Harris DR. Predicting severe pain after root canal therapy in the National Dental PBRN. *Journal of Dental Research*. 2015;94(3 Suppl):375-435.
- Law AS, Nixdorf DR, Rabinowitz I, Reams GJ, Smith JA, Jr., Torres AV, Harris DR. Root canal therapy reduces multiple dimensions of pain: a National Dental PBRN study. *Journal of Endodontics*. 2014;40(11):1738-1745.
- Nixdorf DR, Law AS, Lindquist K, Reams GJ, Cole E, Kanter K, Nguyen RH, Harris DR. Frequency, impact, and predictors of persistent pain after root canal treatment: a National Dental PBRN study. *Pain*. 2016;157(1):159-165.