

## Cracked Tooth Syndrome

### Why do teeth get cracks?

Cracked tooth syndrome is a very common problem usually affecting teeth that are heavily filled. Decay and the subsequent filling causes a weakening of the tooth. The remaining tooth structure has to support the filling and also withstand the forces generated during chewing and grinding. Therefore, the larger the filling is the less tooth structure that remains and the weaker the tooth is under stress.

After a period of time the constant function on our teeth can result in stress cracks. Cracks develop in weak areas of the tooth that are unable to withstand the stress cycles. These hairline fractures develop in the bottom of the cavity usually in the corner.

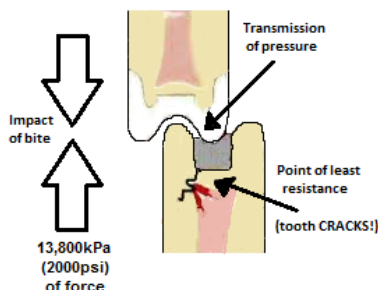
### Why does hot and cold sometimes hurt?

The crack allows temperature changes to reach the sensitive part of the tooth. These temperature changes cause pain especially in teeth where the nerve is inflamed as a result of bacteria and their toxins leaking into it.

### Does grinding my teeth make it worse?

Yes.. grinding of your teeth is a common habit with up to 75% of the population doing it at some time in their life. Unknown to you, grinding at night causes a massive increase (200%- 300%) in the stress and strain on your teeth. Grinding can occur for several hours at night rather than just the momentary force when eating.

You may have a tooth shape where the valleys on the biting surface of the teeth are deep, not shallow. This puts a lot more sideways splitting forces on the tips of the tooth during chewing leading to cracking.



The other situation which leads to greater stresses being exerted on your teeth is where back teeth have been lost. This leads to fewer teeth having to cope with a greater work load. To reduce this effect, spaces need to be filled in to restore full function in the whole of the

mouth.

### Why does it hurt to bite on?

As you chew, the crack flexes open and then closes which results in fluid and bacteria being pumped within the sensitive part of the tooth which causes pain. When you are not biting on the cracked area no pain is usually experienced unless the crack has progressed close to the nerve where bacteria can leak. Common foods which can cause problems are multigrain bread or food which has an unexpected hard component in it e.g. olive pips or cherry seeds. Total fracture doesn't necessarily occur immediately but the tooth can progressively weaken.

### What happens if no treatment is provided?

The crack continues to slowly spread like a crack in glass. Sometimes the crack goes off to the side and the fragment of tooth breaks off. The crack can also go deep into the root and at times into the nerve. They can sometimes seem to get better but eventually they usually deteriorate as the crack deepens. Cracks do not heal.

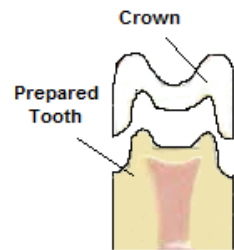


It is easier to treat a small crack rather than wait till it gets worst requiring more extensive and often more expensive treatment. A bigger crack can lead to root canal treatment or an extraction if you are unlucky. It is only chance as to when you can bite on to the weak cusp to cause fracture.

### What is the best treatment of cracked tooth syndrome?

Unless the crack is immobilised and splinted together the tooth is very likely to deteriorate. Although various methods have been employed in an attempt to stick the crack together, chewing forces are extremely powerful, and these 'patch-up' solutions are fairly unpredictable and ineffective.

The only real solution is to cover over the whole tooth with a crown, so that any chewing forces moves the tooth as a whole, rather than splitting it apart.



The crown is bonded over the entire tooth- this seals all the micro-cracks and the variety of sources of bacterial leakage coming from the joints in the patchwork of fillings typically in these teeth. The nerve is now given its best chance at recovery because it has been sealed airtight and the crack has been immobilised.

