



Stopgap Measures

Simple and effective procedures like Inlays, Onlays, Bonding & Crowns can offer a long lasting solution to tooth decay and damage

Fear of going to the dentist is very common. Unfortunately, many stay away from the dentist's chair and that frightening assortment of tools. But the agony will only increase the longer you delay the inevitable visit. And the fact of the matter is, cavities and tooth decay are relatively easy to fix. The best thing to do is simply bite the bullet and endure the short-term pain for the long-term dental gain.

Cavities are created quietly and insidiously by plaque, the gooey film of bacteria that forms over the teeth. Without regular brushing and flossing, leftover plaque hardens to become tartar. Unlike plaque, tartar cannot be removed by the usual morning bathroom routine. It requires a dental professional's services. The bacteria in plaque release acids that can dissolve the protective tooth enamel when they come in contact with the sugars you eat. And a cavity forms when the decay breaks through the enamel and reaches the underlying layers of the tooth. Thus, the easiest way to spot a cavity is the presence of one or more tiny and unsightly holes in the tooth.





Dental drill removing enamel, dentine, and pulp gum from decaying tooth;
and amalgam plugger sealing cavity in tooth

Tooth decay is never a pretty sight, and it can destroy a tooth completely if it is left untreated. Thankfully, if the root under the damaged tooth is still healthy, it can and should be kept in place. Inlays and onlays are two ways to salvage a damaged tooth without having to remove it. These relatively simple and cost-effective methods can replace and restore a tooth's damaged areas. Both are made of a solid, durable substance such as metal, gold, or porcelain. They are simply attached to the area of a cavity and cemented into place.

The only difference between an inlay and onlay is the amount of the tooth's surface area it covers. An inlay is smaller and covers only the central area of the tooth's biting surface, whereas an onlay covers a wider surface area around one or more cusps – the pointed edges of a tooth. However, Dental Surgeon Sandeep Jain from Diestel & Partners, Hong Kong, believes inlays are less desirable, as they tend to weaken the teeth beside them. "What happens is that, as the person repeatedly bites on the inlay, pressure will be distributed to the two surrounding teeth. The chances for those teeth to crack at that point are very high. I've seen lots of inlays doing just that only a few years after the procedure."

There is always a price to be paid for beauty, even in dentistry. Dr. Jain says gold is the most resilient material that can be used for inlays and onlays. Metal alloy comes second. Both can last for decades without needing replacement. The unfortunate catch is that many patients find even the tiniest display of gold or other metals on their tooth unattractive. The alternative is porcelain, which is the same colour as natural teeth. However, that requires a larger surface area, it is less sticky and lasting, and therefore needs to be replaced every few years.

An inlay or onlay procedure is reasonably simple. First, the cavity is cleaned out and then the dentist takes an impression of the hole that needs to be filled. The impression is sent to a lab for the creation of a micro-filling. Meanwhile, a temporary filling is placed in the cavity. The patient returns a week or so later, and the dentist cements the permanent inlay or onlay into place during a 10-to-30-minute session.

Inlays and onlays may be the solution for certain cavities, but if tooth decay is not the patient's only dental problem, he or she might like to consider dental bonding. Besides inlays and onlays, bonding can be an answer to tooth decay, as well as misshapen, chipped, cracked or excessively discoloured teeth, and gaps between them.

The procedure's full name is composite resin bonding, and it involves applying a thin layer of resin to the tooth or into the cavity. "Sometimes the dentist may have to polish the surface of the tooth to allow good adhesion between the material and the tooth. In an analogy, it is like putting on customised wallpaper. You do have to clean and prepare the wall before applying the wallpaper." That is how Dr. James Lee, a dental surgeon at the Dental Studio, a subsidiary of the Singapore Medical Group in Singapore, describes it. Once applied to the tooth's surface, the resin can be sculpted and smoothed to create the desired shape or look, and it can be matched with the tooth's natural colour. Finally, it is bonded to the tooth with a special high-intensity light, and polished to a shine.

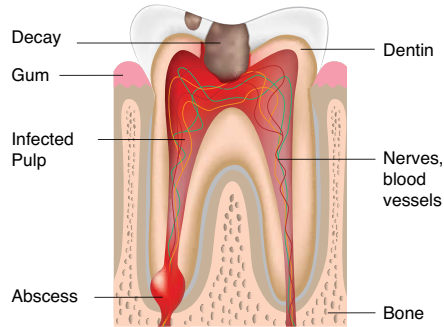
Bonding can be done during a single visit. Each affected tooth takes between about 10 and 25 minutes. While it might seem like the optimal overall approach, as it can address both medical and cosmetic needs, the fly in the ointment is that



Dental crown

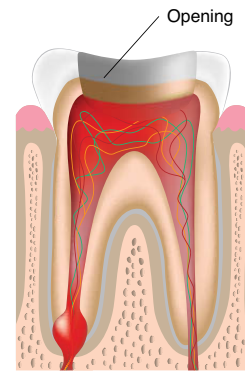
Root Canal Treatment and Crowning

1



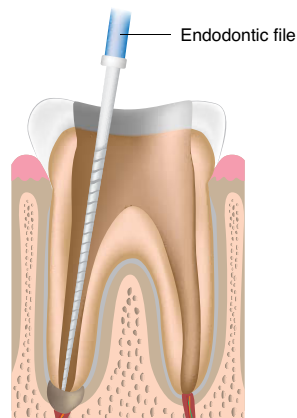
Infected tooth

2



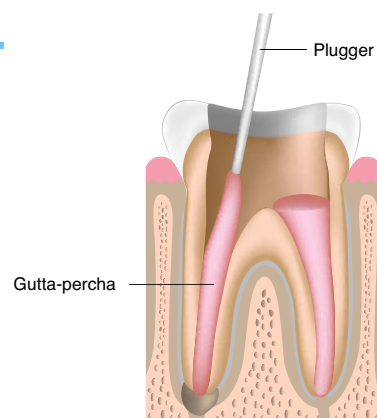
Opening made in tooth

3



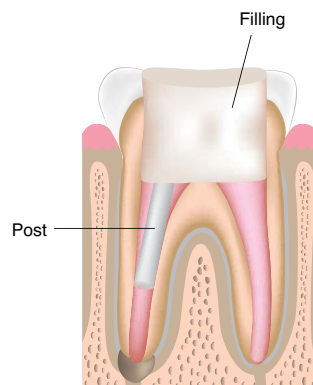
**Infected tissue removed;
Canals cleaned**

4



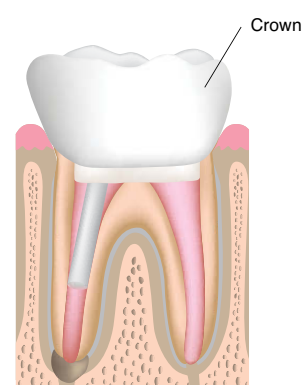
Canals filled with a permanent material (gutta-percha)

5

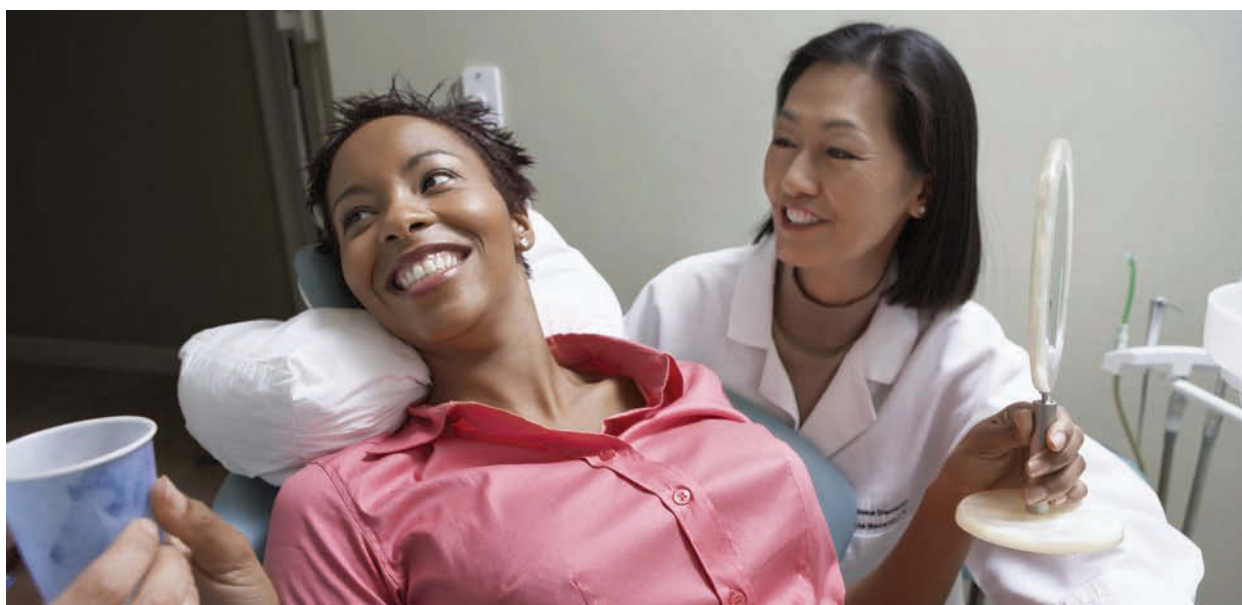


**Opening sealed with filling.
In some cases, a post is
inserted for extra support**

6



**New crown cemented
onto rebuilt tooth**



composite resins are less resistant to staining, chipping and wearing down than other restorative fillings or crowns. Bonding only lasts for between three and 10 years, and it may not be as suitable as a large filling.

A crown is recommended if a large filling is required because the tooth has decayed too much. Think of a crown as a cap over the tooth; a bigger version of an onlay that protects the tooth fully. A crown can reinforce the tooth structure in the case of a huge cavity where there isn't enough tooth left for a filling, protecting it from further decay. A crown can also be made in the same colour and size as the surrounding natural teeth.

"A tooth is like a house. If you have leakage in the pipes, you need to fix that. The crown in such terms is only the roof. You must first fix the inside with root canal treatment before you put the crown on the top. Once that is all done, it is sealed off and no bacteria can go inside," explains Dr. Jain. The dentist makes an impression of the tooth after the decay has been treated, and a temporary crown made of resin is put on until the second visit, a few days or a week later, when the crown is fixed over the tooth with dental adhesive.

Crowns can last for more than a decade. Their strength depends on the material from which they are made. The choices include porcelain, ceramic, gold or other metals, as well as a combination of porcelain and metal. Like veneers and fillings, a porcelain crown is the best choice for a natural look. However, porcelain is less resilient than other materials, and it can fracture due to the pressure of heavy-duty biting. This makes it more of an option for front teeth. Apart from the extra, unintended flash they add to a smile, gold, zirconia and other metals withstand the pressure of biting and chewing very well and without chipping. They are also incredibly durable. However, metal crowns mean compromising aesthetic appearance for hardness.

Then there's the hybrid alternative of porcelain fused to metal. The crown consists of a metal base with porcelain applied over it. This is the preferred solution for most patients, as it combines strength with a more natural look. The only drawback is that, besides getting the benefits of both materials, you also get their weaknesses. The porcelain sheath can still crack under pressure, revealing the grey material beneath it.

While it is comforting to know that tooth decay and its growing severity over time can be stemmed by a host of restorative dentistry procedures, you must also maintain your dental health by visiting the dentist for check-ups every six months or so. Your teeth will thank you for it.

[Dentalstudio.sg](https://dentalstudio.sg)

[Diestelandpartners.com](https://diestelandpartners.com)



Tips for Dental Tourists

Dental tourism becomes more cost-effective the more procedures you require. Obviously, if only a simple filling is needed the added travel costs will outweigh the money you save by going abroad. If multiple procedures are involved however, a few crowns and an implant for example, the difference in price between the two countries will be much greater, making a dental vacation worthwhile.