

Single crown

What is a crown?

A crown is a “cap” shaped like a tooth, which completely covers the decayed or damaged tooth. The dentist trims part of the natural tooth to make room for the crown. The crown protects the tooth and gives it back its color and original form.

Why use a crown?

- To cover and support a tooth that has a large filling when there is no longer much healthy material.
- To protect a tooth that is weakened (for instance, due to decay) from the danger of breakage.
- To restore a tooth that is broken or severely worn down.
- To cover a tooth that is misshapen or severely discolored.
- To restore a tooth after a root canal treatment.
- To be used as an abutment for a bridge.
- To cover an implant or post and core.

Treatment stages when making a crown

Pre-examination

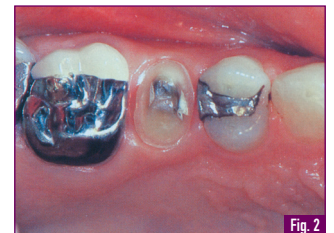
It must be kept in mind that when preparing to restore a vital tooth using a crown, it is not possible to employ a universal restorative technique. Initially, it is through a clinical and radiological examination that the various elements for the preservation of the tooth's vitality and the remaining dental structures can be assessed. This analysis will also permit an assessment of the quantity and quality of what remains of the tooth. Accordingly, major cracks or discoloration need to be taken into account.

It is also important to mention that a proper assessment of the soft tissue surrounding the tooth must be considered. The purpose of the soft-tissue assessment is to see the position, appearance and volume of the available soft tissue. In some cases, the gum will have to be reconfigured through surgery.

Tooth preparation (Fig. 1 and 2)

The tooth's position in the patient's mouth and the patient's aesthetic requirements may also, in some cases, be the reason for a dentist to prepare a tooth that is receiving a crown consisting of one of the following:

- Entirely of metal
- A ceramometal alloy
- Entirely of porcelain



Regardless of the prosthetic solution chosen, protecting the vitality of the tooth remains a prime concern for the dentist.

But, despite the fact that the teeth that will receive a crown may not naturally need a root canal procedure, it may happen that, when the dentist is trimming the tooth, such a treatment will be justified: especially if the tooth is quite damaged, or there is severe inflammation or the pulp is damaged. In this case, the dentist will have to cement a post in the root of the tooth to fit the crown on it.

Temporization phase (Fig. 3 and 4)

When a single-unit crown is made for a tooth that may or may not be vital, treatment takes place in successive phases, all of which are indispensable and interdependent. The temporary crown is one of these phases and will contribute to the success of the treatment.

The temporary crown plays the following roles:

- Provides immediate protection for the tooth and the gum from the mechanical, chemical and infectious threats of the oral environment.
- Prevents the neighbouring teeth from shifting.
- Minimizes the patient's handicap by restoring mastication and phonation abilities.
- Helps with the design of the final crown.
- Enables the testing of function and the cosmetic result.



Finally, the temporary crown must be efficiently cemented to avoid any inconvenience to the patient, while allowing the dentist the option of removing it whenever necessary until the treatment is completed.

Risks

With a fixed dental prosthesis, the treatment's success is immediate. In other words, the achievement of the desired outcome on the day the prosthesis is installed or placed in the mouth is an assurance of patient and dentist satisfaction. This success must endure the test of time to be a true success.

Sometimes complications, even failures, can occur.

Essentially, these involve the following:

Loosening of the crown or crownpost

Loosening is usually resolved for the patient through a mobile restoration in the mouth (or the hand) but without any fracture. With single-unit crowns, resealing or recementation is generally done without any problems. However, before redoing a procedure, the dentist must analyze the reasons for the failure and the damage done by the detachment. If the dentist finds tooth decay or if the crown is ill-fitted, it will have to be remade.

Cracking or fracture of the residual tooth

The choice of an anchor as the seat for a crown always presents a mechanical risk to the root: First, when the root is worked on and then due to pressure put on the root during mastication. Most cases of root fracture result in the extraction of the tooth.

Fracture or breakage of ceramic components

Due to advancements in materials and techniques, it is now possible to efficiently proceed with certain types of repairs directly in the mouth. However, the aesthetic outcome remains a real challenge, which is sometimes difficult to overcome.

Prolonged postoperative pain in a vital tooth

This situation calls for a root canal procedure.

Other possible complications

- Short-term postoperative sensitivity
- Temporary pain in the jaw, teeth and mastication muscles
- Possibility of necrosis of the pulp (death of the tooth) further to the trimming of the teeth

Success/long-term survival of a fixed prosthesis

It is hard to predict how long a crown will last as a fixed prosthesis. However, it is reasonable to expect that, regardless of the quality of the initial result, the prosthetic issue will have to be revisited more than once in the course of a lifetime. This should be made clear to the patient.

Informed consent

Your prognosis is: Good Average Unfavorable

Informed consent is the result of a discussion between the patient and the dentist. This document is provided for information purposes and may be completed or modified during discussions with your dentist. Some dentists may provide adequate information without giving this document to the patient.

Explanations

Informed consent to the making of a crown

I understand and agree as follows: The nature of the planned treatment has been explained to me by my dentist. I understand that even though the initial prognosis is good, complications can still occur and they may require modification of the treatment plan. For instance, there may be the need to perform a root canal procedure, surgery on the neighbouring soft tissue or even the extraction of the tooth. All these modifications can lead to additional costs.

Finally, I understand that it is essential that I collaborate in the treatment (keeping my appointments and arriving on time, practising good oral hygiene and attending periodic follow-ups) and that if my dentist is dissatisfied with my collaboration, my treatment will be suspended.

I have discussed the foregoing with my dentist and he/she has answered all of my questions. I hereby consent to the treatment.

Patient's signature

Date

Dentist's signature

Date