**General & Restorative Dentistry**

**Fillings**

1. Amalgam restorations (for small, medium large restorations)
2. Direct composite restorations (for small – medium restorations)
3. Glass ionomer restorations (for small restorations)
4. CEREC all ceramic restorations (for medium – large restorations)

Amalgam restorations:
Every dental material used to rebuild teeth has advantages and disadvantages. Dental amalgam or silver fillings have been around for over 150 years. Amalgam is composed of silver, tin, copper, mercury and zinc. Amalgam fillings are relatively inexpensive, durable and time-tested. Amalgam fillings are considered un-aesthetic because they blacken over time and can give teeth a grey appearance, and they do not strengthen the tooth. Some people worry about the potential for mercury in dental amalgam to leak out and cause a wide variety of ailments. At this stage such allegations are unsubstantiated in the wider community and the NHMRC still considers amalgam restorations as a safe material to use in the adult patient.

Composite restorations:
Composite fillings are composed of a tooth-coloured plastic mixture filled with glass (silicon dioxide). Introduced in the 1960s, dental composites were confined to the front teeth because they were not strong enough to withstand the pressure and wear generated by the back teeth. Since then, composites have been significantly improved and can be successfully placed in the back teeth as well. Composite fillings are the material of choice for repairing the front teeth. Aesthetics are the main advantage, since dentists can blend shades to create a colour nearly identical to that of the actual tooth. Composites bond to the tooth to support the remaining tooth structure, which helps to prevent breakage and insulate the tooth from excessive temperature changes. They have the advantage of:
- Requiring a more “conservative” tooth preparation (e.g. less drilling required)
- Can have a strengthening effect on the tooth
- Very aesthetic; and virtually blend in with the tooth
- Unfortunately, when compared to amalgam in the molar regions, they do not have the strength properties that will match the amalgam restorations. Typically, composites done in the posterior regions will require changing more frequently than amalgam restorations as they will wear down faster due to its "plastic’ nature.

In cases where medium to large fillings are required, we often recommend patients to consider CEREC restorations.

**CEREC**

For long term solutions using “white’ tooth coloured fillings, nothing surpasses CEREC restorations. CEREC is an acronym which stands for Chairside Economical Restoration of Esthetic Ceramics.

CEREC technology is one of the most sophisticated technology and equipment available in the dental world. It uses CAD Cam technology to scan the tooth preparation doing away with messy impression techniques but more importantly, the restoration is designed chairside and fabricated while you wait! Instead of sending the work away to a laboratory, the restoration is milled in the surgery, adjusted and cemented in one visit. The benefits apart from having a stronger, wear resistant filling is also fantastic looking restoration. Other benefits include one chairside procedure instead of 2 and also the cost savings by not contracting the work to another party which is then passed on to our patients.

There are currently 20,000 CEREC users world wide and the numbers are growing. Together these practitioners have created more than 15 million CEREC restorations. The following facts are noteworthy:
- After 10 years, CEREC inlays and onlays achieve a survival rate of 90 – 95%
- After 5 years, CEREC crowns have a survival rate of 95-97%
CEREC restorations overcome all the problems associated with large posterior composite (plastic) fillings. It is stronger and more wear resistant and its fit is comparable to most laboratory hand crafted restorations. It has the capability of being used in the small to large restorations including crowns. Further development will see its use expanded into bridges and implant dentistry.

We are proud to be a member of the growing worldwide CEREC family and the investment made by the practice indicates the commitment that we have to our patients to provide the best possible technology available to our patients.

Once again the recommendation of using CEREC is made only after a thorough examination and only if appropriate CEREC will be recommended.

**Porcelain Laminate Veneers**

If you have chipped, cracked, misaligned or discoloured front teeth then porcelain veneers may be the solution for you.

Porcelain veneers are thin shell-like pieces of porcelain which are carefully fabricated, by our ceramist, to fit perfectly over the front surfaces of your teeth. These are bonded into place to mask the underlying concerns.

The procedure itself involves:
- The preparation of your underlying tooth structure
- Upper and lower impressions
- Shade section
- Placement of a temporary veneer (if required)

After approximately two weeks your veneer will be ready for cementation. During this appointment we will:
- Remove the temporary veneer
- The underlying tooth surface will be cleaned and carefully etched
- The veneer will be cleaned and etched
- The veneer will be bonded to your tooth

Veneers are a fantastic way to improve your smile and protect the underlying teeth.

**Crowns**

Sometimes, there are times even CEREC cannot be used and crowns are required. Crowns are used where a significant amount of tooth structure is lost through disease (decay) or through trauma (fractures). It replaces the bulk of the external tooth structure and can be made in a variety of materials and combination. These include:

1. Gold crowns
   - These are the strongest and least problematic crowns to construct. It is ideal for people who grind their teeth. Unfortunately, it is losing its favour with patients due to its metallic appearance.

2. Porcelain fused to gold crowns:
   - These are the strongest “white” crowns that can be made. It consists of a metallic substructure, usually a gold alloy with porcelain fused over its external surface. It therefore has the strength of gold/metallic crown with the aesthetics of porcelain.
   - Unfortunately because of the metal substructure, it cannot compare aesthetically with the newer “All Ceramic Restorations”

All Ceramic crowns:
- These are the newest and most aesthetic crowns currently. Unlike the porcelain fused to metal crowns, most all ceramic crowns have a strong ceramic substructure which normal porcelain
is fused over. Because the substructure is not metallic, a better transmission of light provides each restoration with a very natural appearance.

- Long term data is not available for all systems and whilst good laboratory longevity results have been achieved, it does not have the same track record as porcelain fused to metal or with gold crowns yet.

Crowns when done properly can provide strength and restore your tooth to its former function and appearance. Because of its shape, it envelopes the remaining tooth to prevent it from fracture.

Crowns require several visits to complete

- The first visit usually involves removing all old filling and or decay the placement of a core foundation. This core foundation can be made either from amalgam filling or form composite filling material.
- In the second visit, the tooth is anesthetized and prepared and an impression made. A bite registration is taken and a temporary crown made. This impression is then sent to our dental laboratory where the actual crown is individually handcrafted. This appointment can take up to 1½ hours to complete. A 12-15 working days turn around is often required for the fabrication of the crown.
- The final seating appointment is where the new restoration is cemented on to the tooth.

For most crowns, depending on the oral hygiene regimen of the individual, a 12-15 years average functional use is common. Obviously this is dependent on many factors such as diet, oral hygiene and whether the patient grinds there teeth uncontrollably or not.

**Teeth Whitening**

Over the years we have tried many systems including laser whitening with limited success. However since acquiring the “Zoom” whitening system developed in the USA by Dr Bill Dorfman (from Extreme Makeover USA) our results have been most pleasing. Many of our patients have commented on how pleased they are with our simple and effective management of their discoloured teeth.

The Zoom! light activated whitening gel's active ingredient is Hydrogen Peroxide. As the Hydrogen Peroxide is broken down, oxygen enters the enamel and dentin, bleaching colored substances while the structure of the tooth is unchanged. The Zoom! light aids in activating the hydrogen peroxide and helps it penetrate the surface of the tooth. A study has shown that use of the Zoom! lamp increases the effectiveness of the Zoom! gel by 26% or more, giving an average improvement of up to eight shades.

Zoom bleaching incorporates a process of teeth preparation, bleach application and activation and a follow up home “touch-up” process.

- Teeth preparation: We thoroughly scale and clean your teeth and airs polish your teeth removing it of all stains and start our patients on a course of remineralisation process using ACP (Amorphous calcium phosphate). We will then take impression of both your upper and lower jaw where we will construct a medicament tray to allow you to use the home care products after your Zoom bleaching procedure.
- The bleaching process is an 1½ hour procedure where we will isolate your lips and gums to protect them from the bleaching gel. The gel is then applied and activated with a specially designed light. The gel is a scientifically formulated pH balanced Hydrogen peroxide that when activated by the Zoom light gently penetrates the teeth to remove deep stains and discoloration. The bleach is washed off and the procedure repeated for a further 2 times.
- Home care: We provide you with specially constructed bleaching trays fro you to apply extra bleaching gels to top up the bleach process and to apply desensitizing gel if necessary.

In most cases, patient have noticed a 3-4 shade improvement immediately after the bleaching process and after the home treatment, a further 1-2 shade lightening can be expected. In most cases patients do experience some form of sensitivity during and after the bleaching process. This sensitivity can last up to 24-48 hours but from our experience, this sensitivity does not last and patients can continue to go about their normal lives eating and drinking as normal. As in most cases, we advise patients not to smoke and drink red wine during the bleaching process and 1-2 weeks after to avoid premature staining.
Although in-surgery whitening is popular, some of our patients prefer the privacy and comfort of home for their whitening treatment. Using custom-made trays, similar in design to a sport mouthguard, they are shaped to fit snugly over your teeth allowing for maximum contact with your tooth’s enamel while still protecting your gums.

You will be given instructions on the correct use of your trays and gel so you achieve maximum results. Although you can achieve the same look as a patient who chooses the in-chair treatment, as the gel is not as concentrated your desired shade may take between 20-30 days to achieve.

Teeth whitening treatments have undergone extensive testing to ensure they are completely safe to use. The only affect some patients experience is slight sensitivity to hot and cold, however this will often subside several hours after completing your treatment.

If you experience sensitivity while using your at home treatment you should cease application for a few days. If symptoms continue, please do not hesitate to contact life dental for advice.

Depending on the colour of your teeth and the shade you wish to accomplish, results will vary from person to person. The longevity of your treatment will depend on your lifestyle and food choices. Smoking and strongly dyed foods discolour your teeth much quicker; however many of our patients have results that last for two or more years.