temporary crown, since it is made in an impression of the patient’s mouth. This crown can be adapted to any tooth and is esthetically pleasing. The disadvantage to this crown is that some operators feel it takes longer to produce.

The choice of an appropriate temporary crown depends on which tooth is to be restored, the patient’s concern for aesthetics, and the length of time a temporary restoration must serve. With this information, you can make the judgement.

There are two different silicones:

- **Condensation silicone**
  - Has a limited shelf life (platinum catalyst)
  - Is hydrophobic
  - And stains clothes
  - However, they are faster
  - And have no odour

- **Addition Silicone**
  - More accurate than condensation silicones
  - Reduced shrinkage (no alcohol)
  - Set material is rigid and stable
  - However, it has a high cost
  - Hydrophilic

Trays

- Plastic is too flexible
- Polycarbonate is preferred less likely to distort
- Metal can be too rigid when used with a rigid impression material as it can be stuck in the mouth by large undercuts.
- Special trays are not required as good materials are sufficient
- And remember to use the correct adhesive

A core in relation to crowns is a restoration which is placed in teeth prior to the placing of a crown. It will hopefully provide a stable and secure base for fixing a crown to. It is the reduced shape and size of a normal tooth which gives support to the prosthesis and it underpins the success of the indirect restoration.
- Cracked teeth
- Realignment of occlusal plane

Worn teeth can result in short clinical crowns and is caused by erosion, attrition and abrasion. Erosion from acid in the diet or acid reflux, attrition being tooth on tooth contact and abrasion being tooth wear from non-tooth contacts such as toothbrushing etc. The indications for restoring worn teeth are as follows:

- Uncontrolled tooth wear
- Appearance
- Uncontrolled sensitivity

Localised tooth wear

This often presents in the upper anterior teeth. The wear produces short teeth without loss of vertical space. Further interocclusal space is needed for crowns or composites and can be created in a number of ways:

- Minor axial tooth movement using the Dahl effect
- Crown lengthening
- Occlusal adjustment changing the ICP to retruded contact position to create horizontal space between the upper and lower incisors
- Conventional orthodontic movement
- Reduction of the opposing teeth

Management of toothwear:

- Determine aetiology of the tooth wear
- Start preventive advice and refer to a gastroenterologist as necessary
- Confirm the patients main concerns, including:
  - Progression of the wear
  - Appearance
  - Sensitivity
- Take upper and lower study casts of the patient and examine the teeth for alveolar compensation
- Mount the casts on a semi-adjustable articulator with the aid of a facebow recording. Use the retruded contact position as the interocclusal record.

Localised tooth wear:

- Make a diagnostic wax-up to create the desired shape and size of the teeth. From the wax-up make a putty matrix.
- The diagnostic wax-up can be copied and a matrix made.
**FUNCTIONAL CUSP BEVEL (FCB):**

Seven Key Principles of preparation:

<table>
<thead>
<tr>
<th>Seven key principles</th>
<th>Function</th>
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<tbody>
<tr>
<td>Conservation of tooth tissue</td>
<td>To avoid weakening the tooth unnecessarily</td>
</tr>
<tr>
<td>Resistance form</td>
<td>To prevent dislodgement of a cemented restoration by apical or obliquely-directed forces</td>
</tr>
<tr>
<td>Retention form</td>
<td>To prevent displacement of a cemented restoration along any of its paths of insertion, including the long axis of the preparation</td>
</tr>
<tr>
<td>Structural durability</td>
<td>To provide enough space for a crown which is sufficiently thick to prevent fracture, distortion or perforation.</td>
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<tr>
<td>Marginal integrity</td>
<td>To prepare a finish line to accommodate a robust margin with close adaptation to minimise microleakage</td>
</tr>
<tr>
<td>Preservation of the periodontium</td>
<td>To shape the preparation such that the crown is not over contoured and its margin is accessible for optimal hygiene.</td>
</tr>
<tr>
<td>Aesthetic considerations</td>
<td>To create sufficient space for aesthetic veneers where indicated</td>
</tr>
</tbody>
</table>
Veneers can improve the colour, shape and position of teeth. A precise shade of porcelain can be chosen to give the right colour to improve a single discoloured or stained tooth or to lighten front teeth. They are usually placed on upper teeth

Veneering may be opted for where teeth have suffered from fluorosis. Sometimes the irregularity structure of the enamel goes all the way through and therefore micro-etching will not help. Tetracycline staining, especially if severe may be an indication to veneering. This is not always 100% effective as the veneer is translucent and can only cover darkened tooth structure to an extent. A veneer can make a chipped tooth look intact again. A traditional restoration with composite may first be attempted but they have limited strength, especially is the chip is small and offers little retention. The porcelain veneer covers the whole of the front of the tooth with a thicker section replacing the broken part. Veneers can also be used to close small gaps, when orthodontics is not suitable. If one tooth is slightly out of position, a veneer can sometimes be fitted to bring it into line with the others.

Veneers require minimum preparation. Some of the outer enamel surface of the tooth may be removed, to make sure that the veneer can be fitted permanently in place later. Removing the superficial layer of enamel to improve the bond to the tooth. The amount of enamel removed will be the same as the thickness of the veneer to be fitted, so that the tooth doesn’t appear bulky. A heal a cosmetic is not usually necessary but may be used when the patient is especially anxious. Once the tooth has been prepared an impression is taken. A temporary veneer is not usually indicated but may be used should be advised that the tooth will feel less smooth. The colour of the surrounding teeth is matched on a shade guide to make sure that the veneer will look natural.

Ceramics can be etched to provide more retention with hydrofluoric acid. It is very toxic and should not be used intraorally. When checking fit of veneer, the ceramic will become contaminated with saliva and bacteria. To prevent this, the tooth is cleaned first with soap and pumice. Do not use prophy-paste as this is oil based and will prevent adhesion. In try in use neutral try in paste. It is important to use this paste to prevent light refraction from etched tooth surface. If the veneer shade is slightly incorrect it can be altered slightly by colour of luting cement.