Final impression of a CeraRoot Implant

Attention!!: The implant remains at its maximum physical strength when none of its structure is modified.

That is why the implant comes in different shapes with anatomic abutments and correct gingival morphology.

In some occasions, the dental professional might find appropriate to prepare the implant structure to improve the aesthetic appearance of the final restoration.

After 3 to 4 months post-surgery, on occasion, the gum migrates below the prosthetic margin of the implant.

Before proceeding with the implant margin preparation, it is important to evaluate if more quantity and quantity of the surrounding keratinized tissue. In some cases a GTR (Guided Tissue Regeneration) and or GBR (Guided Bone Regeneration) might be recommended to cover more implant surface. It is normal for the gingival tissue to “settle” after the 3-4 month healing period.

The shoulder of the implant on day of surgery is approximately 2mm supracrestal.

The gum is sutured above and around the margin of the implant. The height between the abutment and the opposing tooth allows for ideal clearance.

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www.ceraroot.com
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Final impression of a CeraRoot Implant

Following a 3 month healing period, the surrounding tissue is completely healthy and the margin of the implant is now exposed (1.5mm)- In this case the margin can be prepared or left alone. Exposure of the shoulder in a supra gingival position does not represent any risk for the implant survival.

In this case the new margin of the implant has been moved apically with the use of ultra-fine diamond burs. (see specifications below). When the new margin is located at gum level, the impressions can be done using very thin retraction cord or digital impressions. It is not recommended to use thick retraction cords or laser or electrosurge to retract the tissue. Using these devices will likely cause the gum to migrate further apically.

The new margin of the implant has been adjusted apically with the use of ultra-fine diamond burs. (see specifications below) Because the margin of CeraRoot implant has been altered, the CeraRoot lab analogue and the CeraCrown impression coping cannot be utilized in this particular situation.

All-ceramic crown finished.

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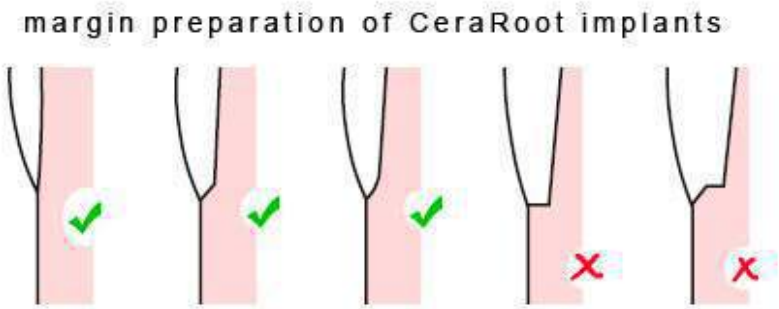
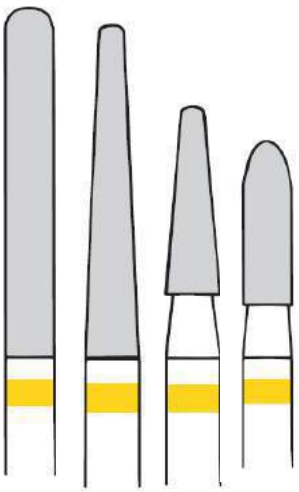
After 3 months the soft tissue is healthy and stable. The all-ceramic crown is cemented and the occlusion is checked.

The image above, demonstrates an example of the diamond grain size that should be used for margin preparation. The color on the bur shank is usually Yellow or White.

ONLY use “superfine” or “ultrafine” diamond grain size. Do not apply force with the burr to the abutment when grinding/polishing. Use very gentle pressure. Always use maximum water spray during the preparation. Do not ever polish or grind the abutment without water spray.





Recommended shapes of diamond burrs

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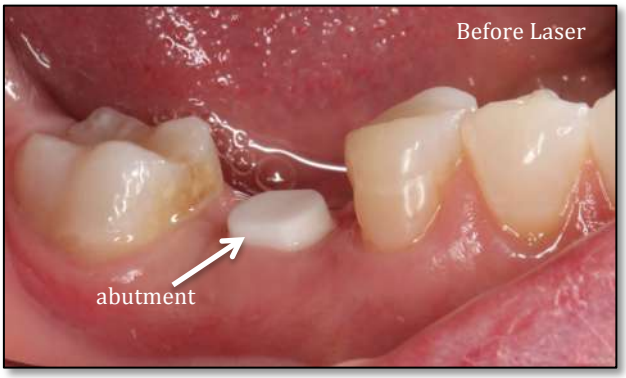
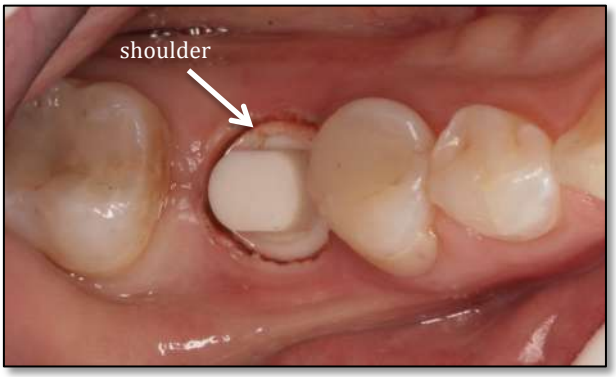
Implant shoulder BELOW THE GUM



The implant shoulder is covered by 2mm of gum. In order to have visibility of the shoulder, laser or electrosurgery can be used to remove the excess.

It is very important for the longevity of the implant to maintain about 2mm of keratinized tissue on the facial and lingual aspect of the implant shoulder.

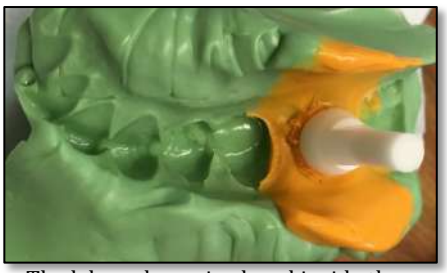


When utilizing digital impression technology- you can directly mark the margin of the implant on the computer.

We can use an impression coping called "CeraCrown" (made of zirconia) that is cemented directly on the abutment and shoulder of the implant.

The zirconia coping can be stabilized on the implant using small amount of wax or temporary cement.

The impression coping is picked up with an Impregum™



The lab analogue is placed inside the coping and stabilized with wax or temporary cement.

With the soft tissue material and the stone around the lab analog the laboratory technician can work on an exact replica of the implant. The laboratory analog can be reused and resterilized.

When taking impressions, the clinician must inspect that the inter-occlusal space for the crown will be sufficient. For full-contour zirconia crowns 0.7- 1mm of space will be enough. For lithium disilicate full contour crowns it is recommended to have at least 2mm.

All-ceramic crown

Selecting by Strength*

1.- Full contour zirconia crown
2.- Layered zirconia crown
3.- Full contour Lithium Disilicate

Selecting by Esthetics*

1.- Full contour Lithium Disilicate
2.- Layered zirconia crown
3.- Full contour zirconia

*(case selection is VERY important)

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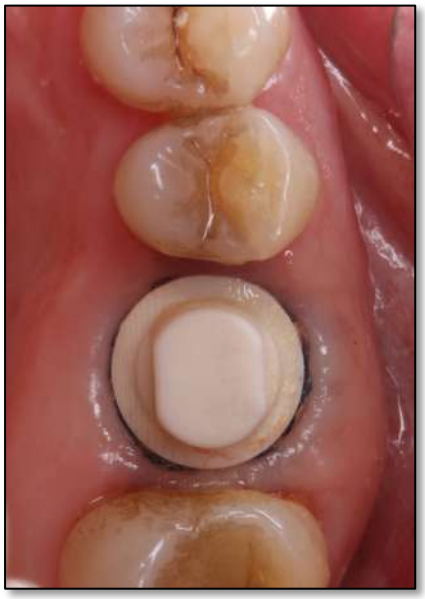
Implant shoulder AT THE GUM LEVEL

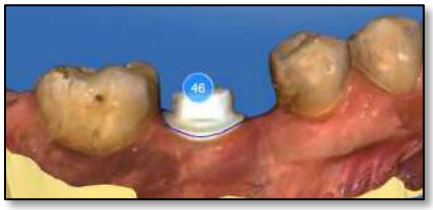
The implant shoulder is almost fully visible. There are small portions of gum covering the margin. These small portions of gum can be removed with laser or electrosurgery.



Utilizing the thinnest retraction cord, the gingival tissue is separated from the shoulder of the implant and now is completely visible. Retraction cord sometimes might not be necessary.

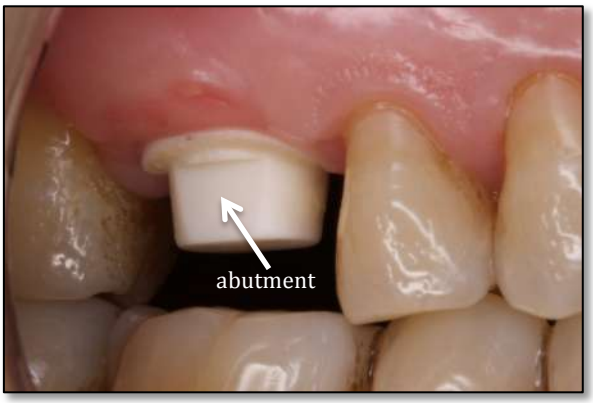
When utilizing a soft polyether impression material the clinician can obtain an accurate impression, directly from the implant, without any impression coping or transfers.

With the digital impression technique the clinician can easily locate the position of the margin.



If the margin of the implant is supra-gingival, it is usually best to leave it especially in a non aesthetics area, Alternatively, the shoulder can be prepared to the gum level.

Once again when taking impressions, we must inspect that the inter-occlusal space for the crown will be sufficient for the restorative material.



When taking impressions, we must inspect that the inter occlusal space for the crown will be sufficient. For full-contour zirconia crowns 0.7-1mm of space will be enough. For lithium disilicate full contour crowns it is recommended to have at least 2mm.

All-ceramic crown

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Selecting by Esthetics*

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2.- Layered zirconia crown
3.- Full contour zirconia

*(case selection is VERY important)

Carefully check the occlusion on the new restoration after cementation and leave the crown with less contact than natural teeth.

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Implant crown CEMENTATION

Air Polisher with bicarbonate

You can use a Pumice paste or Prophy paste without fluoride and emollients.

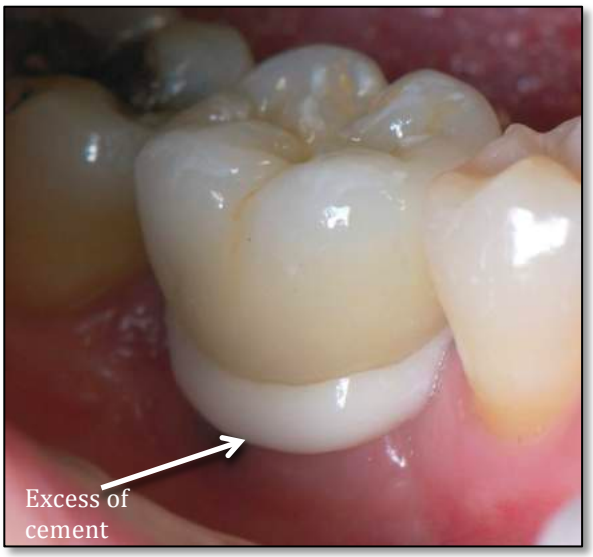
The implant abutment should be cleaned with any of these tools. Once the abutment is clean, simply air dry and cement with any of the products described below.

Prophy brushes

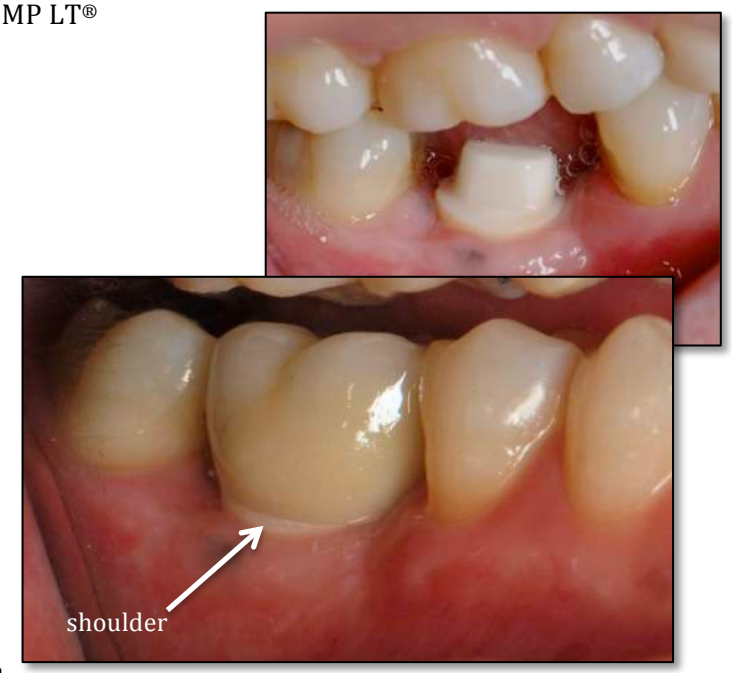
Prophy cup

Recommended permanent cements: FUJI CEM®, Rely X®

Recommended temporary cements: GC Fuji TEMP LT®



Apply the cement to the area around the abutment in side the crown- try to stay away for the marginal area of the crown. As the crown is seating the cement will flow "upwards" towards the abutment. Once it reaches the occlusal table the vector of forces will be now perpendicular to the horizontal plane of the occlusal table. At this point the cement will now start moving towards the prep margin and excess will be extruded out.



Use an appropriate amount of cement. Remember there is just enough room for a thin cement layer between the abutment and crown - about two coats of nail varnish - that is all the cement needed. This is about 3 percent of the total internal volume of the crown. It is safe and recommended to use ultrasounds with metal tips to remove excess of subgingival cement. To remove metal scratches on the zirconia surface, it is safe to use White Arkansas burrs.

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