



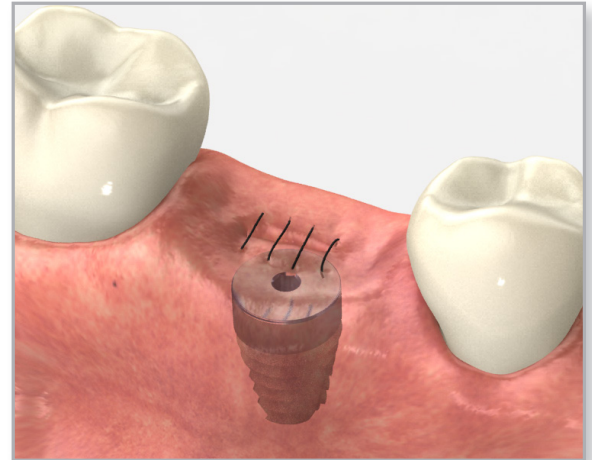
surgical options

Multiple surgical protocols are used to achieve the prosthetic outcome of choice. The technique selected may be dependent upon the volume and/or quality of bone, implant location and patient habits.

Two-stage or submerged surgery

In the two-stage surgical procedure, the implant is placed below the soft tissue to protect it from occlusal function, bacteria and external forces during osseointegration. A low profile cover cap is placed on the implant to protect the prosthetic platform from the ingress of soft tissue.

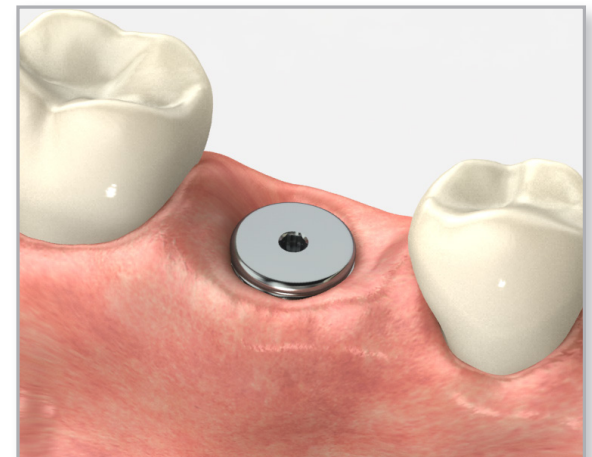
The implant is uncovered during a second surgical procedure and a healing abutment or temporary restoration is placed for soft tissue healing.



One stage or non-submerged surgery

In a one stage procedure, a healing abutment is placed at the time of implant placement.

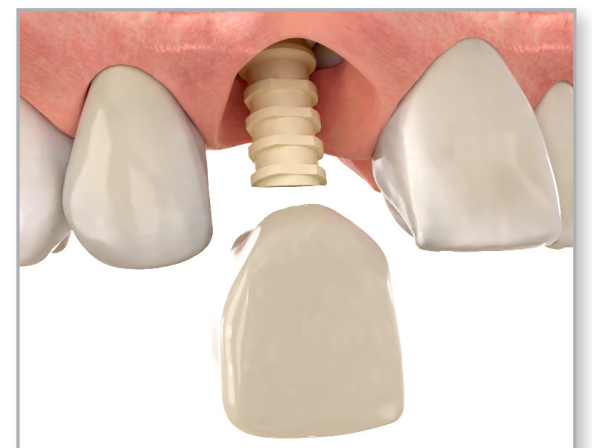
The one stage protocol eliminates the need for a second surgery but exposes the implant to bacteria and some occlusal forces during early healing.



Immediate temporization

Placing a temporary prosthesis at the time of implant placement may be an option for some partially and totally edentulous patients.

A nonfunctional, immediate, temporary restoration in the partially edentulous patient may help develop ideal soft tissue profile in an esthetic area.



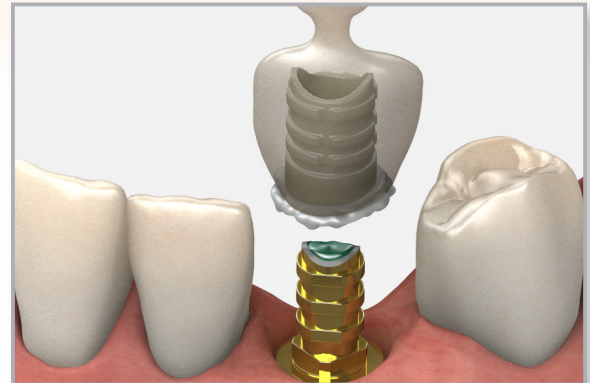


prosthetic options

Temporary restorations

Temporary restorations may be used at any stage of implant therapy. They can be placed on final abutments or on an abutment specifically designed for temporary restorations. Ideally designed temporaries provide predictable tissue contouring in esthetic areas and may be cement-retained or screw-retained.

See [abutment selection guide](#) for options.



Cement-retained restorations

Cement-retained implant restorations are very similar to crown & bridge restorations. A crown or bridge is cemented to a prepared implant abutment.

See [abutment selection guide](#) for options.



indications

- partially edentulous arch
- totally edentulous arch

advantages

- esthetics
- passive fit of restoration
- ideal occlusion

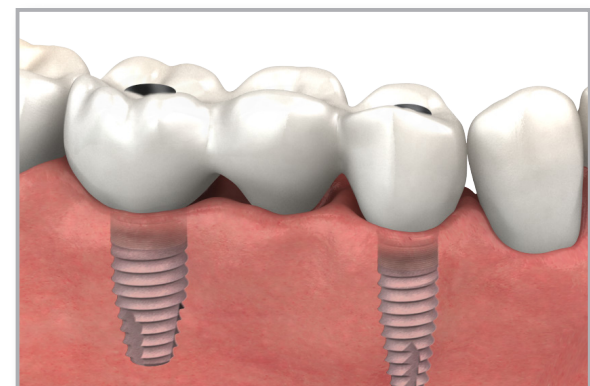
limitations

- subgingival cement can irritate tissue & cause bone loss
- excess cement can lead to peri-implantitis
- lack of retrievability

Screw-retained, implant-level restorations

A screw-retained restoration is secured to the implant with screws that enter through the occlusal surface of the crown or bridge.

See [abutment selection guide](#) for options.



indications

- single or multiple-unit restorations
- edentulous or partially edentulous arch
- limited inter-arch space

advantages

- absence of cement
- retrievability for hygiene

limitations

- screw access may compromise occlusion
- screw access may compromise esthetics
- limited when splinting divergent implants



prosthetic options

Multi-unit abutment, screw-retained restorations

Multi-unit abutment, screw-retained restorations are used for hybrid type restorations or bar overdentures.

See [abutment selection guide](#) for options.



indications

- edentulous maxilla or mandible
- hybrid or fixed detachable restoration
- bar overdenture

advantages

- multiple prosthetic options
- retrievability for hygiene

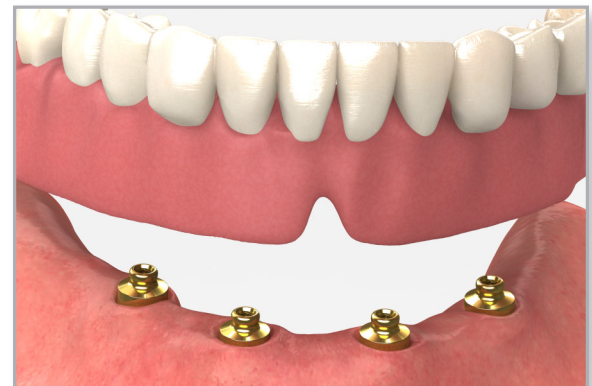
limitations

- requires inter-arch space to accommodate abutments and restoration

Overdenture restorations

Tissue-supported, implant-retained overdentures are an option for retaining a new or existing denture.

See [abutment selection guide](#) for options.



indications

- edentulous maxilla or mandible
- transitional restoration
- severe bone loss

advantages

- removable
- existing denture may be used
- low financial investment

limitations

- implant retained, tissue supported overdentures require periodic maintenance and relining to insure proper tissue support



impression technique overview

There are four types of impression techniques utilized for implant prosthesis fabrication: open tray, closed tray, closed tray pick-up and traditional crown & bridge. The type of impression technique used is the clinician's choice.

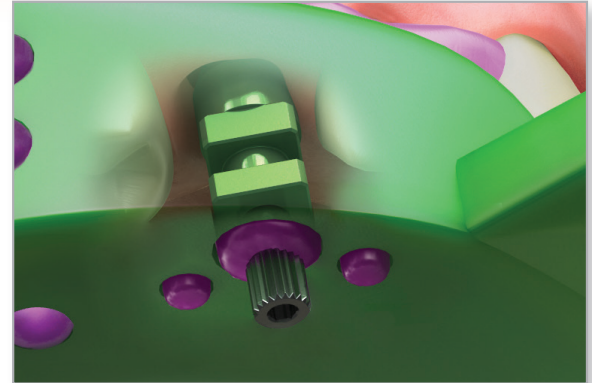
Open tray technique using a direct pick-up coping

The open tray technique requires a custom tray or modified stock tray and picks up the impression coping in the impression. It records the implant location, hex orientation and soft tissue profile and is often considered the most accurate.

Impression copings to use with this technique:

- Direct pick-up copings available in hexed and non-hexed for implant level and non-hexed for Multi-unit abutment level.

For implant level, refer to the [open tray technique using the direct pick-up coping](#) module and the custom impression tray fabrication module. For Multi-unit abutment level, refer to the [Multi-unit abutment open tray technique using the direct pick-up coping](#) module.



indications

- single & multiple implants
- splinted restorations

advantages

- high degree of accuracy
- less likely for the tray to get locked on with divergent implants

limitations

- requires custom or modified stock tray
- difficult in the posterior
- difficult when insufficient intraoral access

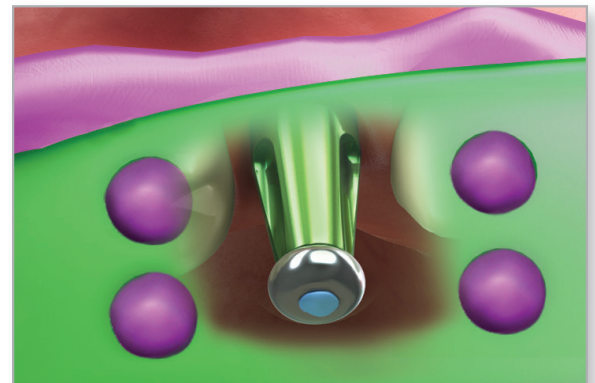
Closed tray technique using an indirect transfer coping

The closed tray technique is similar to a traditional crown & bridge impression since a stock tray may be used and the impression coping is not picked up in the impression. It records the implant location, hex orientation and the soft tissue profile.

Impression copings to use with this technique:

- The 3inOne abutment (with a balltop screw) for regular emergence
- Scoop copings for narrow, regular and wide emergences
- Indirect transfer coping for Multi-unit abutments

For implant level, refer to the [closed tray technique using the indirect transfer coping](#) module. For Multi-unit abutment level, refer to the [Multi-unit abutment closed tray technique using the indirect transfer coping](#) module.



indications

- single implants
- short-span bridge impressions
- posterior implants with insufficient intraoral access

advantages

- similar to a traditional crown & bridge impression
- stock impression tray may be used

limitations

- not recommended for multiple implants or divergent implants



surgical and prosthetic options

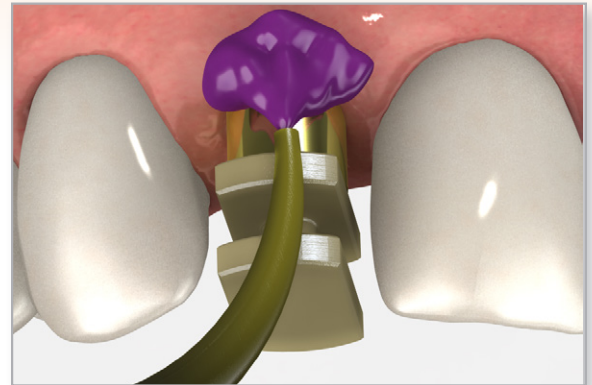
Closed tray pick-up impression technique using a snap coping

This closed tray technique uses a stock tray but still retains the snap coping in the impression. It records the implant location, hex orientation and soft tissue profile.

Impression copings to use with this technique:

- The snap copings for narrow, regular and wide emergences
- The snap scan bodies for flexibility between traditional and digital impressions

For implant level, refer to the [closed tray pick-up technique using the snap coping](#) module.



indications

- single or multiple posterior implants
- splinted restorations

advantages

- simple technique
- high degree of accuracy
- minimal chair time required

limitations

- seating verification is recommended
- single patient use

Traditional crown and bridge impression

An impression is made of a prepared abutment to capture the abutment modification and margin preparation.



indications

- chairside preparation of abutment

advantages

- traditional impression method

limitations

- requires chairside preparation of abutment
- impression only records the prepared abutment
- no information on the implant platform or hex orientation is recorded