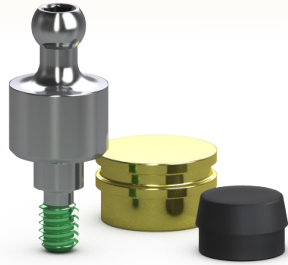




## ball abutment overdenture: chairside pick-up using existing denture

Use this technique for chairside pick-up of ball abutment attachments into an existing denture. Ball abutments are designed to secure a tissue-supported overdenture in the mandible.



### component options

- ball abutments
- .050" (1.25mm) hex driver
- torque wrench
- ball attachment set
- directional rings
- insert seating tool
- reamer

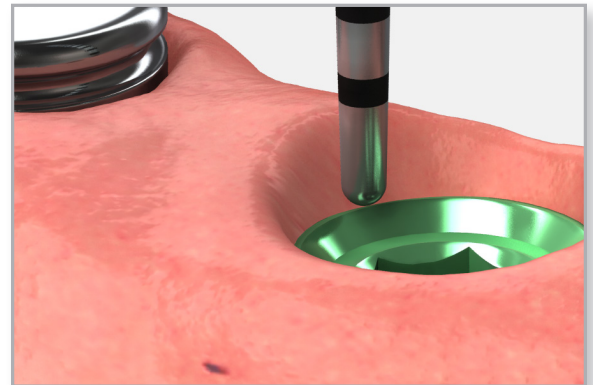
### 1 Select the ball abutments

Select the proper ball abutment based on the prosthetic platform of the implant and tissue height. Measure the tissue thickness from the top of the prosthetic platform to the crest of the gingiva at its highest point.

Choose the abutment collar height that is 1mm higher than the tissue height. There should be no tissue above the shoulder of the collar.



**Note:** Due to tissue depth variations, the abutment heights you choose may vary.



### 2 Remove the healing abutments

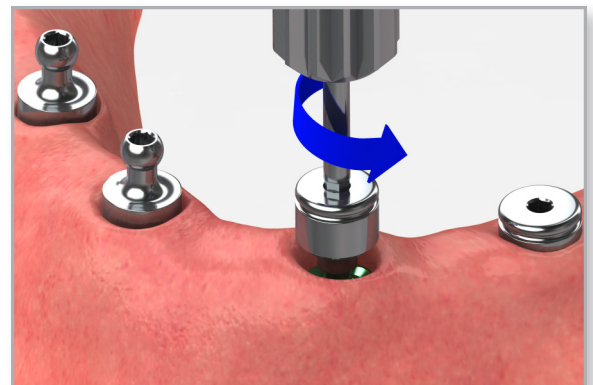
Remove the healing abutments using an .050" (1.25mm) hex driver. Confirm that the prosthetic platforms are free of bone debris and soft tissue. Irrigate the internal connection of the implants and dry.



**Helpful Hint:** When working with multiple implants, remove one healing abutment at a time and replace it immediately with a ball abutment. This helps to prevent the possibility of soft tissue collapsing onto the implant.



**Important:** The ball abutment's shoulder should be 1mm supragingival to prevent soft tissue impingement at time of seating.





## ball abutment overdenture: chairside pick-up using existing denture

### 3 Place the ball abutments

Place the selected ball abutment onto each implant using an .050" (1.25mm) hex driver. Hand tighten.

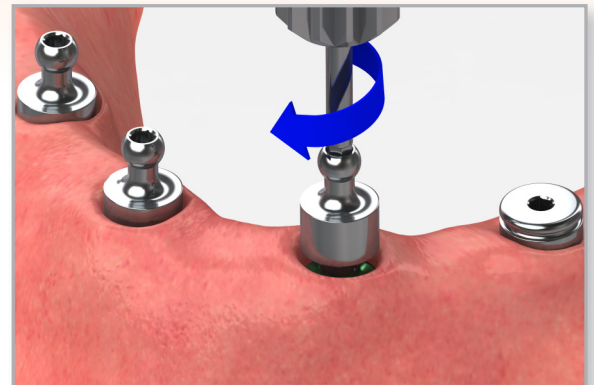
Take a radiograph along the long axis of the implants to ensure the abutments are seated completely on the implants.

Tighten the ball abutments using the 30 Ncm torque wrench and an .050" (1.25mm) hex driver.



**Note:**

The X-ray tube must be positioned perpendicular to the implant prosthetic platform.



### 4 Mark the denture

Place a transferable mark on top of each ball abutment with an indelible pencil and seat the denture to determine the ideal location for the attachment housings in the denture.

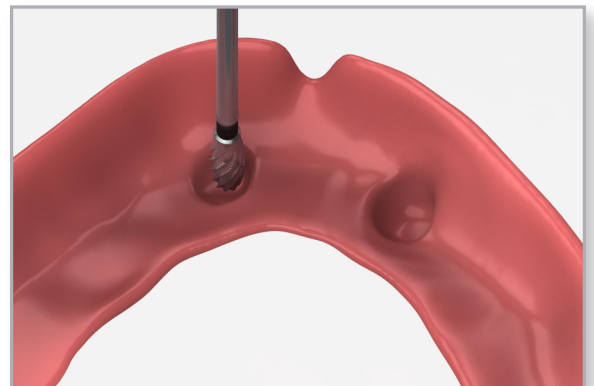
Prepare recesses in the denture to accommodate space for the housings. There must be no contact between the denture and the housings with a minimum of .25mm of space between the housings and the denture.



**Important:**

Resting the denture on the metal caps will result in excess pressure on the implants.

Make lingual vent holes for the escape of any excess acrylic.



### 5 Seat the attachment housings

Insert the black nylon lab processing insert into each of the titanium housings with the insert seating tool. Snap an attachment housing onto each abutment.



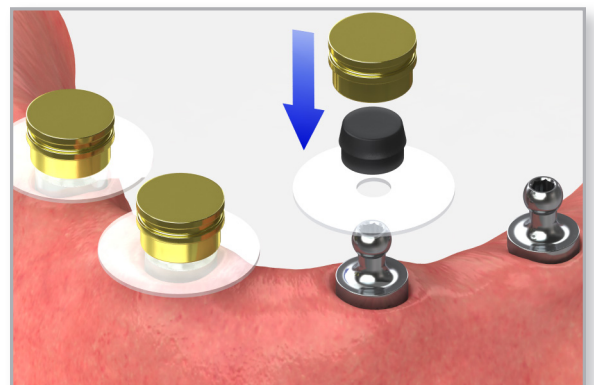
**Note:**

If the implants are not parallel, it may be necessary to use directional rings or blockout material to position the housings on the same horizontal plane for a parallel path of draw.



**Helpful Hint:**

The protective discs may be positioned over the ball abutment to protect the soft tissue during the pick-up procedure.





## ball abutment overdenture: chairside pick-up using existing denture

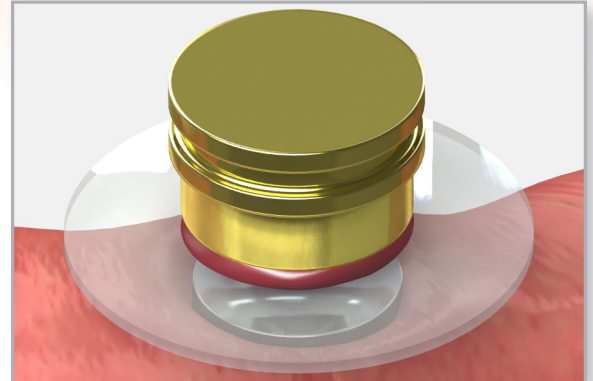
### 6 Block out the undercuts

Block out any undercuts beneath the housing and soft tissue with a material of choice to prevent the acrylic resin from locking the denture onto the abutment. Seat the denture making sure the denture is not touching the housings.



**Important:**

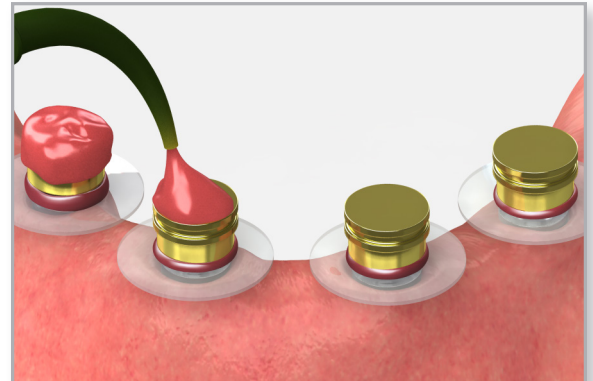
If the undercuts are not blocked out, the denture may become locked onto the ball abutments.



### 7 Apply the acrylic

Use either a chairside light cure acrylic resin or a permanent self-curing acrylic for bonding the ball attachment housings to the denture.

Place a small amount of material into the recessed area of the denture and around the titanium housings.



### 8 Seat the denture

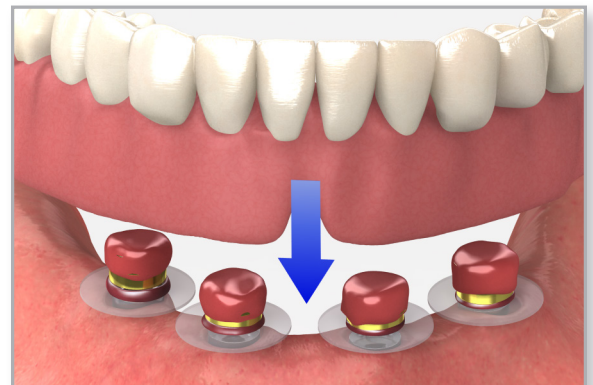
Insert the denture. Guide the patient into occlusion, maintaining a proper relationship with the opposing arch.

Maintain the denture in a passive position without compressing the soft tissue while the denture material sets.



**Important:**

Excessive occlusal pressure during the seating time may cause tissue recoil against the denture base and could contribute to dislodging and wear of the nylon insert.



### 9 Remove the denture

After the acrylic has cured, remove the denture and discard the directional rings, if used. Fill any voids with acrylic, remove the excess acrylic from around the housings and the lingual vent-hole, and polish.

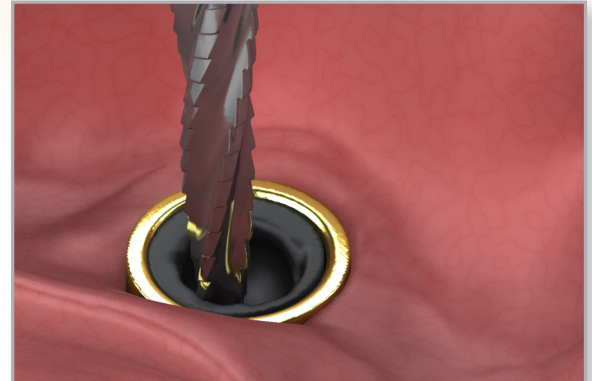




## ball abutment overdenture: chairside pick-up using existing denture

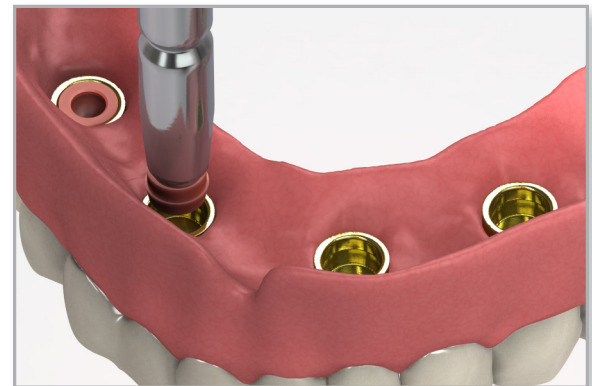
### 10 Remove the black processing insert

Remove the black processing insert from the housing by using a rotary instrument operated at a low RPM. Care should be taken not to damage the housing during this procedure.



### 11 Place the nylon retention insert

Use the insert-seating tool to seat the nylon insert (white for more retention or pink for less retention) into the titanium housing. The insert must seat securely in place and be level with the rim of the housing.



### 12 Deliver the denture

Seat the overdenture onto the ball abutments. Modify the occlusion and the tissue side of the denture as necessary and polish after making adjustments.

Verify the patient's ability to remove and seat the denture properly. If the denture has too much or too little retention, select an insert with a different retention.



#### Helpful Hint:

If the retention is too great for the patient to remove the denture and an insert with lower retention is not available, the reamer may be used to reduce the retention. Insert the reamer into the caps and rotate clockwise for a few rotations. Try in the prosthesis, if retention is still too great; repeat the use of the reamer until the proper retention is achieved.

Instruct the patient on the proper insertion and removal of the prosthesis. This includes inserting the denture using their fingers and not biting the denture into place. When removing the denture, lift it as evenly as possible.

