

## Problem Solvers 12 Mini-Implants to retain Dentures

Synonyms: TAD, temporary anchorage devices, mini's, small diameter implants

Mini-dental implants can be used for long term and continuing use to retain dentures and maintain bone. This article can explain when they are indicated and what you should expect from diagnosis to treatment.

### Mini-Implants –A Good Idea?

Meta Description: While Mini-implants are a wonderful procedure that can solve many denture problems, there are times when they shouldn't be used.

Mini-implants are small 1.8mm-2.3mm wide and are made out of titanium alloy. They are placed in bone for the purpose of giving a denture something to attach to. There are rubberized "o" rings in metal housings that are placed in the denture that grip on to a ball top of the mini implant that help hold it in while allowing the denture the freedom to move in 3 dimensions during chewing.

The FDA has approved mini implants for "long term and ongoing use" which means they can be considered a long- term solution for denture sufferers.

Why were mini-implants developed? They have been used as temporary implants to hold on to temporaries for years and they have had several designs. It is only in the last several years that they were considered a final form of treatment.

Who can have mini-dental implants? People that are not medically compromised, have uncontrolled diabetes or have not been approved for surgery by their physicians.

How much bone do I need to have mini-implants? Typically you need a minimum of 10mm of bone to safely place these implants.

Should mini-implants be placed in both upper and lower jaws?

They can be safely placed in both jaws but the dentist should make sure that the vital nerves, and sinus structures are not violated. Cat scans or 3 dimensional imaging may be required prior to the surgery.

My dentist says he wants to place 4 minis in the lower arch is this the best? While the protocol for using mini-implants calls for 4 mini's to be placed in the front of the lower jaw; if a dentist feels they can safely place more mini implants there will be less rocking and more stability of the denture as a result.

I just had my teeth out, how long must I wait for this treatment?

If there is enough bone remaining, the mini implants can be placed into the bone adjacent to where the teeth were removed. Since it will take 6-9 months for the bone to heal fully, the denture will require relining to make it fit after healing. So it is often advisable to wait for all healing and bone growth to occur prior to placing the mini-implants.

Will placing mini-implants hurt?

No some local anesthetic is used in the area where the implants are to go and the procedure for placement is simply a small hole is created and the implant is twisted gently to place. Since there are no nerves in the area where the implants are to be placed, there is little discomfort.

Will they have to make an incision to place implants?

In some cases the use of an incision is required so the bone (which is very thin) can be inspected directly while placing the implants.

I just had mini-implants placed and my teeth rock, what's going on?

If the caps in the denture are not placed properly, the denture won't fully engage the mini-implants and the keeper caps may bounce on the head of the implant and cause denture rocking. The dentist needs to remove these caps and pick them up in the denture again so they all seat passively.

I had a mini-implant come loose, did the dentist do something wrong?

Not necessarily. Mini-implants are the last resort for attaching a denture to the bone-not the first best option. They are small in size, small in surface area and if the host bone is poor in quality, the implant can fail. In our practice, we allow the implants to heal for 2-3 months before engaging them in the denture so they won't have immediate forces on them that can increase their mobility and potential failure. After 3 months the keeper caps are then placed in the denture so the forces aren't applied until the implants have integrated.

You mentioned that mini implants are not the first best choice for holding on to dentures-what's better?

Traditional dental implants are used to retain dentures and bridges and due to their increase in size, circumference, and surface area they are much better for long term support. Mini-implants merely hold on to dentures (they are retentive devices)—regular implants actually are used for chewing and support.

Mini implants are used to hold dentures and partials and some very small lower anterior crowns. They are not designed for holding on to large span bridges and crowns.

While some dentists advocate using mini-implants for these procedures, there is little literature to support these practices, that have long term, double blind placebo studies to corroborate it. So mini-implants are used to help hold on to partial dentures where teeth are missing, dentures and they can even be used to hold on to temporary restorations around traditional dental implants to keep forces off these implants during healing.

Mini-implants are a worthwhile and wonderful service that can help people with ill-fitting dentures. They can improve chewing forces, taste, stability and can help people that are not enjoying dentures. They should not be used for people that want “fixed” or non-removable teeth. They can fail and should be monitored to make sure they don’t become loose over time. It is especially important to make sure the occlusion or bite is checked frequently to make sure that unusual forces don’t cause the denture to press on the mini-implants causing them to prematurely fail.

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