Implant Procedure

How do I care for my implants?

Oral Hygiene
Proper care of your implants is important to their continued function and good health. While they are not subject to cavities as our natural teeth are, they can develop gum inflammation, and even infection and bone loss if not properly maintained. Whereas localized inflammation and infection around your teeth is known as periodontal disease, a similar process can occur around the implants and is known as peri-implantitis. Your dentist should review proper techniques for keeping your implants clean and the surrounding tissues healthy — but above all else, brushing and flossing is necessary. Your dentist or dental hygienist may also show you other tools that can help keep your teeth and implants clean and healthy.

Dental Check-Ups
Your “new teeth” will require periodic checking by your dentist to ensure the surrounding gums and bone are maintained and healthy. This also requires periodic x-rays to evaluate the level of bone around your implants. The dental restorations attached to your implants will also require periodic checking by your dentist to verify that they are secure and functioning properly.

Dental Check-Ups (continued)
It is not uncommon for the screws that attach your restoration to the actual implants or abutments to loosen from time to time. This usually entails simply removing the dental restoration, cleaning it and replacing it with new or re-tightened screws. Similarly, if your dental restoration is cemented to the underlying implant, they may also loosen periodically. If this happens, your dentist will need to remove the restoration, clean it, ensure that it fits as designed and re-cement it to the implant. While these are minor complications, however inconvenient, they should not be ignored. Allowing the restoration to remain in place when it is not properly attached to the implant can create more significant problems.

How are dental implants placed?
Most dental implant surgery procedures are performed in the dentist’s office and occasionally in a hospital setting. Local anesthesia is usually adequate for these out-patient procedures, but various other forms of patient sedation may also be used (such as nitrous oxide and/or oral intravenous sedation). Adjunctive surgical procedures, such as bone augmentation, may be performed as separate procedures or at the same time as implant placement. Each surgical procedure is different depending on the clinical situation as well as the preferences of the patient and dental practitioner/surgeon.

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**Why is the surgical procedure a multi-step procedure?**

The most widely practiced method of placing dental implants is a “staged surgery” procedure. The first stage consists of surgically burying the implant (which replaces the tooth root) flush with the bone but underneath the gum. This protects the implant from force while it is healing to encourage successful osseointegration. At the end of this healing period, the implant needs to be surgically exposed by removing some of the overlying gum.

At this second stage, the surgeon checks the implant for its successful integration and connects some form of post which penetrates through the gum into the mouth. This post is called the abutment. Abutments come in many forms and can be stock-manufactured or custom-molded by your dentist and a laboratory. The gum is allowed to heal around the abutment and form a cuff or collar through which the dentist has access to the implant when preparing the final restorative stage of placing the prosthetic tooth or teeth.

Research has shown that it is often possible to place a suitable abutment at the same time as the implant. This has certain limitations but can eliminate the need for a second surgery to expose the implant. However, the implant still requires adequate healing time for the bone to osseointegrate.

The abutments must also be protected from chewing forces during this period to assure effective bony integration and successful healing. Once the implants have had a chance to heal and have been tested for successful integration, the final restorative step takes place. This consists of fabricating and connecting the prosthetic teeth to the successfully osseointegrated implants.

**What is one-stage surgery?**

This method employs a non-submerged one-piece implant that has a metal collar designed to protrude through the gum while the bone is healing to the implant. After a suitable healing time, an abutment can be connected to the implant, allowing for fabrication of the crown to replace the missing tooth. Alternatively, a one-stage technique can be achieved by immediate connection of a temporary healing abutment to a two-piece implant that protrudes through the gum in much the same way as a one-piece implant. Both single-stage and two-stage implants have similar success rates and you should ask your dentist which systems they use and discuss how one- or two-stage procedures might be appropriate for you.

**What is the overall success rate for dental implants?**

Despite decades of clinical and scientific research, dental implants do not have a 100% success rate. However, the success rates have improved dramatically since the introduction of dental implant surgery and the dental profession can proudly report success rates well above 90% for most implant patients. Similarly, long-term success rates are in the high 90% range and are likewise improving. When a dental implant has not successfully integrated, it may need to be removed, as it cannot easily be “converted” to osseointegrate. Your dentist will give you best advice about this. A replacement implant can be placed but it may require some months of healing time and possibly bone augmentation (repair by means of grafting).

**How long does it take for implants to heal?**

Healing times for implants vary depending on the quality of the patient’s bone and are often extended in cases where performing adjunctive procedures is necessary. In general, dental implants require two to four months for the bone to heal (without being exposed to extra forces from biting). Research into the mechanisms of bone attachment to titanium has improved the healing process to the point that some implant manufacturers can claim greatly shortened healing times for their products (but this is generally not the norm). In recent years, research has demonstrated that in certain controlled circumstances, dentists can immediately load implants (connect prosthetic teeth) either the same day or shortly after they have been placed. While this is becoming increasingly common, most cases require a healing period of two to four months before the prosthetic restoration can be finalized.

Likewise, if a previously placed implant has lost significant amounts of supporting bone, there are currently no treatments that can predictably restore the lost bone after it has been in function in the mouth.

For more information about dental implants visit the AO website at www.osseo.org