

Replacing Missing Teeth with Dental Implants



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Tooth loss at any age can be a traumatic experience. Perhaps you had severe decay at an early age and lost your teeth to extractions. Or, you lost teeth due to injury from a fall or related to sports. You may have developed complications with a root canal tooth, and it couldn't be saved. Or you developed an abscess or gum disease that resulted in extractions. Maybe your tooth just never developed and it has always been missing. You may now notice gradual shifting of your teeth and emergence of new problems.

Treatment approaches can vary from doing nothing to conventional bridges, to modern dental implants. Some people seek immediate treatment while others wait. Patients should first consider what their motivations are for replacing teeth. Is self-confidence and public image the motivation? Is it to smile again? Do you want to be able to eat your favorite foods and live a healthier life?

Whatever your motivations, you are faced with questions and challenges. Here are some information and solutions to help you make the best decisions.



What are treatment choices for replacing missing teeth?

Historically, patients had either a bridge or denture to replace missing teeth. While a bridge offers satisfactory aesthetic results, it is too invasive and damaging to adjacent teeth, due to the cutting down process of supporting teeth. A denture is aesthetically unpleasing, difficult to chew with, and often results in further damages to the teeth and the supporting bone. Dental implants have more than 98 percent success rate, and are now the standard of care and preferred choice in tooth replacement therapy.



A bridge requires the cutting down of healthy adjacent teeth. Disadvantages of bridges:

- Bridges compromise the long-term health of adjacent teeth by removing the enamel and placing additional forces on them.
- Bridges are difficult to clean, and the teeth are susceptible to decay, root canals and gum problems.
- When bridges fail, additional teeth are often affected, and more extensive treatment is usually necessary.

Dental implants as the standard of care?

Dental implants clearly offer the best replacement option in today's dentistry. First consider the following documented studies:

- Implants are 92%-98% successful for periods of up to 40+ years. The variations are a result of several factors, including the type of implant, age of the patient, health of the patient, and whether or not the implant is placed in a "compromised" site (e.g. very little bone)
- Recent research indicates that replacing a missing tooth with an implant-supported crown provides benefits to the adjacent natural teeth.
- Success rates for implants do not decrease over time. Compare this to the success rate for bridges, which decreases steadily after 10 years. In fact at 15 years, 1 in 3 bridges typically fail.
- If more than one tooth is missing, the bridge "span" is longer - and will have an even lower success rate.

Benefits of Dental Implants

The mouth is restored as closely as possible to its natural state. By

replacing the entire tooth, including the root, it is possible to replicate the function of natural teeth, with a strong, stable foundation that allows comfortable biting and chewing. In addition, nothing in the mouth looks or feels artificial.



Implants preserve the integrity of facial structures. By preventing the bone resorption that would normally occur with the loss of teeth, the facial structures remain intact. This is particularly important when all of the teeth are missing, as the lower one-third of the face collapses if implants are not placed to preserve the bone.

Your smile is improved when replacement teeth look more like natural teeth. Even when only one tooth is missing, long term esthetics are usually much better with an implant supported replacement tooth than with a traditional tooth supported bridge. This is particularly important in the front of your mouth, where preventing a visible bone defect is critical for natural appearance.



Adjacent teeth are not compromised to replace missing teeth. Tooth

replacement with traditional tooth-supported bridges requires grinding down of the teeth adjacent to the missing tooth/teeth so that the bridge can be cemented onto them. This tooth structure can never be replaced, and the long-term health of these teeth are compromised. Partial dentures have clasps that hook onto adjacent teeth, putting pressure on them as the partial rocks back and forth. Eventually, these teeth can loosen and come out as a result of this pressure. Replacing missing teeth with implant supported crowns/bridges does not involve the adjacent natural teeth, so they are not compromised or damaged.

The overall quality of life is enhanced with replacement teeth that look, feel and function like natural teeth. With implant supported replacement teeth, the appearance of the smile is more natural and the teeth function more like natural teeth. The result is increased comfort and confidence when smiling, speaking, and eating. If dentures and partials are replaced with implant supported teeth, the overall enhancement in the quality of life is even more significant, with an ability to eat all types of foods, elimination of messy adhesives, and improved speech, comfort and appearance.

Convenient oral hygiene. It is very easy to care for an implant supported crown, which can be cleaned like a natural tooth. In comparison, a tooth supported bridge requires the use of a floss threader for proper cleaning. It is also more convenient to clean a full set of implant supported replacement teeth than a traditional denture.



Improved appearance. Since implants preserve bone, preventing deterioration of the facial structures, appearance is improved. Collapsing of the lower one-third of the face caused by complete tooth loss can be visually corrected, and the remaining bone preserved. The appearance of wrinkles around the mouth caused by posterior bite collapse or complete facial structure collapse is virtually eliminated.

Restored self-esteem and renewed self-confidence. Many of the people who now enjoy the benefits of implant supported replacement teeth state that their self-esteem and self-confidence have been restored as a result of improved appearance, function, comfort, and health.

Improved ability to taste foods: Wearing an upper denture can prevent someone from tasting food, as the roof of the mouth is covered. With implant supported replacement teeth, it is not necessary to cover the roof of the mouth, so it is possible to enjoy the taste of foods.

What happens if the missing teeth are not replaced?

Diminished chewing function: Losing teeth greatly affects what you can eat, your nutrition and overall health.

Compromised teeth:

When teeth are lost or removed, not only does the bone resorb (see section on Bone Resorption), but the surrounding teeth begin to drift into the gap created by the missing tooth/teeth. This results in problems with the gums and how the teeth fit together and function (occlusion) and eventually problems with joint pain. In addition, when posterior teeth are lost, pressure is placed on the front teeth, which can cause them to splay out.



Unfortunately, attempting to replace teeth with either bridges or removable partials also compromise the health of the adjacent teeth as follows:

When teeth are cut down into pegs for bridges, the enamel is removed, leaving the spongy layer of tooth structure called the dentin. Over time, the cement retaining the bridge washes out and bacteria can seep under the bridge and decay the dentin fairly quickly. This leads to failure of the bridge and possible root canals if the decay reaches the nerve.

In addition, these teeth now bear the forces that should normally be placed on three teeth, which further weakens the structure of these teeth. It's rather like knocking one of the supports out from under the Golden Gate Bridge and expecting the other supports to bear the entire weight. It would simply fail as the other supports break down over time.

Most importantly, once the teeth are cut down for a bridge, the tooth structure can never be replaced; the long term health of the teeth is compromised and this usually results in additional treatment over time, which can be extensive and costly.

When teeth are replaced with a removable partial denture, the bone resorption is accelerated and the pressure that the partial puts on the teeth that it is hooked onto begin to loosen. Over time, the pressure can eventually torque these teeth out completely.



If this happens, the partial must be made larger to incorporate the additional missing teeth/tooth, and it is now hooked onto other teeth than can be lost with continued pressure from the partial.

Bone loss as early as three months after extraction

Why does bone loss result from tooth loss?

Natural tooth roots are embedded in the jawbone, providing a stable foundation that allows the teeth to function properly. When teeth are lost or extracted, the bone that previously supported those teeth no longer serves a purpose and begins to deteriorate, or resorb.

How can this bone loss be prevented?

Dental implants are substitute tooth roots, providing the same function as natural tooth roots (see diagram), including stimulating the bone, thereby preserving it and preventing the bone loss that would normally occur with tooth loss. The jawbone actually forms a bond with the dental implants, creating a stable foundation for replacement teeth that look, feel and function like natural teeth.

Anterior Tooth Loss

When you lose a tooth in the front of your mouth, where the bone is very thin, the bone will usually melt away rather quickly, giving the appearance that the bone and gums are

caving in, or collapsing. Very often, this defect is visible when smiling.



If you replace a front tooth with a tooth supported bridge, eventually the replacement tooth looks like a false tooth as the gums and bone above it begin to

collapse, leaving the tooth hanging, or suspended without support. When a tooth is replaced with an implant supported crown, the implant functions like a natural tooth root and preserves the bone, preventing the defect in the bone that would normally occur with tooth loss.



Posterior Tooth Loss

When all of your posterior teeth are missing, the back of your mouth actually collapses

as the bone deteriorates. The teeth in the front of your mouth begin to flare out as the bite collapses and the corners of your mouth droop. Your appearance begins to change as the height of the jaw decreases.

If your posterior teeth are replaced with a partial denture, the bone resorption process is accelerated as the partial presses down on the gums and underlying bone as you eat. Replacing your posterior teeth with implant supported bridges preserves the bone, preventing the bone deterioration that leads to bite collapse, which occurs when teeth are missing.

Immediate vs. Delayed implants

When appropriate, an implant may be placed immediately on the same day as tooth extraction. But there are very specific indications for this approach. Otherwise, it is best to allow the extraction site to heal for 6-8 weeks and then place the dental implant. It is not wise to compromise a lifetime success by trying to save a couple of months.

Facial Structure Collapse

When all of your teeth are missing, the jaws deteriorate rapidly. In addition, as the bone melts away your muscles migrate, or pull back



from their natural position. Your lips cave in as they lose support and wrinkles increase dramatically as your facial structures collapse. Complete tooth loss and the deterioration of the jaws can also result in significant overall health problems related to improper digestion and malnutrition.

If you replace your missing teeth with dentures, you are compromising your facial structures. Dentures accelerate the bone resorption process as they put pressure on and compact the gums and underlying bone. As facial structures continue to collapse, the dentures must be relined (made thicker) to compensate for additional bone loss. Replacing your teeth with implant supported overdentures (or bridges) will preserve the bone and prevent the further deterioration of facial structures and the related health problems that would normally occur with complete tooth loss.

Are there any age limits for implants?

Dental implants should not be done until a patient has completed their growth, typically age 16 to 17 in females and 18 to 21 in males. Some older patients fear their jaw bone is too weak. The fact is, dental implants are equally successful and have excellent prognosis. No one is too old for dental implants, and for many, improvement in chewing and aesthetics adds confidence and quality to their lives.

Can I get implants with my osteoporosis condition?

Absolutely. Osteoporosis does not effect the health of the jaw bone and dental implants are equally effective and successful.

Can dental implants be rejected?

Rejection does not occur with dental implants. The overall success rate for dental implants is 98 percent with almost 50 years of clinical research to back them up. Because implants are made of completely biologically compatible “bone-friendly” titanium material, they naturally heal and integrate with the surrounding tissues.



What if I don't have enough bone?

The jaw bone undergoes significant shrinkage following the third month after tooth loss, and can continue up to 12 months. If the extraction site was not grafted at the time, there may be an inadequate amount of bone for implant placement. Bone grafting is a highly successful and predictable treatment option to augment missing bone and build the proper foundation for the necessary implants.

Who is the right dentist for implant treatment?

Teeth replacement with dental implants require collaborative efforts of a surgeon and a restorative dentist and dental laboratory. Dental implant surgery is a highly skilled discipline, best performed by specialized surgeons who are well trained and perform this procedure daily. The prosthetic aspect (crown, bridge, etc) is performed by your restorative dentist who may be a general dentist or a prosthodontist, a specialist trained in more complex aesthetic and reconstructive restorative dentistry.

Other specialists may be involved in your overall treatment as well, including an endodontist (root canal specialist) or orthodontist to assist the restorative dentist in reaching your treatment goals.

Are dental implants safe?

Dental implants are made of completely biologically compatible “bone-friendly” titanium material, that naturally heal and integrate with the surrounding tissues. Because titanium is accepted so well by the human body, it is also used for orthopedic implants, such as hip and knee replacements.



Dental implants are very safe and predictable and complications can be avoided when performed by a trained, skillful, and experienced oral surgeon using specialized instruments and techniques. Dr. Kazemi specializes in dental implant placement and has performed it successfully on thousands of patients. The office is designed and equipped for dental implant procedures, and the team assisting Dr. Kazemi is trained specifically for them. Methodical, exacting, and detailed protocols are followed strictly to make sure every patient is safe and having a pleasant experience.

Treatment Stages & Timelines

Treatment stages and time can vary between various individuals and implant sites. Teeth replacement in non-aesthetic zones with good bone anatomy can be completed in as short as three months from implant placement to the final crown.

Immediate vs. Delayed Implants

When appropriate, an implant may be placed immediately on the same day as a tooth

extraction. But there are very specific indications for this approach. Otherwise, it is best to allow the extraction site to heal for 6-8 weeks and then place the dental implant. It is not wise to compromise a lifetime success by trying to save a couple of months.

Staging of treatment will depend on the following factors:

- 1) Location of the implant (smile zone or in the back)
- 2) Bone amount and quality
- 3) Placement as immediate or delayed
- 4) 1-stage (implant with temporary extension placed at same time) or 2-stage approach (implant is covered with gum tissue and uncovered once healed)
- 5) Aesthetic reasons

The overall treatment time can vary based on:

- 1) Type of bone and gum tissues
- 2) Bone grafting needs
- 3) Possible temporization of the implants
- 4) Patient’s physiology and healing potential

What is the best anesthesia option for dental implants? Is it safe?

The best way to manage anxiety and make sure you have the best possible experience is to opt for IV sedation. It is recommended and chosen by many patients. Dr. Kazemi is trained and licensed in administering office anesthesia. Its safety is attributed to continued monitoring techniques, the short-acting nature of the medications, availability of emergency equipment, and most importantly proper training of the surgeon and the staff. Other options are local anesthesia, with or without nitrous oxide (laughing gas) but patient is completely awake and fully aware of the procedure.



IV sedation is a very safe and predictable in healthy patients when administered by an experienced clinician with proper training and accepted protocol. The patient is continually monitored during anesthesia and emergency equipment is on hand, if necessary. The medications used have a long history of safety and are short-acting. Anesthesia is also safe in patients with respiratory problems or cardiovascular

disease, providing that precautions are taken. To avoid possible airway compromise, patients with severe upper respiratory compromise, such as severe cold with stuffy nose and productive cough are asked to postpone the surgery until they feel better. The facility is equipped with emergency equipment and medications and the entire team is trained to manage any possible complications quickly and properly. The surgeon is CPR and ACLS certified and can manage any complications that arise effectively and quickly. Suburban Hospital is in close proximity in the event additional assistance is required.

What is the expected recovery?

- **Pain:** Level and duration of pain depends on the complexity of the surgery, technique, and patient's tolerance. Most patients experience three to four days of elevated pain, commonly managed with pain medications such as Vicodin or Percocet. As pain gradually diminishes over the next two to three days, Ibuprofen (Advil) or Acetaminophen (Tylenol) can be used. After seven to ten days, most patients no longer have pain and may stop their medications.
- **Swelling:** Any swelling related to surgery will maximize in 36 to 48 hours following procedure, and gradually taper over the next five to seven days. Ice helps to reduce swelling in the first 24 hours. If extractions were done in a conservative fashion, a patient may experience no swelling at all.
- **Diet:** Upon arrival home, patients may have water, juices, soups, shakes, puree, and very soft food. A soft diet is recommended up to five to seven days. No hard, crispy, or spicy food should be eaten during this period. The general rule is if you have to chew, it's probably too hard. After seven days, patients may gradually return to normal food.
- **Activity:** Get plenty of rest on the day of surgery. Some patients may feel well enough the following day to walk and go out. That's all right, but take it easy. Avoid strenuous activities for the first two to three days. Refrain from sports, lifting, or doing anything that requires exertion. After three days, if patients feel more comfortable, they can walk, go for a gentle swim, or do very low-impact exercise. Mild activities may cause some pain but not enough to disturb the surgery site or open the sutures.

Managing your anxiety:

Anxiety is not uncommon among those having oral surgery or extractions. This anxiety is mostly related to hearing of others' bad experiences with excessive pain, swelling, and complications. We resolve this in several ways. First, the use of IV sedation allows patients to nap during the surgery. This helps greatly to make them comfortable and reduce anxiety. Second, patients will be cared for by a group of affable staff members who take time to personally connect with each patient and allay their fears and concerns. Third, the surgery is done conservatively, which minimizes or avoids swelling, pain, and complications.

Planning Your Visit



Planning the procedure around your schedule:

We understand that taking time off work or school for procedures may be challenging. Therefore, we will arrange your appointments in a way that offers efficiency and minimizes your time spent in our office. For dental implants, we recommend first a consultation appointment. During this visit, we will complete examination, take necessary diagnostic X-rays, discuss treatment options, and various stages. Our financial coordinator will meet with you to discuss fees and payment options. Following the procedure, you may have one or two follow up appointments. As a convenience, prescriptions are available right in our office. We offer a flexible appointment schedule, Monday through Friday between the hours of eight and five, and early morning or late-day appointments per special arrangements. Weekend appointments are available for our VIP and presidential service packages and can be reserved per special arrangements.



What your escort can do during your procedure?

Your loved ones can relax in our lounge and enjoy a cup of tea or coffee and read wide selection of magazines. Or take advantage of our free Wi-Fi computer lounge and check emails and browse the internet on either your computer or ours. They may also take a stroll on the convenient Bethesda Avenue and visit the many stores, coffee shops, and restaurants. We'll call them when procedure is complete so they can return to office and join you in the recovery room.

Necessary information prior to the procedure:



- Patient registration form, medical history, signed HIPAA forms. All forms may be completed online or sent by fax prior to your visit.
- Referral form from your dentist indicating the recommended teeth to be replaced with dental implants and other treatments.
- Panoramic X-ray done within the past six months sent by your dentist electronically or given to you to bring. If you don't have a panoramic X-ray, you can obtain one in our office. If a CT-scan is necessary, we will refer you to a nearby center.



What is the cost, payment options, and insurance protocol?

The cost of procedure depends on number of implants, grafting needs, and your choice of anesthesia. Following examination and discussion of treatment recommendations, our financial coordinator will present the exact cost and payment options to make it possible. We offer short- and long-term payment plans. Dental implants are typically not covered by dental insurances. Those with insurance may choose to pay the surgical fees and receive reimbursement directly from their insurance company, or pay an approximate co-pay and we will submit the necessary claims. If you need special financial assistance, we can provide a separate consultation appointment.

About Dr. H. Ryan Kazemi



Dr. H. Ryan Kazemi is an Oral and Maxillofacial surgeon certified by the American Board of Oral and Maxillofacial Surgeons. He received his dental degree from the University of Pennsylvania, School of Dental Medicine in 1990. Following a one-year internship at the Albert Einstein Medical Center in Philadelphia, he pursued surgical training at The Washington Hospital Center in Washington, D.C., where he received his certificate in Oral and Maxillofacial Surgery. Dr. Kazemi has practiced in Bethesda, Maryland since 1997, providing a full spectrum of oral and maxillofacial surgery procedures with emphasis on extractions, dental

implants, bone grafting, and corrective jaw surgery.

Dr. Kazemi is a diplomat of the American Board of Oral and Maxillofacial Surgeons, and an active member of the American Association of Oral and Maxillofacial Surgeons, American College of Oral and Maxillofacial Surgery, Academy of Osseointegration, American Dental Association and Entrepreneur Organization.

He has served as the founder and president of several dental and implant study clubs in the Washington DC area. Dr. Kazemi has published and lectured extensively on dental implants, bone grafting, and practice management. His newsletter, *To-The-Point* is read by more than 2000 dentists every month. He is also the founder of DDSForums.com, a professional networking site for dentists.

Dr. Kazemi serves on the medical staff for D.C. United, the major league soccer team in Washington, D.C. and the US national soccer team for the care of their athletes.

What sets us apart:

- Treatment by board-certified oral surgeon
- Predictable results
- Speedy recovery
- Flexible scheduling
- On-time appointments
- Safe and comfortable atmosphere
- Warm and personable service
- Quick access and response when you need us



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