

# dental implants



comfort

confidence

freedom

happiness

**Smile, Eat and Enjoy**

{ understanding the benefits of tooth  
replacement with **dental implants** }

## Why Replace My Missing Teeth?

Your teeth affect your whole body. When they're healthy, you're healthier too. A missing tooth can affect your bite, speech and eating choices. As you rely more on your remaining teeth, you increase the chance they will wear out prematurely, or be damaged or lost. You may also experience headaches and/or jaw pain.

Who would want their appearance and health to deteriorate? That's the natural consequence of missing teeth – the jaw literally melts away. Generally, people will lose 25% of their supporting jawbone structure within the first year after tooth loss. Dental implants are more easily placed when teeth are first extracted because bone replacement becomes more complex as time passes.

The great news? Implants act just like your natural teeth. They safeguard and preserve your bone structure, oral health and appearance. Your dentist and the implant surgeon will provide you with options so that you can make the most informed decision concerning tooth replacement.

## Do I Have Options?

You can select from a number of different options to replace your missing teeth – from temporary to long-lasting solutions.

## Am I A Good Candidate?

A good candidate is anyone missing one or more teeth, or who is unhappy with their dentures. Age is not a factor. However, smoking, diseases such as diabetes, and radiation

therapy to the area, have been shown to lower the success rate of implant placement.



X-rays of your jaw will be taken to evaluate whether they will accommodate implants. Detailed x-rays may also be required to determine if other tests or

procedures are needed to place implants properly.

## What Is A Dental Implant?

A natural tooth consists of a root and a crown. If you compare natural teeth to implant-supported replacement teeth, you'll see they have the same basic parts. Both have a crown (the visible part used to chew food). Both have a root that holds the tooth securely

under the gum and is anchored into the jaw. The difference is that the implant is made of titanium – the same well-accepted material used by surgeons for artificial joints.

When you lose a tooth, you lose both the root and the crown. To replace the tooth, the surgeon first replaces the root with a small dental implant.

Time is allowed for bone to heal and grow around the dental implant. A support post (abutment) is then placed on the implant and a new replacement tooth (crown) is placed on top of the abutment. In many cases a temporary replacement tooth can be attached to the implant immediately after it is placed. If all of your teeth are missing, a variety of treatment options are available to support the replacement teeth.

# { replacement options }



A fragile, temporary and inexpensive solution is a removable plastic tooth with a plastic retainer, often called a **flipper**.



A less fragile option is a **removable partial denture** cast in metal and plastic. It is held in place by wire clips.



A **fixed bridge** is a connected set of replacement teeth. For support, it is cemented into position on top of the teeth adjacent to the empty space. The protective outer layer of these teeth is usually removed or ground down prior to attaching the bridge.



The most common solution, for people missing all teeth in one or both jaws are **complete dentures**. Some people adapt well to dentures. Others find them uncomfortable, even intolerable, because of differences in jaw size and shape.



**Dental implants** are the most comfortable and permanent solution. They form a strong foundation for teeth and keep the jaw healthy and strong. Implants support individual replacement teeth or secure specialized dentures in place.

## did you know?



Unlike bridges, no healthy teeth are damaged. Unlike most bridges, implants can last a lifetime. Implant-supported replacement teeth can be attractive, stable, and comfortable for almost any patient.

### How Do You Place Dental Implants?

The procedure to place an implant takes 30 to 60 minutes for one implant and only 2 to 3 hours for multiple implants. The number of appointments and time required, vary from patient to patient. The surgeon will bring great precision and attention to the details of your case.

Prior to surgery, you may receive antibiotics and for greater comfort, intravenous sedation or nitrous oxide (laughing gas). These options are discussed with you at your consultation appointment. A local anesthetic will be administered to numb the area where the implant will be placed.

When you are comfortable, the surgeon makes a small incision in the gum tissue to reveal the bone, creates space using special instruments, and gently inserts the titanium implant. The top of this implant is often visible through the gum. Sometimes it is better in the early stages of healing to have the implant covered by the gum tissue.

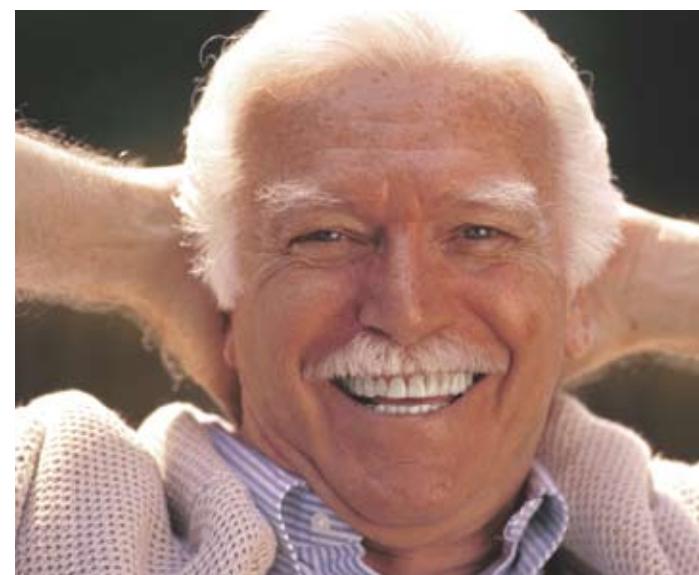
Now the healing begins. The length of time varies from person to person, depending upon the quality and quantity of bone. In some cases, implants may be restored immediately after they are placed. The surgeon will advise you on follow-up care and timing.

After the initial phase of healing, the surgeon places an abutment (support post) or a healing cap onto the implant during a brief follow-up visit. This allows gum tissue to mature and provides access to the implant.

Occasionally, impressions are made at the time the implant is placed. This enables the crown to be ready when the implants have healed. How long your mouth needs to heal is determined by a variety of factors. Follow-up care (one to four appointments) is usually needed to ensure that your mouth is healing well and to determine when you are ready for the restorative phase of your treatment.

It may be beneficial to perform a **soft tissue graft** to obtain stronger, more easily cleaned and natural appearing **gum tissue** in the area around the implant. This process involves moving a small amount of gum tissue from one part of your mouth to the area around the implant. Most often, it is a brief and relatively comfortable procedure.

Whether it's one tooth or all of your teeth that are being replaced, your dentist will complete the restoration by fitting the replacement tooth (crown) to the dental implant.



*“Don't be afraid to Smile.”*

For years I'd felt like a part of my body was missing – because my teeth were. My dentist told me that dental implants would make me feel and look a lot better. OK, I said. Now, I'm thrilled. I can smile, eat anything, and enjoy a good laugh with my friends.

### When Are Dental Implants Placed?

Implants are often placed several months after extraction. At times, an implant may be placed immediately after extraction of a tooth. This may involve a little more risk, but it simplifies the process—you won't have to wait for another appointment to place the implant. When infection or other problems with the bone are present, immediate implant placement is not the best treatment.

If your tooth has been missing for some time, the adjacent support bone is likely to grow thinner and shrink. This occurs because the root of the natural tooth has to be present to stimulate the bone. As much as one third of your jaw's thickness can be lost in the year following tooth extraction. If you are missing enough bone, you may benefit from having additional bone grafted into the area. This ensures the implant will be adequately supported when it is placed in the jaw.

### Do I Have Enough Bone?

After tooth extraction, if the walls of the socket are very thick, they will usually fill naturally with bone in two to three months. However, when the walls of your socket are very thin (such as in your upper and lower front teeth), this type of healing will not be as predictable. In these situations, a bone graft is often placed at the time of tooth extraction to help your body fill in the empty socket with bone. This step will maintain the width and volume of bone you will need for implant placement several months later.

There may be inadequate bone for implant placement if your tooth was removed many years ago and your bony ridge is extremely thin. In this case, a bone graft can be placed next to the thin bone and allowed to heal for up to six months. After the graft has fused to your pre-existing bone, the ridge will be re-entered and the implant placed. Bone grafting is usually a relatively comfortable office procedure. Many different bone-grafting materials are available,



After you lose a tooth, we generally allow the extraction site to heal. The implant is then placed into the matured site.



**Wide body implants are used to replace missing teeth in the back part of your mouth.**

You may also need bone grafting if the sinus cavities in your upper jaw are very large, or very low, and extend into the tooth-bearing areas. This often occurs when teeth in the back of a person's upper jaw have been removed many years before, and the amount of bone available for implant placement is limited. A "sinus grafting procedure" is then required. Most often, it is performed in the office with local anesthesia and perhaps sedation. During this procedure, the membrane that lines the sinus will be located and elevated. Bone will then be added to restore the bone height and ensure that dental implants of an adequate length can be placed. This procedure often can be performed at the time of implant placement.

### *How Many Implants Do I Need?*

Most frequently, one implant per missing tooth is placed.

Because many of the larger teeth in the back of your jaws have two or three roots, the most common approach is to replace missing back teeth with larger implants.

### *What If I'm Missing All Of My Lower Teeth?*

Although many patients have no problem wearing an upper denture, some people find it difficult to wear and eat with lower dentures.

Several implant-supported replacement options are available if you are missing all of your lower teeth. One option is to have two implants placed in your lower jaw and a denture made that snaps onto these implants. This option allows your lower denture to be more stable while chewing than without implants. However, there will still be movement of your lower denture, and sore spots will occur if any food particles,

especially seeds, are caught under it. As with all removable replacement teeth, you still will need periodic appointments for denture adjustment.

Another option involves placing four to six implants, depending on your jaw size or shape, into your lower jaw. After healing is complete, the implants are connected with a custom-made support bar. Your denture will be made with special internal retention clips that attach onto the support bar, enabling the denture to snap firmly into place. This is called an "overdenture." The advantage of this option is that it is much more stable than the first option and allows very little denture movement. Your denture is still removable for easy cleaning and maintenance.

A third option involves placing five or more implants in your jaw and attaching a permanent denture. Your denture is held in

place by screws or clasps that secure it to the support posts or bar. It doesn't touch the gum tissue, which allows you to clean under the denture without removing it. This denture will replace all your missing lower teeth and will not be removed except at maintenance visits. Although cleaning under your denture without removing it is more time consuming and requires more dexterity, many patients who want a permanent denture prefer this option.

The final option is to have all your teeth individually replaced so that they will appear to be growing out of your gum tissue and will most closely resemble the appearance of your natural teeth. This option usually requires eight or more implants. Separate abutments or support posts for each one of these implants will be made and crowns for each missing tooth will be placed. The teeth are often joined together for

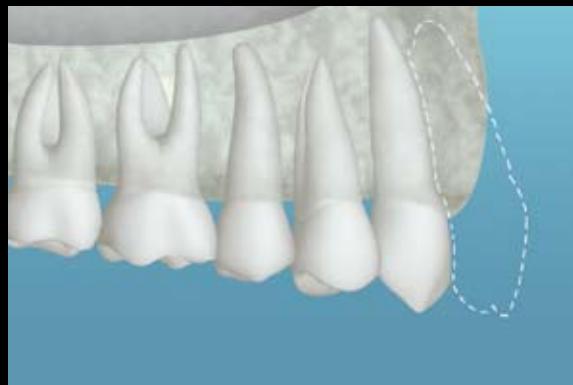


**sinus grafting to replace bone height**

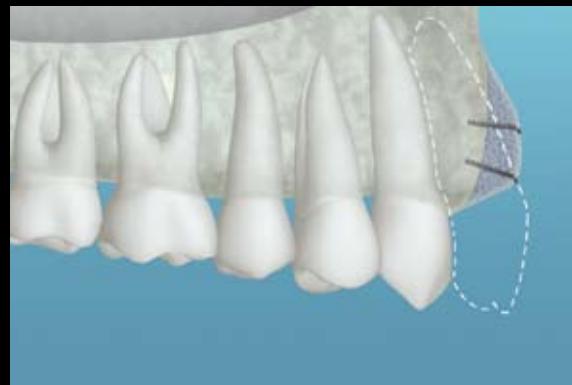
## { restoring your jawbone }



**original bone and tooth**



**bone loss over time**



**bone width restored**



**implant and tooth in place**

strength and support. Overall, this is the most costly option, because it requires the most implants and individual replacement tooth fabrication. Your replacement options may also be limited by the current size and shape of your jawbone.

### *What If I'm Missing All Of My Upper Teeth?*

A similar range of treatment options is also available for your upper jaw. However, because the bone is not as hard as that in the lower jaw, people often need more implants to support their new replacement teeth.

Depending upon the number of implants to be placed, it may be possible to eliminate the need for covering the roof of your mouth with a complete denture. This option allows you to fully taste your food and gives you a better sense of its temperature. Your denture will feel more natural. You will still have a removable denture, which makes cleaning the support bar and denture much easier. If you want a restoration that is similar to your natural teeth and therefore not removable, you probably will need eight to ten individual implants placed. This is followed after healing by the placement of the abutments and new replacement crowns.

### *What Can I Use For Teeth While The Implants Heal?*

Many options are available, and they are tailored to your specific requirements. If you need a replacement tooth while the implants are healing, temporary removable teeth or a temporary bridge can be made. If all of your teeth are missing, we can usually modify your present complete denture or make you a new temporary denture. If you would prefer non-removable teeth during the healing phase, temporary transitional implants usually can be placed along with the permanent implants, and temporary teeth may be made and inserted the same day. Depending on your particular situation, some implants can be placed and "loaded" immediately. This means a temporary or permanent replacement tooth can be placed on, or shortly after, the day the implant is placed.

### *What Are The Potential Problems?*

Although it is natural to be concerned about the pain that may be caused by these procedures, most patients do not experience severe or significant post-operative pain. Pain medication and antibiotics will be prescribed for you to make your recovery as easy as possible. Occasionally, some people develop post-opera-

tive infections that require additional antibiotic treatment. Even though great care is taken to place the implant precisely, occasionally adjacent teeth are injured in the placement process. In addition, there is a chance that the nerve in the lower jaw, which provides sensation to your lower lip and chin, may be affected. If you are missing quite a lot of bone, it might be difficult to place an implant without infringing on the nerve space. Although we take great care to avoid this nerve, occasionally it is irritated during the procedure, resulting in tingling, numbness or a complete lack of sensation in your lip, chin or tongue. Usually these altered sensations will resolve within time, but they can be permanent and/or painful. If you notify us of post-operative numbness as soon as possible, it will allow us to manage your care in the most appropriate way.

### *How Long Will The Implants Last?*

Implants usually last a long time. When patients are missing all of their teeth, long-term studies (more than 30 years) show an 80 to 90 percent success rate. For patients missing one or several teeth, recent studies show a success rate of greater than 95 percent, which compares favorably with other areas in the body that

receive implant replacement (such as hips or knees). However, if one of your dental implants either doesn't heal properly or loosens after a period of time, you may need to have it removed. After the site heals (or on occasion at the time of removal), another implant usually can be placed.

### *When Are The Replacement Teeth Attached To The Implant?*

The replacement teeth are usually attached to the implant when adequate healing has occurred and your jawbone is firmly fused to the implant. Depending on a variety of factors, it may be possible to begin this phase of your treatment immediately or shortly after implant placement. We will review the most appropriate treatment sequence and timing for your particular situation.

The dental work required to complete your treatment is complex. Most of the work involves actually making the new teeth before they are placed. Your appointments are considered more comfortable and more pleasant than previous methods of tooth replacement. Frequently, this process can be performed without local anesthesia.

{ replacing all lower teeth }

{ nerve relationship }

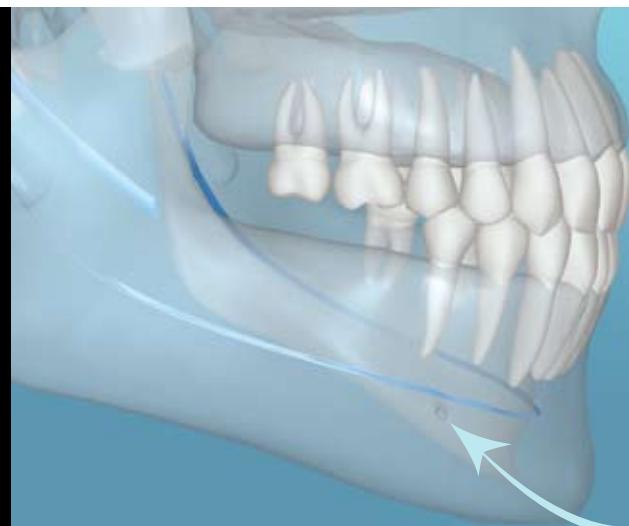
"overdenture"



custom made support bar

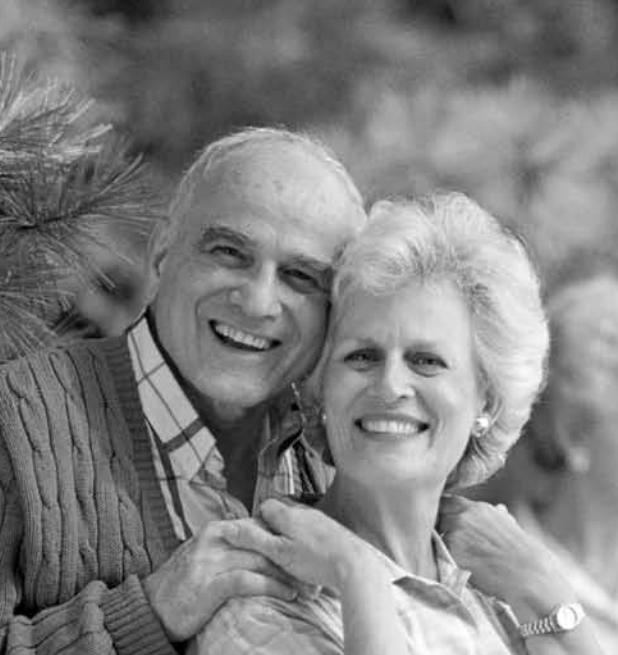


specialized denture firmly in place



The nerve in the lower jaw, which provides sensation to your lower lip and chin, may be affected. Although these altered sensations will usually resolve with time, they can be permanent and/or painful. If you notify us of post-operative numbness as soon as possible, it will allow us to manage your care in the most appropriate way.

relationship of nerve to lower teeth



**Dental Implants** are the most technologically advanced and longest lasting tooth replacement option available. Restore your **confidence...**

### **Smile, Eat, and Enjoy!**



Your restorative treatment begins with specialized impressions that allow us to produce a replica of your mouth and implants. We will also make “bite” records so that we see the relationship of your upper and lower jaws. With this information, we will make the abutments (support posts) that attach your replacement teeth to your implants. Various types of abutments exist. Frequently, we can use “off the shelf” abutments. Other times, custom abutments must be made of gold or a tooth-colored ceramic material. As you can imagine, these custom made abutments add to the cost and treatment time involved. Which abutment to use is a decision that often cannot be made until after healing is complete and impressions have been made.

The number of appointments and the amount of time required for each appointment is different for each patient. No two cases are exactly the same and regardless of the number of teeth replaced, the work must be completed with great precision and attention to detail. If you are having only a few teeth replaced, as few as three short appointments may be required. Between appointments, we will need time to complete the necessary lab work to make your replacement teeth. It is most beneficial that you keep all of your scheduled appointments.

If your final restoration is a removable denture, you will need to come to as many as five office appointments (although it may be fewer) over the following several months. During these appointments, we will perform a series of impressions, bites and adjustments in order to make your new teeth, as well as the custom support bars, snaps, magnets, or clips that will secure your teeth to the implants. During this period, every effort will be made to ensure you have comfortable, temporary replacement teeth.

In general, once your implants are placed, you can expect your tooth replacement treatment to be completed anywhere from 1 to 12 months. For these reasons, it is difficult for us to tell you exactly how much the restorative phase of your treatment will cost, although you should receive a reasonable estimate from our office. It also is difficult to give you a specific timeframe for completion of your treatment until after the implants are ready for restoration.

#### *How Do I Clean My New Teeth?*

As with natural teeth, it is important that you clean implant-supported restorations regularly with toothbrushes, floss and any other recomi-

several times each year for hygiene and maintenance. As with regular dentures and other tooth replacements, your implants and their associated components are subject to wear and tear and eventually will need repair, including clip replacement, relines, screw tightening, and other adjustments.

#### *Will One Doctor Do Everything?*

Usually, a dental surgeon places the implant(s) and performs other necessary surgical procedures – your general dentist provides the temporary and permanent replacement teeth. Both doctors are involved in planning your dental treatment. Also, depending upon a variety of factors, different dental specialists may help with your dental care.

#### *How Much Does All Of This Cost?*

Before treatment begins, every effort will be made to give you an accurate estimate of all the

expenses involved in placing the implants and making your replacement teeth. In many cases, there is an initial charge for the diagnostic work-up, including study models, x-rays, and the fabrication of a surgical template to ensure the best possible result. In addition you will be charged for the abutment or support post(s), plus the crown, dentures, or anything else that will be placed over the implants, including temporary restorations. Periodic maintenance such as hygiene visits, tissue conditioners, denture relines and other repairs will also incur additional charges.

When different doctors are involved in your treatment, you will be charged separately for their services. We will try to assist you in estimating what your actual payments will be after we evaluate your insurance coverage or other third party payments. Also, you should consider your personal financial investment in each treatment option as some insurance companies provide limited or no coverage.

**Each patient is unique, and it is not possible for us to discuss every option and every contingency for treatment outcome. This booklet is intended to help you understand the general treatment options available to you. If your specific treatment options are not clear, please contact us. We will be happy to answer any questions you have about your dental care.**

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