

## What are Dental Implants?

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## What are Dental Implants?

Osseointegrated implants are effective in over ninety-six percent of all patients treated. Prosthodontics Intermedica is one of the leading centers for osseointegrated dental implants in the United States. A natural tooth consists of a crown (the part you see above the gum), and the root (the part hidden under the gum). It is the root in the jawbone that actually holds the natural tooth in place. A dental implant is a small man-made titanium fixture that serves as a replacement for the root portion of a missing natural tooth. Titanium is used because it is the most compatible with our human body. The dental implant is placed in the bone of the upper or lower jaw and functions as an anchor for the replacement tooth. After the bone has grown around the implant, implants can hold a crown, bridge or overdenture just like roots hold natural teeth in place.

Implants provide additional support where teeth are missing without putting forces onto remaining natural teeth. They may be used to support the replacement of a single missing tooth or a complete functional set for individuals who have lost many or all of their teeth.

*From the Latin implantere - to implant.*

### WHAT ARE THE BENEFITS OF DENTAL IMPLANTS?

#### **Improved Appearance**

When teeth are lost, ongoing shrinkage of the jawbone occurs making the face look older. Dental implants can slow or stop this process. Dental implants look and feel like your own natural teeth.

#### **Improved Comfort**

Dental implants eliminate the pain and discomfort of removable full or partial dentures. Since dentures sit on top of the jawbone and gums, continuous shrinkage of the jaw bone alters the fit of the denture resulting in slipping or rocking of the dentures. Exposed nerves and irritation of the gum tissue may add to the discomfort.

Implant supported replacement teeth are like natural teeth because they are anchored securely to your jawbone.

Gum irritation and the pain of exposed nerves associated with conventional full or partial dentures are eliminated.

### **Improved Speech**

With ill fitting dentures, the teeth slip and slide around the mouth. The facial muscles become tense in an attempt to hold the teeth in place. This often results in mumbling, slurred speech or clicking noises.

Replacement teeth allow you to speak with confidence in a relaxed and natural tone.

### **Eat Better**

The average denture patient with an excellent fitting denture eats at 15-20% efficiency when compared to a person with natural teeth. As the jawbone shrinks, your chewing efficiency is reduced even more, making it difficult to eat certain foods. Dental implants can restore chewing efficiency comparable to that of natural teeth.

This allows you to eat your favorite foods with confidence and without pain, enjoy what everyone is eating and not think twice about it. A full upper denture covers the palate of the mouth and reduces the ability to taste foods. With dental implants, you can have the palate removed from your upper denture so you can taste and enjoy your food.

### **Convenience**

Dental implants can eliminate the numerous embarrassing inconveniences of removable partial and full dentures. You will eliminate the use of gooey denture adhesives that must be re-applied throughout the day. You will no longer need to cover your mouth when you laugh or smile, for fear that your teeth will pop out or fall down.

### **Protect Your Remaining Natural Teeth**

Dental implants are often more appropriate than a bridge for the replacement of one or more adjacent teeth. With conventional bridgework, the teeth surrounding missing teeth must be ground down. Dental implants often eliminate the need to modify these teeth, resulting in a conservative, yet esthetic restoration.

### **Improved Self Esteem**

Considering all other benefits, dental implants can improve your self-esteem. You may feel better about yourself. You can regain nearly all the capabilities that most people have with natural teeth, giving you renewed confidence, and allowing you to enjoy life, do what everyone else is doing and not think twice about it.

### **Appearance**

Your concern for a natural appearance is designed into the implant. Besides good function during chewing, the ideal replacement must *look* like natural teeth, both to you and to others. The solutions possible with an implant supported bridge take advantage of the best appearance possibilities available in dentistry and modern dental technology.

### **Confidence**

The ideal replacement must also *feel* like natural teeth and be easy to keep clean. Knowing your teeth are stable during eating and talking means a lot. Another benefit is that your implant supported teeth will not decay like natural teeth. You'll be glad our treatment didn't require grinding down your remaining natural teeth.

### **Security**

The implant is the thoroughly documented implant treatment for dentistry in the world. The long-term safety of this solution is well established and published in recognized scientific journals. Your doctor will discuss with you how these treatment results apply to you.

An implant supported bridge replaces your missing teeth and more, providing a very good combination of appearance, confidence and security. When you are thinking about replacing your missing teeth, ask for a bridge supported by implants. You are likely to find this the best long term solution.

Are Dental Implants Safe?

***My Dentist recently recommended osseointegrated dental implants. What are dental implants and are they safe?***

Osseointegrated dental implants are the state of the art in modern dentistry. They are small titanium "fixtures" that take the place of the natural root of the tooth. Gently implanted into the bone, using local anesthesia, these very tiny titanium roots actually bond or integrate with a patient's bone, more securely than natural root would. Most often, the osseointegrated implant is more stable than a natural tooth's root. Upon these implants, a dentist can build permanent teeth, custom designed and shaded to aesthetically suit each patient's distinctive facial requirements.

Sophisticated research for more than three decades in the United States and abroad has recognized titanium for its biological compatibility with the human body. Studies have shown that the earliest patients treated with these modern osseointegrated implants continue to enjoy healthy, stable smiles.

### ***How long does the procedure take and is it painful?***

Nearly all implant procedures are performed with local anesthesia in a comfortable dental chair. No pain is felt during the surgical procedures. Depending upon the number of implants placed, there may be swelling and/or tenderness for a few days following the surgery. Pain medication is usually prescribed which alleviates this discomfort. Patients generally prefer a soft foods diet for the healing period following surgery. Cold foods and tepid soups are suggested, as they aid in reducing swelling.

The entire osseointegration process and the building of the new teeth can be accomplished in as little as three months, though the upper teeth or replacing a complete denture with permanent teeth normally requires five to six months.

Dental implant patients range from age nine to 99. A single congenitally missing tooth can dramatically change the life of a child; the replacement of dentures in an older patient can make the golden years more fulfilling, and considerably gentler to both the digestive tract and the cardiovascular system. Generally, only patients with rare blood diseases, leukemia, or patients being treated with chemotherapy are contraindicated. Patients who have successfully undergone cancer therapy and received permission from their oncologist may benefit from implant treatment.

### **Who is a candidate for dental implants?**

Anyone who is missing one or more of their teeth due to injury, disease, or decay may be a candidate for dental implants. If one or a few teeth are missing, dental implants in conjunction with a crown or bridge can replace those teeth without losing more bone. If all or most of your teeth are missing, the dental implants may be placed to replace a loose fitting full or partial denture. Adequate bone in your jaw is needed to support the implant(s) along with healthy gum tissues that are free of periodontal disease. Occasionally, older patients express concern that their age may prevent them from enjoying the benefits that dental implants offer.

However, health is more of a determining factor than age. If you're healthy enough to have a tooth extracted, you're probably healthy enough to receive dental implants. Certain chronic diseases may contraindicate implant treatment. Your dentist will determine if you are a candidate for dental implants after a careful evaluation of your dental and medical health history.

### **How long does it take?**

The answer to this question depend upon the type of dental implant treatment provided.

"Teeth In A Day" treatment allows patients to have fixed teeth from the very first day of treatment.

This is dependent on patient's conditions (for example bone quality) and not every patient suitable for the immediate placement of prosthesis after implant surgery.

**Conventional dental implant treatment is described below:**

The complete implant reconstruction process may take from 4 to 9 months and in some cases longer. Time is needed for your jawbone to grow around the implant and for your replacement teeth to be made.

Procedures vary, but it usually includes two surgical steps and then the restoration is fabricated. First, your dentist or a specialist places the dental implants into your jawbone. Bone cells grow around the implants that may take up to six months to occur. Your dentist or the specialist then makes a small incision in the gum tissue and connects a healing post to your implant(s). The gum tissue heals around the post for a period of 3-6 weeks or longer. Your dentist then attaches a post and makes the replacement teeth. It may take several visits and several months to complete the restoration process.

Is there pain or discomfort involved?

Just as with any surgery, there can be some discomfort. Anesthesia and patient sedation are used to eliminate any discomfort at the time of the procedure. Most patients report that there is very little discomfort and that they were much more comfortable following the procedure than they anticipated. For patients who prefer to be asleep during dental implant surgery, this option is available at Prosthodontics Intermedica. Your doctor will prescribe medications to ease any discomfort that may occur.

**Stages of Dental Implant Treatment**

Step 1: Examination and Planning

Step 2: Placing the Dental Implant

Step 3: Connecting the Abutment and Conversion Prosthesis

Step 4: Restoration

Step 1:

Examination and Diagnosis consist of an oral examination, full-mouth x-rays, panorex x-rays, diagnostic casts and photographs. It should be done less than six months prior to surgery.

Step 2:

Stage 1 Surgery- Implants are placed in jaw.

Swelling disappears 4 to 7 days after surgery.

Sutures are removed 7 to 10 days following surgery.

A soft diet is recommended during the first 4 to 6 weeks.

Osseointegration occurs in 3 to 6 months.

Example of upper and lower complete tissue integrated prosthesis supported by osseointegrated dental implants during casting try-in procedure.



Step 3:

Stage 2 Surgery (Optional)-- Implants are uncovered.

Implants are checked for osseointegration.

Abutments are placed.

X-rays are taken.

Impression of mouth is done for the final prosthesis.

Casting try-in procedure is completed.

Conversion Prosthesis is made.

Sutures are removed 7 to 10 days later.

Step 4:

Tissue Integrated Prosthesis is completed and placed onto the implants.

Final adjustments are made.

X-rays are taken.

Follow Up Care:

Oral hygiene maintenance is performed at 3 to 6 month intervals following placement of the final prosthesis. Regular and fastidious oral hygiene maintenance is the key to the long-term success of dental implants.

### **History of Dental Implants**

In 1952, in a modestly appointed laboratory in the university town of Lund, Sweden, Professor Per-Ingvar Brånemark had a lucky accident -- what most scientists call serendipity. Much to his irritation, Dr. Brånemark discovered that it was impossible to recover any of the bone-anchored titanium microscopes he was using in his research. The titanium had apparently bonded irreversibly to living bone tissue, an observation which contradicted contemporary scientific theory.

His curiosity aroused, Dr. Brånemark subsequently demonstrated that -- under carefully controlled conditions -- titanium could be structurally integrated into living bone with a very high degree of predictability and, without long-term soft tissue inflammation or ultimate fixture rejection. Brånemark named the phenomenon osseointegration.

The first practical application of osseointegration was the implantation of new titanium roots in an edentulous patient in 1965. More than thirty years later, the non-removable teeth attached to these roots are still functioning perfectly.

How much will it cost?

The fee for tooth replacement with dental implants will depend on several factors, including the number of teeth being replaced and the number of implants required to support your replacement teeth. Some additional procedures may be required prior to the placement of your dental implants to ensure the long-term health of your dental implants. Typically, there is a fee for the surgical procedure and a separate fee to attach the posts and construct your replacement teeth. To obtain a specific fee estimate, it is necessary for us to examine your mouth. After a thorough diagnostic examination, we will recommend the treatment that is best for you and what your investment would be for the procedure.

**Why do dental implants cost so much?**

**How can I afford them?**

Dental implants are NOT expensive, when one evaluates the return for the investment and the long range benefits that come from having secure, functional, attractive teeth and a winning smile. Unlike all the rest of the human body, the virtual "youth" of dentition can be preserved by dental specialists right on up through the age of a hundred. For some who prioritize dental health, the concept of eating well until death is an significant motivation to implant treatment.

Dental implants are a costly treatment to provide for a number of reasons. First, an entire team of highly skilled professionals are necessary in order to deliver the most perfect result that we can for each individual. With the exception of meticulous sterile detail and attentive, thorough home care instructions, there is nothing routine about dental implant treatment. Each patient receives a highly customized treatment plan that takes into consideration their overall health needs in conjunction with the esthetic and functional requirement to achieve a long-lasting smile.

The doctors and staff administering implant treatment commit a great deal more time to the procedure than the patient does. The dentist will intensely study the patient's diagnostic and health profile, and will engineer a custom plan to meet the patient's distinct needs. Behind the scenes, surgical staff and laboratory support perform dozens of labor intensive steps to produce the result. The time of many professionals blends to insure success.

Secondly, the materials used to build implant prosthodontics are costly themselves. To obtain comprehensive diagnostics, special radiographic assessments are required using panradiography and cephalometrics. CT scans may also be indicated. The titanium implants and the highly technical computers used by the doctor to place them in the mouth are extremely costly. In addition, the prostheses, both interim and the final version, contain precious and semi-precious metals, and are fused with porcelain that must be artistically applied by careful technicians.

Finally, some patients require bone grafting, sleep sedation anesthesia or genetically enhanced accelerated healing procedures that add to the bottom line cost of the treatment plan.

At Prosthodontics Intermedica, we have been able to provide comprehensive dental implant treatment to patients of every income level. Our patient relations director has nearly twenty years of experience in arranging funding for even the most extensive and sophisticated treatment. For some, a home equity loan is a good solution. Others forego a new automobile or a family vacation in lieu of a longer lasting benefit. Still others agree to participate in a research study or serve as a seminar patient and receive reduced cost treatment that is supplemented by the program sponsor. Finally, in many cases, a treatment program can be broken into several phases, accomplishing the more serious needs first. It is not unusual to design a plan that is delivered and paid for over a period of several years.

## **IMPLANTS ARE A PROsthESIS**

Dental implants are not pre-prosthetic treatment. This concept creates an image of a non-prosthetic procedure when in fact implants are in and of themselves prostheses. Consider, that our colleagues in orthopedics have for decades referred to artificial hip or knee implants. Let's take a closer look at prostheses that restore function in the human body.

In subsequent follow-up and review of medical histories, artificial heart valves, knees and hips are all referred to as prosthetic devices. Since the dental implant is the artificial replacement for the tooth's anchorage unit, it must truly be viewed as a prosthesis. When one considers even the simplest single tooth replacement, the implant takes the place of the tooth root in the alveolus. Here the implanted prosthetic root provides artificial replacement of the tooth's anchorage unit, it must truly be viewed as a prosthesis. When one considers even the simplest single tooth replacement, the implant takes the place of the tooth root in the alveolus. Here the implanted prosthetic root provides artificial functional support for the remainder of the prosthetic replacement, the coronal portion.

In more complex and extensive oral-facial rehabilitations, both hard and soft tissue replacement is required. Again, the osseointegrated anchorage unit is an integral part of the complete prosthetic reconstruction. The predictability of osseointegration makes this form of the prosthetic treatment a biologically conservative one and the treatment of choice when caring for patients with complete or partial edentulism.

It is most interesting to note that prosthodontic training focuses heavily on acquiring a high level of precision and skill in both the diagnosis and execution of the treatment plan with particular attention to the preservation of the living hard tissues. Now consider the level of skill and dexterity required to prepare a multi-surfaced inlay or only or a complex post and core. Then consider preparation of multiple teeth for the construction of a complete arch tooth supported prosthesis. All of these prosthodontic surgical procedures are executed by a specialist who inherently is thinking in a three-dimensional mind set.

The dentist's ability to conceptualize the end result of treatment and to envision the final prosthesis in the space of the oral cavity is indeed a major clinical asset in planning and placing the prosthetic anchors in bone. The mind of the experienced dentist is a virtual database; computing special orientation, leverage factors, loading forces, the biomechanics and physiology of the masticatory system and its relationship to occlusal harmony. The same database contains numerous files filled with esthetic variations applicable to many different clinical conditions. Split second decision-making, based on prosthodontic experience, makes this specialist uniquely qualified to determine the optimal position of the implant prosthesis in its surrounding skeletal architecture. The dentist's acute and delicate tactile abilities are fine-tuned to calculate the density of bone at various levels of preparation of the osteotomy site, providing additional data important in determining the appropriate loading in time and dimension. Who better than the dentist can

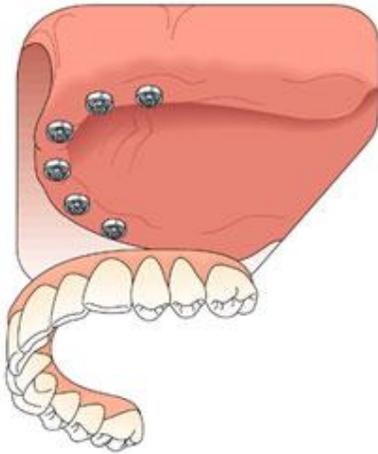
determine if the osseous support at the time of implant placement is suitable for immediate and functional loading?

Yes, comprehensive prosthodontic rehabilitation remains in some instances a multidisciplinary specialty effort. We all recognize the superior skill and dedicated professionalism of our colleagues in orthodontic, endodontic, periodontic and pediatric dentistry and oral and craniofacial surgery. Often their pre-prosthetic treatments are prerequisite to the ideal outcome of the restorative efforts of the dentist. The final outcome must be carefully and thoughtfully coordinated by the dentist, enlisting all of his or her knowledge and communication skills to sequentially organize the various disciplines, for ultimately the patient looks to the dentist for the final result.

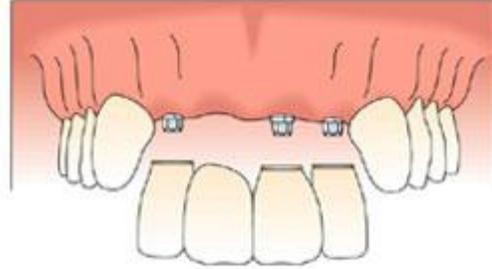
So, to what degree should the dentist be involved with implant supported prosthesis? The answer lies only in the degree of interest and involvement to which the dentist aspires. The prosthetic osseointegrated union of alloplastic material to "ordered living bone" provides the foundation for further reconstructive treatment. Knowing and fully understanding and executing all parameters of the foundation allows the dentist to best fulfill his/her professional obligation to the patient.

# REPLACEMENT OPTIONS

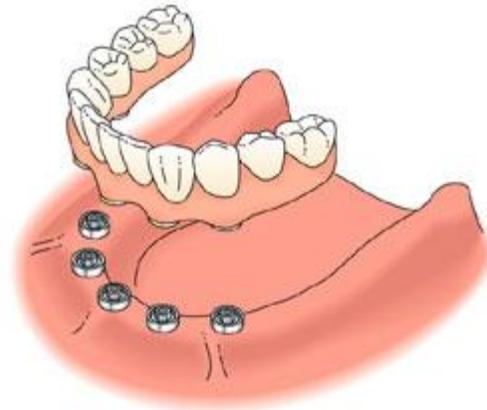
**Full Upper Replacement**



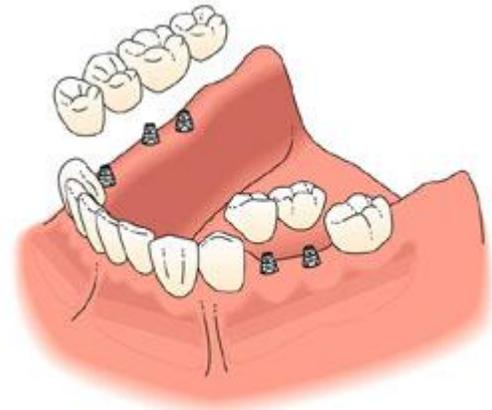
**Anterior Replacement**



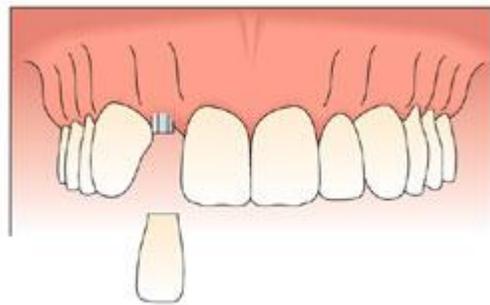
**Full Lower Replacement**



**Posterior Replacement**



**Anterior Replacement**

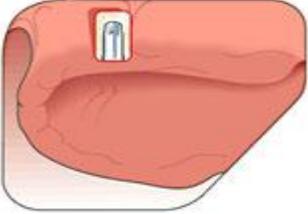


# Full Upper Replacement

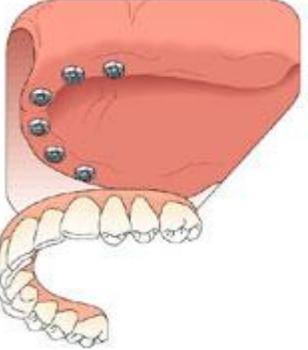
*Life with a full denture means more than just missing your teeth. Problems associated with a denture extend far beyond tooth loss, affecting comfort, ability to chew foods, even self-image and social considerations. The challenge is to provide stable function, without using denture adhesive, that will fulfill your expectations for appearance, confidence and security.*

## The Treatment Steps

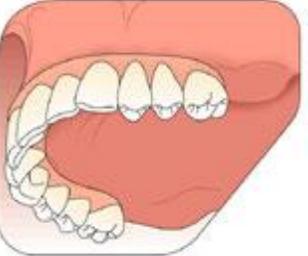
### "Permanent" Option

**1** 

The first step is to replace missing tooth roots by placing titanium implants. The implants will remain covered underneath the gum for approximately six months. During that time, osseointegration takes place.

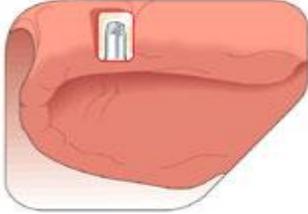
**2** 

The second step of the procedure involves uncovering the implants and attaching extensions. This completes the foundation on which your new teeth will be placed.

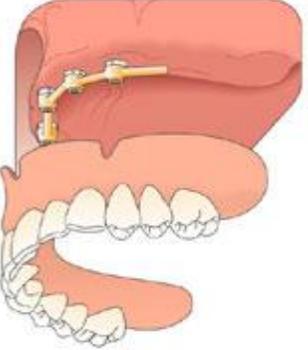
**3** 

The final step is the placement of your new teeth. With techniques that ensure optimal size, shape, color and fit, they will blend with your facial characteristics, while providing support needed for a natural appearance.

### Patient-Removable Option

**1** 

The first step is to replace missing tooth roots by placing titanium implants. The implants will remain covered underneath the gum for approximately six months. During this time, osseointegration should take place.

**2** 

The second step of the procedure involves uncovering the implants and attaching extensions. Later in treatment, a bar will be affixed to these extensions, completing the foundation on which your removable restoration will be placed.

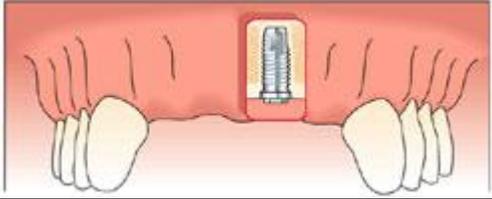
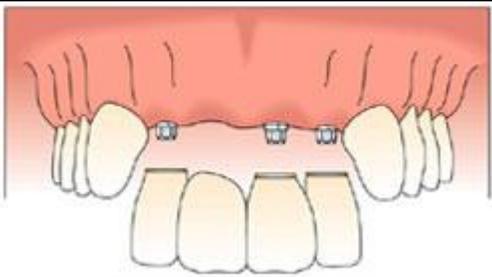
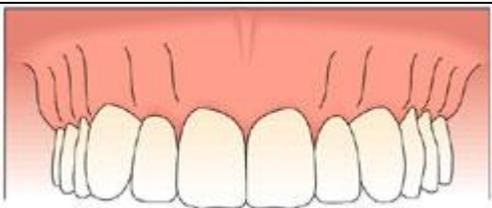
**3** 

The final step is the placement of your restoration. With techniques that ensure optimal size, shape, color, and fit, this removable restoration will blend with your facial characteristics, while providing support needed for a natural appearance.

# Anterior Replacement

Missing front teeth have unique demands. The challenge is to replace your now missing teeth for both appearance and function, without harming your remaining teeth or gum tissue.

## The Treatment Steps

<b>1</b>		The first step is to replace missing tooth roots by placing titanium implants. The implants will remain covered underneath the gum for approximately three to six months. During that time, osseointegration takes place.
<b>2</b>		The second step of the procedure involves uncovering the implants and attaching extensions. This completes the foundation on which your new teeth will be placed.
<b>3</b>		The final step is the placement of your new teeth. With techniques that ensure optimal size, shape, color and fit, these replacement teeth will blend with your facial characteristics and remaining natural teeth.

# Full Lower Replacement

Missing back teeth have unique demands. The challenge is to replace your now missing teeth for both appearance and function, without harming your remaining teeth or gum tissue.

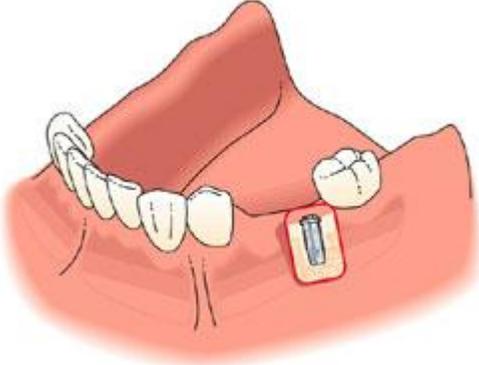
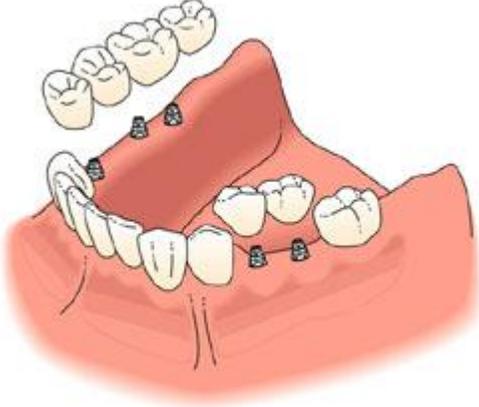
## The Treatment Steps

"Permanent" Option	Patient-Removable Option
<p><b>1</b> </p> <p>The first step is to replace missing roots by placing the titanium implants. The implants will remain covered underneath the gum for approximately three to six months. During that time, osseointegration takes place.</p>	<p><b>1</b> </p> <p>The first step is to replace missing roots by placing the titanium implants. The implants will remain covered underneath the gum for approximately three to six months. During that time, osseointegration takes place.</p>
<p><b>2</b> </p> <p>The second step of the procedure involves uncovering the implants and attaching extensions. This completes the foundation on which your new teeth will be placed.</p>	<p><b>2</b> </p> <p>The second step of the procedure involves uncovering the implants and attaching extensions. Later in treatment, a bar will be affixed to these extensions, completing the foundation on which your removable restoration will be placed.</p>
<p><b>3</b> </p> <p>The final step is the placement of your new teeth. With techniques that ensure optimal size, shape, color and fit, these replacement teeth will blend with your facial characteristics and remaining natural teeth. Many people have accepted an supported bridge "as part of themselves."</p>	<p><b>3</b> </p> <p>The final step is the placement of your restoration. With techniques that ensure optimal size, shape, color and fit, this removable restoration will blend with your facial characteristics, while providing support needed for a natural appearance.</p>

# Posterior Replacement

Missing back teeth have unique demands. The challenge is to replace your now missing teeth for both appearance and function, without harming your remaining teeth or gum tissue.

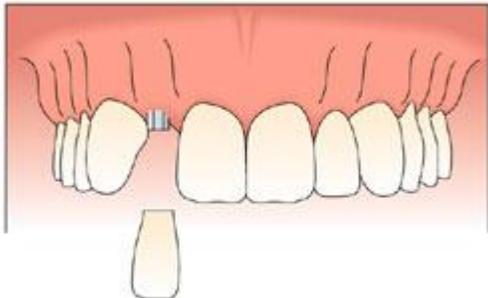
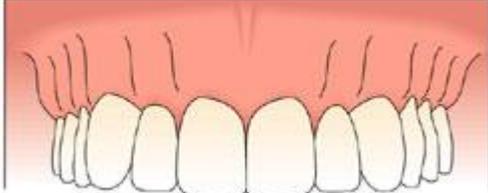
## The Treatment Steps

<b>1</b>		The first step is the placement of the titanium implants. The implants will remain covered underneath the gum for approximately three to six months. During that time, osseointegration takes place.
<b>2</b>		The second step of the procedure involves uncovering the implants and attaching extensions. This completes the foundation on which your new teeth will be placed.
<b>3</b>		The final step is the placement of your new teeth. With techniques that ensure optimal size, shape, color and fit, these replacement teeth will blend with your facial characteristics and remaining natural teeth.

# Single Tooth Replacement

Missing teeth surrounded by healthy teeth have unique demands. The challenge is to replace your now missing tooth for both appearance and function, without harming your remaining teeth or gum tissue.

## The Treatment Steps

1		The first step is to replace missing tooth roots by placing titanium implant. The implant will remain covered underneath the gum for approximately three to six months. During that time, osseointegration takes place.
2		The second step of the procedure involves uncovering the implant and attaching an extension. This completes the foundation on which your new tooth will be placed.
3		The final step is the placement of your new tooth. With techniques that ensure optimal size, shape, color and fit, these replacement teeth will blend with your facial characteristics and remaining natural teeth.

### Are dental implants successful?

Research and documentation studies have proven the effectiveness and long lasting results of dental implants. The Branemark system of dental implants have demonstrated a success rate of over 95% in documented studies. Good oral hygiene is one of the most critical factors to insure the health of your dental implants. Our dentist will instruct you on the proper home hygiene procedures to keep your dental implants and remaining teeth clean and healthy. Regular visits to your dentist are important so we can assess the health of your replacement teeth and gum tissue. You can rely on your replacement teeth to look, feel and function like natural teeth for years to come

### **How do I Maintain My Dental Implants?**

Long-term success of implants depends on how well they are maintained. Regular dental visits are essential. Your dentist will develop a dental visit program to ensure the health of your implants and remaining natural teeth.

Periodontal disease can strike when teeth and gums are not properly cleaned. If left untreated bone loss, which weakens supporting structures, can lead to loss of dental implants as well as tooth loss.

**Home Care:** Daily brushing and flossing are absolutely necessary for long-term success. There are also many supplemental products that allow you to clean the implants properly. Your dentist will design a home care regime that will suit your individual needs.

**Brushing:** Your dentist may recommend a cordless electric toothbrush. Whether you use a standard brush or electric toothbrush, your dentist and hygienist will review your brushing techniques to ensure that you are cleaning the area properly.

**Oral Irrigation Systems:** Research has shown that oral irrigation is effective in reducing plaque accumulation around dental implants and natural teeth. Your dentist may also suggest that you use a special mouth rinse.

**Flossing:** Good home care includes daily flossing. Floss threaders are very helpful in allowing you to reach around implants, under bridges and bars so these areas can be easily cleaned. Your dentist may also recommend special types of floss.

**Interproximal Brushes:** These small dental brushes, also called "Proxy Brushes", are specifically designed to clean between the teeth and implants. While not a replacement for dental floss they are helpful in cleaning hard to reach areas.

**Dental Visits:** It is typically recommended that patients visit their dentist for professional cleanings every 3-6 months. However, your dentist will design a dental visit program specifically for you.

## OPTIONS AND ALTERNATIVES

Comparison Table

	Removable Dentures	Tooth Supported Bridge	Single Tooth Implant Restoration
Short Term Cost	Low \$	High \$\$\$\$	High \$\$\$\$
Long Term Cost	High \$\$	High \$\$\$\$	Low \$
Biologic Costs	High	High	Low
Esthetics	Fair	Good	Excellent
Function	Poor	Excellent	Excellent
Bone Preservation	Poor	Poor	Excellent
Hygiene Access	Fair	Poor	Excellent
Long Term Maintenance	High	High	Low

### Full Mouth Reconstruction

The replacement of missing or severely decayed teeth with prosthodontic reconstruction is our specialty. Teeth can be replaced by many different means and combinations of techniques, such as crowns, non-removable bridges, removable partial dentures or implant supported permanent teeth. The rebuilding of a smile often requires a blend of these options.

### Crowns and Bridges

Our traditional single crowns and bridges are custom designed to match all proportions of adjacent natural teeth. Porcelain is custom colored and shaped in our laboratory to offer each patient a distinctive prosthetic restoration.

### Crowns

Crowns are restorations that cover or cap teeth, restoring them to their natural size, shape, and color. Even a poorly maintained or badly damaged tooth can benefit from a well designed and correctly placed crown. This cap not only helps appearance, but can also save a tooth that might otherwise be lost. (See also Procera Information Page)

## Fixed Bridge

A fixed bridge is designed to replace a tooth that has been lost, with natural looking nonremovable replacement. It can eliminate unsightly gaps by extending or "bridging" a replacement tooth between the teeth on either side of the gap.

### **Why is it important to replace missing teeth?**

Aside from the obvious effects that missing teeth can have on personal appearance, there are other more serious consequences. When a tooth is lost, as space is created. Normal oral pressures and stress can cause the remaining teeth to shift. This shift can cause healthy, straight teeth to tilt and become unstable, leading to even more tooth loss. Also, the teeth support facial tissue. When gaps are left unrepaired, the tissue "caves in". This can add years to the person's appearance.

## The Proven Technique

For years, crowns have been constructed to restore the function of damaged teeth. Today, crowns can be created to look exactly like your natural teeth. Porcelain is often baked onto a durable metal shell. The porcelain is colored or shaded to blend in with your natural teeth. The damaged, natural tooth is reduced in size so the crown can cover or "cap" the damaged area without appearing too large or out of place. A non-removable bridge uses crowns on adjacent teeth to support an artificial replacement tooth. If the teeth on either side of the gap are healthy and in good condition, they can easily be used as anchors for the bridge. The crowns are connected to a replica of the missing tooth. This replacement tooth "bridges" the gap between your teeth and restores function while improving appearance.

## Implants

With over a quarter century of clinical success, Swedish and American research has proven that osseointegrated implants are effective in over ninety-six percent of all patients treated.

Implants provide additional support where teeth are missing without putting forces onto remaining natural teeth. They may be used to support the replacement of a single missing tooth or a complete functional set for individuals who have lost many or all of their teeth.

## Complete Dentures

A removable prosthesis, such as customized complete dentures, can restore function and appearance in the mouth as well as the surrounding facial tissues. If several teeth can be saved, dentures may be made to fit over the roots of these teeth. The "overdentures" preserve bone and greatly increase denture stability. In many individuals, dental implants can offer a patient an overdenture with far more stability than traditional dentures. More importantly, patients who have had dentures can enjoy non-removable replacement teeth, built upon implants. These function as well as, and sometimes better than, the original natural teeth.

## Cosmetic Dentistry

Cosmetic dentistry is a broad title which describes several new and exciting techniques that can fill gaps between teeth and restore discolored, misshapen, or broken teeth.

There are several procedures which fall under the heading of cosmetic dentistry:

Cosmetic Resin Bonding

Shade Correction by Tooth Whitening

Laminate Veneers

Tooth Movement Recommendations

Replacement of Missing or Discolored Teeth

Cosmetic Reshaping

Oral Hygiene

Special Crowns

Specialty Dentures

Replacement of Lost Gum Tissue

With the advent of new materials and their various applications, your dentist has a wide range of procedures that enable him or her to choose the one that best meets your needs.

Advantages of Cosmetic Resin Bonding

Immediate results

Little or no tooth reduction (for bonded restorations)

Less expensive than crowning or capping

Generally painless (requires little or no anesthetic)

Disadvantages of Cosmetic Resin Bonding

The bonded areas of teeth can chip and stain over time

There is a limited life expectancy to each of these techniques

Does not postpone the need for a crown

Why should you choose a Dentist?

An implantologist is a dentist who has had of advanced training to provide simple as well as complex im[plant surgery and prosthodontics care. He or she is a extensively trained in the complicated techniques of:

Cosmetic Dentistry

Denture Therapy and Fabrication

Crowns and Bridges

Fixed and Removable Partial Dentures

Dental Implants

TMJ (Joint Dysfunction)

Facial Replacements (Maxillofacial Prosthesis)

Total Mouth Rehabilitation

Depending upon your individual condition and needs, your dentist can recommend the treatment that is right for you.

Prevention

The ultimate goal of this office is to prevent dental disease and loss of teeth. Our team of are experts in preserving your dental health.



Removable Dentures  
Tooth Supported Bridge  
Implant Supported Bridge  
Comparison Table

**Dental patients** often wonder which approach is the best for them -- removable dentures, tooth supported fixed bridges, and dental implant supported bridges. Here is a comparison of several of the most popular choices. While some choices are initially less expensive, they can become costly due to frequent repairs and adjustments. Comfort is a major factor when making a choice. Appearance is another. Bone loss in the jaw can cause some prostheses to lose their fit after awhile.



**A tooth supported bridges** have many advantages over removable dentures. In particular, there is security of knowing that teeth are not going to move around and fall out during a conversation or a meal. A more natural esthetic effect is possible.

Patients can eat a wider variety of foods without worry. Tooth supported dentures require less time to maintain.

### **Advantages of Tooth Supported Fixed Bridges**

- Security - Prosthesis is not removable by patient.
- Usually more natural esthetics than a removable denture.
- Better chewing ability than removable dentures.
- No denture material covering the roof of the mouth or under the tongue.



*Upper Fixed Bridge*

### **Disadvantages of Tooth Supported Fixed Bridges**

- Bone loss occurs where natural teeth are missing.
- Bone continues to deteriorate behind the false teeth due to loss of roots.
- Healthy adjacent teeth are compromised because they must be cut down so that the bridge can be attached to them.
- Potential for gum disease increases.
- Possible need for root canal treatment and post and core, adding additional time, discomfort and cost to the treatment.
- Long term function is compromised.
- Long term esthetics is compromised as gum recedes.
- Oral hygiene difficulty because bacteria can lodge around bridge.
- Potential for mouth odors.
- Decay of roots and teeth under the bridge can occur
- More costly in terms of future treatment.



**Dental Implants** provide the best long term solution to missing teeth. Implants provide a secure anchor for teeth. They have been proven to be safe with ADA approval and considerable research demonstrating their effectiveness. Bone

growth is stimulated by the dental implants. Adjacent teeth remain intact and healthy. Implant supported prostheses look and feel like your own natural teeth.



**Before and After Pictures of Dental Implant Patient**

### **Advantages of Dental Implant Replacement**

- **Secure** - The teeth are tightly anchored in the mouth.
- **Stable** - There is no movement of the teeth during chewing or talking.
- **Reliable** - Peace of mind in knowing that the teeth will not move.
- Bone growth is stimulated by the dental implant, which imitates a tooth root.
- No grinding down of adjacent teeth is necessary.
- Improved oral hygiene.
- Better breath.
- Better health with improved nutrition.
- Improved Function - Feels like a natural tooth
- Improved Esthetics - Looks like a natural tooth.

### **Disadvantages of Dental Implant Replacement**

- May initially seem costly, but the investment value is actually less costly over time.
- Adequate bone must be present in order to place dental implants.
- Bone graft procedure may be necessary if adequate bone is not present.



**Bone Grafting:**

A bone graft is a surgical procedure that replaces missing bone with material from the patient's own body (autogenous bone) or an artificial, synthetic, or natural substitute. The graft not only replaces missing bone, but also helps your body to regrow its own lost bone. This new bone growth strengthens the grafted area by forming a bridge between your existing bone and the graft material. Over time your own newly formed bone will replace much of the grafted material.

Bone grafts are needed when part of your body is missing bone. This missing portion of bone is frequently called a "bony defect". Examples of jawbone defects are: defects which occur following tooth extraction; generalized decrease in quantity of jawbone from trauma or long-term tooth loss; defects surrounding "old style" dental implants; defects resulting from cysts or tumor surgery.

**Guided Bone Regeneration: (GBR)**

A procedure in which a membrane is placed over the bone defect site. This membrane encourages new bone to grow and also prevents the in-growth of fibrous scar tissue into the grafted site.

**Success Rate:**

Recent advances in technology have dramatically increased the success of these procedures, leading to bone formation and resolution of the defect. However, depending upon the reason needed for these procedures, success rates will vary. Also, different graft and GBR materials seem to affect the amount of new bone formed. Finally, a patient's overall health will help determine the degree to which new bone will form within the grafted site.

When bone grafts are used to provide support or anchorage for osseointegrated titanium implants, the success rate is generally quite similar to implants placed in naturally available bone.

**Types of Bone:**

There are many different types of bone grafts. Some grafts are taken from different parts of the patient's own body (i.e. from the jaw or chin). Other grafts come from synthetic materials or from highly purified bovine bone mineral.

Likewise, there are different types of GBR membranes. Some are made from synthetic polymers and must be removed during the second surgery several weeks or months later. Other membranes are made of resorbable collagen materials.