A NEW SMILE

It’s no fun when you’re missing teeth. You may not feel comfortable eating or speaking. You might even avoid smiling in public. Fortunately, dental implants can help. Implants can replace a single tooth, several teeth, or all the teeth in your mouth. Best of all, they look and feel like natural teeth.

When Teeth Are Missing

It can be embarrassing to have spaces in your mouth where teeth are missing. But you’re not alone. Some people lose teeth due to injury, tooth decay, or periodontal disease (infection of the gums and bone surrounding teeth). Others may not have had all their teeth grow in. Whatever the reason, dental implants can help replace missing teeth. And implants often feel more natural than dentures and other dental restorations.

Implants Can Help

If you want a dental restoration that looks and feels as though it’s really part of your mouth, dental implants may be right for you. A dental implant is an artificial tooth root. Your jawbone fuses with the implant to provide a secure platform for a prosthesis (artificial tooth). If you are missing many teeth, several implants can be used to support a partial or complete denture.
Working Together
Throughout the implant process, you’ll work closely with a dental team. Part of the team prepares your jaw and surgically places the implant. Others build and adjust the prosthesis.
- Your *surgeon* may be an oral surgeon, periodontist, or a general dentist skilled in dental implant procedures.
- Your *restorative dentist* may be a prosthodontist or general dentist.

Understanding Your Role
Depending on your dental needs, total treatment time for implants can range anywhere from several months up to a year or more. Without a strong commitment from you, implants are less likely to be successful. For best results, be prepared to:
- Keep all your appointments.
- Take good care of your mouth during the implant process.
- Commit to a lifetime of good oral hygiene.
- Have dental checkups at least twice a year.
- Contact team members if you have any problems.

Table of Contents

- Your Dental Evaluation ..................... 4
- Forming a Treatment Plan............... 6
- The Right Prosthesis for You .......... 8
- Surgery to Place Implants ............. 10
- Placing Abutments...... 12
- Making Your Prosthesis.................. 13
- Good Habits to Last a Lifetime........ 14
To learn whether you’re a good candidate for dental implants, you will have a dental evaluation. The evaluation includes a dental exam, a dental and medical history, and imaging tests. As part of the exam, the health and structure of your mouth are studied. This helps the dental team understand where to place the implants.

Your Dental Exam

An exam supplies important details about the structure of your mouth. Your bite is studied to see how your jaws and teeth fit together. The condition of your jaws, gums, head, and neck is also checked. This is done to see whether your mouth is ready to accept implants. During the exam:

- The height and width of your jawbones are measured. This is done to make sure there is enough bone to hold an implant.
- Your gums are examined for signs of periodontal disease. Diseased gums need to be treated before implants can be placed.
- Your gums are also checked to see if there is enough firm tissue to surround an implant.
The Importance of Your Dental History
The more your surgeon learns about you, the more successful your implant surgery is likely to be. Your dental and medical history is an important part of this learning process. It includes questions about your overall health and any previous dental treatments, such as crowns and bridges. You’ll also discuss your expectations. Why do you want implants? What do you hope the results will be? Finally, you’ll discuss factors that can affect healing after surgery. These include smoking and the use of certain medications.

If You Have an Ongoing Medical Condition
If you have an ongoing medical condition, such as diabetes, you may have blood tests. This is to make sure your condition is under control before treatment begins. Also, be sure to tell your surgeon if you take medications, such as insulin or a blood thinner, including aspirin.

The Importance of Imaging Tests
Imaging tests are a key part of the dental evaluation. They make it possible to view parts of the mouth and head that can’t be seen during an exam. Imaging tests also help your surgeon learn more about the quantity and quality of the bone in your mouth.

- **Dental x-rays** show teeth and jaws.
- **Panoramic x-rays** provide a wide view of the jaws, teeth, nerves, and sinuses. They can also help indicate bone problems.
- Other imaging tests, such as a **CT scan** or **x-ray tomography**, may also be used.
FORMING A TREATMENT PLAN

After the evaluation, your surgeon and restorative dentist will each discuss treatment options with you. You’ll also talk about any dental work or special procedures you may need before the implant process can begin.

A Solid Foundation for Implants

Having a healthy mouth is just as important for implants as it is for natural teeth. If you don’t have enough healthy bone or gum tissue in your mouth, you may need a graft before implants can be placed. Grafting helps build a solid foundation for the implants. You’ll probably have to wait for a graft to heal before you can have implant surgery. If you have periodontal disease, it will also need to be treated prior to placing the implants.

If You Need a Graft

Graft surgery can build up bone or gum tissue in an area where it’s lacking. It can also replace bone and gum tissue that has been lost due to disease or trauma. One type of graft surgery is the sinus lift (a procedure to build up bone at the bottom of the maxillary sinus). This adds height to the jawbone, ensuring enough bone to hold an implant.

- Bone for a graft may be taken from your jaw, hip, or other sources. Sometimes a synthetic (artificial) graft is used.
- A graft to build up gum tissue usually comes from your own mouth.

If You Have Periodontal Disease

Periodontal disease weakens gum tissue. Left untreated, it can also weaken bone and lead to the loss of both natural teeth and implants. Depending on your condition, cleanings, medications, or surgery may be needed to treat the problem. You’ll also need to practice good oral hygiene throughout your life. This will help keep periodontal disease from returning. It will also help your implants last longer.
Your surgeon will explain any treatments that may be needed before implants can be placed.

**Outlining Your Treatment Plan**

If you’re a good candidate for implants, the dental team will talk with you about a treatment plan. You’ll also discuss the costs and time that may be involved. Keep in mind, your commitment during the process will be crucial. In many cases it will take at least several months before new prosthetic teeth can be attached to implants. If you need a graft or treatment for periodontal disease, the process is likely to take longer.

**You Have Alternatives**

If dental implants aren’t right for you now, consider your alternatives. One option may be a bridge to replace your missing teeth. If you already have a denture, adjusting it for a better fit may help. You can also decide to have implants at a later time. Together, you and your surgeon will decide what’s best for you.

**Risks and Complications**

The risks and complications of implant surgery may include:

- Bleeding
- Infection
- Failure of the implant (jawbone doesn’t fuse to the implant)
- Injury to adjacent teeth or sinus
- Injury to nearby nerves and muscles
THE RIGHT PROSTHESIS FOR YOU

A dental prosthesis is secured to one or more implants. It can be made of one or many artificial teeth. The prosthesis you have will depend on your dental needs. If you’re replacing a complete set of teeth, you may be able to choose between a removable or fixed prosthesis.

A Prosthesis to Fit Your Needs
Depending on how many teeth you’re missing, you may have a single, partial, or complete prosthesis. The more teeth to be replaced, the more implants you will need. For most people, a permanent prosthesis won’t be made until the jawbone has fused to the implants. Until then, a temporary prosthesis may be used.

- A single prosthesis is used to replace a missing tooth. One implant is all that’s needed for support.
- A partial prosthesis replaces two or more teeth. Two or three implants are used for support.
- A complete denture prosthesis replaces all the teeth in an upper or lower jaw, or both. (See page 9.) The number of implants needed depends on whether a fixed or removable prosthesis is used.

The restorative dentist will talk with you about the type of prosthesis best suited to your needs.
Types of Complete Prostheses
There are two types of complete denture prostheses: removable and fixed. Both can be used to replace a complete set of teeth. Removable means you’ll be able to take it out of your mouth. Fixed means it can only be taken out by a dentist. You and your restorative dentist can discuss which type is best for you.

Choosing a Removable or Fixed Complete Prosthesis

Removable Prosthesis
With a removable prosthesis, the new teeth are joined to the implants by a connecting device, such as a clip and bar. This allows you to take the prosthesis out for cleaning. For support, this type often uses four to six implants per jaw.

Fixed Prosthesis
With a fixed prosthesis, the new teeth are fitted to a frame that is secured to the implants. Five or more implants are placed along the contour of the jaw. In some cases, a fixed prosthesis offers more stability for chewing.
Surgery is used to place implants in your jawbone. Ultimately, successful dental implants depend on the jawbone fusing to the implant [a process called osseointegration]. You can help this process along by keeping your gums and teeth especially clean over the next few months.

Preparing for Surgery
Most implant surgeries are performed in a dental office. To prepare for surgery, follow your surgeon’s instructions. Also:
• Tell your surgeon if you’re taking any medications or herbal remedies.
• Wear comfortable clothes to the office.
• Take antibiotics if prescribed.
• If you will be sedated or asleep (under general anesthesia) during the surgery, arrange for an adult to give you a ride home. Also, don’t eat or drink for several hours before surgery.

Your Surgical Experience
Upon arriving, you may be asked to rinse your mouth with an antiseptic. You may also be given medication to help you relax or to make you sleepy. Right before surgery, the jaw is numbed. Then the jawbone is prepared so the implants can be placed. If you’re awake, you may hear sounds or feel vibrations. But you shouldn’t feel any pain. The length of the surgery depends on how many implants are placed.
**After Surgery**

When your surgery is over, you may rest a while. But you can go home as soon as you feel able. Be aware that a certain amount of swelling and minor bleeding is normal. To speed your recovery, be sure to follow your surgeon’s instructions. You may be told to:

- Drink only clear liquids for the rest of the day.
- Take pain medications and antibiotics.
- Avoid putting pressure on your jaw.
- Eat soft foods for the first few days as your mouth begins to heal.
- Avoid wearing your temporary prosthesis or denture for a certain amount of time.

**Taking Care of Your Mouth**

Much of the healing process depends on keeping your teeth and gums clean. If you don’t take care of your mouth, you may get an infection. This could cause implants to fail. For best results:

- Use a soft toothbrush to clean your teeth and gums after every meal.
- Clean the areas near your incisions. But do not brush the incisions themselves.
- Use an antiseptic rinse if prescribed.

**Follow-up Care**

It often takes a few months for jawbone to firmly attach to implants. During that time, you’ll have several follow-up visits with your surgeon. This is to see how well your jaw is healing. If you wear a denture, you may also visit your restorative dentist. He or she may put a new lining in your denture for greater comfort.

**When to Call Your Surgeon**

Call your surgeon if you have any of the following:

- A large amount of swelling under the tongue, or around the face and neck
- Bleeding that won’t stop
- Pain in the jaws, mouth, or sinuses that isn’t relieved by prescribed medication
- A fever
- Numbness that does not go away after the anesthesia wears off
**PLACING ABUTMENTS**

**Abutments** are connecting pieces that join the prosthesis to the implants. They also help gum tissue heal around the implant site. In certain cases, abutments may be placed at the same time as implants. More often, though, surgery to place abutments is done after the jawbone has fused to the implants. This second surgery usually takes less time than the first.

**Healing Abutments and Final Abutments**

Depending on your dental needs, two kinds of abutments may be used. Healing abutments (also called healing cuffs) help gum tissue heal around the implant site. Once the gum has healed, final abutments are placed so the prosthesis can be joined with the implant.

**Exposing the Implant**
If you have a second surgery to place abutments, a small incision is first made in the gum tissue.

**Placing Healing Cuffs**
In many cases, a healing cuff (also called a healing abutment) is temporarily secured to the implant.

**Placing Final Abutments**
When gums have healed, the final abutment is placed. The top of the abutment sticks out just above the gum line.

**After Abutments are Placed**
It usually takes 4 to 6 weeks for gums to heal around the abutments. During that time, follow your surgeon’s advice about what kinds of food to eat. You will also be given instructions for cleaning around the abutments. Proper cleaning prevents infection and promotes healing.

**When to Call Your Surgeon**

After abutments are placed, call your surgeon if you have any of the following:

- Bleeding that won’t stop
- Pain in the jaws, mouth, or sinuses that isn't relieved by prescribed medication
- A fever
- An abutment that feels loose
MAKING YOUR PROSTHESIS

When your gums have healed around the abutments, your restorative dentist will begin making your permanent prosthesis. Several office visits may be needed to make a precise model of your mouth. Then it may take a few weeks, or even months, to build your prosthesis.

A Custom Fit
To custom-fit the prosthesis, your restorative dentist will make impressions (molds) of your jaws, teeth, and abutments. Bite registrations are also made to see how your teeth fit together. These molds are used to create a model of your mouth. Your new prosthesis is then made from this model.

Fitting Your Prosthesis
Once the prosthesis is ready, you’ll have several fittings to see how it feels in your mouth. With a fixed prosthesis, this process may take a little longer. After any needed adjustments are made, the prosthesis is attached to the abutments. You may be told not to eat hard or crunchy foods for a few weeks after the prosthesis is attached.

When to Call Your Restorative Dentist
Call your restorative dentist if you have any of these problems:
- Pain in the jaws
- A bite that feels wrong
- A prosthesis that feels loose, chips, or breaks
- Implants or abutments that feel loose
To ensure that your implants last, take good care of your mouth. This means brushing and flossing every day, and having regular checkups with your dental team. If you don't keep your mouth in good shape, your implants can fail.

**Brushing After Meals**
Brush your teeth, prosthesis, and abutments after every meal and at bedtime. You should also brush the gum-line and the gum around your abutments. Be sure to call your restorative dentist if you have trouble cleaning your prosthesis or abutments.

**Flossing Daily**
Flossing is important because it cleans areas a toothbrush can't reach. Floss between your teeth and around your prosthesis at least once a day. For best results, you should also floss up and down along the abutments.

**Try Special Cleaning Aids**
- Foam-coated floss and an interdental brush can help clean abutments.
- An electric toothbrush can make it easier to clean your prosthesis and abutments.
- A prescription rinse helps rid your mouth of bacteria.
Make and Keep Appointments
Commit yourself to a lifetime of good dental care. See members of your dental team as often as directed. Regular care is important for the health of your implants. During appointments:

- Your abutments are cleaned, and any needed adjustments or repairs are made to the prosthesis.
- Your implants and the health of your jaws and gums are checked. You will also have x-rays to evaluate the bone around the implant.
- Your teeth are cleaned to maintain good oral health.

To Keep Feeling Secure
With your prosthesis in place, you’ll be able to speak and smile with confidence. To make your implants and prosthesis last, follow these tips:

- Avoid chewing on hard objects like ice or popcorn kernels.
- Control health problems such as diabetes.
- Stop smoking.
- Contact your dental team if you notice any problems with your implants or prosthesis.
It takes time and effort to make dental implants successful. So commit yourself to the care of your mouth. Brush and floss, and see your dental team for checkups. That way, you can keep smiling with comfort and confidence.