Pre Operative Instructions: Dental Implants

People who have missing teeth may benefit from new techniques that allow artificial teeth to be secured firmly in the mouth. These techniques may range from replacing one missing tooth to replacing every tooth in the upper and lower jaws.

Implants have become an important part of modern dentistry, and millions of people around the world have had a variety of implants.

As shown in the figure, the basic structure consists of the implant fixture and the tooth "prosthesis".

**Implant:** An implant fixture is inserted into the jawbone to provide a base for supporting and attaching the prosthesis.

**Prosthesis** is an artificial tooth, or a row of artificial teeth, attached to the implant. The prosthesis may be a "crown" to replace one missing tooth or a "bridge" to replace several missing teeth. In a jaw with no teeth, the prosthesis covers almost the full dental arch. Some prostheses with many teeth are fixed permanently onto the implants with screws or special cements. Other types of prostheses can be taken out for daily cleaning. These are called "over dentures".

Implant design materials and techniques have improved greatly over the past 15 years and are continuing to improve. Many different types of implants and prostheses are available for people with different needs.

Implants may be made of different materials and implanted in different ways. Each has its own advantages and disadvantages. You and your Surgeon can discuss which is likely to be best for you.

**Why Dental Implants are Useful**

Implants help solve some of the problems people may have with the traditional dentures and bridges which rest on the surface of the gums.

When natural teeth are extracted, the bone that held them in place begins to shrink. This can cause dentures and bridges to become uncomfortable and ill fitting. Eating and talking can be painful, difficult and embarrassing.

As implants provide points of firm attachment for dental prostheses, they can help solve problems posed by traditional dentures and bridges. Many people have reported that dental implants are more comfortable, convenient and attractive than the dentures they had previously worn.

They also report fewer problems when eating and talking. Patients report that biting and chewing are often very similar to biting and chewing with normal teeth.

In order to get bridges to fit correctly, adjacent healthy teeth need to be cut and reshaped, which is damaging. In contrast, natural teeth do not have to be altered or damaged when implants are used.

**Bonding of the Implant and the Jaw Bone**

Implants are made from materials (such as the metal titanium) which are compatible and can bond strongly to the living bone tissue. The bone tissue grows onto the surface of the implant. This is called osseointegration and biointegration. You may hear your dentist or surgeon use these terms.
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When fixed firmly within the jawbone, the implant will be strong enough to bear the daily forces of chewing and normal function.

If the implant fails to integrate with the jawbone, the implant will not be strong enough to withstand the forces of chewing and will be removed. The surgeon may have to insert another implant fixture.

Implant Surgery

Your surgeon will make an incision to open your gums. The implant will be inserted into the jawbone using special techniques and instruments.

The number of implants inserted by the surgeon will depend on the prosthesis. For example, one implant is used to replace one missing tooth. Or for a complete upper prosthesis having 12 artificial teeth, six implants may be needed.

The incision will be closed with stitches. The bone surrounding the implant will be allowed to heal for up to six months.

After healing, an ‘abutment’ will be inserted through the gums and into the implant. This can be done under a local anesthetic. The abutment is the foundation, support or connector for the prosthesis. The gums around the abutments are allowed to heal for several weeks.

Your surgeon, prosthodontist or dentist will test the implants to see if they have properly integrated with the bone. This is important because the implants must be strong enough to support the prosthesis and withstand the forces of chewing and normal function.

If the implants have been successful, your dentist will begin work on the prosthesis. The prosthesis may be fixed to the implant with cement or screws so that it is not removable. Or it may be attached in a way that allows it to be removed for cleaning. These are called ‘over dentures’

When the impressions of your mouth are made and before the prosthesis is finished, discuss the appearance of the prosthesis with your dentist. If you have ideas or concerns about the appearance of the prosthesis make sure you discuss them with your dentist.

Cleanliness is crucial. Implants, prosthesis, gums and remaining teeth must be thoroughly cleaned every day so they stay free of dental plaque. Constant attention to cleanliness will improve the chances of the implants being successful. Implant hygiene is a lifetime commitment for both the dentist and the patient.

Possible side effects

All types of surgery have risks. Complications can occur. They do not happen often but they can occur. Dental Implants may have other complications that are not listed here:

- Pain and swelling of gums
- Implant Failure
- Effected Speech
- Gingivitis
- Perforation of the nasal sinus
- Infections
- Nerve Injury
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- Bone Loss
- Build up of Tissue
- Crown Fracture
- Loose Prosthesis
- Hemorrhage
- Swallowing or Inhaling of implant component or Instrument
- Fracture of the Jaw Bone

Your surgeon will assess your health and any risks which the implants or prostheses may cause to your general or dental health. Health checks will occur during treatment and follow-up.

When Implant Therapy Should Not be Done:

Some people should not have, or should delay having, implants for the following reasons:

Unrealistic expectations – A realistic outlook is important. Implant therapy is not successful for everyone. Some reconstructions may be very difficult, and the results may not be as good as the person hoped.

Pregnancy – Tell your surgeon if you are or may be pregnant. General anaesthesia is likely to be unnecessary for the mother and foetus. Pregnancy could affect treatment with painkillers, antibiotic drugs and other medicines. Pregnant women should wait until they have given birth before starting implant therapy.

Severe, chronic illness – These people may not be able to withstand general anaesthesia and may not be able to maintain the oral hygiene required for implants. Any condition, disease or treatment which delays healing

Not enough jawbone – If too much jawbone has been lost due to aging and extraction of teeth, the implant will not be successful.

Abuse of alcohol and drugs – These problems may interfere with a person’s good nutrition, ability to follow the surgeon’s advice and maintenance of oral hygiene.

The Decision to have Dental Implants

After an examination, your surgeon will discuss whether you are likely to benefit from dental implants. The decision to have implants is always yours. You should not be pressured by anyone into having implants. If you are uncertain about your surgeon’s advice or diagnosis, you may wish to seek the opinion of another oral maxillofacial surgeon.