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Dental Implants
Patient Information

About Dental Implants



Dental implants are often a good option for people with missing teeth. A dental implant (or fixture) is a surgical component that acts as an artificial tooth root. It is inserted into the bone of the jaw and acts as an anchor to support a prosthetic device such as a crown, bridge or denture.

Various techniques are used with dental implants to replace one, two or several missing teeth. Occasionally, dental implants may be inserted to hold an entire set of artificial teeth (dentures).

A dental implant is purely the metal “root” component that is interfaced with the jawbone. After the bone has healed around the implant, an abutment (connector) is fitted. This is a connector between the implant and the crown (artificial tooth). Then, the crown is attached. Sometimes, an implant can be fitted with little press-stud like attachments to hold a denture in place. These studs minimise any movement of the denture.

Dental Implants:

- may prevent receding gums;
- prevent bone changes and resultant changes in facial aesthetics (the absence of teeth cause bone loss in the jaw, changing facial structure);
- are secured firmly in the jaw;
- in most cases are surrounded by gum tissue – just like natural teeth;
- are mostly more comfortable than dentures;
- can be cleaned and cared for like normal teeth (dentures or bridges require special cleaning procedures);
- can be cleaned with regular toothpaste, toothbrush and dental floss;
- provide additional support for dentures, enabling greater bite pressure.

Dental implants are designed to last for years. However, if good oral hygiene is not maintained, this can shorten its lifespan. Therefore, maintaining good oral hygiene is essential. As with real teeth, artificial teeth that are not cleaned adequately, can develop plaque and calculus deposits that will eventually lead to problems such as gingivitis, bleeding gums, infection, loss of bone and pain.

Providing the dental implant has been successfully anchored in a sufficient amount of bone, and if regular dental hygiene is maintained, your dental implant should last for many years. However, as with any dental appliance, repairs may occasionally be required.

Your treatment may need to be managed by several dental practitioners and require several appointments. Although this requires time and financial outlay, the treatment is arranged this way for the benefit of the patient and the chance of the best results possible.

About Dental Implants

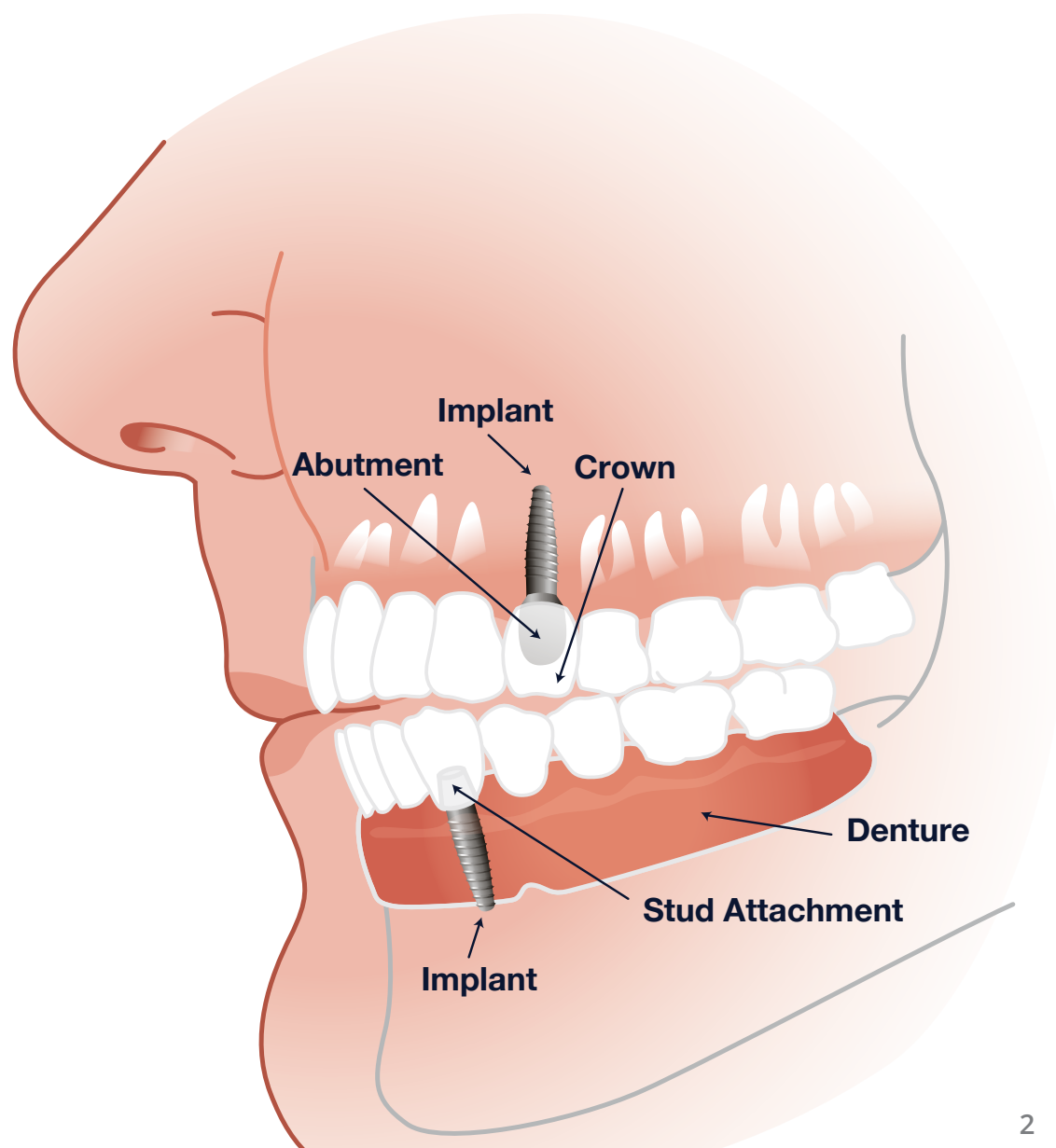


About this pamphlet

We encourage all patients to talk with their dentist. This brochure provides general information about dental implants but is not intended as a substitute for advice from your dentist. If you have any questions or require further clarification, talk to your dentist or dental prosthetist. He or she will be happy to help you. If you are ever uncertain about advice given, we encourage you to seek the opinion of another dental professional. With all surgical procedures, there are risks and limitations, as well as benefits, that must be discussed with your dental health professional.

Consent Form

Before you undergo a dental implant procedure, your dentist may require you to sign a consent form. We recommend you read this carefully. If you are unclear about any of the information or have any questions regarding the surgery, risks, the consent form or anything else, please ask your dentist for clarification.



Before Implant Surgery



You will need to discuss whether dental implants are the best option for your dental problem with your dentist. After discussing your dental issues with your dentist and reviewing the information, you may decide against dental implants. It's important to remember that the decision is yours, and you are under no obligation to pursue the surgical option. If you decide that you would like to have the dental implant procedure, your dentist will still need to check that you are suitable. Most people are suited to dental implants, with the following exceptions:

Smoking

Smoking delays healing, possibly causing implant failure by preventing the necessary bone integration around the implant. Also, over time smoking may cause a breakdown in integration between bone and implant.

Bone Loss

Some patients, for example, individuals that have had missing teeth for many years, lack sufficient bone material, making successful implant surgery impossible. However, for many patients in this situation, there are now bone replacement techniques available that can be used to rebuild enough bone around the implant site.

Pregnancy

Sometimes a general anaesthetic is required, along with other medications that may compromise the unborn baby's health.

Drug or Alcohol Abuse

Various substance abuse problems may cause the patient to have nutritional problems, or make them unable to adhere to the dentist's instructions or ongoing oral hygiene and care.

Psychological Conditions

In some cases, the patient may not be able to follow the dentist's instructions.

Age

Any child younger than 17 years is usually considered not suitable, as their bones are still growing.

Medical Conditions

Certain illnesses, e.g. uncontrolled diabetes, will increase the risk of complications such as delayed healing or infection.

Dental & Medical History

You must tell your dentist your complete dental and medical history. Medications, previous medical illnesses or surgeries may impact on the success or recovery of your implant procedure. In particular, please inform the dentist if you have had:

- rheumatic fever;
- any blood disorder including haemophilia;
- facial radiotherapy;
- heart surgery or heart problems;
- previous reaction to an anaesthetic;
- any medications on a regular basis such as warfarin, aspirin or any other type of blood thinning medication;
- an allergy to any medications or antibiotics.

Before Implant Surgery



We suggest you supply your dentist with a complete list of all medications you are currently taking or have recently taken, including over-the-counter medication, prescription drugs and even herbal remedies.

Diagnostic Tests

Your dentist will need to perform diagnostic tests to confirm your suitability for the procedure. This test will also help plan the best treatment option. Diagnostic tests may include:

- dental examination;
- CT scans of your jawbones;
- dental cast of your mouth;
- photographs;
- dental x-ray radiographs;

Your dentist will decide on the appropriate appearance of your artificial tooth based on the shape, size and colour of your remaining teeth. During this time, it is recommended that you discuss with your dentist any suggestions or concerns you may have about the appearance of your new artificial tooth.

Additional Dental Health Problems

Any current dental health problems usually should be treated before implant dentistry. Sometimes individuals may have had dental health problems such as gum disease or tooth decay that have contributed to the loss of his or her natural teeth. When this is the case, these issues need to be correctly diagnosed and treated to ensure the ongoing success of the dental implant after the procedure. Talk to your dentist about the most appropriate treatment plan for your dental health problem. Your dentist will also inform you about the anticipated costs for any required treatment.

Bruxism (grinding the teeth) may damage dental implants. Symptoms of bruxism include chipped tooth enamel, broken fillings and flattened teeth. If you suffer from this condition the dentist may need to:

- use stronger materials for your artificial teeth;
- insert additional implants;
- provide you with a splint or guard to wear at night, as many people grind their teeth while sleeping.

Before Implant Surgery



A Realistic Outcome

Although implant dentistry and dental prosthetics continue to improve, not all implant procedures will produce “lifelike” results. Everybody is different, with some cases being more challenging to restore than others. Occasionally, results may be less satisfying than anticipated. Make sure you have a realistic understanding of the outcome and discuss your expectations thoroughly with your dentist. It’s also essential that you have a thorough understanding of the procedure, with both its limitations and benefits.

Crowns and implants may not look and feel precisely like your teeth. Certain activities may feel different, such as biting and chewing, and it may take a little time to get accustomed to the new sensations. Well maintained dental implants are considered to be a permanent fixture. However, you must keep in mind that regular check-ups with your dentist along with sound oral hygiene are necessary to keep your crowns or dentures in optimal condition.

No implant surgery can be guaranteed to be successful. Sometimes a dental implant will need to be replaced, and about one in every 20 implants fails to integrate with the jawbone. Occasionally, an implant may come loose over time. Implant failure may be due to:

- smoking;
- a lack of commitment to good oral hygiene;
- the patient’s overall health, including the ability to heal after surgery;
- lack of bone density and strength;
- location of the implant (the back of the upper jaw is the most difficult location for implant dentistry as the bone has less density and height than in other areas).

Talk to your dentist in advance about an alternative plan of treatment, in the chance that your implant treatment may fail.

About Anaesthesia

Dental implant procedures can be performed in a variety of ways using either general anaesthesia or local anaesthetic. The choice of anaesthesia depends on several factors including the position and complexity of the procedure or the patient’s feelings towards being awake during the procedure. If general anaesthesia is preferred, this may require hospital admission and the anaesthesia provided by a specialist anaesthetist.

Today, anaesthetics carry delete minimal risks, but occasionally an individual may have a serious reaction to the drug. Your anaesthetist can explain to you the type of anaesthetic most suited to you, along with the risks and benefits. Before your procedure, you may be instructed to not eat or drink for a particular period prior to the procedure, depending on the anaesthesia chosen. Your dentist and anaesthetist will discuss these details fully with you before your procedure. It is essential that you adhere to these instructions.

Dental Implant Procedures



There are several types of dental implants available. Most implants are made from materials that are specifically chosen for their capability of forming a strong integration with the surrounding bone tissue, such as titanium. The appearance of dental implants may vary, depending on the type chosen by a dentist.

The Three Treatment Stages

The dental implant procedure requires three treatment stages, usually performed separately:

- 1** Insertion of the implants
- 2** Insertion of the abutment (connector) onto the dental implant
- 3** Attachment of the denture or artificial tooth, e.g. crown, to the abutment

The entire implant process does not happen instantly. It takes time and involves several consultations with more than one practitioner. Generally speaking, it can take between three to six months or even longer from the insertion of the implant to the final fitting of the crown.

Other factors that contribute to length of time of the procedure involve the patient's general health, the amount of available bone capable of integrating with the implant, rate of healing, amount of integration between the bone and implant, and the contributing factors of any other dental problems that may be present.

The dentist may sometimes be able to insert the implant and attach the abutment and crown in one single procedure. However, depending on your pathology, this is not always possible, and not all dentists offer this single-stage procedure.

Where is the dental implant procedure performed?

The dental implant is usually inserted in the chair at your nearest Dentistry Plus clinic. Sometimes you may be referred to a day surgery or hospital for your procedure. Your dentist will advise you on the most appropriate setting for your implant procedure.

The procedure usually only takes 30 to 60 minutes; however, in some more complicated cases the procedure may take up to several hours.

Dental Implant Procedures



Preparation of Implant Hole

Your dentist will prepare a site in the gum to expose the bone underneath. Next, a drill is used to prepare a hole in the jawbone in preparation for the implant. Several implants will be required when there are several missing teeth that need to be replaced. The number will depend on the amount of bone tissue available.

Sometimes just one single implant can support a “bridge” of artificial teeth. Your dentist will advise you on the appropriate amount of implants you will require.

1 Implant Insertion

A dental implant looks a little bit like a bolt. Its surface can be either smooth or threaded. With threaded implants, they are screwed into the drilled hole. Smooth-sided implants are usually tapped into position. Afterwards, the gum is stitched closed and left to heal. Stitches are removed after approximately seven to ten days. The stability of the implant will improve as the weeks progress and the bone tissue slowly grows over the surface of the implant. This process may continue for some six months and is known as “osseointegration” or “biointegration”.



2 Abutment (Connector) Insertion

After osseointegration, the dentist will fit the abutment to the implant. The abutment is a connector between the implant and the dental crown. A small incision will be made into the gum by the dentist to access the implant and insert the abutment onto the implant. X-rays are used to ensure the abutment is correctly placed. Sometimes, a dental impression of your mouth may be taken to ensure that the correct design of the artificial tooth has been made. Once again, a few weeks’ healing time may be required before proceeding to the next step.

Dental Implant Procedures



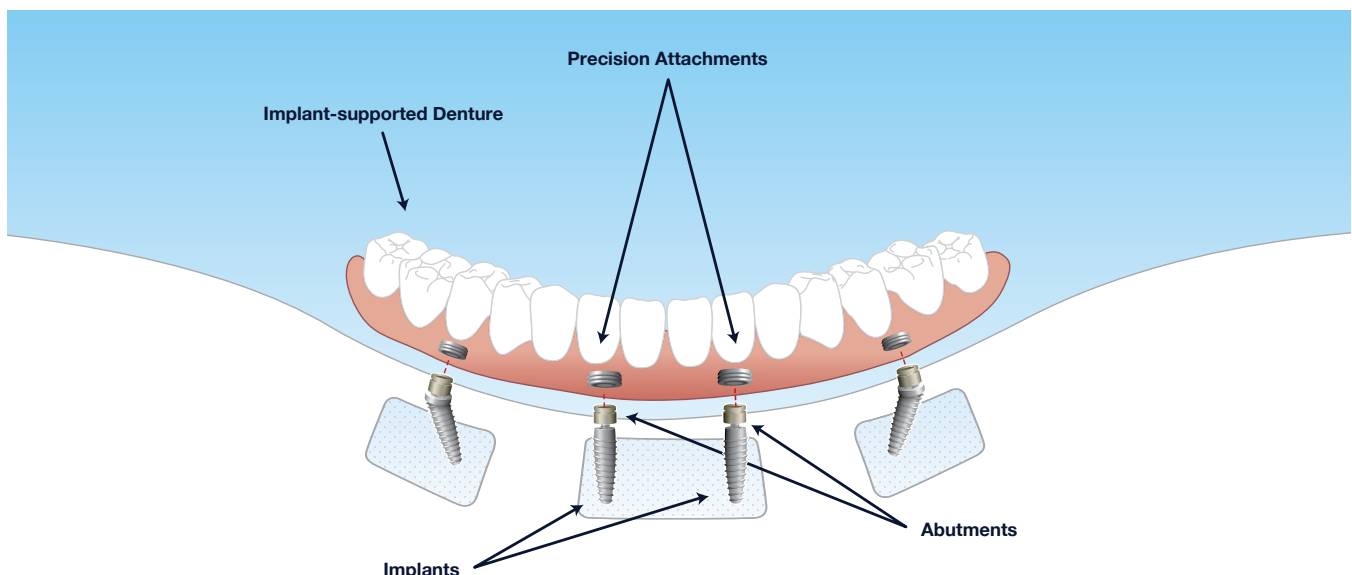
3 Attachment of the Artificial Tooth

Once your dentist has ensured that the implant is strong enough to support the forces exerted by your crown or artificial tooth, the tooth will be attached. The artificial tooth may be either fixed to the abutment with a screw or cemented onto the abutment. Alternatively, after consulting with your dentist, you may choose detachable teeth that can be removed by yourself. Detachable teeth are known as “over-dentures”. Although not as sturdy as permanent artificial teeth, they can be easy to repair and clean. For some individuals, they are more comfortable. Your dentist will advise you on the best option for you.

Once again, a dental x-ray (radiograph) may be taken to confirm that all implant components have been correctly placed.

Dentures

Sometimes dental implants are used to secure dentures. One or more implants can be fitted with special clips or attachments that allow an existing denture to be firmly held in position. The objective is to improve the stability of the denture, which can be a concern for some denture wearers. However, good results are reported by most patients.





Recovery After Surgery

- You will not be able to drive home after your surgery. Arrange for someone to drive you home.
- Some people elect to take a few days off work.
- Bruising, swelling, pain and headaches are all normal reactions that may be experienced post-surgery. These symptoms usually resolve within one week.
- To prevent swelling and pain, ice packs are applied immediately after surgery. Usually, over-the-counter medications will suffice to ease any discomfort. Your dentist may prescribe stronger medication if required.
- For several days after the surgery, do not drive, operate heavy machinery or vigorously exercise, unless told otherwise by your dentist.
- You may be prescribed a course of antibiotics by your dentist. If prescribed, you must follow the directions.
- Avoid alcohol, especially if you are taking any medications.
- Drink plenty of water after the first two to three hours of surgery (avoiding hot drinks).
- Crunchy or hard foods are best avoided while your mouth is healing. Soft foods or soups are a recommendable option. You may be advised by a dentist to eat a soft food diet for up to six weeks after implant surgery.
- Your dentist may give you self-care routines to follow at home, e.g. rinsing your mouth with antiseptic solutions or salty water. It's important that you follow all self-care instructions carefully.
- Be sure to adhere to your follow-up appointment and regular dental checkups to ensure the ongoing success of your implant treatment.
- If pain or swelling worsens, see your dentist at once. Contact your dentist immediately if you develop a fever.
- Remember to follow your dentist's instructions regarding good oral hygiene, which is essential following a dental implant procedure.

Caring for your Dental Implant

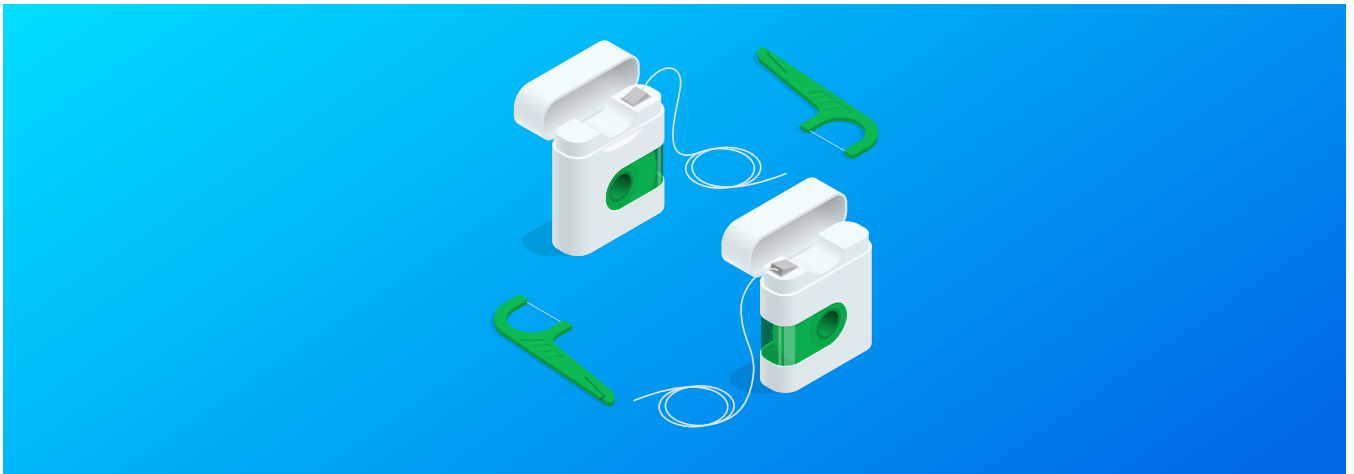
Plaque is caused by bacteria in the mouth forming a sticky coating that adheres to both natural and artificial teeth. Your implant-supported teeth may fail if not kept clean. Plaque may lead to gum inflammation and infection. Therefore, it is imperative that you follow your dentist's guidelines regarding the care of your dental implants and artificial teeth. The following suggestions apply to the general care of both natural teeth and implants.

- Always brush your teeth after every meal.
- Be sure to clean every surface of every tooth.
- Your toothbrush should have a small head and soft bristle, with interdental brushes.
- A toothbrush is not the only tool required when cleaning your teeth as it cannot reach between your teeth or below the gum line. Floss your teeth at least once a day.

After Surgery



- Use fluoride toothpaste to lessen the risk of decay in your natural teeth.
- Don't smoke. Smoking impairs healing, increases the risk of periodontitis and implant failure.
- Try to reduce your intake of sugary foods, which encourage the buildup of plaque. Brush your teeth after every sugary snack.
- If you have gum inflammation, toothache or any other dental problem, contact your dentist at once.



Dental Implant Treatment

Potential Complications



All surgical procedures, including dental implant surgery, carry some degree of risk. Your dentist is likely to explain every potential complication of treatment; however, it is essential that you accumulate ample information regarding complications and side-effects to be able to make an informed decision. Discuss any concerns you may have about potential complications with your dentist. We recommend you write a list of questions and concerns to bring along to your consultation.

Although it is a dentist's professional duty to disclose all possible complications of any surgical procedure, the majority of these complications are rare. Below are a list of such complications that are provided to inform, but not alarm you. There may be other risks that are not included here.

General Surgical Risks

- Short-term nausea following general anaesthesia;
- Allergic reaction to the anaesthetic;
- Excessive bleeding from the wound that may require a blood transfusion or possibly be life-threatening (this is extremely rare);
- Infection at the site of the wound that may require antibiotics.

Risks Specifically Related To Dental Implant Surgery

Sinus Problems

Your sinuses are air-filled cavities within the skull and are close to the upper jaw. When an implant is placed into the upper jaw it is possible that it may contact or even perforate the lining of the sinus within the bone (maxillary sinus). This contact may cause infection, known as sinusitis. Typically, antibiotics are prescribed to treat the sinus infection. Excessive bleeding from affected sinus has been noted but is extremely rare.

Swallowing or inhaling parts or equipment

In rare occasions, the patient may swallow or inhale the attachments, implant or a piece of equipment used in the surgical procedure. A range of complications such as infection or breathing obstruction can occur and surgery may be required to remove the object.

Nerve Damage

Implant placement can damage the inferior dental nerve, which runs along the length of the lower jaw. Damage to this nerve can cause numbness in the lips, gums, or in the skin around the mouth. Usually the numbness is temporary, resolving within six to 18 months. In rare cases, the numbness is permanent.

Lower jaw fracture

On rare occasions, the lower jaw may break during surgery. If this occurs, specialist treatment may be required.

Dental Implant Treatment Potential Complications



Risks Specifically Related To Implant Treatment

Local Infection

the area surrounding the implant may become infected. Treatment involves the use of antibiotics; however, if the infection does not subside, removal of the implant may be necessary.

Systemic Infection

In some individuals, dental implants can occasionally lead to infection in areas other than the implant site. For example, infectious endocarditis is a potentially life-threatening infection of the heart. Individuals who have undergone prior heart surgery are at most risk of this rare complication.

Bone Loss

Usually, the pressure caused by chewing and biting encourages strong bone tissue to grow around the implant. In rare cases, the implant may cause bone loss, resulting in the implant eventually becoming unstable.

Speech Problems

Following the fitting of a new crown, bridge or denture, some patients may develop some speech problems. Usually, this problem is resolved once the patient is more accustomed to the different feeling in the mouth. If the problems do not resolve, occasionally speech therapy is recommended.

Hyperplasia (gum tissue overgrowth)

Occasionally, the gum surrounding the dental implant may enlarge, pushing above the gum line, which may cause redness and pain. Good hygiene usually remedies this problem. Alternatively, the tissues may be surgically removed.

Loose Implant

Sometimes, the implant fails to integrate with the bone, or may become unstable over time. In these instances, the implant must be removed. Another implant must be inserted into the jawbone nearby. Alternatively, after an acceptable healing time, another implant is placed into the original site.

Tooth Problems

Chipping or breakages can occur. In some cases, a new artificial tooth must be created and fitted.

Loose Tooth

The abutment may come loose from the implant, or the crown may come loose from the abutment. Either scenarios require treatment to either replace or tighten screws.

**Call your nearest
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