**Patient information: dental implant treatment**

**Treatment options**

When a patient has one or several teeth missing, several options are available to them. These are:

1. **Do nothing:** leave the gap as it is.
2. **A denture.** This is a removable device made of plastic and/or metal. No surgery is involved, and this is a relatively inexpensive option. However, dentures can feel bulky and may loosen over time.
3. **Acid etch bridge.** This is a “sticky” bridge which is attached to the teeth adjacent to the gap by metal wings. This type of treatment is only carried out when the patient’s clinical factors are favourable. The disadvantage to this option is that metal may show when the patient smiles. Also, the adjacent teeth may appear darker due to the metal wings shining through the tooth and there is a chance of the bridge falling out.
4. **Conventional bridge.** This would require the grinding down of the healthy teeth adjacent to the gap. Although a treatment option, it is not routinely recommended to grind down healthy teeth.
5. **Dental implant.** The benefit of this method is that we do not interfere with any of the adjacent teeth. The implant is independent and provides function to the supporting bone, thus stimulating it. The treatment is planned so that we can achieve as natural an appearance as possible. Finally, the data we have so far shows it to be a very predictable method of treatment.

**Treatment proposal**

You have chosen to have **treatment option 5**. We will now provide further information on this option.

**What is a dental implant?**

A **dental implant** is the name given to an artificial prosthetic appliance that is fixed in the patient’s jawbone. Dental implants can be used to replace a single missing tooth, several missing teeth or a full arch of missing teeth.

A dental implant is made up of smaller **components,** which attach to one another to form a tooth-like appliance:

1. **The implant fixture** is the screw which is gently inserted under the gum into the jawbone. The patient undergoes a small surgical operation to have this implant placed; it’s a bit like the opposite of a tooth removal. The implant fixture is buried underneath the gum and it cannot be seen. Your dentist will place this fixture. The patient has the option to have this stage carried out whilst being sedated so that they are relaxed.
2. **The abutment** is the component which is screwed on top of the implant fixture.
3. Various components can now be attached to the abutment:
* For a single missing tooth, a **crown** is constructed to slot over the abutment and is held in place by glue or a mini-screw.
* For patients with several missing teeth, a long span **fixed bridge** can be made which can be held in place by 2 implants. Think of a bridge running over a river with supports at either end.
* For patients with no teeth, a **denture** can be stabilised by positioning it over the implants. Male and female components are used which lock into one another. This denture can either be removable (only removable by force) or **permanently fixed** into position.

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**What clinical factors determine if a patient can have dental implant treatment?**

* Patients must have **enough jawbone** to seat the implant fixture. The implant fixture is a screw and comes in various lengths and diameters. A CT scan (3D x-ray) is usually taken to assess how much jaw bone the patient has in the site in which the implant treatment is proposed. If there isn’t enough jaw bone, then advanced procedures such as sinus elevation and bone grafting can be performed.
* Patients should have **enough space** between their upper and lower teeth so that an adequate size crown, bridge or denture can be fitted. If the patient has lost any restorative space or had extensive tooth wear, then the Restorative Dentist will have to carry out treatment to ensure there is enough space.
* Patients must have **good/stable medical health.**
* A **non-smoker** is ideal.
* Having medical problems is not a contraindication for dental implant treatment. If your medical issues are controlled with medication and your doctor is taking care of you then there shouldn’t be a reason not to have dental implant treatment. We must be careful with patients on high dose immune suppressants and those patients on Bisphosphonate medication.
* Patient must have **good dental health.**
* Patient must have **good oral hygiene.**
* Patients are advised to return for regular check-ups, even after the implant treatment is carried out.
* Your dentist will assess these factors amongst other issues.

**How soon after having a tooth removed can a dental implant be placed?**

It all depends on the patient’s clinical situation. You must bear in mind that when a patient has a tooth removed then they are left with a defect in their gum and jawbone. Overtime, this defect is filled with the patient’s own bone and gum.

If the extraction is simple, then a period of 4-8 weeks is usually observed before inserting the implant fixture. This is because new jawbone is required to support the implant fixture.

If the patient’s tooth is a challenge to extract or a surgical procedure is required to remove the tooth, vital jawbone may be lost in this way. A period of 3-6 months is usually normal to observe before assessing the site for implant treatment.

Sometimes an implant fixture can be placed the same day a tooth has been extracted. However, the clinical factors must be favourable. Your dentist will be able to assess this.

**It is important that an infected tooth is not left untreated, even if it is causing the patient no issues. This is because vital jawbone can be lost due to the bacteria and infection, making implant dentistry a bit of a challenge. If an infected tooth cannot be saved, it is best to have it removed at the earliest opportunity to prevent unnecessary jawbone loss.**

**How long does the treatment take from start to finish?**

Once the implant fixture is surgically placed, a healing period of 3-6 months is observed before the final crown or any other superstructure can be attached on top of the abutment and implant fixture. This healing period varies according to many factors and the site the implant is placed in. If the implant fixture is placed into very strong bone and the healing period is uneventful, then generally we can attach the crown after 3 months. In softer bone, a longer healing period is advised so that the patient’s own jawbone can grow around the implant to make it solid.

A CT Scan is a 3D image of your jawbone. Sometimes we take a CT scan for complex implant cases or when your dentist would like further information about the jawbone quantity and quality. Practically speaking, it is only when an implant fixture is surgically placed that your dentist can determine the quality of the jawbone.

Some parts of the mouth have got hard bone. For example, the bone around your chin area is usually strong. Bone density can only vary in different ethnicities and the general build of the patient (imagine a rugby player vs. a frail person).

In complex cases where the patient does not have enough jawbone, the patient’s **natural bone can be utilised** to substitute the defect or **bone from other sources** can be used. Your dentist will discuss this with you if this is the case.

**What will an implant feel like?**

**Patients are delighted when they have their missing teeth restored with a fixed appliance.** It can help them to smile, eat, get rid of their dentures and increase their confidence levels. An implant tooth is not bulky like a denture and is more comfortable.

If the patient has had a gap for some time, then the implant tooth can feel strange for a little while. Most patients will be able to adapt quickly. The gum may feel tight for a few days until it adjusts to the contours of the new prosthetic appliance.

**How do I clean my implant?**

Treat it like a normal tooth- be gentle when brushing and use a soft bristle toothbrush. Make sure to angle the brush bristles into the gum to clean the plaque and any food debris. Clean in between the implant and the adjacent tooth by using **floss, interdental brushes or super-floss.** Use branded toothpaste. It is very important to keep the implant tooth and the surrounding gum clean and free of plaque. Plaque contains harmful bacteria which can cause damage to the gum and bone surrounding the implant if not kept clean.

**Can I go on holiday during treatment?**

It is probably best to wait a period of a few weeks after the initial surgical procedure until you go abroad. This is because your dentist may have to call you back to review the implant site and to remove any stitches. Once you have your final crown, bridge or denture fitted then most patients adapt uneventfully; however, the Restorative Dentist may call you back for a review 1-2 weeks later. Your dentist will advise you according to the complexity of your procedure.

**Why might I require bone grafting?**

* To support a defect in the jawbone where the implant is to be placed, e.g. a large gap left by a tooth extraction
* To cover the threads of an implant not covered by bone
* To support the implant if the bone around the facing of an implant is thin

Our current bone graft material of choice is synthetic and is safe to use. Naturally, we will monitor your implant site to ensure there is no reaction (very rare). We will advise you if you need a bone graft. Sometimes, we can only tell at the time of surgery, but we will gain your approval and inform you of costs at the time of assessment.

**INSTRUCTIONS TO FOLLOW PRIOR TO THE IMPLANT PLACEMENT SURGERY:**

* Have your teeth professionally cleaned by your dentist or hygienist a week or two prior to your implant surgery appointment
* Brush your teeth thoroughly a few hours prior to your implant surgery appointment
* Use Corsodyl mouthwash: rinse the night before for one minute and in the morning of your appointment
* Do not smoke
* Eat well and remain well hydrated
* Take your medication as normal
* No/minimal makeup
* Simple hair style: we may cover your hair with a special hat
* Wear an old top
* Wear comfortable clothing
* Take painkillers **one hour** prior to your appointment. A combination of paracetamol AND ibuprofen is usually a good mix (providing you’re not allergic). Speak to your pharmacist for the best advice.
* We may give you a dose of antibiotics just prior to the procedure
* **Please let us know if there has been any change in your medical health or if you have started taking additional medication since your last visit**
* **Please let us know of any allergies that you may be aware of**
* We usually do not allow any visitors into the clinic as we must observe strict cross infection control measures
* We will be using a local anaesthetic to numb the gum and implant site
* **You have the choice to be sedated during your surgical treatment. If you are predisposed to anxiety or would rather have minimal recollection of the local anaesthetic injection and surgical procedure, please let us know so that the appropriate arrangements can be made. We will provide a separate sedation consultation/assessment and give you the appropriate information on sedation.**

**After the implant surgery**

You will need to look after your mouth following surgical treatment (implant fixture placement). This will be covered by the instructions that are given to you on the day of surgery. After surgery, a certain number of review appointments may be required. These may be:

* Removal of the stitches after 7-14 days
* Additional appointments may be required to review the healing period
* X-rays to monitor the progress and healing may be required

Most importantly during this period we will depend upon you to update us on how things are progressing. In the event of any concern we will require you to contact the clinic. Generally, please rest for the reminder of the evening. Most patients are fine to go home on their own, but you may wish for a family member to accompany you home (unless you are sedated then there are a completely different set of instructions to follow). Do not exercise for a few days. If you are prescribed antibiotics, finish the course and take painkillers as necessary.

**Restorative phase (making the crown, bridge or denture after a few months)**

There are various methods to attach the final crown, bridge or denture to the implant fixture. We choose the most appropriate method during treatment. For crown and bridge work, the common methods used are:

* **Screw retained.** The final prosthetic appliance is attached to the implant(s) by a mini screw. No cement is used.
* **Cement retained.** The final prosthetic appliance is cemented to the abutment(s) using tooth cement/glue.

For dentures, the common methods used are:

* **Attachments.** Ball attachments can be used in implant denture cases. The male component protrudes from the implant which is buried under the gum and this clips into the female component in the denture.
* **Bar retained.** Dentures can sometimes be held with a special bar attachment.
* **Precision attachments** to fix the denture so that it cannot be removed.

**On-going care during treatment**

* **Extra appointments may be required during each phase.**
* The number and type of appointment will vary depending upon the treatment that is being carried out and the clinical scenario.
* The appointment length will vary depending upon the stage of treatment that you are in.
* It is important to ensure that you maintain your general check-up and hygiene appointments and have any remedial work carried out. Naturally, we will discuss your treatment options and cost estimate before proceeding with any other routine dental treatment.

**Smoking and dental implants**

It is strongly advised not to smoke during the time the gum is healing. Tobacco smoke contains a lot of harmful substances which can affect the healing and therefore the prognosis of the implants. We usually recommend a smoking cessation course prior to implant therapy. **THE RISK OF IMPLANT FAILURE IS HIGHER IN SMOKERS.**

**Benefits and risks of treatment**

As with any form of medical and dental treatment, there are benefits and risks involved. We usually carry out this form of treatment if the benefits far outweigh the risks. **It is up to the patient to make an informed decision** to go ahead with the proposed treatment. We like our patients to understand what is involved and welcome any questions regarding their care prior to and during treatment.

**General benefits to dental implant treatment**

* Gap restored independent of damaging adjacent teeth
* Tooth coloured restoration
* Increases biting efficiency
* Better aesthetics
* Stabilisation of your occlusion (the way your teeth meet and slide against one another)
* Minimises the rate of jaw bone shrinkage
* Positive psychological impact of having a gap replaced
* Patients with fixed teeth tend to be more confident after treatment and smile more!

**Complications with dental implant treatment**

A dental implant needs to be cared for in the same manner as your natural teeth. You still need to brush and floss around the prosthetic tooth to ensure plaque and food deposits are kept to a minimum. It is beyond the scope of this information document to provide a fully exhaustive list of complications in relation to dental implants.

**Referral to other dental colleagues**

Sometimes, we may need to seek the opinion of our colleagues, either at the implant assessment stage, during the treatment or at completion of treatment. If this is the case, we will give you an explanation and ensure you are referred to the appropriate clinician(s) to facilitate your care. These clinicians work in different clinics.

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| **Surgical implant placement stage complications** |
| * We will make every effort to minimise the risk of any complications occurring.
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| * As with any type of minor surgery, patients may experience some or all of the following symptoms: pain, swelling, bleeding and bruising. This is transient and can be controlled with pain killers and antibiotics and specific aftercare instructions. We will provide specific instructions at the time of surgery. **You will recover.**
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| * Infection. We may need to prescribe pain killers and antibiotics before and after the implant surgery. **You will recover.**
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| * General discomfort. **You will recover.**
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| * Nerve injury which can result in temporary/permanent numbness/tingling of the lip/tongue/surrounding skin adjacent to the surgery site. **(Rare)**
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| * Sinus involvement which may involve additional treatment and/or referral to specialist colleagues and it may prolong the surgical healing time. **(Nothing major to worry about)**
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| **General complications** | **What can be done**  |
| Failure and loss of the implant. With modern dental implant systems and thorough treatment planning, studies have shown dental implants to be over 95% successful.  | Remove the existing implant, wait a period for bone to regrow and place a new implant if there is still enough bone. This may require an additional assessment/planning. |
| Bone loss around the implants (but the implant is not lost) | Monitor or provide appropriate treatment. **Brush and floss regularly!** |
| Fracture and loosening of the abutment (this is the post which is attached to the actual implant fixture). | Take out the offending abutment and replace it. |
| Crown loosening. We usually use “soft glue” to cement the crown to the implant. This is because access can be gained to the underlying substructure if there a problem were to ever arise. If you notice the crown becoming loose then please contact the clinic for an assessment. | Recement the crown. |
| Infection. If you notice pain, swelling or any other symptoms around the implanted tooth then please contact the clinic for an assessment. As with most types of infection, dental implant infection can be treated successfully if it is in its early stage. | Many options. Antibiotics. Periodontal (gum) surgery. Referral to a Periodontist (gum specialist). |
| Fracture of the white porcelain from the crown. The porcelain can chip or fracture from the crown. The crown can usually be replaced if the damage is confined to the crown. | Leave it or replace. |
| General wear and tear of the crown, bridge or denture. | Monitor or repair. |
| Gum recession around the crown or implant. **Recession around natural teeth and implants do occur and cannot be avoided.** You can minimise this with gentle brushing and good oral hygiene measure. | Leave it. Make a new abutment and crown but will be a longer crown. Referral to a Periodontist (gum specialist) may be indicated. Implant may need to be removed. |

There is a risk of accidental damage to adjacent anatomic structures, such as teeth and sinuses; although with accurate planning this is commonly avoidable. There is a low risk of failure for implants after the first year in function as long as your health, both general and dental, is maintained and no excessive forces are exerted on the implant teeth. Excessive forces may result in some of the component parts fracturing.

Implant treatment has a success rate of over 95%. As well as the benefits, we have discussed the risks that are associated with this treatment. Dentistry is not an exact science and you are aware that on occasions implants fail. Generally, an implant can be replaced should it fail either after the surgery or at a later stage. Occasionally, additional procedures may be required.

You are aware that implants and teeth are subject to wear and tear as time goes on and depending upon the amount of wear the need to replace the crown/bridge/denture and/or components may arise.

Just like natural teeth, there is a risk of gum and bone recession around the implant and though this may not affect its survival it may require treatment for aesthetic reasons.

**The gum around the implant crown**

The implant crown is designed so that the gum around the neck of the crown emerges neatly. Due to certain clinical factors, it is sometimes difficult for the gum to grow around the implant crown to make it as naturally looking as a healthy tooth. This can be more prevalent in patients with thin gums and/or those patients with implants in the smile zone.

Also, with time, the gum around the implant may recede. For the reason, some metal may show at the gum margin. Although the implant may well be intact, a new abutment and crown may be necessary, or you may need to be referred to a gum specialist (periodontist) to rectify this situation. This can be more prevalent in patients with thin gums and/or those patients with implants in the smile zone. The metal show can be minimised with ceramic abutments and crowns. These aesthetic implant systems will cost more.

**Hygiene**

During treatment, you will need to follow the instructions to look after your mouth. This will include cleaning by your dentist/hygienist and daily home cleaning instructions.

**Annual review**

Annual review appointments will be required for a thorough examination and monitoring by the hygienist and dentist. X-rays and photographs may be taken at specified appointments. The data recorded will form part of your on-going care to ensure the health of your implants and mouth. Current fees at time of examination will be applicable.

**Maintenance**

As you are aware, it is essential that the implants are monitored and maintained after the completion of treatment. After the initial period you will be required to attend the clinic at three-monthly interval for hygiene cleaning and checking of the implant(s) (practice price rates apply) for the guarantees to be valid.

**Do implants last a lifetime?**

As with all forms of medical and dental treatments, there are always benefits and risks associated. In implant dentistry, there are usually two things to consider:

1. **The survival rate of the implant.**

This means that the implant is still embedded into jaw bone. For example, the implant crown and components may have wear and tear and the gum and jaw bone may have receded around the implant, but nonetheless the implant is still in the patient’s mouth. The survival rate of implants depends on the time the implant has been in the mouth and the patient’s risks factors. Some risk factors can be controlled; others cannot.

1. **The success rate of the implant.** This means either the implant is in the patient’s mouth after a certain period, or it has been lost due to complete failure.

Examples of risks factor include:

**Poor oral hygiene.** This is a major risk factor. After we place your implant, we will demonstrate an effective cleaning method which you must follow if you would like to minimise the risk of any implant infection. We strongly advise having a check-up and hygienic clean with our dentist/hygienist on a three-monthly basis so that we can see how well you are keeping your implants clean. This also gives us a chance to detect any potential problems early on.

**Smoking.** Cigarettes have so many bad chemicals in them and smoking is a major risk factor for periodontal disease tooth loss (“gum disease”). We always suggest our patients to cut down/eradiate their smoking habit, especially before implant treatment or any other form of dental surgery. We appreciate that chronic smokers cannot quit smoking overnight. We suggest that you seek the attention of your doctor or pharmacist for any smoking cessation advice/treatment.

**Previous history of periodontal disease tooth loss (“gum disease”).** How the patient lost their teeth is of significance. If a patient has lost their natural teeth much earlier in life due to gum disease (i.e. the teeth became loose) then having implant treatment doesn’t automatically make that patient immune from the disease. They are still at risk, hence more the reason to look after their implant teeth.

**General health.** Patients with a compromised immune system, e.g. diabetics, have an increased risk factor for jaw bone loss around teeth and implants. It is important that you see your doctor for advice and control of your immune system.

**The status of your remaining teeth.** You must bear in mind that when you lose even a single tooth from your mouth then more pressure is put on the remaining teeth to function at the same level. Your mouth tends to adjust, but if you have lost teeth from your favourite chewing side then you will find chewing difficult.

**The pressure of the bite.** Teeth and implants are surrounded by jaw bone. Implants like to be stimulated with gentle chewing forces to keep the jaw bone stable around the implants. But if you place too much pressure on the implants then it can result in excessive jaw bone loss or even complete failure. For this reason, it is important to get the rest of your teeth checked and to have routine dental procedures to ensure that you minimise the risk of tooth loss.

So back to the original question: **“Do implants last a lifetime?”** We will provide the treatment with the best will in the world, but no dentist can ever guarantee a 100% success rate for their treatment. Even the best and most experience dentists who place implants have failures and issues with the treatments they provide. You need to bear in mind that your mouth is a specialised machinery. If you look after it, it will serve you well and you will maximise the success and survival rates. It is a bit like comparing a Rolls Royce car to teeth. A Rolls Royce car is relatively expensive to purchase, but if the owner does not look after it then it may breakdown sooner than anticipated.

We like to give our patients the reassurance of a guarantee in that we will fix the problem providing certain criteria are followed. The guarantee is dependent on the type of implant system our patient chooses to have, based on our clinical recommendation, amongst clinical and patient lifestyle factors (e.g. smoking, playing contact sports, kick boxing).

**Summary of implant treatment stages, using a simple implant case as an example and treatment going to plan**

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**Payments**

* You will be given a written cost estimate prior to commencing treatment
* **Payment to be completed prior to the commencement of each stage**
* Debit or credit card
* Cheque (to be cleared before commencing treatment)
* Cash
* **No American Express payments**
* VAT not applicable
* **Option to pay monthly- please ask us for an information leaflet**
* Please ask us if you require further clarification regarding the fees

**Implant treatment guarantee**

Your dentist will discuss with you how long your guarantee will be for. Guarantee not valid if:

* You fail to follow your post-operative instructions
* You fail to attend for your aftercare visits after the implant surgery
* Decline any recommended dental work
* Do not maintain an excellent standard of oral hygiene
* Do not wear a sports guard if you play contact sports
* You increase your smoking intake/start smoking
* Your alcohol intake increases dramatically
* The damage is caused by accident or trauma
* Your health suddenly deteriorates or there was an undiagnosed medical condition which could have an implant on implant dentistry

Before your dentist fits the final crown/bridge/denture on top of the implant, the implant will be classified as being osseo-integrated and clinically stable. Your overall guarantee will begin from this date, but is subject to the following conditions:

* You visit our clinic on a 6-12 monthly basis for a dental/implant check- up (we may have to take x-rays as part of the routine examination visits). We will advise on the recall intervals.
* You visit a dentist (or us) on a regular basis for a general check-up and clean
* You follow the oral hygiene instructions that we give to you
* You do not increase your smoking habit
* If you’re a non-smoker then you do not suddenly start smoking
* If your implant treatment doesn’t feel right, contact our clinic to make an appointment
* You have any recommended routine work carried out by your dentist/hygienist
* You must seek the attention of your doctor/specialist promptly if you find out you have been diagnosed with a major medical issue (e.g. diabetes/osteoporosis)
* You inform us of any major changes in your medical history
* Implant failure which has resulted from an accident or trauma cannot be guaranteed
* Have any recommended dental work carried out
* Maintain an excellent standard of oral hygiene
* Wear a sports guard if you play contact sports
* Wear your protective night guard if you clench and/or grind your teeth
* The damage is not cause by heavy biting forces
* Wear and tear on the porcelain is not included in the guarantee

Even after the treatment, you need to ensure that you are in good general health, cut down /eradicate smoking, maintain a low level of alcohol consumption and take your medication as recommended by your doctor(s) and hospital consultants. Keeping up with good oral hygiene is paramount.

**Special precaution. If a crown/bridge/denture becomes loose, even slightly, please contact the surgery. Do not apply pressure or eat on the loose components. If the crown comes out, you should keep it in a safe place. Most times we can re-fix the crown. This occurs in a very small minority of our patients.**

**After the guarantee period ends, standard fees will apply to the maintenance and resolution of any problems associated with the implant tooth, abutment and restorative components. Naturally, fees will be discussed prior to treatment. Referral to specialist dental colleagues may be applicable in certain circumstances and their fees will apply.**