

# Dental Implant Treatment

A GUIDE FOR PATIENTS



IDA  
irish dental  
association

Colgate

Colgate Caring  
Dentist Awards 2021

[www.colgate.co.uk/guide-to-us](http://www.colgate.co.uk/guide-to-us)

DAME STREET DENTAL



DAME STREET DENTAL  
HIGH TECH MODERN CARE



DAME STREET DENTAL  
HIGH-TECH MODERN CARE

Dame Street Dental  
16 Dame Street, Dublin 2.  
+01 525 2670

[damestreetdental.ie](http://damestreetdental.ie)  
[info@damestreetdental.ie](mailto:info@damestreetdental.ie)

## Table of Contents

---

1–2	Who we are
2–3	Introduction to Implants
4–5	Restoration
5–8	Advantages vs disadvantages
9–12	The process
13–16	Approaches to treatment
17–18	Aftercare and maintenance
19–22	Potential risks or consequences
23–24	What to expect from surgery
25–26	Patient Stories
27–36	Frequently asked questions
37–38	Alternatives to dental implants
39–42	Comparison of options
43–44	Fees and payment
45–46	Why choose Dame Street Dental
47–50	Glossary

Thank you for choosing Dame Street Dental as your partners in restoring and safeguarding your oral health. Our highly qualified team of expert and specialist dental professionals, and investment in only the most high-tech and modern equipment and materials, are what enable us to provide our patients with world class dental care and a truly personal patient experience.

Our Dublin City Centre practice was founded on an integral commitment to work responsively and collaboratively with our patients to provide excellence in dental care in a comfortable, welcoming environment at an affordable price. Communication is central to our values - we recognize the important role patient knowledge plays in our clinical duty, and we are dedicated to ensuring that our patients are educated in full on their treatment needs, the reasons specific treatments are recommended for them, how to maintain their teeth now and for life - so that they can make informed decisions and take back control of their oral health.

We have produced this booklet specifically to benefit our patients and address their commonly asked questions and concerns. In the following pages we will take a closer look at all elements and stages of dental implant treatment. Please be sure to read the booklet in depth and do not hesitate

to contact us at the clinic if you have any queries, or to set up your consultation.

### **ONE OF THE MOST SIGNIFICANT DENTAL INNOVATIONS OF THE LAST 50 YEARS**

The dental implants we can place today boast a long-term success rate of nearly 97%. Continuous research and innovation have got us to this stage, however dental implants have been used to permanently and effectively replace missing teeth in the upper and lower jaws since the technique's discovery in the 1960s.

Implants are small, titanium screws — a bio-compatible metal which has been rigorously established over the decades as a bodysafe material for medical use, due to its well-evidenced ability to heal and fuse with our own tissues without any adverse effects. Years of substantive research have shown dental implants to be a highly stable, effective and predictable treatment to replace lost teeth, via an implant-mounted

restoration of one, several, or even an entire row of teeth.

### **WHAT IS A DENTAL IMPLANT?**

Dental Implants are a highly successful, innovative dental solution to missing teeth. Implants act in a similar way to the root of a tooth - they are surgically placed below the gumline into the bone of the jaw and are used to support either a porcelain crown, bridge or securely affixed denture. The implant itself is a titanium screw, which forms the secure, long-term foundation on which a new restoration is anchored. While the prosthetic itself, even with perfect oral hygiene habits, will require changing or repair at some stage (for example, a well looked after dental crown may need to be restored after 20 years or so) it is possible for the implant 'root' itself to last a lifetime.

### **WHAT ARE THE TREATMENT OPTIONS FOR REPLACING A SINGLE MISSING TOOTH?**

Dental implants are known as the 'gold standard' of modern restorative dentistry. The body safe, tooth decay and infection resistant materials involved fuse and integrate securely with your own bone, preserving the health and density of the bone in that area while providing a solid foundation for a brand-new dental restoration for your missing tooth.

### **WHAT ARE DENTAL IMPLANTS FOR?**

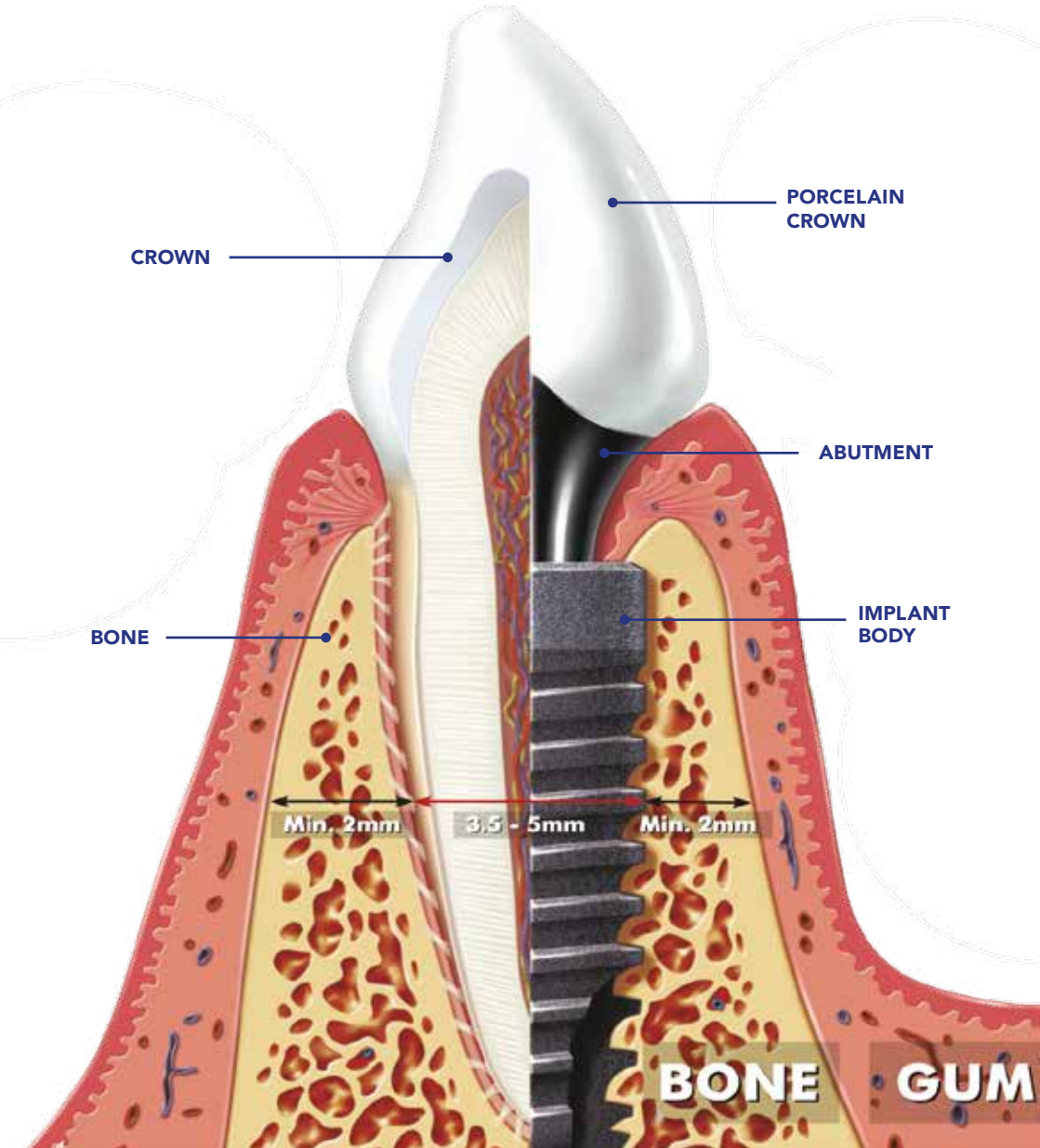
Implants are used to anchor a restoration (a false, yet entirely natural-looking tooth) such as a crown, bridge, or denture, securely in your jaw. The aim is to restore your full chewing function, oral health, and the aesthetic appearance of your smile.

*Our implant specialists have extensive combined postgraduate experience and accreditation in Ireland and internationally, training under some of the world's leading oral surgeons and restorative and cosmetic experts, so we can dependably take care of every eventuality and patient need.*

*The Dame Street Dental team came together out of a drive to create a state-of-the-art, inviting practice that provides consistent, beautiful results with implant dentistry through our skills, experience and innovation to give our patients back the freedom to eat, talk, and smile with confidence with implants that look just as natural as your own teeth - especially if you have previously been told 'it can't be done.'*



\*Dental Implant / Natural Tooth Cross-sectional  
Comparison



Teeth replaced via dental implant, which supports a custom-made restoration crown, crafted to conform to the exact specifications of your natural tooth in terms of shape, size and colour, look perfectly natural and will function just like your original tooth while blending in with adjacent teeth seamlessly.

#### RESTORING MISSING TEETH WITH DENTAL IMPLANTS AND THE ALTERNATIVES!



**1)** An implant can be placed in the gap left by a single missing tooth, and a dental crown custom-made and bonded onto that implant.



**2)** The adjacent teeth can be prepared to support a dental bridge, depending on their own health and suitability. This option does impact on those adjacent teeth, and does not replace the missing teeth's roots in your jaw bone; nevertheless this is a common restoration for larger gaps, often involving more than one missing tooth in a row.



**3)** A single removable prosthetic tooth can also be created, similar to a partial denture—or similarly

a larger, custom-made partial denture can be fabricated. This appliance can be put in and taken out by the patient once created, and is made to replace a patient's specific missing teeth either of the upper or lower arch.



**4)** Not replacing the missing tooth is an option, however inaction does carry risk – it's very common for the bone of the jaw to shrink in that area, in response to a missing tooth, which can lead to problems down the road.

## ADVANTAGES VS DISADVANTAGES

### ADVANTAGES

Highly aesthetic, durable, functional, reliable results

Does not affect adjacent teeth  
Implant itself and restoration cannot develop tooth decay or infection - will never need Root Canal Treatment

Cost-effective restoration option over time, by protecting adjacent teeth & bone health and stability

VS

### DISADVANTAGES

Initial costs investment  
Oral surgery required  
Initial time investment  
– mandatory post-surgical healing period before permanent tooth replacement

### DOES HAVING A DENTAL IMPLANT AFFECT THE JAW BONE?

Crucially, dental implants can protect the health of the jaw bone, and prevent bone loss from occurring in the area of the missing tooth, allowing your jaw to keep its natural shape and appearance. Implants mimic the stimulation usually given by a natural tooth root to the bone, protecting bone density and the stability of adjacent teeth. The more time has passed, the more complex the case, which can affect this aspect of implant treatment - as your dentist will discuss with you in full at your initial consultation.

### PATIENT SUITABILITY: WHO IS SUITABLE FOR DENTAL IMPLANTS?

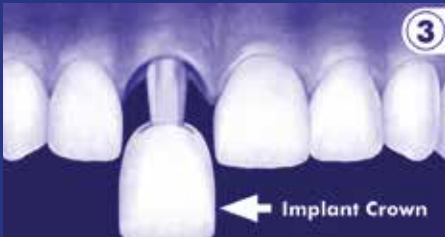
Dental implants are a safe, effective treatment and suitable for most adults

with good dental and general health.

While the mouth and jawbone are still growing and developing implants are not an appropriate treatment, and so younger patients are typically not suitable to receive implants.

Smoking or drinking habits can increase the risk of poor initial healing post-surgery, which can have long-term effects on the overall health of the surrounding gum and bone - your dentist will ask screening questions regarding these habits, and it may be necessary to delay treatment until smoking habits are significantly reduced. Additionally, any existing gum disease must first be treated, and oral hygiene habits addressed to ensure the proper maintenance and aftercare of the implant,





*Dental implants are suitable for most adults with good general health*

and reduce the risk of short- and long-term problems impacting its success.

### **HOW WILL YOU KNOW IF I'M SUITABLE FOR DENTAL IMPLANTS?**

Every case, and every patient, is unique, so it is vital to have a full assessment with an implant dentist to see if this treatment is right for you.

At your initial consultation the dentist will conduct a full examination of your mouth and remaining teeth, including evidence of any current dental issues. X-rays will be taken to establish the quality and density of your jaw bone, and impressions taken of your mouth at present. These records will allow your dentist to determine the

optimal placement and approach for an implant or implants, depending on your needs. You will also be asked detailed questions concerning your medical and dental history, as your dentist needs to be aware of any circumstances, habits or health issues which can affect the timeline or complexity of implant treatment.

The dentist will then be able to provide you with a full treatment plan, including a timeline for any preparation treatments required in advance of safely beginning the surgical stage of the implant process.



**Establishing solid baseline dental health is the first key phase of any treatment plan.**

#### **HOW DO I ENQUIRE ABOUT DENTAL IMPLANT TREATMENT?**

It is always possible to book a consultation to discuss dental implant treatment at any time, and our clinic and oral surgery specialists routinely take referrals from general dental practices or self-referrals from patients who have been missing teeth for a period of time, and now is the time to have them restored.

The need for a consultation regarding dental implants can also very often arise in response to an ongoing or emerging dental problem, or the recent or planned loss of a tooth (whether through disease process or a planned extraction.) The cause of the underlying dental issue, such as swollen or

bleeding gums, tooth decay or loosening, will need to be understood and thoroughly treated, before the implant process can commence.

#### **HOW DO YOU ASSESS IF BONE IS HEALTHY ENOUGH TO SUPPORT AN IMPLANT?**

Following your initial consultation and examination, which will include dental X-Rays of your mouth and jaw being taken, you will need a pre-surgical assessment with the specialist oral surgeon. A significant part of this appointment will be a 3D dental scans - an advanced and highly accurate imaging tool known as a CBCT scan (cone beam computed tomography). This scan allows the oral surgeon to record and manipulate a precision-focused image of your jawbone in all three dimensions.

Think of the X-ray during your initial assessment as the roadmap which gives us the 'big picture' of the health of your mouth, including flagging any areas of obvious shrinkage of your jaw and allowing your dentist assess your overall gum and tooth root health, indicating what pre-treatment (if any) is required before the implant process itself can begin. These X-ray images show very large amounts of detail, however the magnification involved and 2D nature of the scan makes measuring depth and distance impossible. And so a CBCT scan is required at your pre-surgical consultation to refine that original roadmap, allowing your oral surgeon to plan the best placement and

approach for an implant - an X-ray alone cannot, for example, allow us to judge how far an implant site will be from a nerve, while a CBCT can.

### **HOW LONG DOES IMPLANT TREATMENT TAKE?**

In the majority of routine cases, the time from the initial surgical placement of the implant or implant, until final restoration with the permanent crown, bridge or denture, is 4 months in total.

Your dentist will always provide you with a temporary restoration to cover and protect your implant while it is healing, and this temporary restoration can often be placed on the very same day as your implant procedure, so you can rest assured that you will not be waiting long before you see beautiful, transformative improvements to your smile.

In those cases where bone density loss has already occurred, additional steps may be required prior to implant placement, including specialist procedures known as bone grafting or sinus lifting. Pre-treatment of your gum may also be required, if there is evidence of gum disease requiring periodontal treatment before proceeding. If either preparation is required in your case, your dentist will always communicate this with you from the start, and you will be given a detailed treatment plan following your initial assessment, so that you have an accurate timeframe for full treatment completion.

### **WHAT SHOULD I KNOW BEFORE THE DAY OF MY SURGICAL IMPLANT TREATMENT?**

It's important to be mindful of the fact that implant treatment can and will be postponed if any pre-surgical care that was ordered as part of your overall treatment plan, such as hygiene and periodontal treatments, have not been followed as advised. Implants are a surgical procedure, so we need to ensure that the conditions are optimal before commencing treatment to maximise the success of the implant placement.

Your comfort and peace of mind are our priority throughout your treatment with us, and in addition to an effective, strong local anaesthetic which will be administered before the surgical procedure and monitored for the duration, we also provide the option for your appointment to be carried out under IV sedation, to alleviate any worry or anxiety you may feel regarding the procedure.

Your dentist and oral surgeon will be happy to reassure and address any concern during the consultation stage, but it is important to bring any questions or worries to the team then, as on the day of your surgery the clinical team will have a strict schedule to follow to complete your procedure in the allocated time, and any unplanned time used that day could result in the treatment needing to be postponed.



### PROCESS OVERVIEW

A Dental Implant process generally involves several phases of treatment, taking place over a period of time typically lasting three to nine months. In the next section we will take a look at the various implant treatment methods, where the process must be adapted for more complex specific cases - but a standard implant process will typically follow the stages laid out below, with more detail given overpage.

## Standard Treatment Timeline\*

ASSESSMENT AND  
PREPARATION STAGE**1) INITIAL CONSULTATION**

Examination, x-ray, and treatment plan

**2) PERIODONTAL HYGIENE TREATMENT**

(More than one visit may be required)

**3) PRE-SURGICAL CONSULTATION**

CT scan, wax 'trial' created, and pre-surgical medication

## SURGICAL STAGE

**4) SURGICAL IMPLANT PLACEMENT**

*3-6 months* for healing and integration with bone

**5) IMPLANT UNCOVERING AND GUM PREPARATION**

*2-4 weeks* healing time

**6) RESTORATION CONSULTATION**

Impression taken for final crown(s) or bridge (*2 weeks lab wait*)

RESTORATIVE  
STAGE**7) TEMPORARY FITTING OF RESTORATION**

Adjustment of fit, bite, aesthetics (more than one visit may be required). *2 weeks*.

**8) PERMANENT RESTORATION FITTING**

*2 weeks* then return for final check up and monitoring

AFTERCARE +  
MAINTENANCE**9) CHECK UP AND LONG-TERM CARE**

Annual review, along with *6-monthly* cleaning appointments

*\*If extractions, dentures, bone grafting or sinus lifts are required prior to surgical implant stage, please be aware that this will add time to the overall treatment length, as your dentist will advise.*

## The standard implant process

### **ASSESSMENT AND PREPARATION STAGE** (STEPS 1-3)

During your initial consultation, the dentist will carry out a comprehensive examination to ensure your suitability for Dental Implants, which will include taking dental X-rays to assess the bone quality and density in your jaw, and impressions of your teeth to begin planning for the surgical consultation. This feasibility assessment will always include discussing all possible alternatives with you, and addressing any questions or concerns you may have. At this stage we will prepare a full treatment plan for you, taking into account any pre-surgical periodontal or other treatment you require, to have your mouth in optimal condition to support implants. This plan will also detail the plan, as discussed with you and based on your own smile goals and priorities, for your long-term restoration post-surgery, and will include the estimated overall timeline and itemized fees until the total completion of the implant treatment.

Once this assessment and your treatment plan have been determined, you will require a pre-surgical appointment to discuss the surgery in detail. This will also include the taking of 3D CBCT scans of your mouth and jaw, to allow the oral surgeon to assess the health and amount of bone available, to decide on best placement and positioning of your implant(s), and to make plans to compensate when the levels are low. Plans

can also be made at this stage to have the entire implant surgery carried out under sedation, if that is preferred, and the oral surgeon will be able to answer all questions regarding IV sedation at this time, as well as go through our pre-surgical checklist, ensuring that you are prepared for the day of surgery, and will have a plan of action in place with your nominated escort on the day.

### **SURGICAL STAGE** (STEP 4-5)

The implant placement itself is actually quite a straightforward surgical procedure – your mouth and gums will be completely numbed with a local anaesthetic under sterile clinical conditions, making the entire procedure entirely painless.

If, during the assessment stage, the underlying jawbone was deemed insufficient to support an implant, a plan will have been put in place to either carry out bone grafting (a simple procedure to introduce new bone material to the site, to regenerate your own natural bone and tissue) prior to the implant placement, or during the same procedure. That decision will depend on the specific case complexity and requirements, and how this plan will affect your treatment timeline and costs will be discussed with you in full during the assessment stage.

Once the implant has been successfully placed into the bone, the gum is closed with sutures, and if your case is suitable, a

temporary, lightweight dental restoration can be placed over the surgical site for the duration of the initial healing period - typically 3 months, although depending on the extent of initial bone degeneration in the area, it can take up to 9 months for the implant to fully integrate securely with the bone. You will also be given full aftercare instructions before leaving the clinic, and a prescription for pain relief medication should it be needed.

#### **RESTORATIVE PHASE (STEPS 6-8)**

Once it has integrated fully with the bone, the new implant is now ready to function as the 'root' of a new dental restoration, to fill the gap created by a missing tooth or teeth. These restoration options range from a single crown restoration (to replace a single missing tooth) to a smaller or larger bridge, or a removable partial or full denture (for situations ranging from two or three consecutive missing teeth, to an entire arch replacement).

Our skilled dental technician, working closely with the implant and oral surgery team, crafts these custom-made, colour-matched new restorations per your specifications and discussions with your dentist. Once your final restoration is bonded in place, your dentist will go through the long-term care that is needed to keep your new tooth as healthy and functional as your natural teeth - including a routine check up and dental cleaning

schedule, and signs to note that your restoration may require repair or replacing.

#### **AFTERCARE AND MAINTENANCE**

*(STEP 9)*

Following the completion of implant treatment, it is essential to regularly, thoroughly and properly clean the new restorations exactly as instructed by the dentist. A dental hygienist can also advise on care and maintenance of the restorations and natural teeth - and our team will make sure that you are informed of an effective check up and dental cleaning schedule that is suitable to your case.

Your final review following the placement of your restoration will be scheduled for 2 weeks after that appointment, to ensure that the area is healing well and that you have no discomfort or questions regarding your completed restoration. Regular ongoing check ups going forward will be a vital part of monitoring and maintaining the integrity of not only the implant and restoration, but also the surrounding soft tissue, bone levels and the patient's overall dental and oral health.

Our dental technicians custom-make each implant crown, bridge or denture specifically to fit and blend seamlessly into your mouth. We take the time to choose the exact colouring to match your natural teeth giving you the most realistic, organic result possible.

## Standard Approach Options

*Suitable for the majority of patients*

### 1. STANDARD TWO-STAGE IMPLANT

The most common approach, this method involves placing the implant into a healing or previously healed extraction or tooth loss site during the first surgical stage, where it is then hidden by a covering layer of gum for the duration of the healing process (an average of 3 months). The second surgical stage involves uncovering the integrated implant again, and preparing the re-exposed abutment to receive the planned restoration tooth.

### 2. STANDARD ONE-STAGE IMPLANT

Largely the same as the two-stage standard technique, however following the surgical implant we place a healing cap onto the implant abutment, which is therefore visible above the gum immediately after placement. The advantage of this method is that a second surgical procedure is not necessary to re-expose the implant after the initial healing and integration wait period - it will still take an average

of 3 months using this approach, before the implant will be ready to support a restoration tooth.

## Advanced Approach Options

*Subject to individual patient suitability*

### 1. IMMEDIATE IMPLANT

When a tooth is extracted, it is sometimes possible to place an implant directly into that extraction site. Bone grafting is a requirement of this approach, as the natural tooth will have been bigger in size than the implant, meaning the excess space needs to be sealed with additional bone material.

### 2. IMMEDIATE IMPLANT WITH 'EARLY LOADING'

This approach is effectively similar to the one-stage standard implant technique, where the implant is placed into a new, healing or healed extraction site. However, it is then fitted with a temporary restoration tooth during that same procedure, meaning that the patient leaves the clinic following the surgery with a complete smile - this approach is therefore most employed for



the hyper visible front teeth. The temporary restoration is monitored throughout the healing period (typically of 3 months) after which it will be replaced with a permanent custom-made restoration as normal, once the implant and bone healing are determined to be ready.

### **3. IMMEDIATE IMPLANT WITH 'PARTIAL EXTRACTION THERAPY' (PET)**

Bone loss following an extraction poses some of the most significant challenges to implant dentistry, and have given rise to the range of bone grafting techniques and materials to address these more complex cases. A ground-breaking and innovative technique we can utilize in recent years involves using the natural tooth itself to combat bone loss. The PET approach entails retaining part of the organic tooth root within the surgical site following extraction of the 'crown' (the visible tooth), as studies have consistently proven that retaining the original root has tremendous benefit in preserving bone mass and soft-tissue retention. This in turn has shown highly promising results in terms of implant stability and success, and indeed aesthetic impact.

## **Outcomes and Results**

### **WILL DENTAL IMPLANTS FEEL DIFFERENT FROM MY NATURAL TEETH?**

Our natural teeth are fed by nerve endings and a blood supply via the root system,

which enables us to feel sensations of pressure or temperature when we bite or chew. Dental implants do not have this structure and so you should be prepared for the sensation not to feel identical to your natural teeth.

However, there is typically a very short adjustment period needed to grow accustomed to the new sensation, where pressure on that tooth is experienced largely via the nerves of the surrounding gum tissue. And significantly, unlike with appliances such as dentures, which patients often report being able to 'feel' within their mouths, as a separate structure that is being 'worn', dental implants literally integrate and fuse with your own bone, and so very quickly come to feel like just another part of your mouth.

### **WILL IT BE OBVIOUS THAT I'VE HAD MY SMILE RESTORED WITH IMPLANTS?**

We understand the importance of restoring the appearance as well as the function of the original teeth as an essential outcome for our patients, and so our dental technicians custom-make each implant crown, bridge or denture specifically to fit and blend seamlessly into your mouth. We take the time to choose the exact colouring to match your natural teeth giving you the most realistic, organic result possible. Not only will your new implant restoration feel like your own tooth, nobody will be able to tell that it's not.



**HOW MANY IMPLANTS WILL I NEED?**

Dental Implants can be used to replace one, several, or even an entire arch of missing teeth. All the common forms of tooth replacement (single crowns, bridges, and full or partial dentures) can be supported on dental implants.

If you are missing just one tooth, then one implant is normally all that will be needed to secure a restoration crown in that gap. Larger spaces created by two or more missing teeth do not necessarily need one implant per tooth; the exact number of implants will depend upon the quality and volume of bone at each potential implant site.

Habitual behaviour can also have an impact on the number of implants required, and this will be discussed in full during your initial consultation at the treatment planning stage. Patients who habitually clench or grind their teeth (often as an unconscious action during the night, a condition known as bruxism) can be at risk of overloading their implants with this added pressure, and this outcome will be considered and reflected in your treatment plan. Compensating for this can look like placing additional implants, selecting appropriate restoration materials, or fabricating a nightguard to be worn to protect the new teeth during sleep.

**DOES THE IMPLANT PROCESS HURT?**

The surgical procedure itself is entirely painless, as the oral surgeon will ensure that your gums are entirely numbed with local anaesthetic before commencing - the most that is felt is some vibration and gentle pressure.

Most patients will experience some mild discomfort in the day or two following their treatment. However, this can be effectively managed in almost all cases with over-the-counter pain relief medication, with your dentist of course happy to provide you with a prescription for pain relief if needed in your case. During the healing process, some swelling or bruising in the area is to be expected for a matter of days, up to a week in the case of more complex placements. The more complex your case and therefore longer the operation, the bigger any swelling is likely to be. By following your dentist's aftercare guidelines regarding recovery, rest and caring for your implant, you will be feeling fully yourself again in no time.



**At Dame Street Dental, we are proud to be the only clinic in Ireland to offer a full 20-year warranty on the majority of Implant placements.**

#### **HOW LONG DO DENTAL IMPLANTS LAST?**

Our implant specialists can confidently assure you of an initial implant success rates of almost 99%. Once the implants and surrounding gums, bone and soft tissue are reviewed as healthy and recovering well at your post-restoration review, how long they will ultimately remain in great aesthetic and functional condition is largely determined by the quality of ongoing care and maintenance they receive - as can be said for one's natural teeth.

If dental hygiene habits are inadequate,

implant restorations can develop a covering of hard and soft deposits (calculus and plaque) in a similar manner to organic teeth. And while they cannot suffer tooth decay, these deposits can still lead to infection of the surrounding gum tissue, causing redness, bleeding, and general discomfort, often requiring deep periodontal cleaning to take care of.

Implants with a good bone treatment prognosis that are properly cared for and maintained can be expected to last for many years; which means that making that commitment to excellent oral health habits, including keeping up a consistent and thorough dental hygiene routine at home, can mean that your dental implants will last you for a lifetime. However, just as you would expect conventional crowns, bridges and fillings to need occasional repairs or replacements, your implant supported teeth can also have similar repair or replacement needs over the years.

At Dame Street Dental, we are proud to be the only clinic in Ireland to offer a full 20-year warranty on the majority of Implant placements, so if you are experiencing any issues with your tooth before that time we will be happy to assess and restore it without any additional charge while it is under warranty.

**HOW DO I CLEAN DENTAL IMPLANTS?**

The quality and consistency of your home oral hygiene habits following your implant placement and restoration will have the most impact on their health, appearance, and lifespan. Cleaning dental implants is not difficult, but sometimes can be challenging, and so your dentist will give you full instruction and guides regarding this during your final review, and during any routine check up or hygienist visit if you are experiencing difficulty.

For the majority of placements of implant-supported teeth, patients are able to clean around each supporting implant by brushing and flossing just the same way that you would around natural teeth or conventional bridges. However in some areas special floss, inter-dental toothbrushes and other cleaning aids may be needed to maintain adequate oral hygiene - this is most common in areas towards the back of the mouth, and your dentist or hygienist will be happy to help in this regard. A learning curve is common in the early days following your implant treatment, with new oral hygiene habits to form, perhaps more complex than you had been following for your original teeth, or taking more time to complete - however this added time, attention and care is in your best interest to maintain excellent implant health.

**HOW OFTEN SHOULD I VISIT FOR A DENTAL CHECK UP AND CLEANING AFTER GETTING IMPLANTS?**

To get the most out of the investment you have made into your oral health, well-being and quality of life, to maintain and safeguard your implants and permanent dental restorations we recommend regular dental hygiene visits and check-ups with your dentist. Your oral surgeon will advise you of the best schedule to keep to with knowledge of your specific case and needs, and it is vital to follow those aftercare and check up guidelines closely, to optimise your treatment outcomes and protect your oral health.

At a minimum, an annual dental check-up and 6-monthly hygiene appointment is likely to be recommended, but it is reasonable to expect your dentist may recommend seeing you more frequently for monitoring visits in the first few months following your treatment - after which if they are satisfied that your treatment is healing and progressing to plan, you should be able to resume a routine schedule.

Likewise, more frequent or intensive periodontal cleaning treatments could be necessary if in your case the tooth loss necessitating implant treatment was due to gum disease or periodontitis. Scale and polish treatment or deep period cleaning every 3 months for a period of time to support healing and integration can be advised.

Dental Implants have been used by specially trained implant dentists for many years and have a highly successful track record of excellent long-term outcomes and patient satisfaction. The implants themselves are made of titanium, a metal which is completely body-safe and biocompatible, which extensive research has shown to integrate seamlessly with the body without any adverse effects.

As with any surgical procedure, it is impossible to 100% eliminate any possibility of risk when placing a dental implant – however such risks as exist are relatively minor, and in most cases can be controlled and managed easily. The likelihood of risk depends on a variety of factors, including the exact area of the mouth to be treated. Minor risks of oral surgery include haematoma (localized subdermal bleeding, similar to a bad bruise), swelling, bleeding, or general pain / discomfort.

There are very few major risks associated with implant surgery and although they can potentially occur, they are extremely rare.

## Potential Complications of Dental Implant Surgery

### **INFECTION**

Infections around implants (*known as 'peri-implantitis'*) affect the surrounding gum and cause inflammation, swelling or tenderness, similar to the presentation of gum disease.

Such infections are most often a result of inadequate oral hygiene, and can be prevented by proper cleaning habits, including professional cleaning by your dentist or hygienist on a regular basis, if you are prone to this issue. If you were previously receiving periodontal cleaning treatment prior to your implant procedure, following a schedule of preventative periodontal care will be even more important.

### **IMPLANT LOSS**

Although rare, an implant can be lost and fail to integrate with the bone, for reasons such as post-surgical infection or fracture. It is normally possible to replace a failed implant with a new one, although additional bone grafting treatment and healing may also be required.

### **BONE LOSS**

Particularly if the bone in that area had previously suffered more extensively from shrinkage, bone loss can in rare cases continue to occur even once a dental implant and bone grafting material are placed. Regular check ups with your implant dentist will ensure that any more extensive bone loss is caught and treated early.

### **IMPLANT FRACTURE**

Fracture of implants occurs vanishingly rarely (in less than 1% of cases), and usually as a result of overloading of the implant restoration - that is, an extra-ordinary amount of pressure is habitually placed on the implant-supported tooth (i.e.. due to

dysfunctional oral habits such as clenching, grinding or bruxism)

### **DAMAGE TO ANATOMICAL STRUCTURES**

In the upper jaw, there are few important risk areas to avoid - for implants in the area of the back upper teeth, the 'maxillary sinus' will need to be avoided, however the sinuses are readily identifiable in scans and are easily avoided.

In the lower jaw, your oral surgeon will identify the 'inferior dental nerve' in order to avoid this structure. This is a key nerve which is usually located behind the wisdom teeth, running from there under the back teeth (molars), emerging onto the skin of the cheeks approximately in the area where the middle teeth (premolars) are located. This nerve is very sensitive (it is the reason local anaesthetic even right at the back of the mouth also gives patients a numbed lower lip) and damaging it during the implant surgery can lead to temporary or even long-lasting or permanent numbness. While this is an extremely rare complication, and a skilled oral surgeon is extensively trained and experienced in dealing with the most difficult nerve and anatomical layouts without disturbance or damage, it is important to acknowledge the risk.

### **RESTORATION COMPLICATIONS**

As is also the case for non-implant supported restorations, the porcelain crowns or bridges placed onto an implant can

themselves fracture. Minor chipping is somewhat more common for implant-retained teeth than natural teeth, due to the reduced shock absorbency between the implant and the bone compared to a natal tooth. Again, this kind of issue is more commonly seen in patients with bruxism, or indeed patients who habitually bite their nails, and your dentist is likely to recommend a protective nightguard, or other measures, to a patient with these identified habits.

## **How do you minimize risk during the placement of Dental Implants?**

### **3D SCANNING**



A vital part of your pre-surgical consultation is the taking of CBCT scans - a 3D image of your jawbone and lower facial structures, which allows your oral surgeon to identify the exact location of nerves, blood vessels, and other important anatomical structures to be able to place the implants with confidence. Extensive training and experience in interpreting and planning surgical approach based on 3D imaging, ensures that your oral surgeon can confidently and successfully avoid any risk associated with facial nerves and anatomical structures.



### SMOKING REDUCTION



Smoking increases the risk of implant complications, including increased risk of inflammation and continued bone loss around implant sites and adjacent teeth, and reduces the effectiveness of the body's natural healing - overall implant failure rates are 20% higher in smokers than in non-smokers. While implants can and are still successfully placed for patients who smoke, your dentist and oral surgeon will still strongly recommend ceasing or significantly reducing smoking before undertaking implant treatment.

### PERIODONTAL PRE-TREATMENT



Patients who have previously required periodontal treatment (or who require it currently), for severe or recurrent gum disease, must have this condition under control and adequately treated via dental hygiene and other procedures, before undertaking implant surgery. Periodontal disease is a common cause of losing teeth, and many perio patients have their teeth replaced effectively and successfully with dental implants, however it must be noted that the risk of complications for this group remains somewhat higher than in patients without perio issues. It is therefore very important to minimize the risks of complications of implant failure by maintaining a recommended schedule of periodontal

treatments after the completion of your implant process.

### CERTAIN MEDICAL CONDITIONS



Your pre-surgical assessment with the oral surgeon will involve a comprehensive medical history and contraindications check, before any surgical treatment would be recommended.

Certain medical conditions or their associated medications can require additional clearance before oral surgery can be recommended, or may alter the timing of the implant treatment process:

- Patients with a history of cardiovascular disease or any prior cardiovascular issues must receive clearance from their cardiologist to proceed with implant surgery. While medical clearance in these cases is generally possible to give, there are some exceptions - implants and oral surgery cannot be performed within 6 months of a heart attack, for instance.
- Patients with diabetes will need to show that their diabetes is well controlled, before beginning the implant process, with a longer recommended healing period following the surgery, before the restoration tooth is placed. A full course of antibiotics will also often be required before the surgery to avoid the risk of any post-operative infection.



– Patients with osteoporosis have been the subject of several studies comparing the implant success in patients with and without osteoporosis, and no significant differences were found. So osteoporosis itself is not a contraindication for implant therapy, however, you will require a clearance letter from your GP or consultant to commence implant treatment, due to one of the common medications used to treat osteoporosis - biophosphonates. In most cases, taking oral biophosphonate medication has no impact on a patient's suitability for implant placement, but unfortunately intravenous biophosphonate treatment is an absolute contraindication for any kind of oral surgery.

– Where more advanced oral surgeries are required, such as bone grafts, sinus lifts or soft tissue grafting, patients regularly taking anticoagulant medication will need to first consult with their GP and receive medical clearance to proceed with the implant process, as their anticoagulant treatment is likely to need to be temporarily altered or stopped. This is not usually necessary for simple oral surgery, such as the implant placement itself - your dentist will always advise you if you will need to consult with your GP or any specialist care provider

### **TIMING: AGE AND PREGNANCY**

As above, your dentist will ensure that you are suitable for treatment with dental implants before progressing to the

surgical assessment and planning stage. There are no contraindications for placing implants in older patients, so while the body's natural healing process can slow down with age, the only impact this may have on treatment is to extend the periods between stages - there is no upper age limit to treatment by oral surgery and dental implants. Many patients well into their 80s have been treated, with no noted increase in complications, provided there were no other relevant risk factors than age alone.



Dental implants cannot, however, be placed before facial and jaw growth and development are fully complete

- meaning that they are not appropriate to use in patients under 18 years old, and in young adults an assessment must be carried out to determine if the patient is suitable for implants, and would benefit from an interim treatment in the meantime.

Similarly, patients at any stage of pregnancy are not eligible for implant treatment - not due to the surgery itself, which is very straightforward and bearing minimal risk, but due to complications which can arise from the need to prescribe antibiotics or anti-inflammatory medications. Likewise, we cannot carry out X-rays or CBCT scans on a pregnant person, which is essential to ensuring the safe and optimal placement of the implants.

The general success rate for dental implants is around 95%; In our practice in the last 3 years, we have lost only 3 implants, meaning we have a success rate of approximately 99%.

#### **WHAT CAN YOU DO IF AN IMPLANT DOES NOT TAKE?**

Worldwide, the general success rate for dental implants is around 95%. What that can translate to in practice, is up to 1 in 20 implants placed may not properly integrate and last long-term. An important part of your pre-surgical and treatment planning assessment, therefore, is discussing with your oral surgeon what your options are should any complications arise, and how your treatment plan can be adapted in the unlikely event of a lost implant.

In those patient groups identified above (patients who habitually smoke, have difficulty maintaining a consistent & effective oral hygiene regime, or are affected by certain medical conditions) the failure rate for a dental implant can be expected to be higher than for patients without those complications.

In the event that an implant does not integrate and fuse successfully with the jawbone, it will gradually but eventually become loose, and no longer be able to support the replacement restoration tooth. It is very rare for this loosening to cause any discomfort, and the situation is commonly only noted during routine monitoring check ups, when replacement

procedures can be instigated. And in certain cases if more than one implant was placed, there may be enough remaining implants to continue to support a larger restoration without it being necessary to replace the failed implant at all.

## **What to Expect from Surgery**

### **PREPARATION**

*As part of your pre-surgical consultation*

- 1) You will be prescribed an antibiotic - this is intended for you to procure, and take 1 hour in advance of your surgical procedure. Because, unlike with certain body systems, the mouth can never be fully sterile as a surgical environment, to perform this procedure under 'antibiotic cover' means that you will have the added protection from having this antibiotic already circulating in your blood, reducing risk from possible bacterial infection.
- 2) Sedation options will be discussed with you, and we can arrange for a prescription to be given to you for an oral sedative medication to take in the clinic in advance of the procedure, or for the procedure to be carried out under IV 'conscious' sedation – both options allow for particularly nervous patients to receive oral surgical care without anxiety or stress.
- 3) Full guidelines and information regarding your surgical aftercare and the need for a responsible escort will be discussed with you, to enable you to plan appropriately for the day.



### ON THE DAY

*The surgical procedure*

- 1) 1 hour prior to surgery, you will take your antibiotic – your check in will be slightly earlier if we have also planned time for you to take an oral sedative, or to set up for IV sedation
- 2) A local anaesthetic will be administered by the oral surgeon to numb your mouth
- 3) You will be given antiseptic mouthwash to rinse with for 30 seconds, after which the nurse will clean and disinfect the skin around your mouth
- 4) Once both sedative and anaesthetic have fully kicked in, we will cover you with a sterile sheet to create a sterile environment – we can adjust this step if you have claustrophobia or sensory issues, so please make the team aware of this during your pre-surgical consultation
- 5) The oral surgeon will begin the procedure,

which can last between 1 and 3 hours, depending on your exact case and treatment plan and implant approach

### AFTERWARDS

- 1) An X-ray or scan will be taken to ensure the correct positioning of the implant
- 2) You will be brought to a recovery area, where you can be monitored by our team as well as your designated escort, until you have fully recovered from any sedation
- 3) Full aftercare instructions and guidelines will be given to you and your responsible escort, and we will re-confirm your review and monitoring appointment in 2 weeks' time with your escort
- 4) You will be escorted home either by car or taxi – it is not recommended for your escort (who must be a responsible person over the age of 18) to bring you home via public transport
- 5) For the next 24 hours you should only be resting – you must not work, operate a vehicle or heavy machinery, take any important decisions or sign any documents, or have any childcare or caring responsibilities



Tracy was in a bicycle accident which resulted in the root-fracture and loss of her front central tooth. After speaking to several different clinics about not only restoring her now missing tooth, but having aesthetic procedures done as part of a unified plan, Tracy chose Dame Street Dental. She made the decision to trust us because she was impressed with our transparent, comprehensive treatment plan, and how we made sure she fully understood the basis for our approach - which included a planned extraction of the fractured tooth, bone socket preservation grafting, extensive periodontal treatment to clear up underlying infection, and a beautiful, successful implant placement with a custom-made Zirconia crown.

**TOM'S STORY**

Tom came to Dame Street Dental with some reluctance, following years of high-impact smoking and neglect, which had severely discoloured and damaged his teeth to the point of the decayed, weakened outer structures beginning to break. We were able to use implant-supported crowns to provide a full upper arch restoration, expertly matching the size, shape and natural colour of Tom's original teeth. Now Tom recommends us to family and friends because he could tell that we really cared about his end results, and about the journey throughout the process to get him to the new smile he wanted. Putting the smile back on your face can really change your life, which as a public speaker Tom knows well, and is delighted to no longer be embarrassed by his smile when getting on with everyday life.

### **WILL PEOPLE NOTICE THAT I'VE HAD DENTAL IMPLANTS?**

We understand patients' worries when considering dental implants, which are not only about restoring lost function due to missing teeth, but also about restoring the appearance of their original smile. Our dental technicians custom-make each implant-supported crown, bridge or denture to blend seamlessly into your mouth and compliment your unique features. We take the time to choose the exact colouring to match the surrounding teeth giving you the most realistic, natural-looking result possible. The exact fit of the implant to your own jaw, supporting a highly aesthetic restoration tooth or teeth, means that normally nobody can tell a natural tooth from an implant - making this treatment an excellent choice for those who have lost one or more of their front teeth, and are exploring options to be able to smile naturally and comfortably again.

### **CAN I BITE AND CHEW ON AN IMPLANT AS WELL AS ON A NATURAL TOOTH?**

Yes you can - the restoration crowns, bridges or dentures bonded on top of your implants are made of highly durable, robust materials, and are secured firmly into your jaw by the implant roots. The appropriate kind of restoration and the best suited materials will have been chosen for the area of your mouth where you had missing teeth, so that your implanted tooth will be able to withstand the forces

from all normal functions, including biting and chewing.



You should be aware, however, that there will be a slight difference in sensation for your implanted supported teeth, compared to your natural teeth. As our natural teeth are surrounded by the 'periodontal ligament', which contains nerve endings, they are able to sense pressure directly when we chew on a particular tooth. While the exact fit of your implant into your jawbone and surrounding teeth will mean that it feels like just any other tooth in your mouth, the sensation of pressure from chewing or biting will feel slightly different, as the sensation will be coming indirectly via the nerves of the surrounding gum tissue rather than the tooth root itself.

### **CAN DENTAL IMPLANTS HELP PROTECT MY REMAINING TEETH?**

Replacing a missing tooth or teeth, such as with dental implants, can absolutely help preserve your remaining teeth. In general, our teeth persistently tend to 'drift', that is move towards the front of our mouths and towards the opposing jaw, unless they are stopped by something in the way - which is usually the adjacent or opposing teeth. When one or more teeth are lost, the adjacent teeth can begin to shift out of normal position. Likewise, the opposing teeth to the new gap (for example, if you

lose a tooth in the upper right of your mouth, the opposing teeth are in your lower right) can also begin to shift out of place, in this case upwards, further into your mouth and out of your jaw.

Apart from the impact this drifting can have on the overall aesthetics of your smile and appearance, it can also begin to seriously affect the alignment of your bite, and associated functions. This drifting can also create irregularities and asymmetries in the height, uniformity and contours of your gums, making them more difficult to clean effectively and opening those teeth adjacent to a gap up to a higher risk of dental decay or gum disease due to plaque accumulating. Replacing the missing tooth or teeth as soon after the loss as possible, is a highly effective solution to a missing tooth which also helps to preserve your remaining teeth.

### **CAN DENTAL IMPLANTS BE AFFECTED BY TOOTH DECAY OR INFECTIONS?**

Implants and the restoration teeth placed on top of them are not natural structures, and so cannot be affected by tooth decay or bacterial infection in the same way as a natural tooth. However, implants are still subject to conditions affecting the gums and soft tissues surrounding the artificial tooth structure. In a similar manner to periodontal (gum) diseases that affect natural teeth, implants can be affected by peri-implant diseases. This is where the tissues surrounding the implant can



become inflamed due to plaque and bacterial build up, and can be treated and may be reversible if correct perio-dontal cleaning treatment is provided in good time. It is important to catch inflammation around an implant early, as if soft tissue inflammation persists it can be accompanied by bone loss, at which point the condition (now known as peri-implantitis) will require more intensive treatment and management from your dental team, up to and including surgical interventions to treat the infected gum tissue and re-establish healthy conditions.

### **IF MY NATURAL TEETH NEED PERIODONTAL TREATMENT IN THE FUTURE, WILL MY DENTAL IMPLANTS ALSO NEED THAT TREATMENT?**

While your implant-supported tooth cannot itself become infected, just like with your natural teeth it remains very important to monitor the health of the gum tissue surrounding your implants. Patients with ongoing issues or a history of periodontal disease are at higher risk of complications relating to implants, so it is vital to attend for regular check ups and hygiene cleanings to maintain the health of your gums and catch any inflammation or recurrence of perio issues early so it can be treated accordingly.





### **WILL MY RESTORATION MY DENTALLY BONDED TO MY IMPLANT OR SCREW-RETAINED?**

While both of these techniques are widely used in modern dental implant care, each has its advantages and disadvantages. Your pre-surgical assessment with the implant specialist will always involve a full assessment of your needs and specific situation, and the approach that is right for you is the one that will be recommended, fully taking your own preferences and priorities into account.

### **WILL MY RESTORATION BE REMOVABLE, OR PERMANENTLY FIXED TO MY IMPLANT?**

While both methods for replacing lost teeth via implants are widely used and highly effective, we have found fixed implant-retained restorations to be a better solution for the majority of cases.

Most patients have preferred the option of a fixed restoration tooth which does not need to be removed - although it should be noted that this kind of bonded tooth does have higher cleaning requirements to maintain the implant and surrounding tissues in good health.

Removable implant-retained restorations are generally easier to clean daily, as they can easily be removed, cleaned, and re-attached by the patient at home. This option is generally also more cost effective, particularly if a full or partial denture is required to replace many teeth at once, making implant-retained, removable dentures a popular option in patients who have experienced a significant amount of bone loss, often after wearing traditional dentures for many years.

### **WILL MY IMPLANT-RETAINED RESTORATION TOOTH INCLUDE SOME ARTIFICIAL GUM?**

Depending on your specific case, yes it is possible for your restorative dentist to include a section of artificial gum tissue, for structural and aesthetic purposes, when crafting your final permanent restoration.



When a tooth is lost, not only does the underlying jawbone in that area tend to shrink and lose density, but the soft tissue of the gumline above that bone will tend to shrink also. Particularly in areas where a tooth or teeth have



been missing for a long time, including being replaced with traditional removable dentures, considerable gum tissue loss is commonly seen. When replacing a missing tooth with an implant-supported restoration, an important part of the final aesthetic result, giving you a natural-looking, beautiful new smile, can therefore involve recreating a section of gum tissue. Sometimes this can be achieved via a minor surgical gum graft, but often optimal results can be achieved by crafting a section of artificial soft tissue, which still creates a proportionate and symmetrical contour to your gumline and supports the lip, enhancing the overall appearance of your restored smile and facial aesthetics.

#### **WHAT CAUSES BONE LOSS IN THE JAW?**

When a tooth is lost, whether due to accident, disease process or a planned extraction, a significant amount of the bone that supported and held that tooth's root can likewise shrink and become lost, in a process known as 'bone resorption'. Unless specific bone augmentation intervention steps are taken to minimize the effects of this natural process, this bone loss will always occur to some extent, although the exact rate and amount of bone density change varies greatly from patient to patient.

This issue particularly affects patients who have worn a traditional denture for some time, as after some years of bone shrinkage patients can find that their dentures have

become gradually looser and ill-fitting, even uncomfortable to wear. While this process of bone loss is kick-started by the initial tooth loss or extraction, in the long-term it is the continued effect of chewing on an unsupported denture without tooth roots stimulating the jaw bone to replenish itself, that leads to the ongoing shrinkage of the jawbone. What this means is that, the longer a denture is worn, the less dense the jawbone becomes, meaning that to successfully place dental implants it is highly likely that bone grafting will be required in those affected areas, to make sufficient bone available to support implants.

#### **CAN I STILL HAVE DENTAL IMPLANTS IF I HAVE SIGNIFICANT BONE LOSS?**



Following a tooth extraction, or particularly if a patient has been missing a tooth or teeth in an area of their mouth for a while, they may not have sufficient strong, healthy bone in that area to support an implant successfully. This does not however mean that we cannot proceed with implant treatment, as modern dentistry now offers various highly effective, proven procedures to allow our skilled oral surgeons to replenish and reconstruct this lost bone and commence the implant process. The most common, effective and time-proven methods for restoring lost bone in the jaw are 'bone grafting' and 'sinus lifting' procedures.



### **CAN ANYTHING BE DONE TO PREVENT BONE LOSS AFTER A TOOTH EXTRACTION?**

Immediately following a tooth extraction, a blood clot forms in the empty socket. Over the following weeks, blood vessels under this clot work to repair the socket, eventually forming new bone, while above the clot new gum tissue cells grow outward to form new gum and close over the extraction site.

Following this healing process, however, because there is no longer a tooth root embedded in the jaw bone in this area, this healing of the extraction socket is also normally accompanied by 'resorption' and shrinkage of the bone and soft tissues in that area. While the extent and degree of bone and tissue loss at this stage is impacted by a number of factors, chief amongst them being the patient's individual biology, the amount of trauma suffered by the bone and tissues during the extraction also plays a part. The manual skill of the operator in terms of minimizing and limiting any trauma to the bone and surrounding tissues, including avoiding the removal of bone as much as possible during the extraction, can help to prevent bone loss following a planned extraction. Another option to minimize bone loss involves introducing bone grafting material directly into the socket immediately after the extraction, during the same procedure, known as 'socket preservation'.

### **WHAT IS A DENTAL BONE GRAFT?**

This simple, minor surgical procedure involves introducing organic or artificial bone graft material to the area where bone loss has occurred, allowing us to add volume and density to your jaw in those areas. This can be done using a variety of different materials, including your own bone tissue harvested from a secondary site, artificial bone material, or organic bone material from a donor bank.



The new bone material will gradually heal and integrate with the natural bone, in a recovery process dependant on the healing activity of the patient's remaining natural bone tissue, and so recovery time is heavily influenced by factors such as the patient's age, general state of health, and the extent of bone loss experienced and the condition of the surrounding bone and soft tissues. Following this recovery and integration period the area will be re-assessed, and the implant procedure can commence once the oral surgeon determines the area is now suitable to successfully and securely support an implant in the optimal position.

Similar to a bone graft, a sinus lift is a somewhat more complex surgical intervention, undertaken by an experienced oral surgeon, to add bone to the upper jaw above the back teeth, following tooth loss in that area.

When upper back teeth are lost, the resultant bone loss can lead to the bone height in this area reducing and the sinus (a passage of empty space behind the cheekbone and above the upper jaw) becoming enlarged, meaning that there is often not enough bone remaining to place an implant successfully. Sinus lifts enable an oral surgeon to introduce new bone material and increase the height and depth of bone available on the lower ends of the sinus, which following the standard healing and integration period can then support the required implants.

The bone graft material can either be introduced via the extraction site of the lost tooth, in the case of minimal bone loss, or in the case of more extensive bone loss a lateral surgical incision is made through the sinus wall, above and to the side of the eventual implant placement site. Both approaches allow for a controlled, safe surgical procedure to be carried out and the bone successfully elongated, and depending on the case, in some cases it can be possible to place the implants at the same time as the sinus lift procedure.



Alternative approaches to implant therapy in this tricky area of the mouth are also options, however, in the case of extreme bone deficiency or patient preference. These alternatives include the use of short implants, which do not penetrate the bone as deeply as conventional implants, and so do not require the bone to be elongated to avoid reaching the sinus cavity. It is also possible to place a specially shaped implant, which is supported on an angle into the triangular bone contour both in front of and behind the sinus.

#### **DOES BONE GRAFTING AFFECT THE LENGTH OF TREATMENT?**

Following your assessment with an oral surgeon, if they have determined that you will require a bone graft or sinus lift to proceed with implant treatment, this will in almost all cases increase the total length of your treatment time. New bone can take a minimum of 3 months, up to 12 months to fully grow to the point of readiness to support a dental implant, particularly if a larger volume of bone will need time to mature. However, this step is always recommended out of necessity and when it will greatly improve the successful outcome of the implant being placed, both in terms of long-term integration and stability, and indeed final aesthetic results.

In some suitable cases, it may be possible for your oral surgeon to perform any required bone graft treatment at the same

time as the implant placement itself. This naturally reduces the overall treatment timeline, while also enabling us to achieve results that are difficult to reach by other methods. However, the approach taken to any individual patient's treatment will also depend on the circumstances of that specific case, and it may still be necessary for the implant and bone graft stages to remain distinct, with implant placement going ahead only once the graft has been determined to be fully successful. This determination will always be made with the patients' best interests in terms of long-term success as the priority, and the recommended integration stage should never be rushed.

#### **I'VE BEEN TOLD I NEED 'GUIDED TISSUE REGENERATION' – WHAT IS THAT?**



'Guided tissue regeneration' or GBR is a supplementary procedure used by oral surgeons to complement and improve the success rate of bone regeneration in certain cases. This widely-used technique involves placing a resorbable barrier material carefully into the surgical site during a bone graft, which serves to create a barrier between the fast-moving cells of the soft tissues and gum, and the slow-moving cells of the bone tissue. This holds the space for the bone cells to replenish and fill that space as intended, and successfully replenish the bone density in the area. The resorbable

barrier itself will dissolve and disappear naturally in a few months' time, and so does not need to be removed once the recovery period has ended.

#### **I'VE BEEN TOLD I NEED 'PRGF THERAPY' – WHAT IS THAT?**

PRGF plasma therapy is a supplementary procedure used by an oral surgeon in certain cases where the body's natural healing process would benefit substantively from reinforcement or supplementary techniques. PRGF is a biomedical technology that contains fibrin, a fibrous protein that stimulates the body's own healing resources and encourages the balanced and gradual release of growth factors in the circulatory system essential for healing to take place. This ground-breaking technique enables modern dental solutions that are predictable, minimally invasive and entirely safe and adjustable to the individual patient, leading to enormous improvements in our implant and other oral surgical treatment success rates.

Bone grafting and sinus lift procedures require a significantly higher degree of skill, and are often more complex to perform, than the placement of the implant itself, and are best carried out by experienced oral surgeons

**HUMAN****SYNTHETIC****BOVINE****WHAT MATERIALS ARE USED FOR BONE GRAFTS?**

Bone material used in grafts and sinus lifts is made available from a number of sources, with the type recommended for use in each specific case depending on the approach, technique and circumstances of that individual case.

In general, bone grafting material can be either organic or synthetic:

**ORGANIC**

The patient's own bone (autogenous bone grafting) can be harvested from a secondary site, usually from the lower jaw behind the back teeth, or from the patient's chin. In hospital settings it can also be harvested from the hip or shin bone. While this does create the added discomfort of a second donor site in addition to the grafting site during post-surgical recovery, this disadvantage is often outweighed by the many advantages of using a patient's

own bone tissue. While all other forms of bone graft material must rely on only the biological activity of the remaining natural bone at the surgical site to integrate and form new bone, autogenous bone grafts have benefit from the ongoing biological activity of their own bone cells and tissue – meaning that in many cases these grafts will integrate and heal more quickly than other kinds.

**DERIVED OR SYNTHETIC**

It is not necessary in most cases to undertake a harvesting procedure to collect the patient's own bone tissue to carry out a graft – less intensive options are available, however these alternatives will be somewhat slower to integrate, as they are not themselves bioactive. Sources of bone grafting material include human and bovine (derived from cow bone) cells from donor banks, or entirely synthetic lab-created materials, all of which have been

specially sterilized and prepared to ensure they are safe for use in humans.

### WHAT MATERIALS ARE USED FOR DENTAL IMPLANTS?



Dental implants are almost always made from medical grade, pure titanium. This material is biocompatible with our bone structure, meaning that once the implant is placed into sufficiently dense, healthy bone, the surrounding bone will successfully fuse to it over time in a process called 'osseointegration.'

Titanium is also a bodysafe material, although some exceedingly rare cases of titanium allergies have been reported. Alternative implant materials, most notably dental ceramic, have been introduced in recent years, and it may be possible for you to have your implant made of such a material if necessary, however we do not yet have long-term studies available as to the success rates of non-titanium implants.

### WHAT MATERIALS ARE USED FOR IMPLANT-RETAINED RESTORATIONS?

Following the placement of your implant(s) and once the required healing period has passed and your implant has been determined to have successfully and securely integrated into your jawbone, it is time for your permanent restoration (a crown, bridge, full or partial denture) to be placed on it.

Removable restorations (implant-retained dentures) are generally made of dental acrylic material, to that they can remain comfortable, lightweight and natural feeling.



Fixed restorations (crowns or bridges) have an inner core which provides the frame, and an outer contour which is custom-made in the dental lab from a tooth-coloured ceramic (dental porcelain) to the exact specifications decided in consultation between you and your restorative dentist, so that it will exactly match the size, shape and colour of the surrounding teeth for a highly aesthetic, natural finish. The inner core is made of either a durable ceramic or metal alloy, with the stronger metal core recommended for restorations of molars, as these back teeth must withstand the greatest degree of daily pressure.



Dental Implants are widely-regarded as the 'gold standard' in the field of dental restorations, enabling practitioners to replace and restore missing teeth safely, reliably, and for a lifetime.

However, your dentist will always be happy to discuss alternatives to implants with you during your initial consultation if you wish, including the following available alternative treatment options:

#### **01. REPLACING A SINGLE TOOTH**

The most common alternative to a dental implant to replace a single tooth is a fixed dental bridge. This restoration is not 'rooted' in the jaw as a dental implant is, but is an artificial crown resting on the gum in the space of a missing tooth and supported on either side by the adjacent teeth, creating a 'bridge'.

Placing this restoration involves preparing the neighbouring teeth to act as supports, re-shaping those healthy teeth and grinding down some of the outer structural layers. The bone underneath a bridge is also not stimulated by the presence of a tooth root, as it would be with an implant, and so the health and density of the bone will deteriorate over time through bone loss. This can over time change the appearance of your smile and the contour of your jaw, while requiring more

long-term care and maintenance than would a dental implant.

#### **02. REPLACING MULTIPLE TEETH**

To replace multiple missing teeth (or in rarer cases, a single tooth) a removable partial denture is the typical alternative to a dental implant. This option does not require grinding down any adjacent teeth, and provides a short-term cost benefit, however it is not nearly as stable and comfortable in the mouth as an implant-retained restoration, meaning that in the long-term it can interfere with speech and chewing functions. Again, with this type of restoration, the partial denture is only resting on the gum, and there is no artificial tooth root stimulating the bone of the jaw in the area of the missing teeth, leading to bone and tissue loss over time gradually but eventually become loose, and no longer be able to support the replacement



restoration tooth. It is very rare for this loosening to cause any discomfort, and the situation is commonly only noted during routine monitoring check ups, when replacement

**03. REPLACING ALL TEETH**

A removable full denture, an appliance that sits on top of the gums in place of the missing teeth were and secured with a denture adhesive, is a less expensive alternative to dental implant restoration. However, while a full denture can be relatively straightforward and is easy to clean, it can be uncomfortable to wear in the long-term, as the lack of stimulation to the jaw bone throughout the mouth

will lead to significant bone loss and shrinkage, affecting the fit of the denture. Ill-fitting dentures generally make eating certain foods difficult or impossible, can cause discomfort or pain, and shift or move in the mouth when speaking, eating, or smiling.

FIG.01



FIG.02

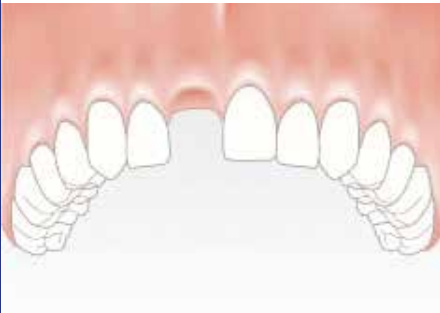


FIG.03

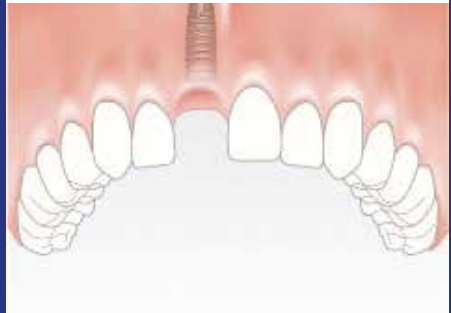


## Replacing a Single Tooth – Implant-retained Crown

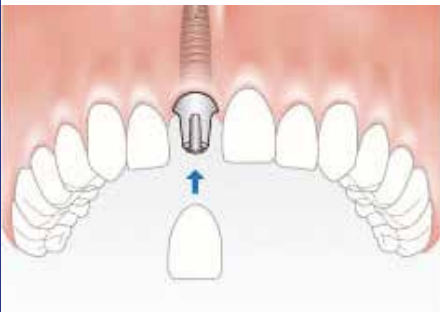
1. A single lost tooth in the highly visible front of the mouth can cause a great deal of discomfort or embarrassment, as well as affecting bite function



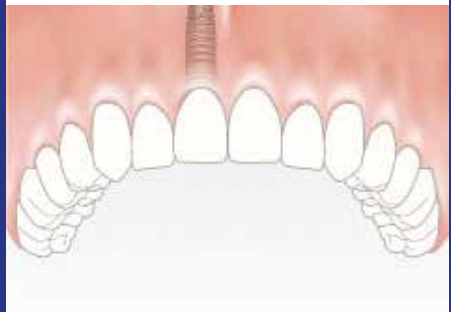
2. A dental implant can be surgically and precisely placed into the jaw bone without impacting the adjacent teeth at all



3. Depending on the approach decided on, the abutment is attached during placement, or at a later stage post-healing period



4. The new restoration crown is bonded to the abutment, restoring the smile and making it good as new



## Replacing Multiple Teeth – Implant-retained Bridge

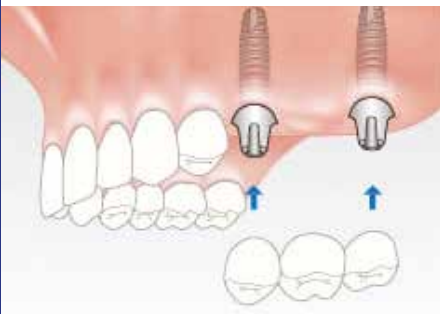
1. Several missing teeth can have significant affects on chewing functions and ability, in addition to an unwelcome aesthetic impact



2. Following assessment, two or more implants will be placed in optimal position to support the new restoration appliance as artificial roots



3. Abutments are attached to the implant roots to act as the supports for the final restoration dental bridge



4. The permanent restoration dental bridge is securely bonded to the implants and is ready for use



## Replacing All Teeth — Implant-retained Bridge (Full arch)

1. Whether through disease process or multiple planned extractions of damaged teeth, an advanced solution is required to replace a full arch of missing teeth



2. Following assessment with an implant specialist, 2 to 4 implants will be placed to securely support to final full arch restoration



3. The full-arch bridge is attached directly onto the abutments, creating a non-removable, secure restoration solution for tooth loss



4. The permanent restoration bridge is securely bonded to the implants and just like that, an entire arch of missing teeth is replaced with a beautiful, fresh smile



## Replacing All Teeth – Implant-retained Denture (removable)

1. Unlike traditional dentures, an implant-retained denture protects the underlying bone and tissue health, and is a more comfortable, stable option



2. Following assessment, 2 – 4 implants will be placed based on your specific case to support the new removable restoration appliance



3. Two abutment options exist, a ball or a bar connection – these allow the final restoration to be easily removed and reattached from the implants



4. All of the function and natural appearance of your original teeth is created, while retaining the ability to remove at home for ease of cleaning



**The total cost of your complete treatment plan at Dame Street Dental is based on your clinical assessment, and will vary depending on the quantity and complexity of treatment procedures you need, including any supplementary or preparatory procedures, on your bone health and quality, and on the positioning and number of implants required, including the kind of final restoration needed to replace the missing tooth or teeth.**

Generally speaking, prices for a single standard implant begin at €1,200. This includes the body of the dental implant, the titanium abutment and the implant-retained crown. However as was detailed in this guide, a standard implant procedure is not going to be feasible in many cases. We believe in providing you with fair prices and complete transparency when it comes to costs, and your dentist during your initial and surgical consultations will always provide you with a detailed treatment plan at the outset, with an itemized cost breakdown of all stages as your unique plan. The above standard cost does not include additional costs associated with pre-surgical hygiene or periodontal treatment, tooth extractions, bone grafting, any temporary restorations or bridge or dentures costs, or the higher fees

incurred by choosing to be treated under our most experienced oral surgery specialists.

Your consulting dentist will also be able to discuss with you the best options to suit your treatment and smile goals, preferences and budget. Considering cosmetic concerns, such as replacing highly visible front teeth, we often recommend metal-free solutions, such as a zirconium abutment (white) and a zirconium crown - which has an additional cost of €250. Dental implants (under certain circumstances only) and all crown or bridgework restorations are classed in Ireland as non-routine dental treatments, and as such are tax deductible and a percentage of their cost can be claimed back through Revenue, on submission of our full receipt and a Med 2 Revenue claim form, which our team is always happy to help you complete.

At Dame Street Dental, we fully understand that some patients are put off by larger treatments such as dental implants, and can often miss out on genuinely life-changing, state-of-the-art dental care because of the associated expense making them more difficult to pay for upfront.

We truly believe that innovative, transformative dental treatment should be for everyone, and so to help address this concern, our clinic offers a variety of payment plans to approved patients on certain specialist treatments. Our 0% interest payment plans can allow you to split the costs of the implant process by



the treatment you have had done on any given day. Meaning that for implant therapy, which can often take a minimum of approximately 3 to 6 months, you have that much longer to spread the payments out over the course of your treatment plan, with the final account balance not needing to be fully cleared until the appointment where your restoration teeth are placed (either with temporary or permanent dental bonding, depending on your specific plan).

Both options allow for particularly nervous patients to receive oral surgical care without anxiety or stress.

3) Full guidelines and information regarding your surgical aftercare and the need for a responsible escort will be discussed with you, to enable you to plan appropriately for the day. Please do not put up with the

pain and frustration of missing teeth any longer - contact us by phone or through our website, or drop in any time to speak to a member of our knowledgeable front of house team to discuss what payment options are available to you, and get booked in with one of our dedicated and skilled implant dentists.

## Why Choose Dame Street Dental

### OUR PATIENT PROMISE

Dame Street Dental is the centre of excellence for dental implants and cosmetic dentistry in Ireland, accessibly located right in the heart of Dublin city centre, served by reliable transport routes and ready-parking access. We are honoured to have been chosen as the dental care partners of patients from all over the country.

Our clinical and front of house teams are motivated by a shared drive to provide world class dental treatment in a comfortable environment at an affordable price. We have listened to what our patients want, and are constantly planning our practice around ensuring that we give you the best patient experience possible, every time - in a calm, relaxing, stress-free environment.

**OUR CLINIC**

At Dame Street Dental we have invested in beautifully designed surgeries with the most high-tech equipment and materials available to modern dentistry, from painless anaesthetic devices to 3D CBCT imaging and dental microscopy. Our passion for innovation and technology is grounded in our commitment to excellence in patient care - we believe in communication and education, helping our patients to understand their treatment needs and goals using high resolution digital imaging, taking the time to make sure that every one of our patients is informed, comfortable and confident in taking control of their own oral health.

Our multi-discipline, state-of-the-art clinic provides for all aspects of dental care,

from general and emergency care to more advanced restorative, cosmetic, endodontic and oral surgery procedures. We believe our patients deserve to have all of their dental concerns taken care of from one location, no time-consuming and uncomfortable referral or waiting periods. Our skilled and extensively experienced nurses, hygienists, dentists and specialists maintain the highest standards of current clinical techniques and patient care, supported by a welcoming, relaxing environment including an onsite waiting and recovery area with comfortable sofas, ceiling-mounted televisions in every surgery, an internet café and a beverage bar, to help our patients relax in peace before, during and after their treatments.

**OUR SPECIALISTS**

Dame Street Dental employs a highly qualified team of expert and specialist dental professionals who are dedicating to fulfilling our promise of excellence and genuine care to our patients. We see ourselves as our patients' partner in looking after their oral health, and we treat each and every person who comes through our door with respect, dependability, and care - our dream is to give every patient the most professional and pleasant dental experience we can provide.

Our oral surgeons and implant dentists are specialists, meaning that after qualifying as a general dentist they went





on to specialize in the area of oral surgery for a further three years of additional rigorous training. Our oral surgeons have placed over 3,000 implants to date, and in that time have experienced only three failed implants, meaning we have an approximate success rate of over 98%. Depending on your implant journey, you may be treated by more than one of our highly trained dental specialists - meaning that without leaving Ireland you can be under the care of any one of our widely experienced Restorative, Cosmetic or Oral Surgical specialists, all of whom have undertaken years of postgraduate study and clinical training under pre-eminent, world-renowned specialists in their field.

Our front of house and clinical teams are always on hand to answer any questions or concerns you may have about your upcoming treatment – please reach out to

us at any time with feedback, questions, or to book a consultation with us and take the first steps along your implant journey with Dame Street Dental!



**ABUTMENT**

An abutment is the component which attaches the implant to the permanent tooth restoration

**BARRIER MEMBRANE**

A dissolvable membrane which is placed over a bone graft to allow bone healing and new bone growth to occur without being overtaken by soft tissue growth in that space which could compromise the healing process

**BONE GRAFTING**

This is the placement of either natural or synthetic bone material to an area where natural bone has been lost. This may be performed at the time of implant placement, or as a separate procedure prior to implant placement

**BONE RESORPTION**

Bone resorption is the loss of height and/or width of bone in either upper or lower jaws. This process occurs throughout life, but is accelerated in locations where tooth loss or extraction has occurred

**BRIDGE**

A bridge is a method of replacing a missing tooth or teeth by supporting a tooth restoration across the adjacent natural teeth on top of a dental implant. Bridges may be glued in place (adhesive bridges) or supported by crown preparations (conventional bridges), and may be constructed of a variety of materials

**BRUXISM**

The habitual and damaging clenching or grinding of teeth, often unconsciously at night while sleeping

**CALCULUS**

Hard deposits around teeth, referred to as tartar once it has built up and become difficult to remove at home. Calculus is the result of calcification of plaque around teeth, and can be prevented by rigorous attention to proper daily oral hygiene. Once tartar has formed, it is difficult to remove, and in most cases this would involve the services of a dental hygienist

**COMPLETE ARCH**

A complete arch is referring to the teeth of the whole of the upper or lower jaw

**CONSULTATION**

An appointment with the dentist or oral surgeon to discuss possible treatment options. The appointment may include an examination, X-rays, CBCT scans, digital photographs or impressions, along with physical examinations, open discussion and explanation

**CROWN**

A crown is any form of restoration which covers the entire exposed surface of a tooth, and can be made of a variety of materials, including porcelain, porcelain bonded to metal, and gold. Crowns in visible areas of the mouth are usually white in colour for aesthetic reasons

**CBCT SCAN**

Cone Beam Computed Tomography scan is an advanced X-ray technique that produces three-dimensional images of the jawbone and complex anatomical structures of the mouth and lower face

**DENTAL ANAESTHETICS**

Anaesthesia comes from Greek, and means without sensation, and in medicine is used to mean without pain. Today most dental anaesthetics are by means of a simple injection into the area being worked on. Procedures may also be carried out whilst you are under intravenous sedation, known as 'conscious sedation'

**DENTAL IMPLANT**

A dental implant is a man-made 'tooth root'. Most implants are made of titanium or titanium alloys. Implants are placed into jawbones surgically, ultimately to support crowns, bridges or to stabilize full or partial dentures

**DENTAL RESTORATIONS**

The restoration is the term used for the final implant-supported crown, bridge or denture in the course of treatment. The restoration will need periodic maintenance work and may need to be replaced every 10-12 years

**DENTURES**

Dentures are removable false teeth custom-made to each patient. They are usually made from acrylic or a combination of

acrylic and cobalt chromium

**EXTRACTION**

A dental extraction is the planned removal of teeth

**GUIDED TISSUE REGENERATION**

Also called GDR, this procedure enhances soft tissue (gum) healing, and may be used to improve the cosmetic effects around teeth or crowns

**GUM DISEASE**

Also known as periodontal disease, this affects the soft tissues around teeth. Superficial gum inflammation is generally referred to as gingivitis, and is a response to a build-up of plaque, and in most cases can be resolved by a rigorous oral hygiene routine following periodontal treatment by a dentist or dental hygienist

**PERIODONTAL DISEASE**

Unchecked gingivitis may progress with time to a more serious form of gum disease known as periodontitis; this involves loss of bone, and may compromise the survival of a tooth or teeth. If caught in time this can be resolved by periodontal treatments by a dentist or dental hygienist

**IMMEDIATE LOADING**

Providing a temporary crown or bridge simultaneous with the placement of the implant. This treatment is not suitable for all patients.

**INFERIOR DENTAL NERVE**

Sometimes referred to as the inferior alveolar nerve, this runs within a bony canal in the lower jaw, and supplies sensation to the lower teeth, before emerging from bone as the mental nerve which supplies sensation to the lower lip

**INTEGRATE / INTEGRATION**

This means to bond or fuse together, and is used to describe the permanent, secure bonding of a dental implant and/or newly grafted bone material into the jawbone

**INTERDENTAL TOOTHBRUSHES**

An interdental small brush, often just one tuft of bristles. This is particularly useful for cleaning between teeth, and around implants, and may be used as an alternative to floss

**MAXILLARY SINUS**

A hollow air-filled cavity behind the cheekbone and above the upper premolar teeth. This varies in size from individual to individual, and gets larger throughout life

**MOLARS**

The last three upper and lower teeth on both sides of the mouth

**OSSEOINTEGRATION**

Osseointegration is where the implant and bone bond or fuse together, and typically takes several weeks to months

**PLAQUE**

Plaque is a soft sticky, colourless film of

bacteria that constantly forms on teeth and gums and can harden into calculus if not removed daily by effective oral hygiene such as brushing, flossing etc.

**PREMOLARS**

The two teeth located in front of the molars on both sides of the mouth, in the upper and lower jaw.

**PRGF**

Plasma Rich in Growth Factors. An innovative biomedical technology that allows dental specialists to stimulate the body's natural healing and recovery processes.

**REMOVABLE DENTURE**

A denture which is supported by implants but is removable by the patient for cleaning purposes

**RESTORATIONS**

A restoration is any filling, crown, bridge or denture which effectively restores the tooth to functional use

**RESTORATIVE STAGE /APPOINTMENT**

This follows the surgical phase of the treatment regime, usually after a suitable degree of healing, typically 1-2 weeks. In most cases this will involve the taking of impressions thus allowing the technician(s) to fabricate the permanent restoration

**RIDGE EXPANSION / SPLITTING**

New oral surgical equipment (called piezosurgery) allows us to expand bone where before we had to graft. Piezosurgery

allows us to make tiny cuts in the bone into which expanders are placed to push out the bone plate, creating more available suitable bone for implant placement

**SINUS LIFT**

Asurgical procedure where bone regenerative material is inserted into the sinus to encourage the formation of new bone to increase the height of bone available to accommodate implant placement.

**STERILE CONDITIONS**

Sterility in this context means the removal of bacterial contamination. Realistically we never manage to achieve absolute sterility; however, we must always aim to get as close as we can to a sterile surgical environment. This includes the use of autoclaves to sterilize all non-disposable instruments, along with drapes and gowns to isolate working surfaces and personnel. Prior to oral surgery, patients are also given an antibiotic to take in advance, meaning the medication is already in their blood stream giving extra protection

**STITCHES (SUTURES)**

Thin, thread like fibre used to close wounds in order to promote healing. Most modern dental sutures are dissolvable, and so a special visit to the clinic is not required to remove them

**TITANIUM**

This is a biocompatible metal from which implants are manufactured. Titanium

has been used for medical procedures, including hip replacements, for decades

**TREATMENT PLAN**

A written detailed report on a patient's dental implant procedure including proposed treatment, timeframe and costs



18:27

Dr. Shun, D.D.  
Implant Dentist



Mini Dental Implant Candidates - Fort Worth, TX







## **Dental Implant Treatment**

16 Dame Street, Dublin 2.  
+01 525 2670

[damestreetdental.ie](http://damestreetdental.ie)  
[info@damestreetdental.ie](mailto:info@damestreetdental.ie)