

ADI

Association  
of Dental  
Implantology

# Considering Dental Implants?

A patient's guide  
to dental implant  
treatment



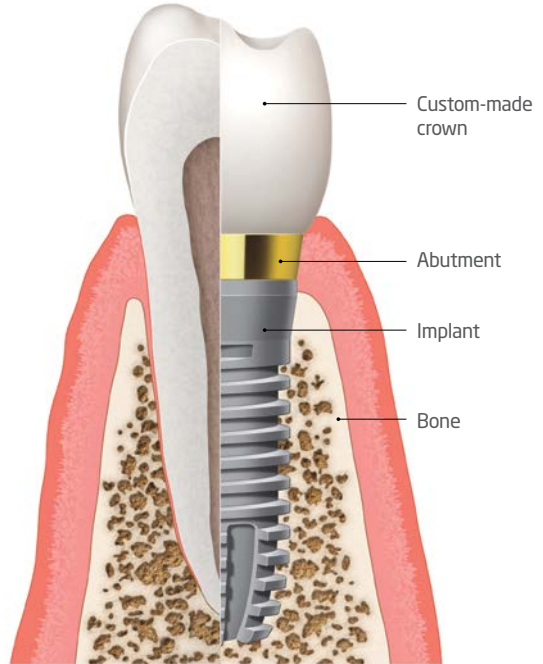
# Dental Implant Information

**In the last decade dental implants have become widely used in mainstream dentistry and are usually the treatment of choice for a missing tooth.**

## 1. What is a dental implant?

A dental implant is an **artificial replacement for a tooth root**, usually made from titanium. There are many different implant systems available and when competently used they all deliver a highly reliable form of treatment. The main aim during the placement of any implant is to achieve immediate close contact with the surrounding bone. Over time further growth of bone onto the implant surface enhances the stability of the implant.

In order to support replacement teeth, dental implants normally have some form of internal screw thread or post space that allows a variety of components to be fitted. Once fitted, these components provide the foundation for long-term support of crowns, bridges or dentures.



## 2. Who is suitable for dental implants?

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

They can only be used once the jawbone has stopped growing and so generally are not used with younger patients.

Habits such as heavy drinking or smoking can increase the number of problems associated with initial healing and thereafter may be bad for the long-term health of gum and bone surrounding each implant. Some dentists will decline to place implants if smoking cannot be reduced or given up altogether.

However, each case is different and if you do have any medical problems then speak to your doctor or dentist prior to starting any treatment - it is only in some circumstances that health problems prevent the use of dental implants altogether.

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

### 3. How will you know if you are suitable for implants?

At your initial consultation **the dentist will assess the feasibility of providing implant treatment.** You will be expected to answer detailed questions concerning your medical history and there will be a complete examination of your mouth and remaining teeth to discover the nature and extent of any current dental problems. Usually x-rays will be taken and models of the teeth prepared so that these can be examined after your visit.

These x-rays and models will be used to determine the optimal position for an implant, how many implants can be placed in the gap and the quality and volume of bone that is available.

Establishing good basic dental health is a key stage in any treatment plan. At this first appointment you should be made aware of which problems are urgent, and what treatment is required to stabilise any gum- or tooth-related problems. It would be reasonable to expect a verbal outline of how your particular implant treatment might be approached.

### 4. Do you need to have a healthy mouth?

When you first enquire about dental implants it is often in response to an awareness of ongoing dental problems or the recent loss of teeth. The cause of these problems will need to be understood and treated **before undertaking implant treatment.**

If you are aware of bad breath, loose teeth, or have noticed excessive bleeding, particularly when your teeth are cleaned professionally, you may have gum problems. Gum disease (periodontal disease) is a major cause of bone loss, and with reduced bone dental implant treatment can be more complicated but not impossible.

### 5. How long does treatment take?

For routine cases, from the time of implant placement to the time of placing the first tooth/teeth, treatment times can vary **between six weeks and six months.**

The availability of better quality bone can be used to decrease treatment time, whilst more time and care must be taken with poorer bone, which can therefore extend treatment times beyond six months.

### 6. What should you know before you start treatment?

It is accepted practice that you should be given a **written summary of your treatment planning discussion(s),** highlighting your current dental situation and any alternatives there are to dental implants. This summary should also include an overview of the anticipated treatment stages and give you some idea of how long treatment is likely to take, how many implants are required and **what the fees are expected to be.** There may well be other issues specific to your case and these would be dealt with accordingly.

### 7. How long will the implants last?

Once the implants and surrounding soft tissues are seen to be healthy and the new teeth comfortable and correctly adjusted, it is the quality of your personal attention to oral hygiene and willingness to attend regular maintenance reviews that will have most influence on how long they will last.

When poorly cared for, implants will develop a covering of hard and soft deposits (calculus and plaque), which is very similar to that found on neglected natural teeth. Untreated, these deposits can lead to gum infection, bleeding, soreness and general discomfort. **It could probably be said that implants will last as long as natural teeth.**

Well-maintained implants placed into adequate bone can be expected to last for many years and possibly for your lifetime. However, just as you would expect conventional crowns, bridges and fillings to need occasional repairs or replacements, your implant-supported teeth may also have similar maintenance requirements over the years.

## 8. How many teeth can be supported by implants?

Dental implants can be used to **replace one or several missing teeth**. All the common forms of tooth replacement, such as bridges or dentures can be supported by dental implants.

If you are missing just one natural tooth, then one implant is normally all that will be needed to provide a replacement. However, larger spaces created by two, three 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.

Patients who have a habit of clenching or grinding (bruxing) their teeth may be at risk of overloading their implants. For most people bruxism occurs during sleep, which is why they are generally not aware of it. Heavily worn or flattened teeth, chipped enamel edges and/or regularly breaking pieces of heavily filled teeth are the most common clinical signs of bruxism. The effects of bruxism need to be considered during treatment planning and can be compensated for by placing additional implants, selecting appropriate restorative materials and providing a night time bite guard to protect the new teeth.

This will be discussed in your initial consultation and detailed in your treatment plan.

## 9. An overview of the implant process

Implant treatment normally **involves several stages that take place over a period of time from three to nine months**. Although there are various implant treatment methods, a typical process often includes:

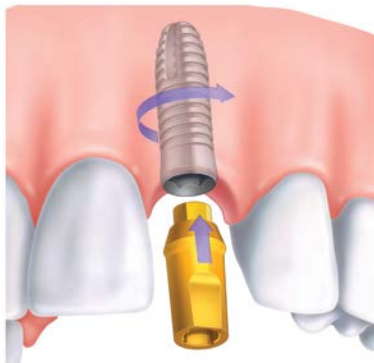
- **Assessment and treatment planning:**  
At initial consultation, following full discussion of all possible alternatives, the dentist will assess the feasibility of providing implant treatment. X-rays will be taken and models of the teeth prepared. A written treatment plan will then be formulated detailing the sequence of treatment and associated costs.
- **Implant placement:**  
Implant placement is a relatively simple minor surgical procedure that can be performed under sterile conditions in a dental surgery. The treatment is performed under local anaesthesia with sedation if required. If, during assessment, the underlying bone is deemed deficient, a number of options are available for bone regeneration. Bone regeneration is carried out prior to or at the same time as implant placement depending on requirements.
- **Integration period:**  
Implants can take from six weeks to six months to fuse with the patient's bone. During this integration period, temporary dentures or bridgework can be worn as appropriate. In some cases, temporary teeth can be fixed to the implants while they integrate in a process known as 'immediate loading'.
- **The restorative phase:**  
Once integrated, the implants can be brought into function with a variety of new teeth options (definitive restorations) ranging from a single crown, small or large bridge or a removable overdenture. A dental technician who works closely with the dental surgeon constructs these definitive restorations.

- **Maintenance:**

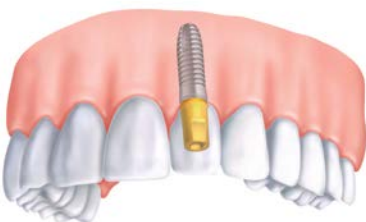
Following completion of implant treatment, the patient must regularly and thoroughly clean the new teeth (restorations) as instructed by their dentist. A dental hygienist may also advise on care and maintenance of the restorations and natural teeth. Regular visits to your dentist are essential so that the health of the soft tissue, bone levels and the integrity of the restoration can be reviewed.



Missing tooth



Implant and abutment



Crown centred on abutment

## 10. How do you know if you have enough bone for dental implants?

Routine dental x-rays show large amounts of detail, but in only two dimensions. From these views it is generally possible to judge the height of bone available for implant placement; however, more advanced imaging techniques are sometimes needed to determine the equally important bone width.

**Dental CBCT Scans** - there are now a number of advanced x-ray techniques that allow your jawbone to be looked at in all three dimensions. The most accurate and widely available is known as the CBCT (cone beam computed tomography) scan. Images obtained by CBCT scanning will normally be able to show all of the information required about your bone, including quantity and quality, but most importantly the presence of anatomical structures that must be avoided.

## 11. What can cause bone loss?

- Whenever a **tooth is lost or extracted** a considerable amount of the bone that once surrounded the remaining root may disappear. This loss can be particularly rapid during the first few months and is described as 'bone resorption'. Although the rate and amount of bone resorption is highly variable between individuals, it will always occur to some extent, unless specific care is taken to reduce its effects.
- Many patients report that after a while their **dentures** become progressively looser and do not fit as well as they once did. Initially the increased rate of bone loss following extractions is responsible for the observed deterioration of denture fit. Over the long-term it is the direct effect of chewing forces that causes slow deterioration of the supporting bone. Therefore **the longer dentures are worn, the less bone is available for dental implants.**

## 12. What anatomical structures must be avoided during the placement of dental implants?

- In the *upper jaw*, provided the implants stay within the bone that once supported your own teeth there are really no important risk areas. If you have missing upper back teeth then the shape and location of the region above the roots (maxillary sinus) can be shown to you. The maxillary sinuses can be seen on most x-rays and are therefore readily avoided.
- In the *lower jaw* the most important anatomical structure to be avoided is the 'inferior dental nerve'. This nerve runs from the area behind the wisdom teeth, passes under the back teeth (molars) and emerges onto the skin of the face in the region where your middle teeth (premolars) are or used to be. This is why a normal dental anaesthetic produces a numb lip even when the needle was placed right at the back of the mouth. If this nerve is disturbed or damaged during the placement of dental implants it can lead to temporary or even permanent numbness or altered sensation. This is a rare but important complication.

CBCT scans are generally the best means for identifying the location of this nerve and allow implants to be placed with considerable confidence; however, these are only sometimes available within a normal dental surgery environment. It may therefore require a visit to a suitable hospital where the scan is generally completed within a few minutes. Whilst CBCT scans are more expensive than routine dental x-rays, the information they provide is often invaluable for complex treatment planning and knowing where important anatomical structures are located.

If a tooth is inadvertently damaged by the placement of a nearby implant, any resulting problems can generally be resolved by root

canal treatment in which the nerve of the natural tooth is removed.

## 13. Can dental implants preserve bone?

**This is one of the most important features of dental implants.** Once in place and supporting teeth, everyday functional forces (eating, smiling, talking) stimulate the surrounding bone, which **responds by becoming stronger and denser**. Like all things there are limits as to how much work an implant can do. Your treatment provider will be able **to discuss this in more detail as it relates to your individual case**.

## 14. Can you wear replacement teeth whilst going through implant treatment?

If the teeth being replaced by dental implants are in a clearly visible part of your mouth you will most likely want to have some teeth present whilst the treatment is underway. **There are a number of ways that this can be done, ranging from simple plastic dentures to removable bridges.** If replacement teeth are used during treatment stages it is important that they do not apply uncontrolled pressure to the underlying implants. You should expect to make a number of visits after the implants are placed and before they are brought into function, for small adjustments to any temporary teeth. They may not look as aesthetically pleasing as your final restoration.

## 15. Can dental implants be placed next to natural teeth?

Dental implants are **routinely placed beside natural teeth and this is generally very safe to do**. The only exception to this would be if the natural root was very curved or tilted unfavourably in the proposed path of the implant. This could cause the root to be damaged by the implant; however, this can usually be avoided by careful pre-operative planning.

## 16. Are the new teeth joined together?

When multiple implants are placed, they are routinely **joined together in the same way that a bridge supported by natural teeth** would be designed. When implant-supported teeth are linked together, they are mechanically stronger than the individual parts.

If enough implants are available, it is often easier and just as effective to make several smaller sections of bridgework each supporting a few teeth. The overall effect in the mouth is the same and if you ever need to repair one of the small sections, this can be much easier to do.

Again the bone quality and the number and position of the implants will largely determine which option is most suitable for you.

## 17. Is it uncomfortable when implants are being placed?

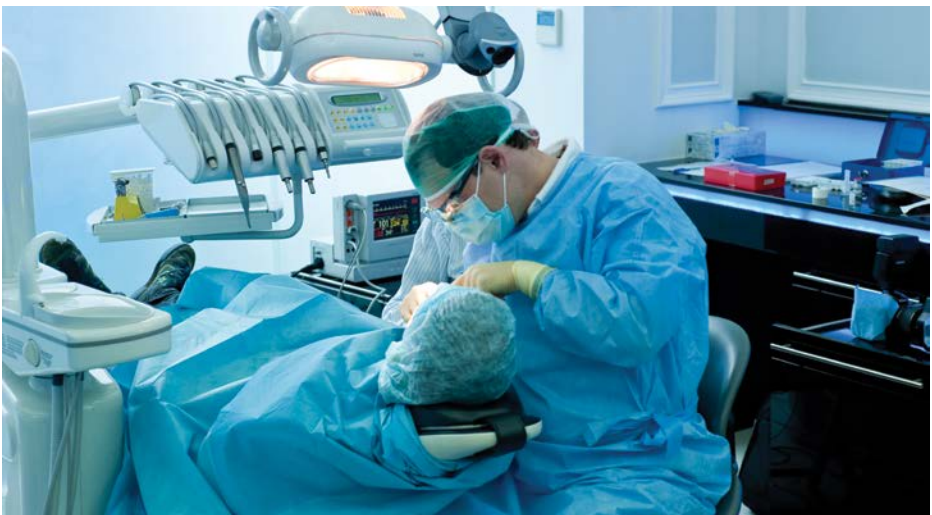
Most patients will be familiar with the dental anaesthetics used for routine dentistry and will know how effective they are. **Implants are placed using the same anaesthesia.** Depending upon the complexity of your case, the operation might

take anything from 30 minutes for a single implant, to several hours for complex bone grafting and multiple implant placements.

Since the surgery normally involves exposing the bone in the area where the implant and/or bone graft is to be placed you can expect some minor swelling and occasionally bruising afterwards.

For most patients, any of the over-the-counter/basic painkillers that you might take for a headache will be adequate for a few days. If you experience more discomfort than this, contact your treatment provider who can prescribe a stronger medication.

Healing is generally straightforward and any stitches are removed a week to ten days later. During the first few days you should report any unexpected levels of pain or swelling so that they can be assessed. If in doubt always ask for advice, as early detection of a problem will often lead to a simpler solution. You may also be asked to take a course of antibiotics and to follow some simple procedures such as rinsing with salt water or an antiseptic mouth rinse. It is important that you carry out these instructions.





## **18. If the implant surgery is going to take a long time can you have sedation or a general anaesthetic?**

Although it is quite straightforward to provide good pain control during surgery, most people will be quite anxious. There is no need to suffer in silence, **as there are several very effective means by which you can achieve a relaxed state.**

- *Relative analgesia* - Some operators may recommend a procedure called 'relative analgesia' where you inhale a mixture of nitrous oxide (laughing gas) and oxygen through a small mask placed over your nose. This gas mixture is breathed for the duration of the treatment stage.
- *Oral sedation* - Another simple way to aid relaxation is to be given a dose of a short-acting medication such as Temazepam (normally used to help with sleep difficulties). This will reduce anxiety for most patients and provides a very good effect for uncomplicated surgical stages taking less than an hour.
- *Conscious sedation* - For treatment of greater complexity it may be suggested that you have a more controlled way of keeping relaxed and comfortable during the surgical stages. This is known as a 'conscious sedation' and is distinctly

different from a general anaesthetic, because you remain alert enough to respond to simple instructions that may be helpful to the surgeon - however, you will remember almost nothing about the treatment stage. It is particularly beneficial for procedures taking more than an hour where a hospital admission is not required - this is probably true for the majority of treatments related to dental implants. For a routine 'conscious sedation' a carefully controlled amount of sedative is delivered through a vein in your arm or hand for as long as the treatment takes. It is a very safe procedure during which your heart rate and oxygen levels are monitored throughout by an anaesthetist. With conscious sedation, a normal dental local anaesthetic is injected around the proposed implant sites. Most people do not remember this stage because the sedation has already taken effect by the time the dental anaesthetic is given.

For procedures involving oral or conscious sedation you may be asked not to eat or drink for at least four hours prior to the surgery and you will need to arrange for an adult to take you home. You will also be advised not to operate any machinery for at least 24 to 36 hours afterwards.



- *General anaesthesia* - General anaesthetics require a hospital admission and are mainly, but not exclusively, used for complex cases such as where bone is being grafted from the hip to the mouth, or where large numbers of implants are being placed at the same time. Most patients will not require a general anaesthetic since conscious sedation is much safer and has fewer post-operative complications.

## 19. If you do not have enough bone what can be done?

So far we have covered the building blocks that are part of routine implant placement. This has included the initial examination and diagnosis, special x-rays such as CBCT scans, sedation during surgery and what to expect after the implants have been placed. However, for some people, bone loss after the removal or loss of teeth leaves them without enough to secure an implant. There are procedures that can be done if this is the case:

- In the upper jaw above the back teeth, it is possible to increase the height of bone available by creating new bone in the sinus. This procedure is called a '**sinus augmentation**'. A skilled surgeon can deliver highly predictable results in this location and without the general success of this technique many patients would be unable to have implants in a part of the mouth where teeth are so commonly missing.
- There are many ways in which bone can be added; however, one simple concept is to take a piece of bone from somewhere else and secure it as an '**onlay graft**' to a deficient area. The new piece of bone will slowly join to the underlying region and when healed and mature, an implant can be placed in a more favourable position.

## 20. Where can you get extra bone from?

Bone can be harvested from a number of sources but usually from behind the back teeth in the lower jaw or from the chin. Sometimes it is taken from the hip or shinbone (tibia). When you use your own bone to create new bone in another area of the mouth you will have to contend with the discomfort created by the donor site as well as the surgical site. Many people feel this is well worth any additional discomfort as your own bone is normally considered the 'gold standard'.

## Alternatives to your own bone for grafting

For those who would prefer an easier but slightly slower, solution there are other sources of bone such as bovine (derived from cow), porcine (derived from pig) or synthetic materials that have been specially prepared to make them safe for use in humans. All of these materials, including your own bone, simply provide a scaffold into which new bone will grow in order to be ready to receive dental implants a few months later.

New bone can take anything from 3 to 12 months before it is ready to receive dental implants. Do not be in a hurry to move to the next stage. If you need a large volume of bone it will take longer to mature than a small amount.

Each surgeon will have his or her preferred way of creating new bone. Many of them will also use a supplementary technique called '**guided tissue regeneration**'. Using this technique, slow-moving bone cells are given time to fill a space by placing a barrier material between them and the fast moving cells of the soft tissues lining the mouth. This is a 'resorbable barrier' that will disappear naturally a few months after it has done its work.

## 21. Does bone grafting affect the length of treatment?

If you need bone grafting, **it will almost invariably increase the length of time** your treatment will take; however, when successfully applied it will greatly improve the outcome of the implant(s) placed. When used in the front of the mouth it can also allow for creation of much better aesthetics.

**Bone grafting requires a considerably higher degree of skill from the operator and is often more complex to perform than the placement of the implant itself.**

In certain situations some operators will recommend combining the implant placement with bone grafting and the placement of a barrier membrane all at the same time. This considerably reduces treatment time and can produce results that are difficult to achieve any other way. However, many surgeons will still prefer to carry out bone grafting as a distinct stage, so that the implants are only placed when the bone grafting has been successful.

Whatever method is chosen to improve the bone quantity the time, effort and expense is generally well worthwhile.

## 22. How do you look after the implants?

It is important that you maintain good oral hygiene with your implants to improve their life span. **Cleaning your implants is not difficult.**

For most implant-supported teeth you will be able to clean around each supporting implant by brushing and flossing in just the same way that you would around natural teeth and tooth-supported bridges. In some areas special floss, interdental toothbrushes and other cleaning aids may be needed to maintain good oral hygiene.

## Cleaning your implants is not difficult

It is reasonable to expect some of the daily hygiene procedures to be a little more complex than around your original teeth and equally expect to spend more time than you may have done in the past if you wish to maintain optimum implant health.

For the first few months the implants are in place your dentist may ask that you are seen more frequently; however, once they are satisfied your treatment is performing as planned, ongoing care will be similar to any patient with natural teeth.



### 23. What can you do if an implant does not work?

In general **the success rate for dental implants is around 95%**; however, in practice this could mean that 1 in 20 of the implants placed might not survive in the long-term. It is a good idea to discuss how your treatment plan might be affected by the loss of an implant.

There are many reasons why a dental implant can fail including smoking, oral hygiene, and systemic disease. In these particular risk groups, the failure rate could be expected to be much higher.

If an implant does not integrate well with the surrounding bone it will eventually become loose and no longer be able to support replacement teeth. Commonly the failing implant causes no discomfort and if there are enough implants remaining, it may not be necessary to replace it at all.

It is important that you discuss the possible complications that may occur with your dentist.

## In general the success rate for dental implants is around 95%

### 24. Different implant procedures

- *One-stage implant* - The implant is placed into a new, healing or healed extraction site (where the original tooth has been removed from) and is visible above the gum immediately after placement. The advantage of this method is that a second surgical stage is not necessary to expose the implant. The implant will not normally be ready to support a tooth for several weeks or months.
- *Two-stage implant* - The implant is placed into a new, healing or healed extraction site and then covered by a layer of gum so that it cannot be seen - this is the first stage. At the second stage some weeks or months later, the implant is uncovered and components added bringing it above the gum ready to begin placing a new tooth.
- *Same day implants* - This technique is most often used to treat the lower jaw and requires considerable planning before the actual day of surgery. Several implants are installed and a few hours later a complete arch of temporary or permanent teeth can be fixed in place. If temporary teeth are used these will normally be replaced with a permanent bridge after a suitable healing interval. Not all patients are suitable for this style of treatment.
- *Immediate implant* - For this technique a tooth is removed and an implant placed immediately into the extraction site. Depending upon the local bone and soft tissue conditions, the implant surgery may be a one- or two-stage procedure. Not all patients are suitable for this approach.
- *Immediate implant and early loading* - This is distinctly different from an immediate implant placement. It is effectively a one-stage technique where the implant is placed into a new, healing or healed extraction site and is fitted with a new tooth at the same appointment. This first tooth will normally be kept out of direct contact with opposing teeth for a healing period of more than three months, after which it is finally restored. This technique tends to be more common in regions of the mouth where optimum aesthetics are important. Again, not all patients are suitable for this approach.

## 25. Frequently Asked Questions

### **Will I be able to eat what I like afterward?**

Once completed, patients should be able to eat a normal, healthy diet with little or no difficulty.

### **What costs are involved in implant treatments?**

The cost can vary, depending on the degree and extent of treatment required. The full cost is therefore explained and confirmed in a written treatment plan from your implant dentist.

### **How long will it take?**

Implant treatment usually requires a number of appointments over a period of months. In some cases, however, implant work can be completed in a much shorter period.

### **How long will it last?**

Once treatment is completed, a regular routine of dental hygiene and regular check-ups should ensure that implants last for many years.

### **Am I too old for implant treatment?**

There is no upper age limit for patients to undergo implant treatment, provided they continue to enjoy reasonably good health.

### **Is the treatment painful?**

Patients are often surprised at how little discomfort they experience during and after implant procedures.



# Glossary

## **Abutment**

An abutment is the component which attaches the implant to the definitive tooth restoration.

## **Barrier membrane**

A membrane which is draped over a bone defect or bone graft to allow bone healing to occur without the ingress of soft tissue which could compromise the healing process.

## **Bone grafting/regeneration**

This is the placement of either natural or synthetic bone material to an area where natural bone is deficient. 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 has occurred.

## **Bridge**

A bridge is a method of replacing a missing tooth or teeth by means of artificial teeth attached to other natural teeth or dental implants. 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 clenching or grinding of teeth at times other than eating.

## **Calculus**

Hard deposits around teeth sometimes referred to as tartar. Calculus is the result of calcification of plaque around teeth, and can be prevented by rigorous attention to good oral hygiene measures. Once calculus has formed, it is difficult to remove, and in most cases this would involve the services of a dental therapist or hygienist.

## **Complete arch**

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

## **Consultation**

An appointment with the dentist to discuss possible treatment options. The appointment may include an examination, X-rays and photographs along with open discussion and explanation where appropriate.

## **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. Most crowns in visible areas of the mouth are white in colour.

## **CBCT scan**

Cone Beam Computed Tomography scan is an advanced x-ray technique that produces three-dimensional images of the jawbone. These images may only be viewed on a computer screen, since they are three dimensional in nature.

## **Definitive restorations**

The definitive 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.

## **Dental anaesthetics**

Anaesthesia means without sensation (Greek), and this includes pain. Today most dental anaesthetics are by means of a simple injection into the area being worked on. More rarely procedures may be carried out whilst you are asleep; this is referred to as a general anaesthetic.

## **Dental implant**

A dental implant is a man made "tooth root". Most implants are made of metal, titanium or titanium alloys being the most common. Implants are placed into jawbones surgically, and may ultimately support crowns and bridges or be used to stabilise dentures.

## **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 removal of teeth.

## **Extraction site**

The space/gap remaining after tooth removal.

## **Functioning implants**

A functioning implant is an implant or implants which bears some kind of dental restoration, be it a crown, bridge or denture, and is capable of chewing.

## **Guided tissue regeneration**

A procedure designed to enhance soft tissue (gum) healing, and may be used to improve the cosmetic effects around teeth or crowns.

## **Gum disease**

Disease of the soft tissues around teeth. Superficial gum inflammation is generally referred to as gingivitis; it is a response to accumulation of plaque, and in most cases may be resolved by rigorous oral hygiene measures.

## **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.

## **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/Integrated/Integration**

This means to bond or fuse together.

## **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 space situated 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.

## **Onlay grafting**

Where bone is taken from elsewhere in the body, i.e. hip (rarely), chin or behind the molars, and secured to the area where bone is deficient.

## **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.

## **Reline procedure**

Reline procedure is where a soft or hard material is used to correct the fitting surface of a denture after an extraction or surgery.

## **Removable overdenture**

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

## **Restorations**

The restoration is a filling, crown, bridge or denture. It effectively restores the tooth/teeth for functional use.

## **Restorative phase/appointment**

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

## **Sinus augmentation**

A surgical 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 working environment. This will include the use of autoclaves to sterilise all non-disposable instruments, along with drapes and gowns to isolate working surfaces and personnel.

## **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 the patient's dental implant procedure including proposed treatment timeframe and costs.

The information in this leaflet is intended to provide an overview of routine dental implant treatment. Treatment plans involving dental implants are unique for each individual and accordingly the timing, cost and delivery of care will be customised. Each of the people providing your care will have their own preferences for the way that a particular course of treatment is delivered and may therefore suggest alternatives or variations that are not included in this information.



## The Association of Dental Implantology

The Association of Dental Implantology is a registered charity dedicated to the provision of general information to the public and educating the profession. It is committed to maintaining and improving the standard of implant dentistry within the UK through the dissemination of scientific research and continuing education.



## Further information

If you have any queries regarding dental implants please discuss these with a registered dentist. The Association of Dental Implantology is a membership and education association working with professionals involved in implantology.

Please note we are unable to offer any medical or clinical advice to individuals. Please visit our website for patients for information on dental implants and to find a dentist in your area: [www.consideringdentalimplants.co.uk](http://www.consideringdentalimplants.co.uk)



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