

During the last 30 years the use of dental implants has changed dentistry beyond recognition. Implants are no longer considered experimental and it is equally rare to come across situations where they cannot be used at all.

What is a dental implant?

Almost all dental implants in use today are made from titanium or titanium alloy, materials that have been shown over many years to be well tolerated by bone.

There are many different implant systems available and when competently used they can all deliver a highly reliable form of treatment.

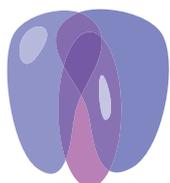
A dental implant is essentially a substitute for a natural root and is commonly screw shaped. Each implant is placed into a socket carefully drilled at the precise location of the intended tooth.

The main aim during installation of any implant is to achieve immediate close contact with the surrounding bone. This creates an initial stability, which over time is steadily enhanced by further growth of bone into microscopic roughnesses on the implant surface.

In order to support replacement teeth, dental implants normally have some form of internal screw thread 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.

What are the alternatives to dental implants for replacing missing teeth?

There are two alternatives for replacing missing teeth, each with its own benefits and disadvantages. **Removable dentures** are relatively inexpensive and straightforward to provide. The disadvantage is that they need to be removed for daily cleaning and many people also find that they can be bulky, loose and uncomfortable. The advantages of **fixed bridges** supported by natural teeth is that they are non-removable and there is no need for a surgical procedure. Their main disadvantage, however, is that they usually involve the preparation of the supporting teeth which necessitates the removal of healthy tooth tissue and can cause irritation of the nerves inside the teeth, sometimes leading to death of the tooth and root canal treatment.



How many teeth can be supported by implants?

All the common forms of tooth replacement, such as bridges or dentures can be replaced 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. Larger spaces created by two, three or more missing teeth do not necessarily need one implant per tooth, however the exact number of implants will depend upon the quality and volume of bone at each potential implant site.

In the upper jaw, bone density is generally poorer than in the lower and if you have no teeth at all, most treatment providers will want to place a minimum of 6 implants to support a complete arch of 10 or more replacement teeth. In the lower jaw, the bone towards the front of the mouth is often very strong and as a direct result, fewer implants may be needed than are required to treat a whole upper jaw.

What else can be done with dental implants?

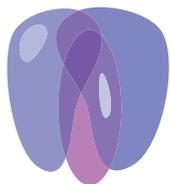
If you have no teeth in the lower jaw, and are not yet ready for multiple implant placements, a conventional lower denture can be considerably improved with 2 implants placed beneath the front section - this is called an 'overdenture'. The same overdenture concept when used to treat the upper jaw, will usually require more implants as the bone is generally softer. Implant supported overdentures, just like conventional dentures, are still removed for daily cleaning. However the implants make them much more stable when in place.

Whilst not suitable for everyone, with proper preparation it is sometimes possible to fit new implant supported teeth on the same day. This fast track treatment can be applied to a number of different situations, however, you do have to balance shorter treatment times against an increased risk of implant failure.

Who is suitable for dental implants?

If you have good general health then dental implants will almost certainly work for you. However, habits such as heavy drinking and smoking can increase the number of problems associated with initial healing and thereafter may negatively influence the long term health of gum and bone surrounding each implant. Remaining teeth might also be compromised making treatment planning less certain.

If you have any other complicated medical problems, please speak to your dentist. We have



considerable experience in handling patients with a complicated medical history. It is rare to have health problems that prevent the use of dental implants.

Do I need to have a healthy mouth to have dental implants?

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. Each of these problems will need to be diagnosed and treated in a logical manner, often placing implants in order to establish healthier conditions.

Although it is tempting to focus on the more glamorous aspects of teeth supported by implants, basic dental health, which includes the treatment of gum disease, repair of decay and the elimination of abscesses will be just as important for the long term success of your 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. Periodontal (gum) disease is a major cause of bone loss and with reduced bone dental implant treatment can be more complicated. Untreated gum disease is also a risk factor for increased long term implant failure.

How will I know if I am suitable for implants?

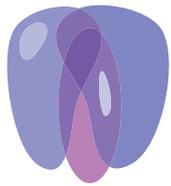
During your consultation appointment you will be expected to answer detailed questions concerning your medical history and there will be a complete examination of your mouth and remaining teeth to discover the nature and extent of any current dental problems. If you do not have up to date x-rays of your remaining teeth you may also be required to have new ones taken. Sometimes models and photos will also be needed so that these can be examined after your visit.

How will I know if I 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, such as CT scans, are usually needed to determine the equally important bone width.

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 stimulate the surrounding bone which responds by becoming stronger and more dense.



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.

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.

What can you do if an implant does not work?

If an implant does not achieve or cannot maintain a rigid fixation with the surrounding bone, it will eventually become loose and no longer be able to support replacement. Commonly the failing implant causes no discomfort and if there are enough remaining, it may not be necessary to replace it at all.

How long does treatment take?

For routine cases, from the time of implant placement to the time of placing the first teeth, treatment times can vary between 6 weeks and 6 months. The availability of better 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 6 months.

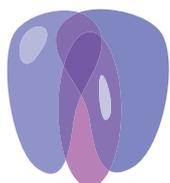
Can I wear false teeth during implant treatment?

If the teeth being replaced by dental implants are in a clearly visible part of your mouth it is most likely that you will 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.

Is it uncomfortable when the implants are placed?

Most patients will be very 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 15 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 swelling and occasionally bruising afterwards.

For most patients, any of the simple painkillers you might take for a headache will be all that is needed for a few days. If you experience more discomfort than this, do not hesitate to contact your dentist who can prescribe stronger medication.

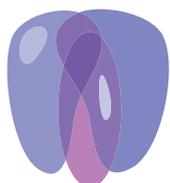
Healing is generally uneventful and any stitches are removed a week to ten days later. You may also be asked to take a course of antibiotics and to follow some simple procedures such as rinsing with salt water or an antiseptic mouth rinse. It is important that you carry out these instructions.

Is it possible to have a sedation?

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

Oral sedation: A simple way to aid relaxation is to be given a dose of a short acting medication such as Temezepam (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 which may be helpful to the surgeon - however you will remember almost nothing about the treatment stage. 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.



What is guided bone regeneration (bone grafting)?

For dental implants to be successful the implant needs to be fully covered in a layer of bone. It is not unusual for there to be insufficient bone available to achieve this, especially at the front of the mouth. In these cases additional bone is placed around the implant at the time of implant insertion. The materials used are of animal origin (normally cow and pig) specially prepared to make them safe for use in humans. The materials form a scaffold, allowing growth of your own bone onto the implant over a period of several months.

How 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.

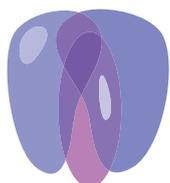
In certain situations we will recommend combining the implant placement with bone grafting and the placement of a barrier membrane all at the same time. This considerably reduces treatment time and can produce results that are difficult to achieve any other way. However, many surgeons will still prefer 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.

How long will the implants last?

Implants in their current form have only been available for twenty years so long term data is limited; however, the latest research shows very good results.

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 home care and willingness to present for 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, just as can occur around natural teeth (peri-mucositis). This can progress to loss of bone around the implant (peri-implantitis). It could probably be said that implants, much like teeth, will last for as long as you can keep them clean.

Which patients can expect a higher level of implant failure?

Certain groups of patients experience a higher level of implant failure, both in the short and long term. These include smokers, heavy drinkers, poorly controlled diabetic, those with a history of advanced gum disease, those with very heavy bites (bruxers) and those who don't maintain a high level of oral health.

How do I look after the implants?

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, Tepe brushes and other cleaning aids may be needed to maintain good oral hygiene. Cleaning is not at all difficult, provided that you do not have impaired use of your hands.

It is reasonable to expect some of the daily hygiene procedures to be a little more complex than around your original teeth - 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 that the implants are in function 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.