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DENTAL IMPLANTOLOGY

PATIENT INFORMATION:
Frequently Asked Questions

What is a dental implant?

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.

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. The terms 'osseointegrated implants' or 'endosseous implants' are widely used to describe dental implants that can develop and maintain a close union with bone in order to support replacement teeth.

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.

All dentists now agree that dental implants provide the best long-term replacement for any missing or failing teeth, giving you the security and comfort you deserve. Implants can be used in a range of situations within the mouth. This can range from replacing a single tooth, to replacing all of your teeth and even to securing loose dentures. They give excellent appearance, stability, security and comfort as they literally become a part of you.

As your other teeth are not affected, this helps to maintain and often improve the lifespan of your remaining teeth. With more teeth on which to chew, the forces are spread more evenly across your mouth, causing less stress and wear on your other teeth.

Furthermore, replacing missing teeth with implants will bring into useful function the opposing teeth. Teeth which do not have anything to bite against often over-erupt or tilt. This can affect the way your teeth come together, making your bite uneven. This can cause toothache and pain in your jaw-joint which may eventually necessitate the removal of these tilted or over-erupted teeth.

What are the alternatives to dental implants?

Another possible option when teeth are lost is to have them replaced by a removable plate known as a denture. Most people tend not to like dentures as they often feel bulky and uncomfortable. They are frequently loose, causing difficulty and embarrassment when eating, and they have to be removed at night.

Another alternative, when it is possible, is to make a bridge attached to the neighbouring teeth. Although this option does provide a fixed way to replace missing teeth, it usually requires filing down the adjacent teeth that will support the bridge. This filing down is damaging, and along with the extra loading that these teeth must then support, may shorten their life-span.

Finally, many people opt to have no replacement when teeth are lost. Apart from the obvious cosmetic issues that may result, failing to replace teeth that are lost will increase the forces that the remaining teeth have to withstand when chewing. As additional teeth are lost, the chewing forces on the remaining teeth increase more and more, eventually leading to their loosening or fracture.

What are the possible complications & risks of dental implants?

Most implant treatment is undertaken uneventfully and our patients are delighted with the outcome. However, although we are replacing your teeth with implants that look and function as much like natural teeth as possible, remember that they are not natural teeth and so there are some issues to be considered.

- Current implant success rates for all patients is about 95%. Despite this very high percentage it still means that for a few implants placed the bone will fail to fuse adequately with the implant (called failing to integrate). This reveals itself by the implant being loose when the integration is checked, usually 2-3 months after placement. Loose implants must be removed but can be replaced in most cases. If an implant fails to integrate, we offer a free replacement of the implant.

- You can expect to return to work and resume normal everyday activities within 24 hours of your implant placement. You will be able to eat and drink on the same day though we do recommend that you avoid hot drinks for the day. You should also avoid putting direct pressure on your new implants so a soft diet is recommended for the first few days after surgery.

- A small amount of swelling, bruising and discomfort can be expected after any surgical procedure and although it is usually mild after this type of surgery, some patients may develop more marked symptoms. Occasionally patients may even develop bruising on their face. If discomfort starts to increase 3 days or more after your surgery, we want to see you to ensure that you are not beginning to develop an infection.

- A very small amount of post-operative bleeding is common and is usually easily stopped by applying pressure to the area by biting on a piece of gauze or some moistened kitchen roll.

- The dissolvable stitches that we use may persist for 2 to 3 weeks or more before finally disappearing. If you find the stitches irritating we can remove them.

- All operations carry a risk of infection. We minimise this risk as much as possible by using antibiotics before the procedures and an antiseptic mouthwash immediately prior to, and for 5 days after the surgery. Despite all these precautions, infection can still occasionally occur. This does not necessarily mean that the implant will fail, although that risk is increased, but usually necessitates some further antibiotics. In the event that you experience increasing discomfort starting 3 or more days after surgery, this could be an indication of an infection and a dentist needs to see you.

- Within your lower jaw runs a nerve which supplies sensation, but not movement, to your lower lip and chin. This is immediately below where lower implants are sometimes placed. If you are having implants placed at the back of your lower jaw we will discuss this with you. We use careful diagnostic imaging to provide an accurate image of the available depth of bone and this greatly aids the safe placement of lower implants. Despite every precaution however, there is still a very small risk that swelling within your jaw bone may cause bruising of this nerve which could result in some numbness, pain or altered sensation of the side of your lower lip and chin that may be either temporary or, very rarely, permanent.

- Frequently, when a patient loses their natural teeth, some of the supporting bone is lost at the same time. Often it will be necessary for us to augment the reduced amount of bone remaining with a small bone graft. If this is necessary for your treatment, then the procedure and the materials that will be used will be discussed at your assessment appointment.

- The pink triangles of gum that normally arch up between the necks of teeth, which are known as the interdental papillae, are the first bits of gum to be lost as a result of gum disease. These

papillae are also lost when teeth are removed. Whilst we will do everything possible to give you the best looking final result, it is sometimes simply not possible to rebuild these missing papillae once they have been lost. This can result in small triangular spaces between the final implant crowns and the adjacent teeth.

What are the stages of implant treatment?

Dental implants are usually placed six to twelve weeks after tooth extraction. The implant is then inserted into the jaw via a short surgical procedure. The implant is then left undisturbed for ten to sixteen weeks before the attachment of the final crown, bridge or denture.

The insertion of the implants is carried out under local anaesthesia (numbing by injections). Stitches are normally removed after 7-10 days.

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 Temezapam (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.

What can I expect from my new teeth?

- When patients have their new implant teeth fitted, they occasionally bite their cheeks, lips or tongue when chewing for the first few weeks. Though annoying, this is something that always settles down as you get used to your new teeth.

- Unlike the teeth that they replace, implants are not alive and therefore do not have normal sensation. Patients sometimes describe this as the implants feeling slightly 'wooden'. Again, this is something that always settles down as you get used to your new teeth.

- Implants are artificial replacements for teeth, designed to look and function as much like teeth as possible. Because they are artificial, they may never be an absolutely perfect replacement for your teeth. Though we will always endeavour to produce the very best result possible, patients should have realistic expectations about what can be achieved with implant treatment.

- Food debris can collect around natural teeth, and implants are no different. You can sometimes find that food debris collects around your implant teeth and if this is the case, you need to be especially careful to ensure that it is cleaned away effectively.

- We will always use the very best materials available for your treatments, but the daily grinding and chewing of hard and crunchy foods presents a challenging environment for your new implant teeth. Just like natural teeth, the teeth that are fitted onto your implants can occasionally chip or break. The screws which connect the crown or bridge to the implants can also loosen and, in exceptional circumstances, fracture. Though obviously frustrating for everyone involved, implant restorations with mechanical failures can usually be repaired or replaced. There will be no charge for any repairs for the first 24 months after placement (excluding damage caused by trauma). These type of mechanical failures are more common in patients who clench or grind their teeth or who have a lack of other teeth to help share their biting forces.

- It is common for the normal shape of the gum to shrink after tooth loss, especially if there have been infections. This means that your implant bridge may not just have natural-looking teeth on it, but it may also have pink material on it to replace your missing gum. Adding this material to your implant bridge will of course make the bridge slightly bigger and patients should be aware that this may initially feel slightly bulky until they get used to it.

How must I look after my new teeth?

- Once your implants and surrounding soft tissues are seen to be healthy and your new teeth are comfortable and correctly adjusted, it is the quality of your home care, and willingness to come and see us or your dentist for regular maintenance reviews that will most influence how long they last. You are in control of your final implant teeth day to day. Despite our efforts during planning and construction, if they are not well maintained at home, you can expect problems to occur just as they would with neglected natural teeth. It is your responsibility to maintain the implants and seek regular reviews for your implant teeth over the many years of good service that they will provide when properly cared for.

- When poorly cared for, implants develop a covering of deposits similar to that found on neglected natural teeth. Left untreated, these can lead to gum infection, bleeding, soreness and general discomfort, just as can occur around natural teeth. Remember - implants, much like natural teeth, will last for as long as you care for them. Well-maintained implants, placed into adequate bone, can be expected to last for many years. However, just as with other surgical implants such as hip replacements, there is no lifetime guarantee.

- Just as natural teeth can develop gum disease, leading to the gradual loss of the supporting bone over time, completed implants can develop a similar pattern of gradual bone loss if they are not kept very carefully clean. It is essential that you keep your finished implants immaculately clean and you will be instructed on how to do this. Cleaning your implants twice a day with a toothbrush will help to avoid this problem, though many patients will also be advised to use floss and small interdental brushes as well. Failure to keep your implants clean can lead to gradual bone loss around your implants. This may result in deterioration in the appearance of the implants in the short term and loosening and failure of the implants in the longer term.

- Some groups of patients can expect a higher level of this type of implant failure. These include smokers, patients with poorly controlled diabetes, heavy drinkers and patients with a history of advanced gum disease. For these patients it is very important to have a more rigorous programme of care with a hygienist and regular reviews with a dentist who is familiar with implants to monitor home care and possible changes exceptionally carefully.

How must I look after my implants if I have an implant overdenture?

It is very important to keep the implant attachments inside your mouth and denture spotlessly clean. As explained above, this will reduce the chance of any infections around the implants but it will also reduce the wear of the metal components used in implant overdentures. If these are not kept very clean they can wear out prematurely and require costly replacement. The replaceable plastic liners inside your denture are designed to wear, protecting the metal components. These are relatively inexpensive and will need replacement every six months to two years depending on the heaviness of your bite. In common with normal dentures, you can expect that your implant supported dentures will require maintenance, repair and possibly replacement with time. We will normally not charge for any repairs etc for the first 24 months after fitting (this excludes damage from trauma or caused by dropping the denture).