Implants

What are they?

Implants are a revolutionary new way to have another set of teeth that does not move like a denture or involve cutting down sound teeth. Where there is a space in your mouth a firm new tooth can be placed which has its own root.

Dental implants have a very long history but until recently have been unpredictable and so have had a mixed reception. The current renewed rise in the use of implants dates from the 1960ôs. This was brought about by the discovery that bone will bond to the metal titanium and so the vast majority of implants in modern dentistry use titanium.

The second great advance has been the discovery that where bone has shrunk it is possible to grow new bone. This has greatly increased the number of people who can have dental implants and so benefit from the increased confidence and ability to chew which having dental implants brings.

These discoveries allow us to place a new root made from titanium in the bone and once it is ósetô to build a new tooth above the gum. This can revolutionise the lives of so many people.

No longer will dentures, which move, be the only option.
No longer will healthy teeth have to be sacrificed for bridges.
No longer will soft foods be the preferred choice on menus.
No longer will you need to put your hand in front of your mouth when you laugh or smile.

What options are there?

There are four ways that a space can be treated:

1. **The space can be left.**

Advantages	Disadvantages
No dental treatment	Likely to be cosmetically poor
No cost	Teeth may drift into the space allowing food to pack between teeth.

2. **A denture (plate) can be made to fill the space.**

Advantages	Disadvantages
Simple and quick	Has to be removed to clean
Lower cost	Bulky Food can trap underneath

3. **We can bridge over the space.**

Advantages	Disadvantages
Quick	Teeth need to be ócut downô
Long lasting	Higher cost

4. **We can place an implant-retained crown**

Advantages	Disadvantages
óToothô on own órootô	Can take three months
Firm and long-lasting	Higher initial cost
No cutting of teeth	
Cosmetically superior	

What is involved?

A titanium implant (like a new tooth root) is placed into the bone and allowed to heal for six to eight weeks.

After the healing period is complete the implant is tested to see if it is firm and has bonded to the bone. If it is then we can go on to the next stage. If it hasn't then it is allowed a longer time to heal.

The next stage is to take 'moulds' of your teeth and gums for the ceramist to make a tooth-like top. The top takes around two to three weeks to make and then it is either glued or screwed into place, depending on the design.

Will it hurt?

From a logical point of view everybody imagines that having your bone drilled is bound to hurt. I have found over the years that no matter how much reassurance I give, people do not believe me! However, the process is carried out under local anaesthetic, the same as if you were having a filling. The implant placement is pain free and afterwards the discomfort is a bruised feeling which may last for a couple of days. We supply pain killers, if needed, after implant placement.

Probably the most telling fact though, is that people who have had implants, choose implants as their first, rather than their last, option when they have another space which needs filling.

Can I be put to sleep?

We have the ability to give you sedation if required. This is not the same as a general anaesthetic as you are awake, though drowsy, throughout. We can discuss this more fully when we have the pre-implant chat. There are two levels of sedation which we have to offer:

Oral Sedation

> This is where we give you some Valium tablets. Half are taken the night before to make sure you have a good nightôs sleep. The other half are taken one hour before the implant placement. This ensures that you are perfectly relaxed.

Intravenous Sedation

> A tiny tube is placed in one of the veins in the back of your hand, this enables us to give a measured dose of relaxant to make sure you remain comfortable during the implant placement.

None of the above are better than any of the others. It all depends on what you need in order to remain relaxed and which suits you best. We do not put anyone to sleep in the dental chair as this is a procedure now limited to General Hospitals.

Attention to detail is important to us.

The most important thing for us at Hilltop Dental Practice is not to take short cuts and to this end we make every effort to ensure that the implant procedure is conducted with a high degree of sterility.

Before the appointment

You will be given a dose of antibiotics one hour before the implant appointment. This ensures that there are no harmful bacteria circulating in your bloodstream which may compromise the initial bond of the implant to the bone.

At the implant appointment

We clean your face and mouth with a special anti-bacterial solution. We also clear the surgery and have sterile gowns and drapes similar to those used in an operating theatre. All the instruments used are sterile.

Following the appointment

We give you an antibacterial rinse and gel to ensure that the implant starts to bond in as conducive environment as possible. These are taken over the next week and are fully explained as we go along.

It is easy to miss out these important elements because they are fiddly, time consuming and expensive. But we want to offer you the highest quality dentistry available.

Will I be left with a gap?

If a tooth is removed at the front it is obviously a concern as to whether the gap will be left for all to see for the two months whilst the bone is bonding to the implant.

There are a number of ways in which the space can be filled temporarily depending on the individual situation

1. A temporary plastic tooth can be glued to the teeth on either side.
2. A temporary plastic plate can be made to fill the space. This is mainly used when there is a gap greater than one tooth.
3. A temporary tooth can be fixed immediately to the implant. This is only possible when the friction grip to the bone is high and the initial stability is high.
4. If there is a crown which needs replacing on one side of the space or the other then a small bridge can be made to fill the gap.

Rest assured that if there is an unsightly space then we will make sure that it is filled for the duration of the time the implant needs to heal.

What can go wrong with an implant?

The problems can be broken down into short term and long term. The following paragraphs will outline the common problems and what we do about them.

Short Term

Problem

The most common problem here is a lack of bond. The implant is placed and when we come to test it after six to eight weeks we find that there is no grip to the implant.

Solution

1. If the bond is ónearly thereô, then we will wait for another month to six weeks and then retest.
2. If there is absolutely no bond then we remove the implant and replace it with a new one. In my experience this second implant takes very well.

As to why we get an occasional lack of bond, it is impossible to know. The human body is not a machine and so some individual variation is inevitable.

The placement of the second implant is much swifter than the first as the correct size hole is already there.

Long Term

Problem

There can be a gradual overloading of the implant due to the fact that the teeth wear but the implant crown doesnôt. People who normally grind their teeth a lot at night will notice this first. Normally what happens is that on a routine x-ray it will be noticed that the bone is shrinking and the implant is losing support. Left alone this will mean the eventual loss of the implant.

Solution

1. For the severe night time ógrinderô a plastic shield is made which protects the teeth from wear so that the natural teeth donôt become short. This will be worn at night as this is when the majority of the grinding occurs which also protects the implant.
2. We build an area of weakness into the system, this means that it will fail at a convenient point and not in the area where we have spent the money! What we do is cement the crown on with medium strength glue. If the implant starts to become overloaded the crown will fall off and this acts as an early warning signal. It is easy to re-cement the crown and then adjust it so that it is not taking too much weight.

For the average person who does not grind or clench their teeth much, the crown may never fall off.

How do I look after my implant?

You will be shown how to care for your implant, but to re-cap:

- Tooth Brushing
  The area we are most concerned about is where the gum meets the implant top. This is the weak area for teeth as well as implants. Place the bristles of the brush half on the gum and half on the implant crown ï Press firmly and rock the brush backwards and forwards. This will ensure that the middle bristles clean the junction. Do this on the cheek side and the inside surface (tongue side / roof of mouth). Ignore any bleeding. If it bleeds every time you brush it, for more than a week, then give me a ring.
- Interdental cleaning
  - Bottle brushes
    Find the gap between the implant and the next tooth at gum level. Insert the bottle brush and rock it backwards and forwards so that the bristles clean the gum in-between the tops. We will have shown you the correct size of brush. If you buy any replacements from your local chemist then the brush should fit between without a lot of pressure. Again ignore any bleeding, especially to start with.
  - Woodsticks
    When the gap is too small for bottle brushes then woodsticks are the cleaner of choice. The woodstick needs to be pushed between the tops in the same area as the bottle brushes and then rubbed backwards and forwards to clean the gum in between. The woodstick is triangular in cross-section, the thin flat side is the one that needs to be rubbed against the gum. This technique is far better demonstrated than

explained in writing, so this should be a reminder rather than your primary woodstick information! Again ignore any bleeding unless it persists over a week.

- Mouthwashes
  I do not recommend the long term use of mouthwashes. There can be specific reasons why they may be useful in the short to medium term, however, you should get all the gum health you need from following the techniques that I have outlined above.

What is you experience of placing implants?

I have been placing implants since 1995 and in that time I have tried many of the foremost implant systems that are made. I now exclusively use the Straumann system which I feel is the best on the market. Within the Straumann system there are different levels of implant marketed, I choose to use the very best that they produce as it is something that will be permanently fixed to your jawbone for many years. I have placed hundreds of implants over the years.

In Bern, Switzerland, I went to the home of Straumann, to learn how best to use their system.

In Gothenburg, Sweden, I went to the Branemark Institute to further my studies. Professor Branemark is considered by many to be the fatherôof modern implant dentistry.

Furthermore I have studied under Dr Hilt Tatum who pioneered in the 1960ôs many of the bone growing techniques which we routinely use today. Dr Tatum is a fantastic surgeon and it has been a privilege to learn from such a master craftsman.

Are all implant systems the same?

I have to say an emphatic **no** to this. It is important to consider the quality of anything which is going to be placed permanently in your mouth.

There are literally hundreds of systems available; some of which are made with no research behind them at all and can be of a very "rough and ready" quality. Why are dentists buying them? They do not cost much but this does not necessarily mean that they won't cost you much!

As I mentioned earlier I use Straumann which, in my opinion, have the longest and broadest research data behind them. They have many decades of research behind their system. They are manufactured in Switzerland using the most modern and sophisticated machining available and are sterile on arrival in the surgery. The Swiss have a deserved reputation for producing engineering of a superlative quality and this implant system is no different. It is beautifully engineered and a pleasure to use.

Healthy gums: the basis for long term success

This system allows me to make custom abutments. The peg that comes out of the implant is called the abutment. Implant companies make abutments which can be bought "off the peg", and are cheaper, but the best abutments are made to the mouth of each individual patient. It allows us to precisely place the crown edge just at the gum margin which is the best place for a good looking crown and healthy gums. My preference is to routinely use custom abutments in order to maximise aesthetics on front teeth and function on back teeth. It is essential to have the flexibility to give the most appropriate treatment for you and not to have treatment dictated by any limitations of the system.

Are all laboratories the same?

I have to say an emphatic **no** to this as well. Whilst I don't want you to become a mastermind on the intricacies of the dental world I think it is worth spending some time to understand what your money is buying.

The beauty of the finished crown and how lifelike it looks are mainly down to the skill of the ceramist. Like all things in life there is a range; from outstandingly wonderful to unbelievably bad. The technician I use produces beautiful lifelike crowns that are difficult to tell from real teeth, even close up. This will give you the ability to smile with confidence.

Truly breath taking crowns

Here things become a little technical but I hope that you will bear with me. The major problem with producing beautiful crowns is that the inner thimble is usually made from a mixture of gold and platinum which is a silver colour. As we don't want our crowns to have a silver/grey tinge to them we paint over the surface a thick, opaque white layer which we then build porcelain onto. This gives a solid, white appearance to the crown making it look false by not allowing the light to travel through as it would in a natural tooth.

To overcome this we have a hard ceramic core made rather than a gold one. This means that because the core is tooth coloured the porcelain that is built on top will allow the light to pass through as a natural tooth would, giving superior aesthetics and a gorgeous lifelike tooth.

Comfortable Crowns

Whilst I am explaining the technical side, I would like to go into one more area which is of critical importance but is unseen. The best crowns are made on an artificial hinge joint called an anatomical articulator. This allows the technician to make a crown which is right for you not only when you bite together but also when you slide around from side to side. It is difficult and fiddly to do but results in crowns which are truly fashioned for your mouth.

You can tell if a dentist is using an articulator for their crowns because you will have a strange metal cage used to measure your jaw position which goes in your ears and onto the bridge of your nose. Completely painless and fun in a strange sort of way. My implant crowns are made using anatomical articulation and should result in the crowns feeling comfortable and part of you; from day one.

Shade taking for that finishing touch

The last thing I want to mention, from a laboratory perspective, is shade taking. The shade for a crown can be taken in the surgery but the technician has no idea of the subtle variations in shade that every tooth has and so the crown can come back looking bland. The best crowns are produced when the technician has the opportunity to take the shade himself and then he can introduce all the subtleties when he makes the crown. Also in this age of digital photography the technician can have a number of views of your mouth which will make everything blend beautifully. We recommend that our patients visit the technician to obtain the highest degree of vitality and accuracy in their crowns.

How long do implants last?

There are two aspects to in this question. 1. What are your success rates? 2. How long can I expect my implant to last?

What are your success rates?

My success rates are above 90%. Having said that, it really doesn't mean very much. Probably a more meaningful fact is that the vast majority of people I have treated have been delighted with the outcome of their treatment. As we have outlined earlier there are things which happen which are unplanned but the important thing is being under the care of a dentist who has the experience to bring things to a successful conclusion.

How long can I expect my implant to last?

Titanium root form implants have been around for about fifty years. The first implant that Professor Branemark placed back then is still apparently doing well. The first implant that I placed, nearly twenty years ago is still there and doing well.

Most problems in dentistry, implants included, happen in the first year. Most of the problems in the first year happen in the first couple of months. So, once you get through the first couple of months after everything is fitted, the statistics show that it should last for many years.