A missing tooth or missing teeth can be distressing and result in loss of confidence. Dental implants can be used to help replace missing teeth.

This leaflet explains dental implants and gives an overview of the different options. It also covers their potential risks and benefits. After reading the leaflet, if you have any questions you should contact your dentist or your specialist.

What is a dental implant?
A dental implant is a tooth root made from titanium and shaped like a screw. It is placed into the jaw bone. The implant is used as an anchor to support the artificial tooth.
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Telephone: 020 3456 1053.
We will do our best to meet your needs.

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What are the benefits/advantages of dental implants?
Dental implants offer you the possibility of having false teeth, which can feel similar to your own. Implants can be used to replace missing teeth without the need to drill into the adjacent teeth. They also help preserve the jaw bone.
Dental implants can be used for a number of situations and needs, including replacement of a single tooth, several teeth or to support a loose denture when all teeth are missing. Although they replace missing teeth they do not necessarily enhance appearance.

Are dental implants safe?
Titanium, the material from which implants are made, is accepted by the tissues of the body, and hence is safe to use. Almost all dental implants in use today are made from titanium or titanium alloy to enable the implants to bond to the bone. The terms ‘endosseous implants’ or ‘osseointegrated implants’ are used to describe the implants in use today and indicate the close union of the implant to the bone. There are many dental implant systems available, and if used correctly all can deliver a reliable form of treatment.
Although implants are safe to use, individuals vary in their response to treatment due to differences in the way they heal. This occasionally may cause problems and also contribute to the failure of implants.

Are implants suitable for everyone?
You need to be relatively fit and healthy, and the overall care of your mouth also has to be good. If you cannot tolerate having surgery, implants are not suitable for you. You also need to have enough jaw bone height and volume. If you have inadequate bone volume, it is possible to build it up with a graft, which may be your own bone or an artificial bone substitute. Your suitability for implant treatment and the need for grafting will be decided and discussed with you by your clinician.

What if I do not have enough bone?
Bone can be grafted if you do not have enough bone to place the implant into your jaw bone. Grafting can be done to create the bone width needed to place the implants. In cases like this, it is common for the graft to be taken from another site either inside the mouth or from a site such as the hip. The graft would then be allowed to heal for a period of 6 months before you are reassessed for the implant placement. If however, there is enough bone to place the implant, but there is a risk of some exposure of the implant, then grafting can be undertaken at the same time as the implant placement. It is normal practice to use your own bone for the grafting. However, sometimes due to the limited amount of bone that can be collected, alternative grafting materials may be used. These can be of animal origin (normally cow bone) or can be synthetic. These grafts if used would normally need protecting with a barrier membrane which is often made of collagen derived from animal sources. If you need to have bone grafting, then the treatment time will be prolonged by at least four months. Your clinician will discuss the alternative ways of rebuilding your own bone with you following your initial assessment.
How successful are dental implants?
Today implants have a high success rate - 80 to 95% over 15 years - in patients with healthy mouths. The success rates for dental implants in patients who are susceptible to gum disease is slightly lower - 80 to 85% over seven years. Over 90% of implants bond successfully to the jaw bone.

Certain factors such as the quality of your jaw bone, unstable gum disease and smoking reduce the predictability and outcome of implant treatment.

Smokers have a higher failure rate and we expect you stop smoking at least six months prior to starting implant treatment. Patients who have a habit of grinding their teeth are also at a risk of overloading their implants. This can reduce the success rate of the implants. Once implants have healed into your jaw bone, the long term success rates are also dependent on your ability to maintain and keep your implants clean and having them checked regularly.

What types of implants are available?
There are a number of different implants available. The differences are mainly in the implant surface and the shape. Implants are also available to be used as a one stage or a two stage procedure. In the former, you undergo one surgical procedure to place the implants and you will be able to see a little bit of the metal covering the implant head in your mouth. In the second you have to have two surgical procedures, one to place the implant into the jaw bone (the gum is replaced over the implant) and a second minor procedure to uncover the implant and connect it to the mouth. This is sometimes referred to as a submerged implant. After examining you carefully, your clinician will decide which procedure is going to be suitable for you.

Two Stage Procedure showing implant placed and covered over (a, b); X-ray showing implant (c) and second stage surgery uncovering the implant (d, e)

One Stage Procedure showing implant placed and left connected to the mouth
How do dental implants work?
Implant treatment involves two phases, the surgical phase and the restorative phase. The first part (surgical phase) involves placing the implant (metal root) into the jaw bone. The surgery is normally carried out under local anaesthesia as an outpatient and is generally not painful. The implant is then allowed to bond to the bone, which can take from three to six months. This time is increased to eight to nine months if a bone graft is needed. During the time the implants are bonding to the bone you may have to go without teeth for a few days. If you have had a two stage implant you may have to undergo another minor surgical procedure before the restorative phase of treatment starts. After this the second restorative phase starts. This involves taking a mould of the implant onto which the false tooth is anchored. The false tooth is usually made by a dental technician from this mould. Depending on whether you are having a denture retained on implants, a bridge, or a crown, the restorative procedure will vary and this will also determine the treatment time. The total treatment time is normally one year from start to finish.

How will I feel after the surgery?
Following surgery you will experience some swelling and discomfort during the first few days. You may also experience some slight discomfort and pain in the immediate healing period. Painkillers can be used to help ease this discomfort. You will need to be seen one week after the surgery to have your stitches removed. Your clinician will check your mouth and dress your temporary teeth. You will be kept under review until the second part of the treatment takes place.

Can I wear my teeth after the implant surgery?
Immediately after the surgery, you will not be able to wear your teeth for a few days. After this if you wear a denture, this will be adjusted and relined. If you wear a bridge this will need to be fitted.

Will I need additional investigations?
Usually assessment is undertaken using standard X-rays. However sometimes further investigations may be needed to assist with planning. These are the use of special X-rays called tomograms (a) which show the width of bone. Sometimes CT scans are also used to show the bone anatomy in three dimensions (b). In addition to these you may need to have moulds of your teeth taken to set up the intended position of the teeth called a ‘diagnostic wax-up’ (c).
What happens after the implant treatment is completed?

Once your treatment is complete, your implants need regular care to ensure they are functioning well. Your ability to clean around your implants is critical to ensure long term success. If you do not keep your implants clean, your gums may swell and bleed, cause infection of the bone and result in you losing your implant. Smoking can also cause your implants to fail. As with crowns and bridges, the teeth on your implants will wear and may need replacement.

Can anything go wrong?

Complications may occur at different times during your treatment.

During Surgery:
- Occasionally, it may not be possible to place the implants due to unforeseen problems. If this occurs, you will be informed. In these situations you may have to opt for the conventional methods of replacing your missing teeth.
- Numbness of the surrounding area: Depending on where your implants are placed, occasionally you may suffer numbness of the surrounding area after the surgery. This usually resolves over time. However in a few cases you may suffer permanent numbness.
- Bone grafting: Complications with bone grafting will be discussed with you prior to your surgery. In some patients, especially smokers, the bone graft may not take. If this occurs conventional forms of treatment may need to be considered.

After Surgery:
- Failure of the implant to integrate into the jaw bone: Occasionally the implant fails to unite with the jaw bone and has to be removed. Depending on the reason for the failure, it may be possible to replace the implant after a healing period.
- Infection: This is a rare complication which can occur. Usually antibiotics will be prescribed and the site of the infection monitored.

Long Term:
- Wear or breakage of the implant retained prosthesis: Crowns, bridges or dentures may need refurbishment with time due to wear. This refurbishment will incur an additional cost. Teeth may also break if you are using them inappropriately. Additionally the clips or screws retaining your false teeth (dentures) to the implant may break or wear out with use and may require replacement.
- Poor cleaning around the implants can cause infection and loss of the implant (metal root). This inflammation is called mucositis or peri-implantitis if you have also lost bone around the implant.

What do implants cost?

The cost of dental implants is expensive due to the material from which they are made. The cost of the treatment is dependent on a number of factors, including the number you need and the type of treatment you have. Dentures (you remove these for cleaning) retained on implants are less costly than a fixed bridge (this is fixed in your mouth). NHS funding for dental implants is limited and strict criteria have to be met for acceptance onto this scheme.

How do I know if implants are for me?

Your suitability for implant treatment is assessed initially at your first consultation. At this time your consultant will also discuss with you your eligibility for NHS implant treatment. If you are suitable for implants but are not eligible for NHS implant treatment, you will be advised to consider this treatment as wholly private treatment, normally through your own dentist.
What will happen if I choose not to have implants?

If you decide not to have implants, then you may consider the alternative forms of treatment for tooth replacement. These will include dentures or bridges or accepting the gaps. The consequences of not having the teeth replaced will also be explained to you.

Contact

Department of Restorative Dentistry
Royal National ENT and Eastman Dental Division
Ground Floor North
250 Euston Road
London
NW1 2PG
Telephone:  020 3456 1030
020 3456 1082
020 3456 1078
Website:   www.uclh.nhs.uk

Further information

Implant Co-ordinator
Telephone:  020 3456 2378
Monday to Friday: 08:00 to 17:30
Website:   www.adi.org

PALS - If you have any concerns

PALS is a patient-friendly, easy to access service designed to provide a personal contact point to assist patients, relatives and carers. If you have a problem that you have not been able to sort out we can help you to resolve it.

The PALS office is located in the main atrium of University College Hospital, 235 Euston Road, London, NW1 2BU.
PALS are open:  Monday to Friday: 10:00 till 16:00
Telephone:  020 3447 3042
Email:   uclh.pals@nhs.net
**How to find us**

Royal National ENT and Eastman Dental Hospitals

47-49 Huntley Street

London

WC1E 6DG

www.uclh.nhs.uk

Huntley Street is close to Euston, Warren Street and Goodge Street Underground Stations and there are bus stops nearby. Apart from limited disabled parking there is no car parking at the hospital. You are advised to travel by public transport.