

# Dental Implants

Information for patients

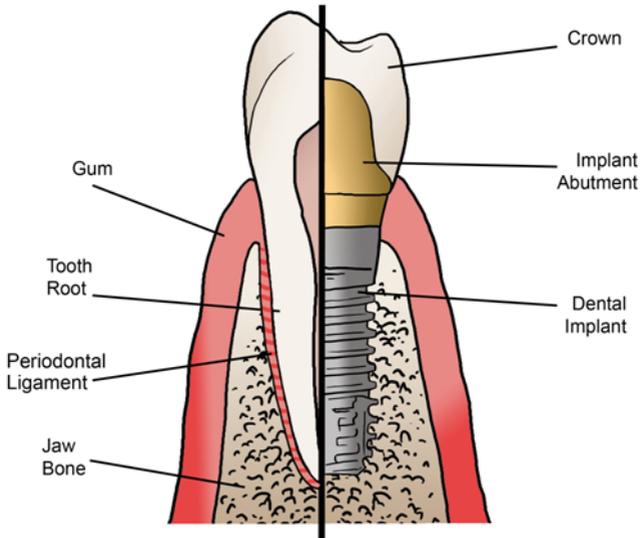




## What is a dental implant?

A dental implant is a hollow screw, usually made out of titanium alloy, which is placed into the jaw.

The implant replaces the root portion of a missing tooth.



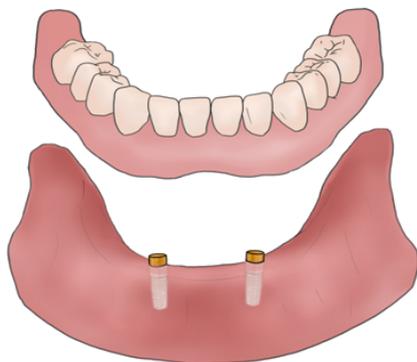
## How are dental implants used to replace teeth?

The dental implant acts as a support for a prosthesis, which is the part that replaces the teeth and gum that you normally see in the mouth.

There are two different types of prosthesis:

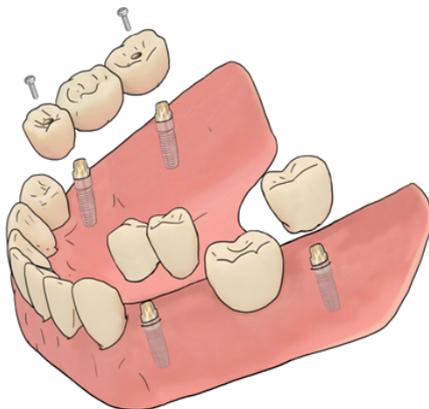
## 1. Removable Overdentures

An overdenture is held in firmly with “press-stud” like attachments. You can remove it when required, at night and to clean the implants.



## 2. Fixed Crowns/ Bridges

Crowns (replacing single teeth) or bridges (replacing multiple teeth) can be screwed or cemented in. You cannot remove these restorations for cleaning.



## What are the advantages of using dental implants to replace missing teeth?

- Replacement of missing teeth using dental implants aims to improve your chewing ability, speech, appearance and comfort
- There is no need to drill or cut down the neighbouring teeth to provide support for bridgework
- Several missing teeth can be replaced with fixed bridgework, rather than removable dentures
- Attaching removable overdentures to implants makes them much more stable and retentive

## Am I suitable to have dental implants?

Dental implants are not the right option for everyone with missing teeth.

### Suitability depends on:

- General factors, such as your overall health and smoking status are also very important
- How you feel about coming for multiple appointments over a period of months and having at least one surgical procedure
- Your age: implants are usually only placed once you have stopped growing
- The health of your mouth, including your teeth and gums, and the amount of bone at the implant site

You must also be committed to looking after your mouth in the long term. This means brushing your teeth and flossing daily, going to the dentist regularly and not smoking.

## What does assessment for dental implants involve?

Assessment begins with a detailed examination of your mouth and x-rays. Impressions of your mouth are taken to help plan the position of the replacement teeth.

A special 3D x-ray, (**Cone Beam CT scan**), is usually requested. This scan can provide important information about the position of structures, such as the roots of neighbouring teeth, nerves, the nose cavity and the sinuses (air spaces linked to the nose). The scan also assesses the amount of bone in the area.

## What if teeth require extraction?

Tooth extractions are often done 6 - 10 weeks in advance so that the gum has time to heal in the area before implant surgery. This is called **Early Implant Placement**. A removable partial denture will be fitted immediately after teeth are extracted. This will replace the teeth throughout treatment until the implants are ready to be used.

Occasionally, if the conditions are suitable, a tooth may be extracted and an implant placed into the socket at that visit (**Immediate Implant Placement**).

## What if there is not enough bone?

If there is not enough bone, it may be possible to build up the bone using a **grafting procedure**. The type of procedure used depends on the amount of bone needed:

Where there is a **small bone defect**:

- Grafting can be done when the implant is placed
- Bone chips can be taken from the area around the implant site. These may be combined with particles of bone substitute, which are usually from an animal source. The chips or particles are protected by a special covering, or **membrane**, which is placed under the gum

If more bone is needed, grafting is done several months before implant placement.

- For **medium size defects**, the procedures vary but bone substitute particles can still be used but they must be protected using a more rigid membrane
- For **large defects**, a block of bone is needed. This can be taken from sites inside the mouth such as the chin, or it can be taken from the hip. These procedures generally require treatment under general anaesthetic and a stay in hospital.

In the upper jaw there may not be enough bone because of the position of the maxillary sinuses:

- **Sinus grafting** can be performed using bone substitute particles to increase the height of bone

Bone grafting procedures increase the complexity of implant treatment and will add to the length of time it takes to complete treatment (see flow chart on page 13).

## What does dental implant surgery involve?

Surgery to place dental implants is usually done under local anaesthesia. This means that you are awake during the procedure and are able to go home immediately afterwards. The appointment usually takes around 90 minutes.

Injections are used to make your mouth numb. The gum in the area is then lifted to expose the jawbone. A hole is carefully drilled in the bone and the implant is gently screwed in. Bone grafting can be carried out at this stage if necessary. The gum is then put back in place with stitches.

If implant placement is relatively straightforward, a **healing cap** can be placed on the implant immediately so that it is visible above the gum (**One Stage Surgery**).

If surgery is more complex, the implant may be covered up to help healing. At a later date further, more minor surgery will be required to expose the top of the implant and place the healing cap (**Two Stage Surgery**).

## What should I expect after implant surgery?

Instructions about how to look after your mouth after surgery are given at the end of this leaflet. The dental team will explain these in detail before you go home.

As with all types of surgery there are some **common side-effects** that you should be aware of:

- **Discomfort and pain:** these symptoms are usually managed effectively with painkillers such as paracetamol and / or ibuprofen which are available to buy over-the-counter
- **Swelling and bruising:** this is usually worse 24 - 48 hours after surgery and varies a lot in severity depending on the extent of the surgery and your body's response
- **Infection:** the risk of this is low if you keep the rest of the mouth clean by brushing and flossing normally and use the recommended antimicrobial mouthwash as directed. Antibiotics are only given in certain cases e.g. when bone grafting takes place

## How long does healing take?

The gum in the area will usually heal within 1 - 2 weeks. The stitches placed will be removed within this time. Healing of bone takes longer and in most cases, implants are left to **integrate**, or bond to the bone, for 2 - 6 months before use.

At this stage, if the implants remain beneath the gum (Two stage procedures) a more minor surgical procedure, **Implant exposure**, must be carried out so that healing caps can be placed.

## When are the teeth made?

Once the implants have integrated and the healing caps are in place, the **Restorative Stages** (see flowchart on page 14) to make the prosthesis can begin.

If the prosthesis is to be fixed in, an impression of the implants is needed so that the crown or bridge can be made. This is usually temporary at first and will help to shape the gum around the implant and check the shape of the prosthesis.

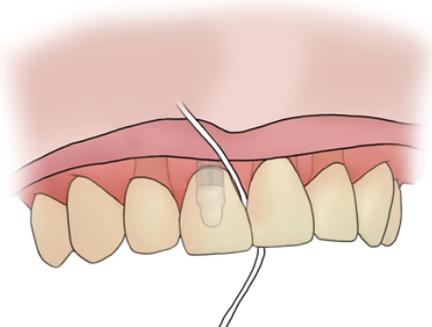
When the gum is stable, a further impression is taken and the final crown or bridge is made. This may take several visits, a few weeks apart depending on the complexity of treatment.

If the implants are to secure a removable overdenture, several appointments a few weeks apart are needed to make this prosthesis. Sometimes an existing denture can be modified to clip onto the implants.

## What is involved in the long term care of dental implants?

When treatment is complete most patients are able to return to their dentist for routine care.

Excellent home care (toothbrushing and flossing around the implant daily), regular check ups and professional cleaning by your hygienist or dentist will help to keep the tissues around the implant healthy.



## How long do dental implants last?

Dental implants have a high survival rate. Studies show that about 90% of implants placed 10 years ago are still present and functional today.

## How can dental implants fail?

In rare cases, the implant never knits to the bone, this is known as **early failure**. If this occurs, your dentist will discuss other options to replace your missing teeth.

Over time, inflammation of the gum (**perimucositis**) and bone loss (**perimplantitis**) may occur around the implant. This can eventually result in loss of the implant, known as **late failure**. The chance of this is greater in patients with:

- **A smoking habit**
- **Poor oral hygiene**
- **A history of gum disease**
- **A history of radiotherapy to the jaws**
- **Poorly controlled diabetes**
- **Certain medications such as bisphosphonates**

Other problems that may occur include:

- **The porcelain of crowns or bridges can chip or the restoration may come off. If this happens, the crown or bridge may need to be repaired or replaced**
- **Overdentures or the clips that attach the denture to the implants may wear over time and require replacement**

## Can I have dental implant treatment at the Leeds Dental Institute?

There are national guidelines about who can receive implant treatment within the NHS.

### Priority groups are:

- Oral cancer patients
- Patients with developmentally absent or severely malformed teeth
- Patients who have experienced facial or dental trauma

Even in these cases we normally have to try conventional options before implant treatment is considered.

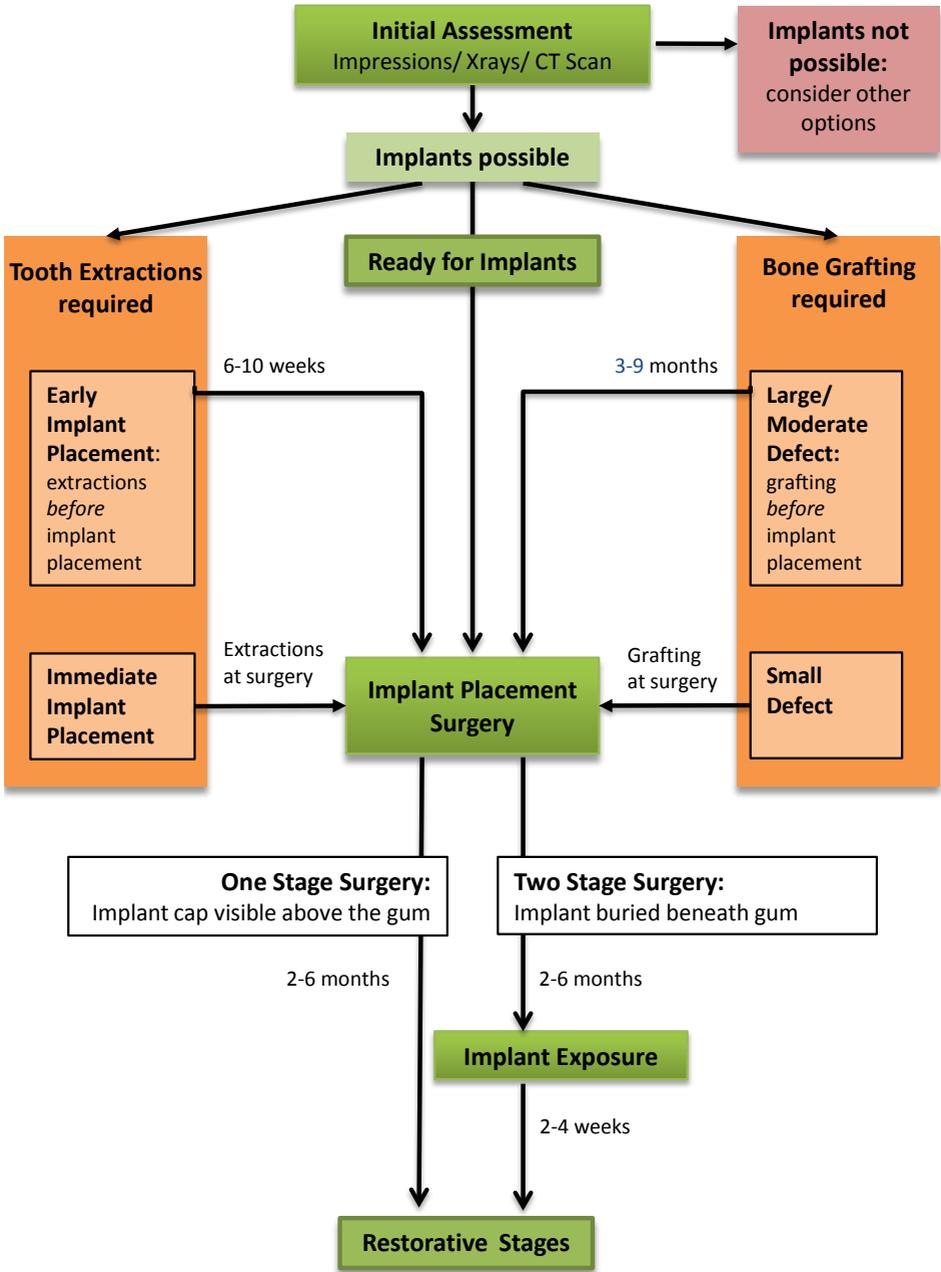
## If dental implants are not for me, what are the other options where teeth are missing?

In some cases it is better to accept the space where a tooth has been lost, especially if there is little impact on appearance or function.

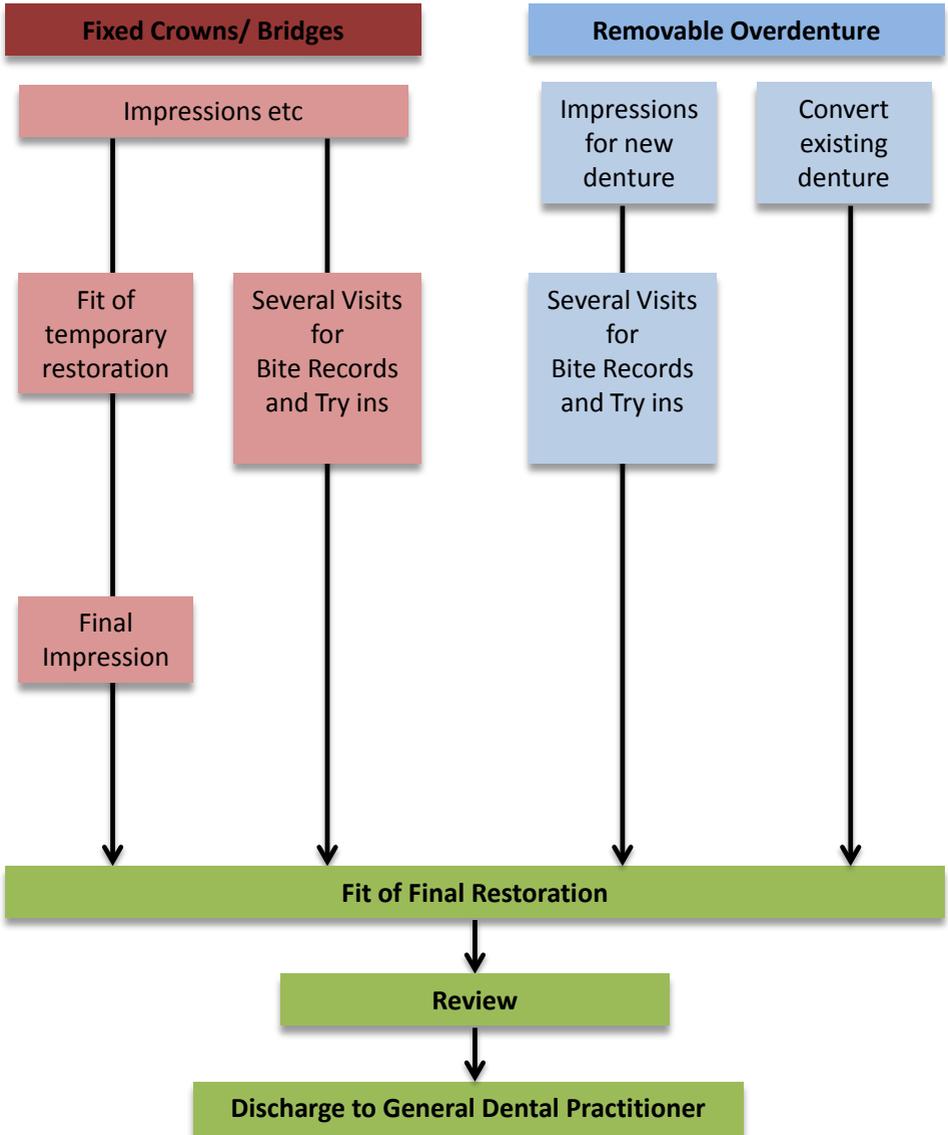
If the tooth is to be replaced, alternatives to dental implants include:

- **Removable Dentures:** false teeth that are removed for cleaning and at night
- **Bridges:** artificial teeth that are supported by neighbouring natural teeth

Details about these are available in other Leeds Dental Institute Patient Information leaflets.



## Restorative Stages







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Developed by: Kathryn Durey (Consultant in Restorative Dentistry) •  
Department of Restorative Dentistry • Leeds Dental Institute

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