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**Important information  
for patients considering  
DENTAL IMPLANTS**

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# Introducing Dr Stephen Franks

BDS (London) Msc (Dental Implantology)

Stephen Franks is our in house implantologist.

Stephen qualified in 1990 at University College Hospital, London. After having spent many years in general practice, including time teaching university undergraduates at Guy's King's and St Thomas Dental School, he decided to focus on dental implantology, completing a year long course with the International Team for Implantology, a Master's Degree in Implantology (with merit) and master classes in bone grafting at The University of Berne, Switzerland..

To date Stephen has placed over 1,000 dental implants and has carried out over 150 grafting procedures. He is a member of the International Team for Implantology and the Association of Dental Implantology as well as being an approved Straumann mentor and past clinical teacher on the MSc Implantology course at the University of Central Lancashire.

Stephen has a caring and professional manner which is sure to put you at ease.



# What is a Dental Implant?

The design of a dental implant is based on the design of a natural tooth which is commonly described as having two main parts:

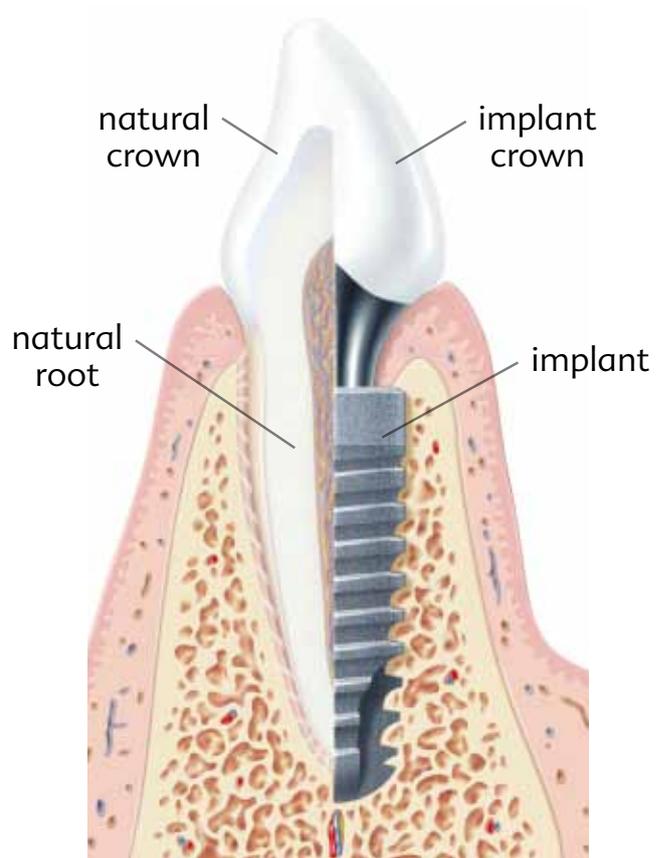
- The crown that sits above the gums
- The root that sits securely below the gum

## The Implant crown

The implant crown is carefully crafted to look and feel like a healthy, natural tooth that feels like part of you.

## The implant

The implant replaces the function of a natural root and if looked after properly should last a lifetime. It stimulates the bone molecules to attach themselves to the titanium thread of the implant, providing a completely stable foundation for the new crown - a process known as osseointegration. It usually takes 8-12 weeks for the bone to securely bond to the entire implant surface.



# Replacing a Single Missing Tooth with an Implant Tooth

## PROBLEM:

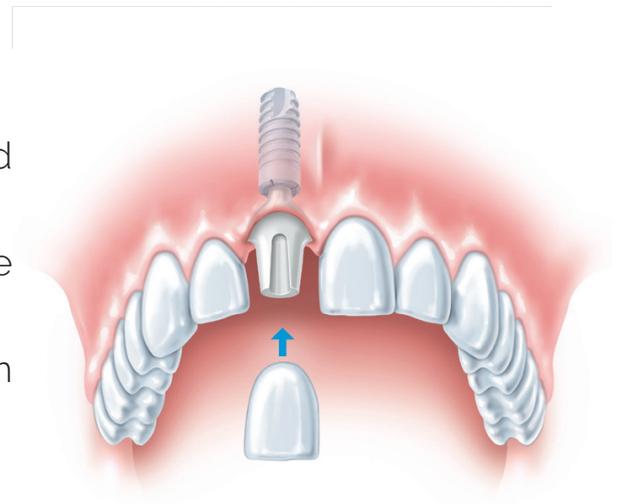
### Missing or Failing Tooth

- Due to infection, failed root filling, trauma or root fracture
- Crown keeps falling out or not enough tooth left to attach a new crown
- Tooth failed to develop

## SOLUTION:

### Implant with Single Tooth

- Ideal long term solution that looks, feels and functions just like natural teeth
- Protects adjacent teeth and underlying bone helping maintain lip and cheek support
- Very high success rate (over 95%) when compared to alternative treatments



## ALTERNATIVES:

### Leave a Gap or Wear a Denture

- Unsightly and embarrassing
- May impair eating and speech
- Bone and gum in the gap will shrink
- The position of adjacent and opposing teeth will distort over time

### Bridge from Other Teeth

- Healthy teeth need to be drilled to attach the bridge, shortening their lifespan making future solutions more complex and costly
- Bone supporting the gum beneath a bridge will shrink due to lack of use leaving a gap
- Extra stress on supporting teeth during chewing

# Replacing Several Adjoining Teeth with Implant Teeth

## PROBLEM:

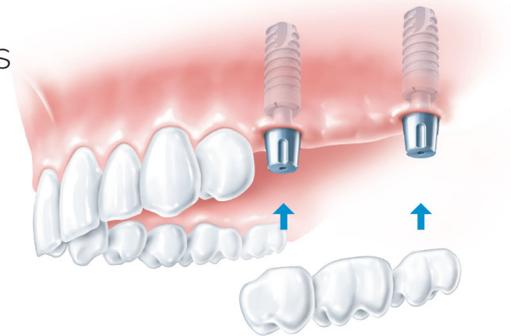
### More than One Tooth Missing or Failing

- Dislike wearing a denture or have a failing bridge
- Unable to chew properly and eat what you want with confidence
- Not enough teeth to support a bridge
- Do not want teeth damaged by a bridge

## SOLUTION:

### Implants Supporting Teeth

- Ideal long term solution that looks, feels and functions just like natural teeth
- Fixed in place, no need to remove them to clean
- No need to damage adjacent healthy teeth
- Very high success rate (95%)



## ALTERNATIVES:

### Bridge Supported on Teeth

- Supporting teeth need to be drilled to attach the bridge thereby shortening their lifespan
- Bone supporting the gum beneath a bridge will shrink due to lack of use leaving a gap

### Partial Denture

- Can be loose and uncomfortable, trapping food beneath whilst eating
- Replacement required every few years as dentures become looser

### Leave a Gap

- Unsightly and embarrassing
- May impair eating and speech
- Positions of surrounding teeth will distort over time

# Replacing a Complete Set of Teeth with Implant Teeth

## PROBLEM:

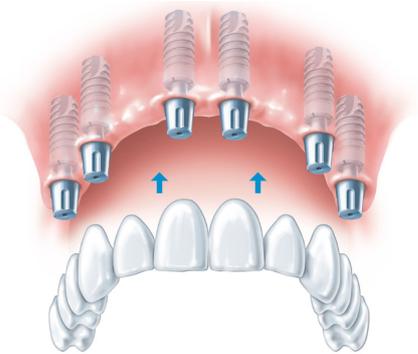
### Upper and/or Lower Teeth Missing or Failing

- Remaining teeth unable to support a denture or bridge
- Loose, uncomfortable or poorly fitting denture

## SOLUTION:

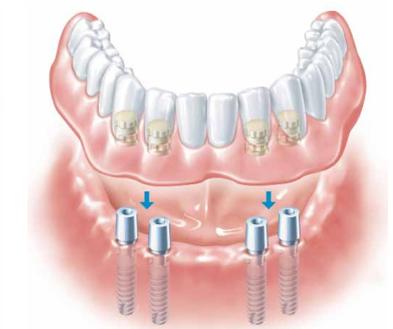
### Implants Supporting a Permanently Fixed Bridge

- Looks and functions like natural teeth that are completely secure and cannot move
- Only removable by a dentist
- The ultimate solution



### Implants Supporting a Denture

- Very cost effective
- Can be removed for cleaning
- Very secure but still allows some movement during normal chewing
- Easily removed for cleaning



## ALTERNATIVES:

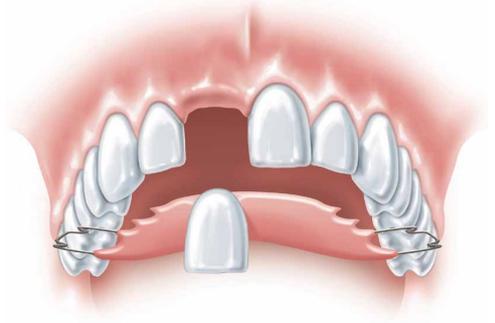
### Complete Conventional Denture

- Lack of confidence and comfort due to limitation in what can be eaten
- Possible impairment of eating, speech, confidence
- The pressure from an unsupported conventional denture during chewing reduces the blood supply to the gums and contributes to accelerated bone shrinkage
- Denture will need to be regularly relined and replaced every few years

# Alternative Options to having a Dental Implant

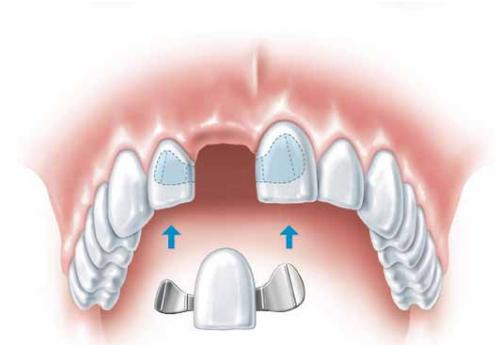
## Partial Denture

These are an economical and rapid solution but 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. They can increase the loss of bone and affect the supporting teeth.



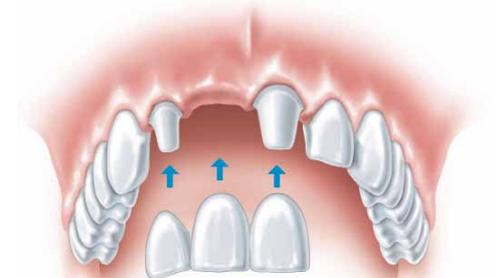
## Stick-on Bridge

These are a good solution in some cases but tend to be at risk of falling out if excess biting force is placed on the bridge. With the absence of the natural tooth root the bone above the crown begins to shrink.



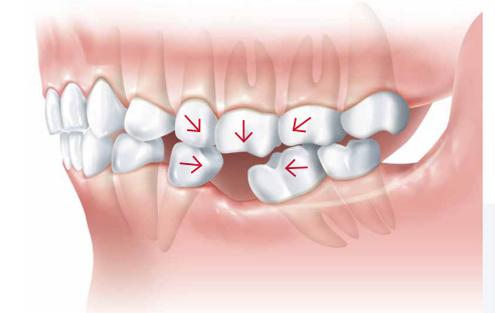
## Fixed Bridge

A high speed drill cuts out a significant amount of the neighbouring teeth to prepare them to take a bridge. This of course damages the teeth and shortens their lifespan. The extra loading the teeth then take means that bridges tend to last only 10-12 years on average and can result in the loss of the supporting teeth.



## The Consequences of Doing Nothing

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. This will result in additional teeth potentially being lost as the chewing forces on the remaining teeth increase more and more, eventually leading to their loosening or fracture.



# Frequently Asked Questions

## What is a dental implant?

A dental implant is a small screw made of titanium or titanium alloy. Strictly speaking the term 'implant' only applies to the part which sits in the jaw bone. The implant is then used to attach a false tooth or 'crown', or two or more implants are used to support a group of teeth, called a 'bridge'. Alternatively implants can be used to stabilise loose dentures.

Dental implants have shown high levels of success for millions of patients and are now a very popular method of replacing missing teeth. They are not however a miracle treatment and need to be carefully looked after for long term success.

## What are the benefits of dental implants?

Dental implants allow the fixed replacement of missing teeth without the need to drill natural teeth as was the case with traditional bridgework. The resulting new teeth look, feel and function like natural teeth. Additionally, the presence of a dental implant prevents the shrinkage of the jaw bone which often follows the loss of teeth. Implants can also be used to stabilise dentures, increasing chewing ability and enhancing self confidence.

## How long do implants last?

The life expectancy of a dental implant will depend on many factors including the quality of the jaw bone, the condition of the other teeth, the health of the patient, and the level of oral hygiene. If well cared for, it is not unreasonable to expect a dental implant to last twenty years or more however, if not properly maintained, dental implants have been known to start to fail within a few years.

The crown, bridge or denture which is connected to the implant can also suffer from mechanical complications, just like those supported by normal teeth. These include chipping or fractures of ceramic, loosening of the screw which connects the restoration to the implant, or, more rarely, fracture of the connecting screw. Actual implant fracture is a possible but unusual complication. Fortunately, most of these complications can be managed easily. It would be reasonable to

expect the non implant part of an implant supported crown, bridge or denture to require maintenance or replacement after fifteen years or so, although many last considerable longer.

## What are the cosmetic limitations of dental implant treatment?

It is normal to experience shrinkage of the jaw bone when teeth are extracted. This can result in a discrepancy in the level of the gum margins of the implant teeth and the neighbouring natural teeth. As a result the implant restoration/s may appear longer at the neck than the adjacent teeth and there may be a loss of the pink gum triangles (papillae) between the teeth. This might be visible if you show your gum margins on smiling and your implants are at the front of your mouth.

Where multiple teeth are missing it is not unusual for there to be a considerable loss of jaw bone height. Unfortunately this cannot be reliably remedied. This can result in longer teeth. Pink ceramic can be used to mimic the lost gum however it is often very difficult or impossible to achieve a perfect match and a compromised aesthetic result may result where a high lip line reveals the necks of the teeth.

Some patients have very thin gums and in such cases it is possible for parts of the metal implant to become visible over time, either at the neck of the new tooth or by shining through the gum to show a grey area.

## Does the treatment hurt?

The implant placement procedure is carried out with normal dental injections and is painless. Following treatment the vast majority of patients report mild or moderate discomfort for the first few days which is easily controlled with over the counter medication. Bruising and swelling can sometimes occur, especially when grafting, and this usually resolves within a week.

## What is a normal series of appointments?

A typical implant treatment would consist of the following appointments:  
**1.** Placement of the implant **2.** Removal of stitches two weeks later **3.** Impressions 8-12 weeks later **4.** Fit of crown or bridge two weeks later.

## Why must I wait before attaching the tooth to the implant?

Dental implants are successful because the jaw bone grows onto the surface of the implant in a process called osseointegration and it fuses the implant to the bone. If the crown is placed too soon there can be failure of the osseointegration and failure of the implant.

## What is bone grafting?

Implants need to be surrounded by bone for long term success. In about a quarter of cases there is not enough bone to fully cover the implant and some of its surface is uncovered. In these circumstances the naked part of the implant is covered in specially processed cow bone and a membrane made of pig skin. These act as a scaffold for growth of your own bone. This procedure, called GBR (guided bone regeneration), is usually carried out at the same time of the implant placement. For larger bone defects a separate grafting procedure may be required. Non animal grafting products are also available on request.

## What are the risks of implant placement surgery?

In common with any minor oral surgical procedure, there is a risk of post operative pain, swelling, bruising, infection and bleeding following implant surgery. However, for most patients, these issues are short lived and can be managed with medication.

It is also possible to damage neighbouring structures when preparing the implant site. Damage to neighbouring teeth may result in the need to carry out root canal treatment. It is not uncommon to breach the sinuses when preparing for upper implants. If this does occur the sinus will generally heal by itself. In the rare cases where this does not heal, chronic sinusitis may result, requiring medical or surgical intervention. When preparing for lower implants it is possible to cause trauma to the nerve which supplies the lip, causing temporary or permanent lip numbness. It is also reported in the scientific literature that some patients suffer long term pain following nerve injuries associated with implant surgery. Fortunately, these last complications are very rare.

## Can implants get gum disease?

Dental implants can suffer from gum disease (called peri-implantitis) and bone

loss, just like natural teeth. This bone loss can result in failure of the implant. **It is therefore very important to keep dental implants very clean with high levels of home care and regular hygienist support.** Regular dental reviews and yearly X Rays will also help catch such problems at an early stage. **Implants are not a 'fit and forget' treatment**, they demand high levels of home cleaning supported by regular hygienist support, for the rest of your life!

## Which patients are at higher risk of implant failure?

Not surprisingly, **smokers can suffer over three times higher failure** rates of dental implants than non smokers.

If you have had **advanced gum disease** (periodontitis) in the past you are more likely to suffer from implant failure. Whilst many patients with treated and stabilised gum disease do well with implants, a small group of patients with a history of periodontal disease seem to suffer bone loss and implant failure despite having high levels of cleaning and regular hygienist support.

Patients with **unstable diabetes** can also suffer higher implant failure rates, however, those with well stabilised diabetes seem to have comparable success rates to non-diabetics.

Lastly, patients with **heavy bites**, or those who grind their teeth (bruxers), suffer higher rates of complications with their implants such as screw loosening, ceramic fractures, screw fractures, implant bone loss and, rarely, implant fracture.

## Will I set off the detectors at airports?

The answer seems to be no. They are too small and the metal is not dense enough.

