

DENTAL IMPLANTS

Replacement of missing teeth



NELSON AVENUE DENTAL CLINIC

INTRODUCTION

A dental implant is a titanium alloy screw that is placed into the jaw bone in a minor dental surgery. It can be used to replace a single tooth, to support a bridge, or to support connections for dentures.

HISTORY

Modern dental implants evolved in Europe in the late 1960's but they did not become widely used in North America until the 1980's. Today, implant dentistry is very common.



SOME FACTS

Dental implants have been used successfully to replace missing teeth since the 1960's.

Implants have a very high success rate of over 95%.

They can be used to replace one, some, or all of the teeth in a person's jaw.

The surgery to install a dental implant is a common procedure which requires the same type of anaesthetic for a dental filling.

While it is possible to give someone "teeth in a day", we prefer to let things heal. An implant needs various months to "osseointegrate" (fuse to the jawbone).

Dental implant surgery is an advanced treatment that requires training beyond what is taught in dental school. It is not everyday dentistry!

DENTAL IMPLANTS

HOW DO DENTAL IMPLANTS WORK?

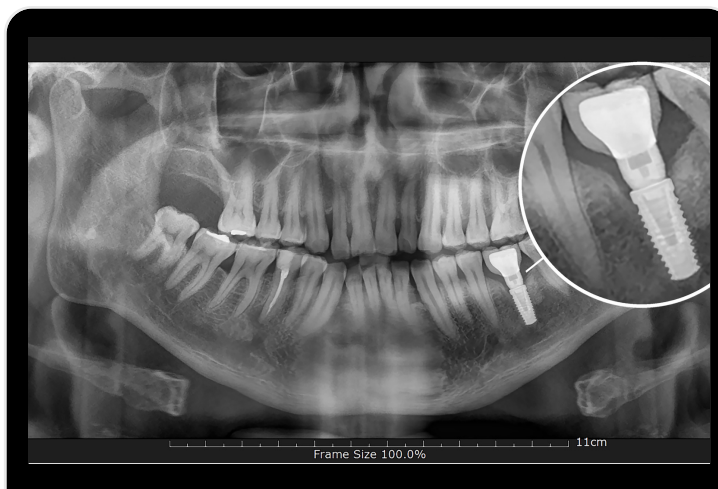
Dental implants have roughened surfaces and threads to which the jawbone fuses. When the implant is first placed, it stays stable because of the tight fit into the jawbone (primary stability). Over the next 2-6 months, the bone heals to the implant and forms a solid connection to the implant surface, in a process called osseointegration.

DO IMPLANTS LOOK AND FEEL NATURAL?

Implants do not function like natural teeth. Your teeth are connected to the jawbone by a ligament, which allows you to feel the teeth biting with great accuracy, and also cushions the chewing forces. A dental implant, however, is fused directly to the bone, without an intervening ligament. The implant is therefore less sensitive and transfers bite forces to the bone much more efficiently. We place the bite on implant crowns slightly lighter than on natural teeth, to allow for the compression of the periodontal ligament during function.

Implant crowns can look quite natural if the jawbone and gums are healthy, but this is not always the case. It is common to have areas where the gums do not fill in the spaces between the teeth and implants, especially in areas where two implants are side by side. Please be aware of this before beginning treatment.

As a replacement for missing teeth, dental implants restore the bite much more efficiently than dentures.



DENTAL IMPLANTS

HOW SUCCESSFUL ARE DENTAL IMPLANTS?

Dental implants are very successful at fusing to the jawbone; over 95% of dental implants fuse to the bone, even in grafted bone. There are certain scenarios where decreased implant success rates are reported: smoking, uncontrolled diabetes, radiation therapy, and uncontrolled gum disease are all risk factors that decrease how well an implant heals to the bone, and can impact the long term survival of the implant.

WHAT KIND OF PROBLEMS CAN IMPLANTS HAVE?

Dental implants are not perfect. The first concern with dental implants is failure of fusion of the implant to the jawbone. Fortunately, this does not happen frequently; over 95% of implants will fuse to the jawbone.

The implant must be placed so that it avoids vital structures such as nerves and blood vessels, roots of teeth or other implants, and must be positioned in a manner that allows for a well designed crown, bridge or denture. Improperly placed dental implants are very problematic. CT Scanning and virtual planning are essential tools to guide the placement of the dental implant.

Implants that fuse well to the jawbone can develop problems over time, most commonly inflammation of the gums around the implant (mucositis), leading to loss of the bone around the implant (peri-implantitis). Smoking, existing gum disease, and poor oral hygiene can all increase the risk of peri-implantitis. Proper homecare is paramount to the long term success of the implant.

It is very rare for a dental implant to fracture, but this may happen in people who have strong bite forces. The crowns, bridges and dentures that go on the implants can also have complications. The most common problems are chipping of ceramic, or loosening of screws. A nightguard is often recommended to help prevent this sort of damage.

Although they are not devoid of potential complications, dental implants are, however, the most direct and predictable way to replace missing teeth.

DENTAL IMPLANTS

ARE DENTAL IMPLANTS FOREVER?

The goal of implant dentistry is to provide you with a permanent treatment, but there are various reasons why an implant may require removal. Implants fuse to the bone at a very high rate (over 95 %), but those that do not, must be taken out. Severe bone loss around an implant, chronic infection, poor placement, or implant fracture, are all reasons why an implant may need removal. Fortunately, implant replacement success rates appear to be just as high as initial treatments.

DOES THE SURGERY HURT?

The procedure of placing a dental implant is very delicate and controlled as it is important to prevent damage to the jawbone and gums in order for the implant to be successful. The same anaesthetic for a dental filling provides ample pain control to perform the procedure. It is normal, however, to experience some minor pain, swelling and bruising after the surgery. This tends to peak 2-3 days after the treatment, and then subsides.

Many people can manage their discomfort with over the counter Ibuprofen or Acetaminophen, and cold packs. We routinely prescribe antibiotics for 10 days to prevent infection and occasionally a steroid if swelling is expected. I do not offer sedation at my office as it increases the risk of the procedure and the treatment is tolerated well with local anaesthesia alone. Stitches may be placed at the time of the surgery; these tend to irritate the gums during healing but are usually removed within a month.



DENTAL IMPLANTS

HOW LONG BEFORE I HAVE A NEW TOOTH?

I prefer to be conservative when working with dental implants. If a tooth is in place, it first needs to be removed and sometimes a "socket preservation" bone graft is performed. The jawbone requires 4-6 months of healing before an implant is placed.

4-6 months after the tooth is removed, a radiograph (x-ray) is taken to assess healing of the jawbone and if it appears adequate, a 3 dimensional dental CT scan of the jaw is completed, along with a digital impression of the teeth, allowing for the virtual planning of the implant surgery and the fabrication of a surgical placement jig.

The implant placement surgery is then completed in our office. The gums are often stitched closed over the implant for healing, after which a second procedure is required to uncover the implant 4-6 months later. If the implant goes in firmly to the jawbone during the procedure it may be possible to place a "healing abutment" on the implant, to which the gums form around, thus avoiding the second uncovering procedure.

After 4-6 months, the implant has had enough time to fuse to the bone and the crown/bridge/denture can be placed upon it.

Some offices are offering "teeth in a day", where many of these steps are combined in to one appointment. While this is a valid treatment modality, it does increase the risk of failure of the dental implant, so it is my preference to pass each checkpoint before moving forward.

We can perform most implant treatments at our office. If extensive bone or gum grafting is required, we may need to refer to an oral surgeon or periodontist.

If you have any questions about the dental implant procedure, please contact me at drdave@nelsonavedental.com, before moving forward with care.