

# ROOTING

## for Dental Implants



*Mr D is a 70 year old retiree who came looking for a solution to a prolonged problem. He lost all his lower jaw teeth many years ago, which he had then fitted with a full set of lower dentures. Lately however, it had become uncomfortably loose which made eating less enjoyable as he could not chew on his favourite meats. Speech became a problem as the lower denture moved whenever he talked and this made him self-conscious. He wonders if making a new set of dentures would solve his dental woes.*

### The Solution

Dentures and bridges are not the only solution for tooth loss these days. While the older generation may accept dentures as part of the inevitable process of aging, the younger generation balk at the thought of living with these prostheses in their mouths. Some of them have also come to realise that bridges too, in the long run, cannot cope with the stresses of functionality and can cause further problems, especially to the supporting teeth that have to bear the load of missing teeth.

Dental implants are the best treatment option for replacing missing teeth. Rather than resting on the gums like dentures, or using adjacent teeth as anchors like in fixed bridges, dental implants are long-term replacements that are anchored in the jawbone, just like natural teeth are.

Everyday in Singapore, many people face the dilemma of whether they should opt for dental implants. If you're one of them, you're probably asking, "What can implants do for me?"; "Does it involve surgery?"; "Am I a suitable candidate?". The best favour you can do for yourself is to gain a better understanding of this latest addition to modern dentistry.

### Dental Implants and What They Can Do

When we look at our tooth in the mirror, we see it as it is. What we don't see is its root that is buried within the jawbone, inside the gums. When a tooth is extracted, the root is lost along with the part that is visible.

Most modern dental implants designs are made of three parts:

- The Dental Implant – the "fixture" or "root"
- The Abutment
- The Crown

A dental implant is a titanium cylinder fixture that replaces this root portion of the tooth. Like the tooth root, it is buried inside the jawbone. After the fixture is placed, a remarkable process of 'Osseointegration' occurs over a few months; bone grows around and into the surface of the titanium implant forming a very strong bond that is capable of withstanding the rigours of chewing.

Once anchored, this new 'root' is then used to support and replace the missing tooth or teeth. This is done with an abutment and crown. An abutment is usually affixed to this dental implant 'root' and is the intermediary that connects the new implant 'root' to the new crown which looks like a real tooth and has a natural appearance.

The dental implant is the closest thing currently available to the natural tooth and it enables a person to speak, chew and smile comfortably. Some implant systems are designed to support dentures and may consist of fewer parts.

### Who Needs It

Dental implants can treat a wide variety of Dental implants can treat a wide variety of problems including those who are missing one or several teeth; those who are missing all their teeth in either the upper or lower jaw; those wearing a removable denture that is bulky, loose or affects speech; those who have a jaw defect due to previous surgery.

Very few patients are unable to have dental implants. With the exception of growing children, dental implants are the solution of choice for people of all ages, even those with chronic health concerns. Implant tooth replacement in children is usually deferred until their jaw growth is complete, though sometimes it is incorporated as part of an orthodontic plan.

However, there are some conditions such as smoking, uncontrolled diabetes, existing gum disease, radiotherapy to the head and neck region, severe teeth grinding habits or other existing medical conditions that can affect dental implant treatment. Most implant practitioners are trained to recognise these conditions and will work with the patient's medical caregivers to ascertain if the patient is suitable to receive dental implants and how they can manage to ensure long term success.

## Overcoming dental anxiety

In many cases, placement of dental implants is a minor procedure that can easily be tolerated under local anaesthesia. There is usually minimal postoperative swelling and discomfort. One patient even reported playing golf with his buddies immediately after the procedure!

For anxious patients who've had past traumatic experience, dental phobia or other conditions, they can opt for intravenous sedation (IV Sedation), a conscious sedation which makes treatment more pleasant. It is effective, predictable and very safe. Patients can choose to have dentistry performed under IV Sedation, which is administered at the chairside by a specialist anaesthesiologist. Under sedation, the patient feels that he has been 'asleep' for the duration of the procedure and unlike general anaesthesia where there are unpleasant side effects, the patient often wakes up refreshed.

Safety in surgery is enhanced with the use 3D Cone Beam CT scans, which produces high quality 3D images of the jaws with much less radiation than conventional CT scans. The implant practitioner is then able to better visualise the volume of jaw bone available to place an implant as well as adjacent structures such as teeth roots and nerves. This results in greater during surgical placement of the implant. Reactions to the implants itself are rare and if the medical assessments are properly done and the patient maintains a reasonable oral hygiene regiment, implant are safe and are, in fact, kinder to the surrounding jawbone by preventing bone shrinkage that occurs following tooth loss.



*Mr D underwent a thorough clinical examination as well as an assessment of his jawbone using the 3D cone beam CT. The problems he was experiencing with his lower denture was a result of many years of tooth loss, where the bone in the lower jaw had shrunk due to the lack of stimulation provided by natural teeth. This was why his dentures felt loose and unstable. He hoped to be able to do without a removable denture and have 'fixed' teeth. Eventually Mr D received 5 implants in his lower jaw. His procedure was carried out under intravenous sedation, which he described was a 'non-event'. To these 5 implants, a fixed bridge was attached that replaced all his lower teeth. He was quite pleased – his speech improved and so did his eating too. More than anything else, he can now bite into a good slab of steak.*

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#06-04/05/06/07

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