Patient Information
Improving your quality of life with dental implants

SWISS PRECISION AND INNOVATION.
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How important are teeth to our quality of life?

Bright and beautiful teeth are an attractive asset. They provide us with self-confidence, improve our quality of life and allow us to feel more natural. But, it is not only for appearance that we have healthy teeth. Scientific research has shown that healthy teeth have an important effect on our diet, health and overall sense of well-being.

Healthy teeth cannot be taken for granted. Age plays no role and anyone can be affected. Teeth can be lost as a result of many factors: gum disease, tooth decay, or due to an accident. The loss of teeth can be restrictive in many ways. A gap in the teeth is not only an esthetic problem, but it can also adversely affect everyday life, whether it is eating a meal, speaking to a colleague, or laughing with a loved one.

Sometimes tooth loss and/or a badly positioned dental prosthesis can cause massive pain in the head and neck.
What is a dental implant?

Dental implants have been a tooth replacement option for almost 50 years. They are now considered to be one of dentistry’s standard therapies. Furthermore, implantology is based on a solid scientific foundation of research and experience.

A natural tooth consists of a crown and a root. A dental implant is an artificial dental root which is positioned directly in the jawbone to replace a missing tooth.

Over a period a few weeks to several months, the dental implant bonds with the bone (osseointegration). During osseointegration, bone cells form new bone around the implant. This new bone develops a firm anchor for the implant. The bonding of the implant with the bone is a prerequisite for achieving a strong foundation for the artificial crown.

After healing, the implant acquires the same function as that of a natural tooth root. Just like a natural root, implants can prevent bone recession in edentulous jawbone, compared to conventional bridge and prosthetic restorations. This means that dental implants also serve a preventative function.

To restore the crown of the tooth, a structure referred to by specialists as an abutment is placed onto the dental implant. With the aid of this structure, artificial crowns or fixtures for prostheses can be attached to the implant. The adjacent picture (right) shows an implant with an abutment and a crown attached it to compared to a natural tooth (left).

Advantages of a dental implant
- Reestablishes function and esthetics of missing teeth
- Prevents bone loss
- Existing teeth are preserved
- Biocompatible with the body
Missing teeth are replaced for functional (chewing, talking), esthetic (appearance) and health reasons (breaking up food to ensure good digestion). The choice of tooth replacement depends on the position in the mouth, the condition of the neighboring teeth and, most of all, the number of missing teeth.

There are several options for tooth replacement: full removable dentures, a fixed bridge or single implants. Conventional bridges or prostheses are fixed on existing teeth, but requires the grinding of healthy teeth. Implants feature the big advantage that existing teeth will be preserved in their functionality and esthetics. Additionally, bridges and prostheses can be fixed to implants more securely, offering more safety and comfort.
Conventional treatment

The conventional treatment of missing teeth with a bridge requires the grinding of healthy neighboring teeth to securely anchor the new bridge. When attaching partial prostheses to neighboring teeth with brackets, the feeling may be awkward or uncomfortable. With this method, valuable healthy tooth matter is lost.

If the gap from the missing teeth is too large or the dentition has too few teeth to fill the gaps for fixing a bridge, the only possibility is to make use of a partial or complete prosthesis.

Conventional partial prostheses are fixed using visible braces to existing teeth. Conventional complete prostheses, or dentures, are worn if all natural teeth are missing. Apart from inadequate functionality of a complete prosthesis, the wearer is confronted with his or her situation every time the prosthesis is removed.

The fit and stability of a denture declines over time, because the shape of the jawbone changes or even atrophies.

An optimal correction of a denture is not always possible. This can lead to impaired function and a decreased quality of life.
Treatment with dental implants

Using an implant provides significant advantages compared to conventional dentures. Gaps are not taken care of by grinding neighboring teeth in order to fix a bridge or visible braces. The implant is simply positioned where the gap is.

The implant grows completely into the jawbone over a period of a few weeks to several months, not unlike a tree that gets its stability from its roots. To treat a dental gap with an implant, a crown is attached once the implant has healed after placement.

In this way, the implant becomes the perfect retaining element for a tooth replacement and relieves the adjacent teeth from undue stresses. Thanks to its fixed anchoring, the implant can function effortlessly as a natural tooth.
When is an implant the right solution?

An implant is not just a good solution for older people who, in the course of time, have lost their teeth. Often, younger people are also affected by tooth loss. A collision may happen while playing sports, or an accident may occur that results in the loss of teeth. In some cases, teeth may be missing at birth due to genetic dental aplasias. In addition, a variety of diseases such as periodontitis and/or caries can result in the loss of teeth at any age. The use of a dental implant will restore a person’s natural smile and the functionality of natural teeth.

Of all the alternative options available, a dental implant is the one that most closely approximates the natural tooth. Implants provide a firm foundation for support and positioning of a dental crown. It can also be used as an anchor for fixed bridges and removable partial or complete prostheses. Dental implants can prevent incorrect loads on natural teeth, as well as the degeneration of the jawbone and diseases of the temporomandibular joint.

There are three different types of artificial tooth replacement: the single tooth restoration, the replacement of several teeth and the replacement of all missing teeth.
Single-tooth restoration

If you loose one tooth, it can be replaced by an implant with excellent results.

1. Initial situation: gap due to a single missing tooth.

2. The implant is inserted in the site, followed by the abutment.

3. The crown is anchored on the implant with abutment.

4. The final result after treatment.
Replacement of several teeth
If several teeth are missing, implants can be used as columns for bridges. Teeth missing in between can be replaced by pontics. Therefore, it is not necessary to replace every missing tooth with an implant.

1. Initial situation: three teeth missing.

2. Two implants are used as anchors. A bridge is anchored on the two implants with abutments.

3. A three-crown bridge is anchored to the two implants.

4. The final result after treatment.
Replacement of all teeth
If all teeth need to be replaced, implants provide a support to stabilize the prosthesis to ensure a firm fit.

Option 1:
fixed denture (can only be attached and removed by a dentist)

1. Initial situation:
   all teeth are missing.
2. The implants are placed in a way that offers optimal stability for a prosthesis. Abutments are anchored on the implants.
3. A dentist permanently anchors the denture to the implants.
4. The final result after treatment.
Option 2: removable

In contrast to the fixed denture, the full denture can be removed by the patient. The implants are provided with a retention element (bar, button or similar) that snaps or fixes to the prosthesis when placed in the mouth, making it more secure and stable than traditional dentures. The patient can then remove the denture with little effort for daily cleaning.
What is the procedure for dental implant treatment?

The planning of the procedure depends on the individual dental situation and will be discussed in detail with your dentist before treatment begins. The length of the treatment depends on the type of procedure and the number of implants to be placed.

Dental implants are typically placed in an outpatient procedure with local anesthesia. The area of the procedure is made numb so that the implant can be inserted into the bone without pain.

According to the implant size, the implant site will be prepared with special drills. The implant will then be accurately inserted into the jawbone. Primary stability, which is the firmness of the implant in the jawbone after placement, confirms the perfect fit of the implant in the bone immediately following implant insertion. This is one of the most important factors determining the success of healing.

Following dental surgery, the time at which a load is applied during implant healing plays a decisive role. The load refers to the crown, bridge, partial or denture. Late subjection to a load takes place following a certain period of implant healing (a few weeks to several months).

Immediate or early load is when a crown is immediately placed on the implant after placement. This requires very good bone conditions, optimal primary stability and adequate oral hygiene.

Dental implants require the same diligent oral hygiene as natural teeth. This includes regular check-ups and professional cleaning at the dentist. The long-term success of the treatment and the implant can only be guaranteed with meticulous care and regular check-ups.
Why choose a dental implant from Thommen Medical?

Thommen Medical is focused exclusively on the design, manufacturing and distribution of products for dental implantology. Our superior product quality has been achieved through more than 25 years of clinical experience along with a commitment to Swiss precision, innovation and functional design.

Patient and product safety are Thommen Medical’s highest priorities. In cooperation with leading clinicians and renowned academic institutions, we develop innovative products so that we can provide the best solutions for achieving excellent clinical results.

Our quality products are manufactured in our own state-of-the-art facility in Grenchen, Switzerland. We have strict control of our quality systems, subjecting our products to extensive tests and measures to ensure that we offer dentists, and you as our patient, products of a superior standard. The precise, automated testing and inspection systems in our production facility check critical dimensions of each individual part and are capable of round the clock-operation for the highest degree of safety and reliability. As proof of our quality assurance processes, statistical analysis shows an outstanding success rate for Thommen Medical implants.

For further information about the company, visit our website: www.thommenmedical.com
What else should I know?

**Costs**
The treatment plan and the cost incurred for the procedure depend upon the oral situation of the patient and the type of tooth replacement that is chosen. Factors which can determine the cost of the procedure include the number of implants to be placed, if bone grafting is necessary, just to name a few. Therefore, no general cost guidelines can be provided.

The dentist will prepare a detailed treatment and cost estimate to discuss with the patient prior to the procedure. A greater initial investment may be involved for dental implants; however, in many instances implants are the more economical choice in the long run.

**Quality**
The precise, automated testing and inspection systems in our production facility check critical dimensions of each individual part and are capable of round-the-clock operation for the highest degree of safety and reliability. Various internal studies show that Thommen Medical dental implants still function perfectly in 99% of patients, even after 10 years.

Careful planning, professional treatment and the patient’s health are also determining factors for long-term success. This success also includes regular visits to the dentist, professional dental hygiene care and thorough personal dental care.

**Risks**
Any surgical procedure carries a potential risk and complications cannot be predicted. This is why extensive consultations and examination by the dentist are essential. The risks of a dental implant procedure can be assessed before the day of surgery, but not completely eliminated. Poor oral hygiene or pre-existing diseases (e.g. osteoporosis, diabetes) can have an effect on wound healing.

**Pain**
To limit the pain during surgery, implants are usually placed under local anesthesia. If there is any discomfort after the procedure, it can usually be treated effectively with light- to medium-strength pain medication. Applying a cold compress to the area can prevent swelling and limit discomfort. Nevertheless, if pain occurs it is best to contact your dentist.
Your dentist