

A revolutionary concept in

DENTAL IMPLANTS

A dental implant is an artificial tooth root placed into your jaw to hold a replacement tooth or bridge. Dental implants are an ideal option for people in good general oral health who have lost a tooth or teeth due to periodontal disease, an injury, or for some other reason. Dental implants are so natural-looking and feeling, you will forget you ever lost a tooth.

It has been forty years since Professor Per-Ingvar Brånemark performed the first bridge implant surgery. His first patient is living evidence of the fact that titanium dental implants work well and are long-lasting.



Fig 1

The whole process is based on the fact that the bone tissue accepts the titanium surface as a part of the body and creates a bond as strong as the bone itself. The initial procedure, after the implant placement, involves waiting for a healing period of three months for the lower jaw and six months for the upper jaw, before beginning the first steps of the prosthesis. This difference in the time required for either jaw to heal is due to the softer bone density of the upper jaw. After years of development and research, and with the improvement of the surface and design of the implant, patients are experiencing a substantial difference. Today it is completely possible to leave the dentist's chair with a set of fully functioning teeth.

Concept

Who wouldn't love the idea of having beautiful, functional teeth - by attending only a few appointments and a minimally invasive procedure that gets you back into your social and working life in no time? The NobelGuide™ treatment concept from Nobel Biocare provides a method by which pre-planned treatment is transformed into clinical reality.

Visualization of anatomy

Thanks to the patient's CT scan, the Nobel Biocare Software Planning Program can be used to make full use of all CT data to obtain an insight into the patient's anatomy.

It is possible to place implants in a virtual environment and see how they fit in with the patient's anatomy. (Fig 2)

This leads to the possibility of using the flapless technique and to insert a fixed or temporary prosthesis during a single appointment.

Treatment planning

NobelGuide™ is intended for single, partial and fully edentulous jaws where the patient :

- Meets general health requirements for undergoing oral surgery
- Is fully healed after any dental grafting procedures
- Has a sufficient amount of jaw bone
- Has sufficient mouth opening capacity to accommodate the surgical equipment.



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First appointment

Impressions are taken in order to build a radiographic guide used to simulate the missing teeth during CT scan (Fig 1).

Second appointment

Try-in of the radiographic guide and instructions for CT scan. After the scan, the software is used for planning the position and orientation of oral implants in a 3D scene. This allows us to determine the optimal sites for implant placements, taking into account anatomical constraints and also prosthetic and aesthetic considerations. Each planning process is unique and based entirely upon the specific considerations and prerequisites that are present for each individual patient. At the end of this session, the surgical template that will be used during the implant placement is created. The same surgical template is used by the lab in order to manufacture a permanent or temporary prosthesis that will be placed at the end of the surgery.

Third appointment : the treatment

The NobelGuide™ surgery is based on guided keyhole surgery that is minimally invasive. This considerably reduces pain and swelling for the patient as compared to conventional treatment (Fig 3).

At the end of the surgery, the final or temporary prosthesis is affixed to the implants (Fig 4). Of course, the final design of the prosthesis may be discussed with the patient: full ceramic individual crowns or bridges.

Post-treatment

As for all implant cases, follow-up visits are recommended for the patient at individual intervals with examination of the soft tissue, the construction and the occlusal condition.

Conclusion

It is an established scientific fact that the muscles used to smile release substances into your body that make you feel better. Many people with dental problems avoid smiling. Holding back your smile holds back your emotions, causing you to appear less social, and perhaps a bit introverted.

The pattern is the same for problems when eating. Traditional false teeth are not always reliable, and there are foods and dishes you can only dream of. Dental health makes life easier in every way. Thanks to this new technology the patient can immediately return to working and social life after the treatment. For many patients this means a considerable cost-saving and an improvement in the quality of life.



Fig 2 : Before the treatment



Fig 3 : End of the surgery : no stitches



Fig 4 : At the end of the surgery, the final or temporary prosthesis is attached on the implants