

AMPUTATION MEDICINE CLINIC OPENED

ROZENDAAL, THE NETHERLANDS NOVEMBER 4, 2023

The independent medical treatment center AOFE CLINICS is the only clinic in Europe entirely dedicated to the treatment of people with an arm and leg amputation. This clinic officially opened on November 4, 2023 with a scientific symposium dedicated to the bone-anchored prosthesis. From January 1, 2024, this treatment will be fully reimbursed by Dutch health insurers, giving people with amputations easier access to this so-called click prosthesis, which can drastically improve the freedom of movement and therefore the quality of life of these people.



"Thanks to the click prosthesis, I have my life back," says Marcel Zonjee (53), a former professional ballroom dancer with a bilateral lower leg amputation, who has been using the new 'artificial legs' for a year. 'I enjoy running again. Last summer I walked the evening four-day event with my son. It is also so wonderful to be able to walk down the street hand in hand with my loved one again.'

"I didn't make the decision overnight," Zonjee said. He discussed the pros and cons of the operation in detail with his wife. For years he used socket prostheses. An operation to insert bone-anchored implants is not only not without risk, but no one can predict whether it would provide (enough) benefit to him.

Now Zonjee, a former nurse and currently working as an IT trainer in a hospital, says he is very happy with his choice. The skin problems such as blisters and excessive sweating that he had with his sleeves are a thing of the past. Although he has to take care of his stoma (the skin opening through which the implant protrudes) every day, he sees this as a ritual comparable to brushing his teeth. Previously, he could never wear his socket prostheses for long periods of time, and taking them off was a lot of work. His click prosthetics, as the name suggests, simply click on and off, and he can literally use them for much longer. Zonjee himself says that he does not suffer from shame, but when asked whether he is still looked at strangely in public or receives comments, he replied in the affirmative. "People find it scary," he said, "because they don't know it. They have often never seen anything like this before.' A lot is still needed to remove the stigma of amputees, even with click prostheses.



Robin Atallah, one of the two surgeons operating at AOFE Clinics, defended his thesis in public and received his PhD from Radboud University in Nijmegen a day earlier. Atallah has specifically investigated how the bone-anchored prosthesis behaves over the years, in terms of safety and complications, such as infections. Serious bone or implant complications appear to be rare, and more common mild skin and soft tissue complications are easily treated and rarely outweigh the functional gains for the bone-anchored prosthesis wearer.

Due to the scarce treatment options at home and abroad, Zonjee had to wait years for his operation. The rehabilitation afterwards is tough. Nevertheless, Zonjee is very positive. "The click prostheses give me contact with the ground again," he says. "For example, I now feel when I walk on grass or sand." He takes eight to ten thousand steps every day. He exercises twice a week.



Remco Blom, commander-in-chief and medically responsible for veterans, freely admitted that he was initially somewhat skeptical about the innovative added value of osseointegration, or bone-anchored prostheses. He believed there was anecdotal evidence for this, but wondered whether it could also be scientifically substantiated. "We'll see about that today."

Someone with a click prosthesis can do almost everything, such as swimming and tennis, except sports where you run the risk of falling, such as football and skiing. The prosthesis is turned off at night. The stoma must be cleaned twice a day to prevent infection.

The bone-anchored prosthesis is not perfect, but appears to be a major improvement over the traditional socket prosthesis - not only in terms of control, feel and ease of use, but also in terms of wound care. For many amputees, this innovative intervention means a substantial improvement in their quality of life.

This was one of the conclusions of the scientific symposium that officially opened AOFE CLINICS in Rozendaal on November 4, 2023, the first clinic in the Netherlands (and Europe) entirely dedicated to bone-anchored prostheses and amputation medicine.

Scientists from home and abroad, as well as practitioners, defense employees and (international) patients, gathered in the Aardenburg military rehabilitation center in Doorn, with which AOFE clinics collaborate. Luc Knap, CEO of AOFE clinics, welcomed everyone and gave the floor to chairman Remco Blom.



Rehabilitation physician Fred van der Meer discussed the selection of the patients. Bone anchored prostheses are not for everyone, patients must meet certain criteria to be eligible.

Treatment with the bone-anchored prosthesis is not suitable for amputees who have few complaints when using a socket prosthesis. The indication for the bone-anchored prosthesis is always carefully considered in a 'shared decision making' model. This means that the patient participates in the decision-making process, but the surgeon ultimately remains responsible for the choice made.



Certified prosthetist Niels Jonkergouw discussed the alignment of the prosthesis in more detail in his talk. Not only is it of the utmost importance that a leg prosthesis is fitted at exactly the right height, the angle at which the prosthesis is positioned in relation to the hip and other joints is also crucial for good rehabilitation.

With 'osseointegration' ('ossis' is Latin for bone), a titanium implant is surgically anchored in the patient's bone. The prosthesis, whether it is (part of an) arm or leg, or even a finger, can then be attached to the implant with a simple click and released again just as easily. A traditional arm or leg prosthesis is attached to a socket around the stump, which often causes skin irritation, stump pain and other problems.

Surgeon Jan Paul Frölke (1960), medical head of the AOFE Clinics, is a pioneer in the field of bone anchored prosthesis. "Amputation medicine suffers from a stigma," he says. 'People with an arm or leg amputation are often ashamed of the loss of physical integrity. Even among surgeons, an amputation is regarded as a defeat and proof that it has not been possible to preserve the body part. We see the amputation as the beginning of a new existence without an arm or leg and strive for as much restoration of function and quality of life as possible.



The famous German surgeon Horst Aschoff, one of the pioneers in the field of bone-anchored prosthetics, provided a historical overview of the various challenges facing orthopedic surgeons like him. In his practice at the Hanover Medical School, he refined the technique of placing the implant directly in the bone over the past decades, to which the prosthesis is 'clicked' (hence click prosthesis).

Since then, Frölke has helped hundreds of people with a click prosthesis, but the capacity at hospitals is limited. The waiting lists for this operation are so long that some people move abroad. As a patient, you not only want an experienced operator, but also an experienced rehabilitation team to make maximum use of the possibilities. From January 1, 2024, this care will be fully reimbursed by Dutch health insurance companies and it is expected that the waiting lists will

disappear quickly.



Frölke (far left) was the first in the Netherlands to start performing bone-anchored prosthesis operations at the Radboudmc in 2009, after he had apprenticed with Dr Horst Aschoff in Germany (second from the left) and shared knowledge with fellow surgeons. in Australia (Al Muderis, second from right) and Sweden (Brånemark, far right), where the technique was developed. (Photo IASPT Vienna 2018)

The AOFE Clinics offer unique focus care with a team of specialists who see it as a challenge to help every patient function as optimally as possible at activity and participation level with the best possible treatment. The clinic does not work with waiting lists, as soon as it is clear what the treatment will look like, an operation date is set in consultation with the candidate and the

rehabilitation is then scheduled in consultation with the Military Rehabilitation Center in Doorn.



The famous British surgeon Norbert Kang showed in videos of patients that it is indeed possible to create a beautiful, clean, quiet stoma around the implant. It turns out that human skin does not always adhere well to the titanium that is currently used for bone anchoring, but often it does. It is crucial that bacteria do not have the opportunity to settle between the implant and the rest of the tissue.

During the intake at the multidisciplinary outpatient clinic, patients are told that the operation is only a limited part of the entire treatment that is then carried out by prosthetists, rehabilitation

physicians and physiotherapists.



Because it has now become apparent that the stoma (which is the exit of the implant system through the skin) is the most important factor for the successful use of the bone-anchored prosthetic system, scientists are working to further optimize the surgical technique.

The medical necessity of a leg amputation in the Netherlands is 85% of the time due to vascular problems and diabetes. It also happens that a limb has to be amputated in the event of certain forms of cancer, serious infections, or after a traffic or industrial accident. A small proportion of amputees are war victims. These proportions are similar in other countries around us. If we look further outside Western Europe, the people who lose their arm or leg due to injuries caused by work, traffic or war are much more numerous.



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After lunch, which was provided by the team that also provides catering for the convalescents at the Military Rehabilitation Center Aardenburg, interested parties were given a tour through the wooded grounds past the advanced facilities - enormous

gymnasiums, special swimming pools and computer-controlled walkways - that serve patients with bone-anchored prostheses help with their intensive rehabilitation.



AOFE Clinics is located in a monumental villa in Rozendaal, a picturesque village in the Veluwezoom National Park, close to Arnhem. It works closely with the Military Rehabilitation Center in Doorn and the Radboud University Medical Center in Nijmegen. The villa is connected to modern orthopedic operation theatre facilities in the back yard.

We owe this accommodation to the hospitality of Cherry Ponsen, who, as general manager from the umbrella organization Sandstep, manages both the location in Rozendaal and Bosch en Duin. They attach great importance to innovative orthopedics and are happy with our collaboration. Cherry showed us around the Rozendaal location with great enthusiasm.



"Normally the fireplace is lit in the reception hall, but I couldn't get it to light on my own," laughs Ponsen, a warm-hearted woman with a lot of experience in healthcare management.

After years of lobbying, the Dutch Healthcare Authority has decided to have bone-anchored prostheses for people with leg amputations fully reimbursed by health insurers from January 1, 2024. This means that the bone-anchored prosthesis is accessible to everyone, both in the Netherlands and in the EU. After all, all EU countries have conformed to each other's compensation system. Naturally, a so-called S2 form must be completed for this. The AOFE Clinics has a lot of expertise in this area.



Relaxed, Ponsen gives a tour of the operating room, where the surgeon on duty treats the patient who has been found suitable for a bone-anchored prosthesis. As a precaution, all guests are given special blue suits, with hats and pockets to put over their shoes. The air in the operating room and the surrounding areas must remain as pure as possible.

At the end of the tour, Dr. Aschoff seemed a little jealous of the clinic in Rozendaal. "A beautiful place to operate and be operated on," he said, with a twinkle in his eye.



Remco Blom's initiative to conclude a contract with AOFE-Clinics as defense commander in 2018 shows his foresight. After all, soldiers who lose a leg or arm at the front are entitled to top care and that is part of it.

For Dr. Jan Paul Frölke, who has been performing osseointegration operations as an orthopedic trauma surgeon at the Radboud University Medical Center in Nijmegen since 2009, a dream has come true. For years he has been campaigning for a separate clinic for amputation medicine and bone-anchored prostheses to meet the demand from home and abroad for these types of operations, which will be fully reimbursed by Dutch health insurers from January 1, 2024.



To qualify for treatment, a referral from your GP or specialist is required. Our case manager Dicky de Best will then ensure everything runs smoothly.