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# NEW PROSTHETIC TECHNOLOGY IMPROVES LIFE'S SIMPLE PLEASURES

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The world of research can seem complicated, but the benefits of research are seen all around us in the ways they improve the quality of everyday life. One example of such research, osseointegration, is being exhibited this week at the Winter Sports Clinic. Dr. Richard Branemark of Goteborg, Sweden, at the invitation of VA Research & Development, is showcasing this new type of prosthesis currently available only in Australia, Canada and Sweden.

The first such implant was performed in 1965 as a dental procedure for missing teeth. Since then, about 1 million patients have received dental implants of this type. Dr. Branemark says researchers continue to expand the applications for osseointegration, refining surgical techniques and equipment to move it from "experimental" to an approved patient treatment. In 1990, this revolutionary implant procedure was used to treat the first bilateral, above-the-knee amputee. To date, approximately 65 - 70 individuals have benefited from this treatment procedure.

"Approximately 70 per cent of amputees have severe problems that impact life quality, such as skin sores, poor fit, sweating and pain," explained Dr. Branemark. "Osseointegration, a procedure developed by my father, anchors the prosthesis directly to the skeleton, eliminating many of the complications normally experienced by the traditional socket design."

If you don't believe it, just ask Erik Ax of Norway, who is here this week for the Clinic. He considers himself a lucky guy to have the opportunity to get this prosthesis. Following an accident in 1986 that resulted in the loss of his left leg, Ax chose to spend the first two years on crutches rather than try a prosthesis. He then spent the next several years in a traditional socket prosthesis, and lived with the problems associated with it. In 1998, he heard about a new type of prosthesis and contacted Dr. Branemark. The first of two surgeries needed to perform the implant was done March 10, 1999; the second was done exactly six months later. Ax said the entire process, from the first surgery until completely healed, took roughly 18 months – but it was well worth it.

You'll see Ax around the village using crutches this week, but for reasons totally unrelated to his prosthesis. Remarkably, he's here after fracturing his hip in a bicycling accident only four weeks ago and hopes to be rid of the crutches in a couple of weeks. According to Dr. Branemark, the skeleton (bone) becomes stronger in the entire leg and *much* stronger at the implant site. Ax's implant was completely unharmed in the accident.

#### see PROSTHETIC, page 2

#### **PROSTHETIC** continued from page 1

On his first visit to the United States, Rolf Nygaard was the first person from Norway to undergo this procedure. Nygaard, who lost his leg during the war, was first told in 1994 he was not a candidate for osseointegration. By 1997, he had developed more serious socket-related problems and was accepted for the procedure. "When you use a socket prosthesis," Nygaard explained, "you have to plan the whole day in advance. You have to plan time to take it easy after walking. Now, I can put it on in the morning and not think about it the rest of the day."

Are there downsides to this new treatment? According to both Ax and Nygaard, not many. Just like any other surgery, this procedure is not without some pain; however, both men stressed that it only lasted a short time and their physicians managed it well. Nygaard mentioned having some difficulty walking on uneven surfaces, but that inconvenience is minimal. The implant allows more freedom of movement, along with improved flexibility and range of motion as compared to the socket.

When can we look forward to having this new technology available in the United States? Dr. Robert Myers, Senior Research Career Scientist with the Department of Veterans Affairs (VA) and Professor of Anesthesiology & Pathology at the University of California at San Diego, is working toward that end. For the past ten years, Dr. Myers has worked with Dr. Branemark on related research. Through this continued partnership, they hope to introduce osseointegration technology to veterans in the U.S. sometime in the next few years through VA's Rehabilitation Research Service. "It is important to introduce this procedure carefully to ensure quality," Dr. Myers said. "It's a delicate surgery, and the surgeons would be first trained in Sweden before performing it in the United States."

When looking at the benefits of research, we often overlook the simple things – like being able to sit on the floor to play with a child, or going for a walk in the park without a rest. Erik Ax said it best, "It's a new world for us, as well as our families." Simply put, that's the true value of research.

For more information, you're invited to attend the special workshop tonight, 7:30 - 9:00 p.m., Kearns Room





**Looking for a quick warm-up?** Don't get it from alcohol! Although the image of a St. Bernard with a keg of brandy is provoking, don't do it! Alcohol causes blood to go to the surface of the skin, which does give a sensation of being warm for a short time. Unfortunately, this also causes the body temperature to drop faster than normal, and the net effect is overall cooling of the body. Better stick with the hot chocolate on this one.

**Not feeling so hot?** The fatigue, headache and difficulty sleeping you are experiencing may be due to something other than the excitement of the Clinic. At an elevation of more than 7,900 feet the body can have a difficult adjustment period, causing high altitude sickness. Symptoms tend to be worse in people coming from lower elevations. Rest, drinking lots of fluids, and refraining from alcohol can help you get over this problem. For severe symptoms, go to the medical room.

### Life's Good -- Even With the Bumps!

Debra "Jean" Van Trump of Lake Park, Florida, will well definitely remember her seventh Winter Sports Clinic. During her run in the downhill skiing event on Tuesday, Jean and her instructor came upon a "tourist" skier (not a Clinic participant). In Jean's own words, "I skied to the right of the tourist, my instructor skied left, and we literally lassoed her in the middle." Jean fell on her side and was fine -- until the entangled tourist was thrown on top of her. As a result, she's spending the rest of the week on the sidelines with a broken collarbone and her arm in a sling.

But that's okay, because Jean Van Trump's no quitter. On her way to the doctor this morning, she was all smiles and determined to make the most of the rest of the week. "Skiing has totally changed my attitude and my life," said Jean, who is diabetic. So what will Jean be doing this week? You'll find her attending classes, cheering on her teammates, and having a good time. "This injury is just a little bump in the road," explains Van Trump with a smile. "When you fall, you pick yourself up and keep going. That's what the Clinic is all about!"

## Medical Information for Participants PHONE: 970-923-2000, Ext. 381

Medical Emergencies:

- Call 911 for an ambulance for transport to the local emergency room.

Non-Emergent Care, 8:00 a.m. - 9:00 p.m.:

- Bedford A conference room, one level below mall, across the street from Mountain Chalet Hotel Stairway access from mall is next to Christy Sports.
- Wheelchair access must use elevator at far end of mall above main bus terminal to get to medical room level.

Transport:

- Van transport is available from Silvertree Hotel to medical room. Find medical van in front of hotel, or call medical room for transport.

After Hours:

- Call medical room for recorded instructions for contacting "On Call" medical provider. If unsuccessful, call hotel operator.

## An Interview With VA's Under Secretary for Health

When it comes to the National Disabled Veterans Winter Sports Clinic, Dr. Robert Roswell's enthusiasm and commitment are clear. Dr. Roswell views the Clinic as an exciting opportunity to showcase new technology, not only for sports events, but for improving activities of everyday life. "Sponsor/vendor partnerships enable us to push the envelope to better address physical challenges," explains Roswell.

Roswell cites the immeasurable therapeutic benefits for veterans who participate, but beyond that, Roswell says the Clinic serves to promote the development of adaptive equipment. "The osseointegration implant is one of the new prosthetics techniques being exhibited here this week," notes Roswell. "This technology involves taking a titanium implant, putting it inside the bone and through the skin, allowing the prosthetic limb to be directly attached." Roswell said the prosthesis attaches with such integrity that it literally becomes a part of the veteran, resulting in a more natural feel, allowing the patient to sense the vibrations of walking. (See story, page 1)

Finally, Dr. Roswell stressed the true importance of the Winter Sports Clinic to the more than 200,000 employees of the Veterans Health Administration. "The veterans who are here, who are facing and overcoming challenges, more than anything else, serve as inspirations to the VA family and remind us of our very noble cause of treating America's veterans."



Lunch today (11:00 1:00 p.m.): Tossed Salad: Minestrone Soup; a.m. Barbecued Chicken; Italian Sausage Sandwiches; Chips; Bars Granola

Dinner today (4:00 p.m.): Chinese Pasta Salad: White 5:15 Rice: p.m. -Vegetable Fried Rice; Fried Wontons; Chinese Chicken with Peanuts: Beef Broccoli Stir Fry; Cookies and Fortune

**Breakfast** tomorrow (6:30 **a.m**. 8:30 a.m.): Fresh Fruit; Oatmeal; Belgian Waffles with Fresh Berries; Ham and Bacon; Home Fries; Coffee, Tea, Juices