



Otto Bock®

QUALITY FOR LIFE


New C-Leg® – without compromise!

After 12 years of experience and the provision of more than 25 000 C-Leg prosthetics, we have made the processor-controlled knee joint system even better with new features and a new design. Read more at www.ottobock.se

Choose a C-Leg® for higher quality of life.

C-Leg® 2

A World's First



Geir-Arne Hageland came into the world in 1972 and grew up on a farm in the municipality of Dovre, 150 kilometres north of Lillehammer in Norway. He was born with impaired leg and hand function. During his first three years of life, Geir-Arne underwent several operations at Rikshospitalet in Oslo and, at five years of age, the decision was made to amputate his legs through the knee joint.

"I don't remember much except that it hurt during the healing process. Though it was probably more painful for my parents during that time. Still, they did what was best for me and gave me the capacity to walk with prostheses, which had not been possible before," says Geir-Arne.

OCH in the Olympic Village

Nobody believed in him. However, orthopaedic engineer Olav Telle in Lillehammer refused to give up. His tenacity and acumen led to Geir-Arne Hageland becoming the first person in the world to walk on two electronic knee joint prostheses: C-Leg® from Otto Bock.

By Lena Mattsson

Came into contact with the newly-opened clinic
Geir-Arne's parents had to drive several hundreds of kilometres from Dovre to Rikshospitalet in Oslo, a round trip of 700 kilometres. However, from 1981 they did not need to go as far anymore. Because that was when orthopaedic engineer, Olav Telle, opened an orthopaedic technology clinic in Lillehammer, which is now part of the company OCH Ortopedi.

Olav Telle has made all the difference
Geir-Arne became Olav's patient, and the engineer took an extremely active interest in the nine year old from Dovre.
"Olav has helped me a lot and become an important person in my life. In our working partnership, I am responsible for communication and he for technology. This has worked well and given me the chance to try out a number of prosthetic solutions," says Geir-Arne, who even has nicknames for his previous prostheses. Kamikaze, John Cleese and Never Ending are some of the prostheses he has been through down the years. "It may sound repellent but I've always wanted to try out new prosthetic technologies for the sake of my own development."



About Geir-Arne Hageland
Age: 37 years
Lives: Lillehammer
Family: Single
Occupation: Computer consultant

"Stubbies" good for play

From the very beginning, he had so-called "stubbies" which are a couple of foreshortened balance prostheses fitted directly on to the knees. They were the first choice when Geir-Arne wanted to play with his friends. The rigid prostheses, however, were not as popular since he had to unlock them when he wanted to sit down or stand up.
"Kamikaze is what I called the prostheses that literally had me on my knees when they suddenly locked up. My legs folded underneath me and I fell down several times."

A few others were named after John Cleese's famous "silly walk". The prostheses functioned well as long as Geir-Arne was walking but when he wanted to sit down, he had to exert substantial pressure on both

feet which required remarkable displays of acrobatics on his part. The last were christened Never Ending as Geir-Arne could only walk with them because sitting was more or less impossible.

Sought help from Otto Bock

Around this time, Geir-Arne's orthopaedic engineer, Olav Telle, heard about C-Leg® the new knee joint prostheses from Otto Bock which are electronically controlled and can bend at the knee in a natural way without the wearer having to unlock them manually first.

"I was curious and thought it might be suitable for Geir-Arne, so I applied for a grant from Otto Bock and in the report I described his need for a new prosthesis. Fortunately, I got the grant," says Olav.

Tenacity that paid off

In the summer of 1998, Olav and Geir-Arne went to Germany to find out if the C-Leg® might be the right solution. When they arrived at the Otto Bock headquarters in Duderstadt, the staff was very sceptical about trying out the C-Leg® on both legs, because they could not guarantee Geir-Arne's safety. Nevertheless, Olav felt it was worth the risk and stuck to his guns. A few months later, as the first Norwegian, Geir-Arne was fitted with a C-Leg® to his left leg but had to keep the rigid prosthesis on his right leg. A partial victory.

"Unfortunately, it was by no means a success for Geir-Arne. He developed an asymmetric posture and this resulted in an even poorer walking technique. I still could not let go of the idea that it might work with two C-Leg® prostheses for Geir-Arne," says Olav.

First in the world with two C-leg prostheses

After six months, Geir-Arne's C-Leg® had to go in for an electronic service. Then Olav got an idea. He ordered a spare C-Leg®, on the grounds that it would be used during the time that the original prosthesis was being serviced. Now there were two C-Leg® prostheses for the left leg at his disposal. After making a few adjustments to the mounting mechanism of the one C-Leg®, the problem was solved - now there was a C-Leg® for each leg. At the same time, Olav made sure the solution was approved by the Norwegian authorities. The whole enterprise could be described as a gamble that paid off. However, given the thoroughness of the work, it would be more accurate to class it as a measured step in the right direction which meant that Geir-Arne became the first person in the world on two C-Leg® prostheses.

"That was ten years ago and I still use them every day. I have more energy which means that I can walk for



About Olav Telle

Age: 57 years
Lives: Hamar, 60 kilometres south of Lillehammer
Family: Single with two adult children and five grandchildren
Occupation: Orthopaedic engineer and clinic director at OCH Ortopedi in Lillehammer

longer periods of time, feel more secure and my body is not put under as much strain as before. It also looks prettier when I walk," states Geir-Arne.

Proud "Daddy"

Olav now calls himself "daddy of the first bilateral C-Leg® knee prosthesis" and is mighty proud of his work and Geir-Arne.

"I've followed him since he was a small child to adulthood. It means you have a special relationship, as a patient but also as a friend.

"Geir-Arne is also very good on his prostheses and it's exciting as an orthopaedic engineer to work with a patient who gives his all and always want to try new things," says Olav.

Full speed ahead in professional life

That is a description Geir-Arne would go along with. It applies to both his private and professional life. He works as a consultant for a computer company, which involves many days of travelling each week. Alongside work, Geir-Arne is also reading for a master's degree in business development at Lillehammer University College, as part of his endeavour to help people with various forms of disability to start their own business.

"I want to help them see the opportunities and solutions rather than give way to obstacles along the way," says Geir-Arne.

Running his own company on the side

He walks the talk. Geir-Arne now runs his own business in his free time and gives talks on his own experience of disability

and knowledge of medical aids.
His biggest challenge, however, still remains. Learning to ride a bike with C-Leg®.
"No one has managed to do it so far. I like to challenge myself and there is always more to learn," concludes Geir-Arne.

OCH... in brief

OCH Ortopedi AS is the abbreviation for the company: Ortopedteknisk Centralverksted and its history stretches back 150 years in time. OCH Ortopedi is among the largest in Scandinavia and a leading provider of orthopaedic aids. Their mission is to work with patients and health professionals to improve individuals' quality of life through counselling and treatment, and the production, development and marketing of orthopaedic appliances.
OCH Ortopedi currently comprises five departments in Oslo, Alesund, Porsgrunn, Fredrikstad and Lillehammer. They also work with a number of large hospitals in Norway, where they receive patients in outpatient clinics, including the hospital in Gjøvik, 50 kilometres south of Lillehammer, and Otta, 120 kilometres north of Lillehammer. They have 80 employees divided among the various clinics. The Lillehammer department has 19 employees including orthopaedic engineers, technicians and mechanics. In one year, the clinic in Lillehammer receives approximately 3,300 patients. www.och.no