

# ÖSSUR TECHNOLOGIES FEATURED IN NATURE MEDICINE ARTICLE REPORTING FOR THE FIRST TIME ON AMPUTEES “FEELING” THEIR PROSTHETIC FOOT AND KNEE

**- Proof of concept research holds promise for the future –**

**REYKJAVIK, Iceland, Sept. 11, 2019** – An article published in the journal *Nature Medicine* reports that two above knee lower-limb amputees who had intraneural electrodes implanted in their thighs and wore Össur prosthetic componentry are the first in the world to “feel” their prosthetic foot and knee in real-time.

In the article, “[Sensory Feedback Restoration in Leg Amputees Improves Walking Speed, Metabolic Cost And Phantom Pain](#),” an international team of researchers present the results from two volunteers who underwent surgical implantation of intraneural stimulation electrodes into residual nerves in their thighs. Both users were fitted with an exclusive configuration of Össur prosthetic innovations, including Iceross® liners, Direct TF Sockets, and Pro-Flex® XC feet, as well as Össur’s Rheo Knee® XC, a state-of-the-art Bionic knee. Data from the knee and a sensorized insole was used to drive neural stimulation which enabled the users to experience real-time sensations of knee motion and the sole of their foot touching the ground.

The authors found that both users experienced improved self-confidence and increased walking speed, as well as diminished mental and physical fatigue, and reduced phantom limb pain.

“While the results are promising, we recognize this was a proof of concept study and further research is needed,” said Asgeir Alexandersson, MD and biomedical engineer, Director of Research & Innovation at Össur, who along with Knut Lechler, CPO, Össur’s Medical Director Prosthetics, were co-authors of the article. “We appreciate the multi-disciplinary approach that was taken in this study – including the surgeons, CPOs, engineers, physiotherapists and other clinicians who are part of the amputee’s clinical team. The promising results encourage the field to continue researching the technology and offer a glimpse into the future of lower limb prosthetic solutions; a future that may be closer than we think.”

According to Össur CEO Jon Sigurdsson, the company’s participation in research projects like this one are central to Össur’s core purpose as an organization.

“For over four decades, Össur has been devoted to innovating to improve people’s mobility, and we were excited to see that technologies in our currently available commercial devices could be utilized in this study. We continually evaluate the applicability of our current prostheses with advancing technologies, to ensure that our future prosthetic developments continue harmonizing with advancements in the field, and so that we may help even more people with limb loss and limb difference enjoy a life without limitations,” Sigurdsson said.

## About Össur

Össur (NASDAQ OMX: OSSR) is a global leader in non-invasive orthopaedics that help people live a life without limitations. Its business is focused on improving people’s mobility through the delivery of innovative technologies within the fields of Prosthetics and Bracing & Supports. A recognized “Technology Pioneer,” Össur invests significantly in research and product development —its award-winning designs ensuring a consistently strong position in the market. Successful patient and clinical outcomes are further empowered via Össur’s educational programs and business solutions. Headquartered in Iceland, Össur has major operations in the Americas, Europe and Asia, with additional distributors worldwide. [www.ossur.com](http://www.ossur.com)