

## About

### New Treatment Helps Spinal Cord, Stroke Victims Regain Balance

**Toronto, Ont., Canada – November 6, 2007** – A new article published in *Artificial Organs* indicates that patients suffering from spinal cord injuries may regain lost balance through the electrical stimulation of toe muscles. It can be very difficult in the initial months following a stroke or spinal cord injury for patients to recover the ability to sit up, stand, and balance. Electrical stimulation can change the angle of ankle rotation, and as a result of this movement, balance during standing.

“Using our results, a device that stimulates toe muscles along with ankle muscles could be designed to provide assisted standing for patients not only with spinal cord injuries, but also those who have suffered severe stroke,” says Kei Masani, Ph.D., lead author of the study.

Various devices have been developed to help patients with spinal cord injuries and severe stroke to stand. These include surgically implanted Functional Electrical Stimulation systems, standing frames, and orthosis braces. However, it is very difficult for such devices to maintain patients’ balance.

“The toe stimulation could provide the torque and fine-control regulation necessary to allow patients to maintain their balance.” says Kei Masani, “In the near future, this would allow patients to stand without having to use their arms to maintain balance, allowing them to perform various activities of daily living while standing.”

**This study is published in the journal *Artificial Organs*. Media wishing to receive a PDF of this article may contact**

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