Stroke Patients Volunteer to Test Whether Rollerskating can Help Limb Movement

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Researchers at the University of Birmingham are investigating whether regular leg exercise on a new chair, wearing roller skates to assist movement, can help chronic stroke patients improve their walking skills.

The team from the University's Collaborative Research Network in Human Health, Wellbeing, and Development are looking for volunteers to take part in a six month study, which is funded by the Stroke Association to assess a new approach to rehabilitation.

Initial results suggest that allowing patients to move their arms or legs in a co-ordinated way can help the process of rehabilitation. During the study seated participants will train both legs at the same time wearing modified roller skates to guide their movement (forward and backwards).This will help investigators assess, what types of movement are most effective in helping rehabilitate stroke patients, who experience loss of movement in one side of their bodies (known as hemiparesis).

Professor Alan Wing from the School of Psychology said: Our preliminary research suggests that helping patients move both arms or both legs is more beneficial than exercising with the affected limb on its own. The activity in the brain, which is driving the healthy arm or leg, can spread across to the arm or leg on the affected side, which seems to help movement recovery significantly. By varying the exercise regime we hope to test this thoroughly so patients receive the most effective physiotherapy in the future."

Professor Wing continues: "We study a treatment regime for stroke patients, which could be used by physiotherapists on the wards if our research shows it is effective. It uses our existing understanding of how people control movement to potentially build on the rehabilitation, which is already available for stroke patients."

Throughout the study the research team will use advanced performance testing to monitor each volunteer. Motion tracking devices will be used to collect information about how well they can perform movements, and how the participants are improving through the trial.

Dr Leif Johannsen from the research team said: "We are very keen for people, who are still experiencing difficulties with movement after a stroke to become involved with the research. Everyone taking part in the project will get the benefit of exercise as well as the chance to talk to the physiotherapists on the project about techniques for rehabilitation. Anyone who is interested can contact the team in complete confidence to find out more information."

Participants are being recruited for the study through general practices in the West Midlands. However, any patients interested in participating in the research should contact the coordinator Dr Leif Johannsen in the School of Psychology on 0121 414 3338 for more information or visit the research group's website at www.symon.bham.ac.uk/glass.htm All enquiries will be treated in strict confidence.

In order to further improve the leg trainer, the research team would like to speak to anyone with expertise in developing similar electromechanical devices.

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For More Information Contact: Ben Hill Press Officer, University of Birmingham: Tel 0121 4145134, 07789 921 163.

NOTES TO EDITORS

Exercise Protocol

The exercise protocol requires half of the participants in the study to exercise their legs, and the other half to exercise their arms. This will allow researchers to compare the effects of exercise on both sets of limbs. Participants will undergo 10 half-hour sessions of therapy at school of Psychology, which will be monitored to assess the improvement in movement.

THE RESEARCH GROUP

The University's Collaborative Research Network in Human health, wellbeing and development is an interdisciplinary team from the University's Schools of Psychology, Health Sciences, and the Department of Primary Care and General Practice.

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