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Media Statement

RUNNING THERAPY AIMS TO HELP BRAIN INJURY SURVIVORS

WA researchers are challenging conventional treatments by setting out to test the agile exercise of running in improving recovery following stroke and head injury.

The pilot study, funded by WA's world-leading Neurotrauma Research Program (NRP), based at the Western Australian Institute for Medical Research (WAIMR), as well as the Physiotherapy Research Foundation, hopes to use running to boost muscle performance and mobility in brain injury patients.

With about eight in 10 stroke victims experiencing difficulty moving or weakness on one side of their bodies, Study leader and Curtin University Associate Professor Garry Allison hoped the trial would break new ground.

"Previously, complex movement tasks such as running were generally assumed to worsen the side effects of acquired brain injury and treatments so far have been based on the understanding that the harder a patient tries to move, the stiffer the affected joint becomes," he said.

"But this trial is going to examine if in fact dynamic movements such as running, during late stages of rehabilitation, may have the opposite effect in some people.

Associate Professor Allison said the program adapted a form of exercise therapy focused on more dynamic movement patterns and aimed to, through the use of running, re-train the body's nervous system to respond better to movement.

"It's a relatively new way of thinking, but we believe retraining skills such as running, skipping, hopping, and stair climbing can help enhance performance of higher level mobility tasks by retraining the brain through repetitive, intense practice," he said.

"The aim of the therapy is to help improve agility, fitness, motor control power and speed which are important for participation in employment, as well as sporting, leisure and social activities."

One of the physiotherapists leading the program – Michelle Kennedy from Royal Perth Hospital's Physiotherapy Department – said brain injured patients would be asked to take part in the study during their last eight weeks of outpatient rehabilitation.

"Patients will be assessed and will either be allocated into the running program or the standard outpatient rehabilitation program," she said.

"After the eight week running program, they'll be prescribed a home exercise program to follow with a review at three months in a bid to see if their improvements can be maintained over time.

"We will then assess the outcomes of the running program compared to the results of the standard outpatient program and if the running program proves to be effective we aim to introduce the program across other rehabilitation centres within WA."

This research is one of a number of cutting-edge research projects being undertaken by the NRP. The projects have been made possible thanks to an \$8 million funding boost over five years from the WA Government.

*Source: National Stroke Association - <http://www.stroke.org/site/PageServer?pagename=hemiparesis>

-Personal story of David Taggart follows-

MEDIA CONTACT: Sarah Hayward, WAIMR Media Consultant, m 0411 404 415, o 9388 9280

DAVID TAGGART

In March 2008, Duncraig resident David Taggart suffered a stroke at 62 years of age, and has now been part of the running program for nearly four months.

A state masters lifesaving champion, David was extremely fit and healthy before he was struck down by the life-threatening episode.

“A week after competing in the state lifesaving championships, I woke up, walked to the door to pick up the newspaper, and as I turned around to get my dog, suddenly felt as though my body had detached itself and lost all feeling,” he said.

“I slid on to the floor and tried to yell for help and realized I couldn’t even speak.”

After lying on the floor for almost an hour, David’s wife found him after being awakened by her alarm clock and immediately called an ambulance.

“I fell into unconsciousness and woke up in the emergency room at the hospital with the most extreme headache – I was in so much pain that the doctors operated on my brain and removed some skull as well as four cubic centimetres of my brain tissue to relieve the pressure causing the headache,” David said.

David later found out that while he was unconscious, doctors told his family they did not expect him to survive, but against all odds he pulled through and after a week in intensive care he was transferred to the Royal Perth Hospital’s Shenton Park Rehabilitation campus.

“When I was wheeled into rehabilitation, I was unable to walk and the doctor who greeted me told me that when it was time for me to leave rehabilitation, I would walk out,” he said.

“I thought this sounded impossible following the neuro-surgery and my stroke, but after a month of intense rehabilitation, I walked out.”

Two months later David heard there was a vacancy in the running program being run at Royal Perth Hospital, so joined up and said hasn’t looked back since.

“The recovery I have made since being on the running program is amazing – it’s not so noticeable on a day to day level but when I look back at how I was when I started the program, I can’t believe how much progress I have made,” he said.

“When I started the program I was on my feet but I wasn’t stable, and now I can walk for miles.

“I can see a total change in the other participants as well – it’s just incredible how slowly persisting on the exercises combined with the unbelievable patience of the physios, makes everyone improve so much.”

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