

Breakthrough program halts Huntington's progression

November 28 2013, by Rashelle Predovnik



Prof Ziman says the pilot shows quite distinctly that a program of physical and mental stimulation, as well as social stimulation, slows the onset of symptoms and the progression of the disease. Credit: JSmith

Being sociable and exercising your mind and body can significantly slow down the progression of Huntington's disease for those who are beginning to show symptoms according to a world-first study by Western Australian researchers.

The disorder, which affects muscle coordination and causes progressive mental and physical deterioration is a type of dementia, related to Alzheimer's disease, and it is caused by a mutation in either one of an individual's two copies of a gene called Huntingtin.

Currently researchers are trying to identify treatments to stop its progression and improve quality of life, while the search for a cure continues.

One promising study found the disease's progression was significantly slowed down in mice given a physical and mental exercise program—this strategy forming the basis of a [pilot study](#) in WA.

The Huntington's Exercise Research Optimisation study recruited 20 patients in early to mid stages of Huntington's disease to find out if a prolonged program of mental and physical rehabilitation would positively impact on features of the disease.

The program ran over 23 months and included gym-based exercises, home-based physical exercises and occupational therapy.

The pilot had remarkable results with participants deteriorating at a 50 per cent slower rate than a group who did not do the program—they also had noticeable improvements in body composition, muscular strength and perceptions of mental health.

In addition, participants showed mental improvement, which reached statistical significance for some aspects of cognitive function.

Researchers concluded the pilot study shows it's possible to considerably impact on the progression of Huntington's disease in a cohort of individuals at early-mid stages of the disease.

But they say larger studies are warranted to more clearly explain the program's benefits.

Following the pilot's success, researchers are recruiting for a new study with participants yet to be diagnosed as symptomatic.

This study will offer participants an ongoing multidisciplinary rehabilitation program as an adjunct to their normal pharmaceutical regime.

Edith Cowan University Professor and chief investigator Mel Ziman says the pilot shows quite distinctly that a program of physical and mental stimulation, as well as social stimulation, slows the onset of symptoms and the progression of the disease.

"Aerobic exercise is known to increase some chemicals in the brain—one called brain-derived neurotropic factor, which stimulates neurogenesis and we have to do quite a bit of exercise in this program to switch that on."

"There were very few other studies in humans and we were the world's first to undertake such an all encompassing program in people and the aim is to improve their quality of life for a longer period of time, so they can maintain their independence."

The researchers hope to publish the [findings](#) by Feb/March 2014.

Provided by Science Network WA

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