

Exercise bike pedals hope for people with MS

March 9 2015, by Michelle Blowes

Researchers from the University of Sydney have designed an innovative exercise system that allows people with multiple sclerosis to workout their paralysed leg muscles in the hope of improving symptoms and slowing the disease progression.

The specially designed [exercise bike](#) uses electrical stimulation to activate contractions in the major [leg muscles](#), which forces the pedals to rotate.

Lead researcher Dr Ché Fornusek, an expert in biomedical engineering from the Faculty of Health Sciences, said people with multiple sclerosis benefit from regular exercise, but the progression of the disease meant many people gradually lose their ability to walk and stay active.

"Inactivity isn't good for any of us, but for people with MS it exacerbates health problems and can put them at greater risk of conditions like diabetes and cardiovascular disease," Dr Fornusek said.

Multiple sclerosis is an incurable disease which causes scarring on the central nervous system, leading to muscle paralysis and reduced quality of life.

The research team has a long history in world-leading research in [electrical stimulation](#) exercise and for this study adapted a bike they previously developed for people with [spinal cord injuries](#). They are now undertaking testing to assess the benefits that can be gained for those with advanced multiple sclerosis.

Dr Fornusek said early trials show a lot of promise and the researchers were eager to see just how effective the exercise treatment could be.

"I'm confident we can improve the condition of people's legs and make tasks like transitioning to and from a wheelchair easier which is great. But I'm also keen to know if this exercise can improve the immune function and ultimately slow the progression of MS," he said.

The study is funded by a grant from MS Research Australia. Chief Executive Officer Dr Matthew Miles said the project highlights the importance of researchers continuing to seek new and innovative treatments for people in the advanced stages of the disease.

"This study has the potential to make a real difference to the quality of life for many people currently living with severe [multiple sclerosis](#)," Dr Miles said.

Provided by University of Sydney

Citation: Exercise bike pedals hope for people with MS (2015, March 9) retrieved 7 October 2024 from <https://medicalxpress.com/news/2015-03-bike-people-ms.html>

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