

High-intensity training could put kidney disease on the run

May 26 2014, by Caroline Day

The benefits of high-intensity interval training for people with chronic kidney disease is the focus of a team of researchers at The University of Queensland.

The study coincides with Kidney Health Week, which is being celebrated from 25 to 31 May.

More than 50 people die every day from kidney-related disease according to [recent data](#) from the Australian Bureau of Statistics.

The research being done at the Centre for Research on Exercise, Physical Activity and Health at UQ's School of Human Movement Studies aims to reduce the high mortality rate associated with the disease.

The study is examining the effects of high-intensity interval training compared to moderate-intensity continuous training on [participants](#) who have stage 3 or 4 [chronic kidney disease](#).

Intense interval training has been shown to have [health benefits](#) in people with metabolic syndrome, also known as insulin-resistance syndrome, and in people with [cardiovascular disease](#) but this is the first study on people with kidney disease.

Lead investigator and UQ PhD student Kassia Weston said the results would enable people with kidney disease to write the most effective

exercise plan for themselves.

"We know fitness is strongly related to health outcomes in kidney disease, so if we can find the best way to improve [fitness levels](#) we can hopefully reduce the high rates of cardiovascular disease associated with this disease," she said.

High-intensity [interval training](#) has gained rapid appreciation among clinicians due to its superiority in increasing fitness in a shorter amount of time than moderate-intensity continuous training.

Although the study is still in its early stages, Ms Weston said participants had already experienced positive health benefits.

"One participant told me she had already noticed considerable improvement in her energy, fitness levels, muscle strength and balance," she said.

"She told me she was also recovering a lot faster after exercise and generally had a more positive outlook."

The study requires participants to train three times a week for 12 weeks, with one group of participants exercising at high intensity intervals for 20 to 30 minutes and a second group exercising at moderate intensity continuously for 30 to 40 minutes.

Ms Weston said testing involves several measures including participants' exercise capacity, fitness levels, mitochondrial function and muscle atrophy.

"Kidney disease patients experience muscle wasting so it will be interesting which type of exercise training is better for ameliorating muscle wasting," she said.

Other researchers involved in the study include Professor Jeff Coombes, Dr Jonathon Peake, Professor Nikky Isbel, Dr Erin Howden and Professor Rob Fassett.

UQ is now looking for a second group of participants to take part in the study.

People are invited to the study if they are 18 to 30 years of age, have stage 3 or 4 chronic [kidney disease](#) and do not have unstable heart disease.

Provided by University of Queensland

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