

Walking down stairs could help prevent dementia

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In another study, elderly overweight women walked either up or down a flight of stairs twice a week, with better outcomes in the descending group rather than the ascending group. Credit: iStock

We're pretty familiar with the notion that exercise is good for our health. But new WA research suggests that something as simple as encouraging the elderly to walk down a flight of stairs could help prevent cognitive decline, a precursor to diseases such as dementia and Alzheimer's.

Undertaking 'eccentric' exercise—where contracting muscles are lengthened rather than shortened—requires more brain power, which may help in preventing [cognitive decline](#), Edith Cowan University Professor Ken Nosaka says.

This view is based on a number of studies including one in which 26 men between ages 60 and 76 followed a regime of eccentric versus concentric exercises (where the muscle is activated and shortened) over 12 weeks.

Their health and fitness was monitored, showing that performing eccentric exercises was more beneficial in terms of heart rate, blood pressure, physical fitness, glucose, blood lipid profile and [insulin sensitivity](#).

In another study, elderly overweight women walked either up or down a flight of stairs twice a week, with better outcomes in the descending group rather than the ascending group.

Meanwhile, retirees at the Rod Evans Community Centre in Perth are taking part in a 12-week 'Stay Sharp' pilot program where they are monitored over time while performing various eccentric exercises.

These exercises include walking down stairs and slopes, sitting down and lying down slowly and lowering a dumbbell slowly.

Prof Nosaka says eccentric exercise is less metabolically challenging, easy to undertake and when repeatedly performed, results in greater increases in muscle strength and mass.

"The front thigh muscles are lengthened when stopping the body moving forward, in contrast to walking up stairs where the front thigh muscles are basically performing concentric contractions," Prof Nosaka says.

"It is also important to note that eccentric exercise requires more cognitive demand, which may help prevent cognitive decline."

He says the study also shows this type of exercise improves insulin sensitivity and blood lipid profile, lowers resting [blood pressure](#) and decreases arterial stiffness, meaning people who do these exercises have a decreased risk of diabetes and reduced cardiovascular stress.

"It is well documented that diabetes is one of the causes of dementia, so if eccentric exercise can improve insulin sensitivity, it should be effective for preventing dementia," he says.

"While at this stage we do not know exactly how eccentric exercise will affect cognitive function, it should be beneficial for all ages including children."

Prof Nosaka says future work includes examining the acute effects of eccentric exercise on [cognitive](#) function.

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