

# Weight training improves cognitive function in seniors

January 25 2010

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Weight-bearing exercises may help minimize cognitive decline and impaired mobility in seniors, according to a new study conducted by the Centre for Hip Health and Mobility at Vancouver Coastal Health and the University of British Columbia.

The study, published today in the [Archives of Internal Medicine](#), is one of the first randomized controlled trials of progressively intensive resistance training in senior women. Led by Dr. Teresa Liu-Ambrose, researcher at the Centre and assistant professor in the Faculty of Medicine at UBC, the research team found that 12 months of once-weekly or twice-weekly resistance training improved executive cognitive function in senior women aged 65 to 75 years old. Executive cognitive functions are cognitive abilities necessary for independent living.

"We were able to demonstrate that simple training with weights that seniors can easily handle improved ability to make accurate decisions quickly," says Liu-Ambrose, who is also a researcher at the Brain Research Centre at UBC and Vancouver Coastal Health. "Additionally, we found that the exercises led to increased walking speed, a predictor of considerable reduction in mortality."

Previous studies have shown that [aerobic exercise](#) training, such as walking or swimming enhances brain and cognitive function. However, seniors with limited mobility are unable to benefit from this type of exercise.

Until now, the benefits of resistance training, which is an attractive alternative type of exercise for seniors with limited mobility, on cognitive function has received little investigation. Liu-Ambrose is one of few researchers in Canada investigating the role of targeted resistance training in promoting mobility and cognitive in seniors.

Cognitive decline among seniors is a pressing health care issue and it is a key risk factor for falls. Approximately 30 per cent of B.C. seniors experience a fall each year and fall-related hip fractures account for more than 4,000 injures each year at a cost of \$75 Million to the health care system.

The number of seniors in B.C. is expected to increase by 220 per cent by 2031, representing 23.5 per cent of B.C. population. Effective strategies to prevent cognitive decline are essential to improving quality of life for older British Columbians and to save the health care system millions in associated costs.

"At the Centre for Hip Health and Mobility we focus on research that will have a positive impact on the health of people in B.C. and Canada," says Heather McKay, centre director and professor in the Faculty of Medicine at UBC. "Dr. Liu-Ambrose's research provides a clear illustration of relatively simple interventions with a profound and immediate impact on the mobility and quality of life of older adults."

Results from this study are available for immediate adoption by senior women seeking to improve their health as the doses of resistance training used meet the recommended criteria provided by the 2008 Physical Activity Guidelines for seniors.

Provided by University of British Columbia

Citation: Weight training improves cognitive function in seniors (2010, January 25) retrieved 23 April 2024 from

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