Reducing the risk of dementia through lifestyle changes

June 18 2018

Female older adult exercising with an exercise bike at the Terraces of Baycrest. Credit: Provided by Baycrest

There is no treatment yet for dementia; but one day, a family doctor could prescribe a specific diet, an exercise regime, music or language

lessons, or documentary discussion groups as treatments to ward off the disease.

Canadian researchers are recruiting older adults across Toronto and Montreal to explore the benefits of different types of brain training and lifestyle interventions for two clinical trials.

Baycrest researchers are playing a leading role in these studies, which are part of the work being done by the Canadian Consortium on Neurodegeneration in Aging (CCNA), a nation-wide initiative bringing together over 400 clinicians and researchers throughout Canada to accelerate progress in age-related neurodegenerative diseases.

"As researchers seek to better understand neurodegenerative diseases like dementia and develop appropriate treatments, more and more evidence suggests that changes to a person's lifestyle could reduce their risk of developing the disorder," says Dr. Nicole Anderson, senior scientist at Baycrest's Rotman Research Institute (RRI), lead Baycrest investigator on the cognitive training and engaging leisure clinical trial, and clinical trial team leader on a nutrition, exercise and lifestyle intervention.

Keeping the brain challenged to stay healthy

Numerous studies have shown that older adults who have pursued higher education and who engage in mentally stimulating careers and hobbies possess a lower risk of cognitive decline and dementia.

This upcoming CCNA trial will be the first study to compare the brain health benefits of cognitive training and its implementation in three engaging types of leisure activities, music and language lessons, and documentary discussion groups.

"The cognitive stimulation individuals receive throughout their lifetime builds up the brain's resilience against the detrimental effects of dementia-related neuropathology," says Dr. Anderson, who is also an associate professor of psychology and psychiatry at the University of Toronto. "In the absence of treatment, we need to think of ways to protect our brain health earlier and build up this protective factor, known as cognitive reserve, as a potential way to prevent Alzheimer's disease."

Your brain is what you eat (and do)

Exercise not only reduces a person's dementia risk, there is evidence that it can also improve a person's memory and thinking skills and even reverse some of the damage done to the brain during aging or from brain disorders.

"Our couch potato lifestyles are unhealthy for our brains," says Dr. Carol Greenwood, nutrition and brain health expert and senior scientist at the RRI. "Physical activity not only helps with the growth of new brain cells, it also helps those cells become integrated into a person's brain networks, which are then used to complete everyday tasks."

Meanwhile, healthy eating has been shown to help people retain cognitive function and reduce their dementia risk, adds Dr. Greenwood, who is leading the clinical trial exploring the effectiveness of a combined diet and exercise intervention. "People could reap greater brain health benefits when these lifestyle changes are paired together, compared to each lifestyle factor on its own," says Dr. Greenwood.

Researchers are seeking participants between the ages of 60 to 85 who have concerns about declining memory or thinking skills. Research participants would need to be available to partake in interventions at specific hospital sites, including Baycrest, and willing to undergo a complete medical assessment, including brain imaging.

Provided by Baycrest Centre for Geriatric Care