Aerobic exercise no big stretch for older adults but helps elasticity of arteries

October 25 2009

Just three months of physical activity reaps heart health benefits for older adults with type 2 diabetes by improving the elasticity in their arteries - reducing risk of heart disease and stroke, Dr. Kenneth Madden told the 2009 Canadian Cardiovascular Congress, co-hosted by the Heart and Stroke Foundation and the Canadian Cardiovascular Society.

Dr. Madden studied adults between the ages of 65 to 83 with controlled Type 2 diabetes, high blood pressure, and high blood cholesterol to see how increased activity might affect stiffness of the arteries.

"The theory is that aerobic activity makes your arteries less stiff and makes artery walls more elastic," says Dr. Madden, a geriatric specialist at the University of British Columbia.

An improvement was seen in the elasticity of the arteries of the group that performed the activity compared to those who didn't exercise. "There was an impressive drop in arterial stiffness after just three months of exercise. In that time we saw a 15 to 20 per cent reduction."

The subjects were divided into two groups to either receive three months of vigorous physical activity (one hour, three times per week) or to get no aerobic exercise at all. Subjects were classified as sedentary at the beginning of the study but gradually increased their fitness levels until they were working at 70 per cent of their maximum heart rate, using treadmills and cycling machines. They were supervised by a certified exercise trainer.

Dr. Beth Abramson, spokesperson for the Heart and Stroke Foundation, stresses the importance of lifestyle factors on heart health, especially with our aging population. "Almost everyone can benefit from active living," she says. "The Foundation recommends that, like adults of any age, older adults - with the consent of their physicians – need 30 to 60 minutes of moderate activity most days of the week."

Dr. Madden says that the exercise requirements may be viewed as controversial because of the age of the participants but the exercise level was safe and well tolerated. "There seems to be a knee-jerk reluctance to getting these older adults to exercise yet we used a vigorous level of activity and didn't have any trouble keeping participants in our study. They enjoyed the activity," Dr. Madden says. "People always underestimate what older adults can do."

Dr. Madden notes that realistically, seniors need someone to help them get started. "We need to learn how to do it effectively and how to do it safely," he says. "It could mean visiting your family doctor to find out about provincially funded programs, or joining programs for seniors that are offered at many local community centres."

Dr. Abramson recommends that seniors choose activities they enjoy, such as walking, gardening, golfing, dancing, or joining a yoga or tai chi class. If weather is a barrier, she suggests climbing stairs at home, joining a mall-walking group, or strolling the halls of their apartment building or retirement residence.

In his next project, Dr. Madden wants to find out if there is a less expensive but equally effective way to reduce the stiffness of arteries in older adults. "Our first step was to prove that it was at all possible for older adults to have reduced narrowing in their arteries due to exercise," he says. "Now we want to find out just how rigorous the levels of activity need to be to demonstrate the same results. The next step is to try

studying a home-based walking program using pedometers. This is something easy for doctors to prescribe and cheap and easy for participants."

The HeartWalk Workout, a special activity program developed by the Heart and Stroke Foundation to help people with cardiovascular problems get regular, healthy physical activity is available online at heartandstroke.ca. It helps people slowly build up exercise tolerance until they can walk at least 30 minutes, five times a week.

Source: Heart and Stroke Foundation of Canada