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Researchers ramp up study looking at exercise, diabetes

CALGARY — Local researchers are seeking individuals with Type 2 diabetes and a desire to get into better shape to participate in a study that's looking at whether an exercise program using resistance bands for strength training improves blood sugar control and heart disease risk factors.

The researchers have received a grant from the Lawson Foundation to expand their study to include 80 participants with Type 2 diabetes who are willing to commit to a six-month program.

"We know that resistance training builds strength and makes the insulin that your body produces work better," says Dr. Ron Sigal, an Alberta Health Services endocrinologist and principal investigator in the study.

"If we can show in a large-scale study that it works just as well with resistance bands, then people with Type 2 diabetes could get the benefits of a gym membership at a fraction of the cost," adds Dr. Sigal, also a professor in the University of Calgary's Cumming School of Medicine, and a member of the Libin Cardiovascular Institute of Alberta and the O'Brien Institute for Public Health.

Although other studies have looked at the effects of resistance training using weight machines in gyms, this is the first large-scale study to see whether resistance bands, which are inexpensive and portable, might be an effective alternative.

To be eligible for the study, people must be 35 years of age or older and not currently taking insulin for Type 2 diabetes. They must also be able to walk for 10 minutes without difficulty.

In Type 2 diabetes, the body doesn't effectively use the insulin that the pancreas produces, leading to a buildup of sugar in the blood. Risk factors for developing Type 2 diabetes are a family history of the illness, obesity and a sedentary lifestyle.

David Hewgill, 72, began training with resistance bands as part of the pilot program last spring. Since then, he's lost 40 pounds and six inches off his waist, going from a size 42 to 36.

"I'm very supportive of the program – it's certainly helped me. It's quite motivating to be doing this in a group with other people. I've never been fitter," Hewgill says.

In Alberta, it's estimated at least 206,000 people have diabetes, of which 90 to 95 per cent are Type 2. That's about one in every 20 people.

Every participant in the study will receive an exercise program. Participants will be randomly placed in one of two groups: aerobic training only, or aerobic training plus resistance band training. Most exercise will be performed in or around participants' homes but there will be some group-based sessions led by an exercise specialist.

Participants will be asked to maintain an exercise log, as well as wear an accelerometer, a pager-like device that measures their daily physical activity.

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They'll receive instruction from fitness trainers in the use of the resistance bands and have access to a nutritionist for counselling about diet.

For more information, call 403-955-8117 or email exercise@ucalgary.ca.

Alberta Health Services is the provincial health authority responsible for planning and delivering health supports and services for more than four million adults and children living in Alberta. Its mission is to provide a patient-focused, quality health system that is accessible and sustainable for all Albertans.

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