Best diabetes fitness plan: aerobics plus weights

November 23 2010, By CARLA K. JOHNSON , AP Medical Writer

Deidra Atkins-Ball, 44, walks in Forest Park Tuesday, Nov. 23, 2010, in Baton Rouge, La. Atkins-Ball has diabetes and took part in a study where she was in a nine-month fitness program combining aerobics and weight training. She successfully lowered her blood sugar levels. People with diabetes should mix aerobics with weight training to get the best results in lowering blood sugar, a new study suggests. The combination worked best for weight loss too, compared to aerobics or weight training alone. Blood sugar is fuel to muscles, and more sugar is burned during aerobic activity. Weight training builds more muscle, and both activities change muscle proteins in ways that enhance the process. (AP Photo/Bill Feig)

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Blood sugar is fuel to muscles, and more sugar is burned during aerobic activity. Weight training builds more muscle, and both activities change muscle proteins in ways that enhance the process.

"It's clear that doing both aerobic and strength training is superior to either alone," said lead author Dr. Tim Church of Pennington Biomedical Research Center in Baton Rouge, La. "It's almost like taking two different drugs."

Patients in the study, published in Wednesday's Journal of the American Medical Association, achieved the results over nine months, exercising three days a week for about 45 minutes each session.

"People can manage this amount of exercise," said Laurie Goodyear of Joslin Diabetes Center in Boston, who wasn't involved in the new study but does similar research. "They didn't have to go on a diet. This was purely an exercise effect."

The researchers' goal was to test three exercise programs that doctors could realistically recommend and patients could stick with. They compared aerobics alone, weight training alone and a combination. U.S. guidelines recommend aerobics and weight training combined for all adults.

All three groups worked out for about the same amount of time. A fourth group of patients was offered only weekly stretching and relaxation classes for further comparison. The study was completed by 245 people with diabetes.

Led by trainers, patients walked on a treadmill that raised the uphill grade by 2 percent every two minutes for the aerobics. Weight training, also supervised, was done on machines that worked muscles in the upper body and legs, with more weight added as participants increased their strength.

"It gave me a lot more energy. That was one of the first things I noticed," said Deidra Atkins-Ball, 44, a biology professor, diagnosed with diabetes a year before she joined the aerobics-weights group.

A distant aunt with diabetes lost both legs and her vision to the disease. Too much blood sugar can damage nerves, eyes, the heart and blood vessels.

"I remember as a kid having to do things for her, going to the store for her," Atkins-Ball said. "It really scared me."

The researchers found that only the group that combined aerobics and weights both lowered their blood sugar and lost weight, although all three fitness groups reduced their waist sizes.

Fewer patients in the combo group started taking new diabetes drugs than in the other groups. Decisions on medications were left up to the patients' regular doctors during the study.

Forty-one percent of the patients in the combo group either decreased their diabetes medications or lowered their average blood sugar as measured by a common blood test, compared to 26 percent for weights only, 29 percent for aerobics only and 22 percent in the non-exercise group.

The blood sugar reduction achieved by the combo group was enough to reduce the risk of heart attacks, strokes and other complications, the

researchers wrote, citing earlier studies.

Atkins-Ball's results were good, if not long-lasting. She dropped 4 pounds and saw her blood sugar reach near normal levels. When the program ended, she joined a gym and kept exercising - for a while.

Then she got busy, let her gym membership lapse after a year and has seen her blood sugar levels climb. She's now taking two diabetes drugs, instead of the one she took during the study.

Atkins-Ball is trying to get back into an exercise routine by walking two miles with her husband in the mornings. Her advice for others with diabetes is to get into a structured exercise program.

"That's what helped me the most," she said.

More information: JAMA: http://jama.ama-assn.org

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