

Workout Guidelines Issued for Type 2 Patients

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BY JENNIE SMITH

FROM THE AMERICAN COLLEGE OF SPORTS MEDICINE AND THE AMERICAN DIABETES ASSOCIATION

People with type 2 diabetes should undergo strength training two or three times a week, get at least 150 minutes of aerobic exercise per week, and go no more than 2 consecutive days without a workout, according to new guidelines on exercise in diabetes – the first in 10 years – from the American College of Sports Medicine and the American Diabetes Association.

“It is now well established that participation in regular [physical activity] improves blood glucose control and can prevent or delay [type 2 diabetes], along with positively affecting lipids, blood pressure, cardiovascular events, mortality, and quality of life,” the groups wrote in the introduction to the new guidelines (*Med. Sci. Sports Exerc.* 2010;42:2282-303).

The guidelines were produced using results from nearly 300 studies, the vast majority of them published within the past decade. While the ACSM and ADA’s 2000 guidelines had also emphasized aerobic exercise, the strength recommendations are new, said Sheri Colberg-Ochs, Ph.D., of Old Dominion University in Norfolk, Va., a member of the ACSM and a coauthor of the guidelines.

“You can see some really dramatic improvements in glucose control with resistance training,” Dr. Colberg-Ochs said in an interview. And the combined exercise may be better still: A recent study of sedentary men and women with type 2 diabetes (n = 262), which was published too late to be considered in crafting the guidelines, showed that a combination of aerobic and resistance training improved hemoglobin A_{1c} levels better than did either aerobic or resistance training alone, Dr. Colberg-Ochs noted (*JAMA* 2010;304:2298-9).

Many of the exercise benefits described in the guidelines are independent of weight loss, and indeed the guidelines’ authors noted that the exercise requirements alone were probably insufficient to produce significant weight change. But they also emphasized that even highly overweight and sedentary people need to be encouraged to exercise, as the benefits of exercise for type 2 diabetes far outweigh known risks.

Though people with high cardiovascular risk factors would benefit from a physician evaluation before starting to exercise, the authors said, most people do not need to consult a doctor before beginning a modest program of brisk walking, for example, Dr. Colberg-Ochs said. “To tell people to go to their doctor gives them the wrong impression –

that exercise is dangerous – and sets up an unnecessary barrier. So we relaxed the recommendation” in the new guidelines, she said.

That said, Dr. Colberg-Ochs added, people must be eased into an exercise program. “You would not just get someone off the couch and say go get 150 minutes – that would be ridiculous. One of the things I personally prescribe is small lifestyle changes. Just getting people moving around and taking more steps starts to build some basic endurance.”

Dr. Colberg-Ochs said that the guideline had recommended 150 minutes of aerobic activity plus two or three weight workouts per week because “most of the existing studies were limited in that they only looked at certain amounts of time. The only thing we could say for sure is there wasn’t enough evidence telling people they could do less.”

For resistance training, the authors wrote, each session “should minimally include 5-10 exercises involving the major muscle groups (in the upper body, lower body, and core) and involve completion of 10-15 repetitions to near fatigue per set early in training progressing over time to heavier weights (or resistance) that can be lifted only 8-10 times.”

Aerobic training means working at between 40% and 60% of maximal aerobic capacity, which in many people is achieved by brisk walking, the authors wrote. The guidelines also promoted increasing unstructured daily movement, including the use of a pedometer,

but viewed flexibility training as an add-on and not a substitute for aerobic training and weights. Tai chi and yoga were excluded from the recommendations for thus-far insufficient evidence of benefit in preventing or controlling type 2 diabetes.

The guidelines also reported that for people with type 2 diabetes:

- ▶ Aerobic training may slightly reduce systolic blood pressure, but reductions in diastolic BP are less common.
- ▶ Supervised training resulted in greater compliance and blood glucose control than did unsupervised training.
- ▶ Blood lipid responses to training are mixed, but may result in a small reduction in LDL cholesterol with no change in HDL cholesterol or triglycerides. Combined weight loss and exercise may be more effective than exercise alone.
- ▶ Increased exercise can reduce symptoms of depression and improve health-related quality of life.
- ▶ Exercise is possible when blood glucose levels exceed 300 mg/dL without ketosis, provided the patient is feeling well and is adequately hydrated.
- ▶ Medication dosage adjustments to prevent exercise-associated hypoglycemia may be required by individuals using insulin or certain insulin secretagogues. Other medications prescribed for concomitant health problems do not affect exercise, with the exception of beta-blockers, some diuretics, and statins.

Neither Dr. Colberg-Ochs nor her coauthors declared conflicts of interest. ■

Patients Guide Each Other to Better Diabetes Control

BY M. ALEXANDER OTTO

FROM A CONFERENCE ON PRACTICE IMPROVEMENT SPONSORED BY THE SOCIETY OF TEACHERS OF FAMILY MEDICINE

SAN ANTONIO – When diabetes patients team up as mentors and mentees – with one coaching the other on how to best control the disease – a curious thing happens: Not only do those being coached do better, but the patients doing the coaching do better as well.

Mutual accountability is the reason, said Dr. Robin Eickhoff, who is a family physician helping to pilot the technique at WellMed, a San Antonio-based company specializing in medical care for people aged 65 years and over.

Mentors think, “If I am going to try to teach you to be a better diabetic, I should sing the same tune” as a role model, Dr. Eickhoff said during an interview. Mentors and mentees “tend to hold each other accountable. There’s a certain accountability you have when you are working with somebody and setting goals,” she said.

In a project funded by an American Academy of Family Physicians grant, WellMed has paired 41 mentors with 113 mentees at 15 of its clinics since late 2009. Dr. Eickhoff explained that the idea sprang from the work of Dr. America Bracho, who has successfully used peer mentors at Latino Health Access in Orange County, Calif.

Patients at WellMed were paired up after they completed an 8-week introduction to diabetes course that taught them about medications, blood glucose monitoring, and healthy meal planning, among other

things. By the end of November 2010, 246 patients had completed the course.

Though WellMed has only preliminary data on its peer-mentoring efforts, the results appear to show benefit for mentee and mentor alike. For instance, before the diabetes course, patients tested their blood sugar 4.4 times per week. After the class and 6 months of mentor-mentee partnerships, mentees reported checking an average of 6.5 times per week, while mentors checked 5.2 times. Compared with how they were doing before the course, mentors and mentees reported improved hemoglobin A_{1c} levels, exercising more, and eating less fat and more fruits and vegetables.

WellMed educators look for potential mentors during the diabetes introductory course, taking note of good listeners with a willingness to learn, Dr. Eickhoff said. Those selected get additional guidance on how to talk to other patients, and are then matched with mentees from similar backgrounds whose lab values indicate they need extra diabetes help.

Most patients accept the invitation to be mentors, Dr. Eickhoff said at the meeting, cosponsored by the AAFP.

The first mentor-mentee meetings occurred at WellMed’s monthly diabetes group meetings so they could be supervised. WellMed staff wanted to ensure that mentors gave sound advice and that the relationships worked. Rarely, there’s a problem, as when a mentor mentioned that she had stopped taking her diabetes med-

ications and was doing fine on dietary supplements.

After the kinks are worked out, the relationships blossom. “We have seen so much positive feedback from both the mentors and the mentees,” Dr. Eickhoff said. “The enthusiasm from patients has been huge.”

Mentors and mentees interact at least 4 hours per month, part of it at the group meetings, and the rest by phone, over lunch, or however else they chose to interact, Dr. Eickhoff said. They might brainstorm problems together, give each other emotional support, share recipes, and compare lab values, among other things.

For example, one woman’s family did not want to give up its high-fat, high-carbohydrate diet, which included mashed potatoes. Her mentor suggested mashed cauliflower; the family didn’t even notice the

switch, Dr. Eickhoff said.

Another woman, unable to do the grocery shopping, felt she had no control over what her daughter brought back to the house. Her mentor suggested giving the daughter a weekly shopping list. It helped.

“They tell each other things that they don’t tell us as providers, but will share with someone in a similar situation,” Dr. Eickhoff said. Plus, physicians “don’t necessarily have time to delve into [patients’] day-to-day lives, yet so much of their diet and their lifestyle are affected by their social [situations]. Mentors have the ability to talk about those things, because they’ve been through it,” she said. ■

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