

# People with type 2 diabetes improved muscular strength

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Physical therapist-directed exercise counseling combined with fitness center-based exercise training can improve muscular strength and exercise capacity in people with type 2 diabetes, with outcomes similar to those of supervised exercise, according to a randomized clinical trial published in the September issue of *Physical Therapy*, the scientific journal of the American Physical Therapy Association (APTA).

Type 2 diabetes is associated with numerous health complications, including a decline in muscular strength and [exercise](#) capacity. Studies show that a decline in muscular strength increases the risk of loss of physical function and that a decline in exercise capacity increases the risk of cardiovascular and all-cause mortality. "Improving muscular strength and exercise capacity in people with [type 2 diabetes](#) is crucial to preventing loss of physical function and decreasing comorbidity and mortality in these patients," said lead researcher J. David Taylor, PT, PhD, CSCS, assistant professor in the Department of Physical Therapy at the University of Central Arkansas.

Supervised exercise programs improve both muscular strength and exercise capacity in people with type 2 diabetes; however, Medicare and other health insurance programs do not currently reimburse physical therapists and other clinicians for these exercise programs.

In this study, 24 people with type 2 diabetes were randomly allocated to either an experimental group that received two months of physical therapist-directed exercise counseling and fitness center-based exercise

training or a comparison group that received two months of laboratory-based, supervised exercise. Exercise training for all participants consisted of resistance training (chest press, row, and leg press exercises) and aerobic training (walking or jogging on a treadmill) as recommended for people with type 2 diabetes by the American Diabetes Association and the American College of Sports Medicine. Participants in the experimental group received a face-to-face counseling session at baseline and one month after baseline, weekly 10-minute telephone calls, and seven-day-per-week access to a local fitness center. Each participant in the comparison group received the same prescribed exercise program as the experimental group, but in a supervised environment.

Although both groups had significant improvements in muscular strength and exercise capacity following exercise training, the results showed no significant differences in improvements between these two groups. "The fact that there were no significant differences in improvements between patients who received exercise counseling and those in a supervised program suggests that physical therapists may make an evidence-based choice of prescribing either exercise counseling combined with fitness center-based training or supervised [exercise training](#) for patients with type 2 diabetes," said Taylor.

Source: American [Physical Therapy](#) Association ([news](#) : [web](#))

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