Adults at risk for diabetes double activity levels through healthy lifestyle program

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Adults at risk for type 2 diabetes or heart disease or both can substantially increase their physical activity levels through participating in a lifestyle intervention program developed at the University of Pittsburgh Graduate School of Public Health for use in community-settings, such as senior centers or worksites.

Previous studies have demonstrated that such programs decrease weight and reduce diabetes risk, but this National Institutes of Health (NIH)-funded evaluation is one of the first to document that these programs also result in significant increases in the participants' physical activity levels. The results are reported in this month's issue of the *Translational Journal of the American College of Sports Medicine*, coinciding with the organization's 62nd annual meeting in Boston, the largest sports medicine and exercise meeting in the world.

The analysis also confirmed that season matters, with participants getting more physical activity in the summer, versus winter, months. "This may seem like an obvious finding, but this evidence that season influences the physical activity levels of participants in community-based lifestyle interventions will allow us to adjust these programs accordingly and offer extra encouragement and strategies to continue striving to meet physical activity goals during the winter," said lead author Yvonne L. Eaglehouse, Ph.D., a postdoctoral researcher at Pitt Public Health.

Dr. Eaglehouse and her colleagues investigated the impact of the Group Lifestyle Balance program, modified from the lifestyle intervention

program used in the highly successful U.S. Diabetes Prevention Program (DPP). The DPP was a national study which demonstrated that people at risk for diabetes who lost a modest amount of weight and sharply increased their physical activity levels reduced their chances of developing diabetes or metabolic syndrome, and outperformed people who took a diabetes drug instead.

Group Lifestyle Balance is a 22-session program administered over a one-year period aimed at helping people make lifestyle changes to lower their risk for diabetes and heart disease. The goals of the program are to help participants reduce their weight by 7 percent and increase their moderate intensity physical activity (such as brisk walking) to a minimum of 150 minutes per week.

As part of the Pitt community intervention effort, a total of 223 participants were enrolled to test the effectiveness of the Group Lifestyle Balance program at a worksite and three diverse community centers in the Pittsburgh area. The participants averaged 58 years of age and had pre-diabetes or metabolic syndrome or both.

Participants were surveyed to determine the amount of leisure physical activity they achieved each week. As a result of participating in the program, participants added an average of 45 to 52 minutes of moderate intensity activity similar to a brisk walk to their weekly routine, which was maintained after the program ended at one year.

"This is one of the few programs of its kind to report on physical activity-related outcomes in a large group and the only known diabetes prevention healthy lifestyle program to examine the effect of season and weather on changes in physical activity levels," said senior author Andrea Kriska, Ph.D., professor in Pitt Public Health's Department of Epidemiology and principal investigator of the NIH study. "Since increased physical activity is one of the primary targets of these

programs, it is critical to know if it is working and what can be done to improve the chances that participants reach their goals."

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