

# Reducing Weight and Improving Glycemic Control in Adults

## Mattoon YMCA Diabetes Prevention Program

---

Emily Hayden, BS; Robert Good, DO

July 2025

### Introduction

Diabetes is a chronic disease that affects millions of people worldwide and poses a significant burden on health systems and individuals. According to the Center for Disease Control, the US prevalence of diabetes among adults aged 18 years and older was 2.4% in 1980. (1) In 2025, the rate of diabetes in Illinois is 10.7%. (2) By 2050, IDF projections show that 1 in 8 adults, approximately 853 million, will be living with diabetes, an increase of 46%. (3)

The serious complications of diabetes include heart disease, stroke, amputation, end-stage kidney disease, blindness—and death. (2) One of the main risk factors for developing type 2 diabetes is being overweight and obesity. Therefore, preventing or delaying the onset of type 2 diabetes through lifestyle interventions that promote healthy eating, and physical activity is a cost-effective and feasible strategy to reduce the burden of diabetes and its complications. As prediabetes is an intermediate state between normoglycemia and diabetes, it is a significant risk factor for progression to

diabetes as well as cardiovascular disease and several other cardiometabolic outcomes. (4)

The National Diabetes Prevention Program (NDPP) is an evidence-based program that aims to help people at high risk of developing type 2 diabetes to lose weight and adopt healthy behaviors. The NDPP consists of a year-long program that includes 16 core sessions and 6-8 maintenance sessions, delivered by trained lifestyle coaches in a group setting. The NDPP has been shown to reduce the incidence of type 2 diabetes by 58% among adults with prediabetes. (5)

The YMCA is one of the largest providers of the NDPP in the United States, reaching over 100,000 participants since 2010. The YMCA has partnered with various stakeholders, such as health care organizations, employers, insurers, and community organizations, to implement and scale up the NDPP in different settings and populations. However, there is limited research on the effectiveness and outcomes of the NDPP delivered by the YMCA, especially in rural and underserved areas.(6)

Therefore, the purpose of this article is to evaluate the impact of the NDPP sponsored by the YMCA on the weight loss, physical activity, and glycemic control of the participants. The main research question of this article is: What are the differences in weight loss, physical activity, and glycemic control between the participants who completed the NDPP sponsored by the YMCA and those who did not complete the program? The main hypothesis of this article is: The participants who completed the NDPP sponsored by the YMCA will have greater weight loss, physical activity, and glycemic control than those who did not complete the program.

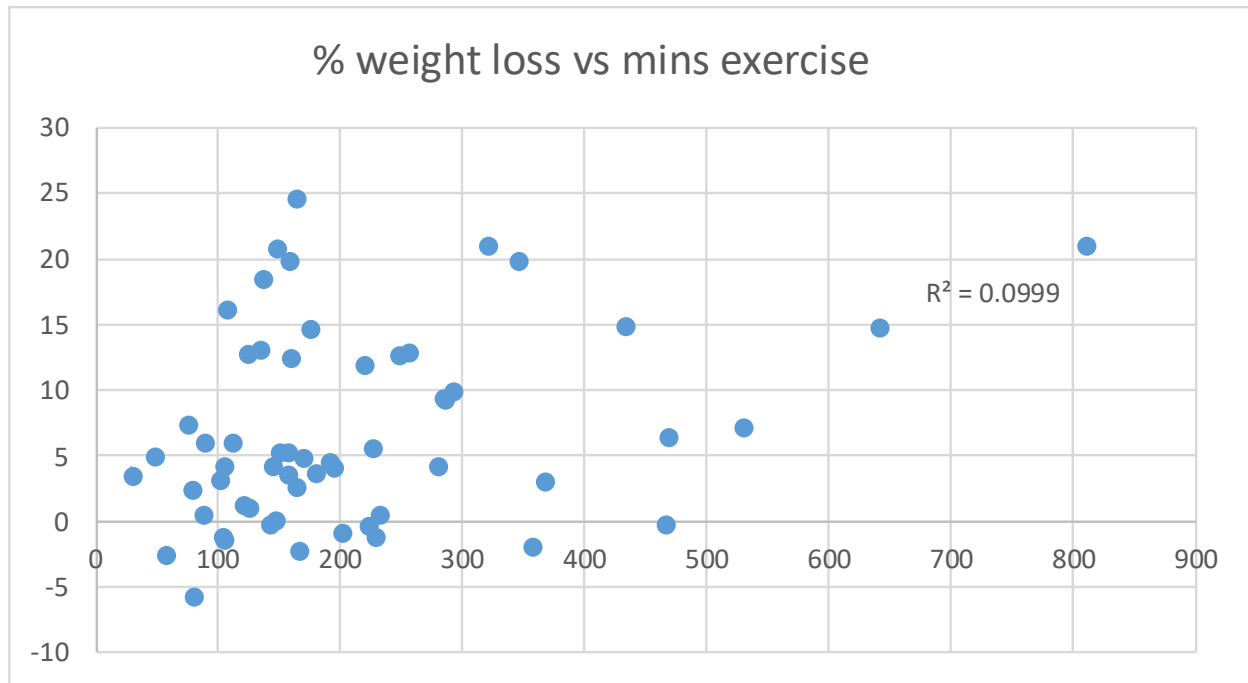
**Methods:**

The YMCA Diabetes Prevention Program is a community-based program that helps adults with prediabetes or elevated risk of developing type 2 diabetes to adopt healthy lifestyle changes. The program consists of 25 sessions over 12 months, led by a trained lifestyle coach in a small group setting. The program aims to help participants lose 7 percent of their body weight, increase their physical activity to 150 minutes per week, and learn strategies for healthy eating and behavior change. The program is based on research that shows that these lifestyle interventions can reduce the incidence of type 2 diabetes by 58 percent or more. (7) The program is part of the CDC-led National Diabetes Prevention Program and is offered by more than 200 YMCAs across the country.

**Results:**

Our study evaluated the impact of the YMCA Diabetes Prevention Program on the weight loss, physical activity, and glycemic control of adults with prediabetes or elevated risk of developing type 2 diabetes. We launched 15 cohorts and served over 100 participants, with an average attendance of 83%. The participants who completed the program (n = 76) achieved an average weight loss of 7.02%, which exceeded the program goal of 7%. Moreover, 76% of the completers experienced weight loss, indicating a high success rate of the program. The completers also reported an average of 220 minutes of physical activity per week, which met the program goal of 150 minutes. Additionally, the completers who reported a follow-up A1c during months 9-12 of the program (n = 32) showed an average decrease of 0.42% from their baseline A1c,

which suggested an improvement in their glycemic control. These results demonstrate the effectiveness and benefits of the YMCA Diabetes Prevention Program for preventing or delaying the onset of type 2 diabetes.



## Discussion

Our study found that the YMCA Diabetes Prevention Program was effective in reducing weight and improving glycemic control among adults with prediabetes or elevated risk of developing type 2 diabetes. The participants who completed the program achieved an average weight loss of 7.02% and an average decrease in A1c of 0.42%. The participants who reached the 150-minute exercise goal had slightly higher weight loss (8.4%) and a similar decrease in A1c (0.41%) than the completers. However, there was not a strong correlation between exercise and weight loss or A1c. We hypothesized that this was due to the limited data on A1c of the high exercisers and the possible confounding effects of other factors, such as diet and medication. We concluded that the program was beneficial for preventing or delaying the onset of type 2 diabetes,

regardless of the level of exercise, and that more research is needed to explore the optimal dose and intensity of physical activity for diabetes prevention. Further information concerning the effect of the A1C, FBS, and weight with level of exercise needs to be correlated more extensively.

**Corresponding Author:** Robert G. Good. DO. MACOI, Carle Health-Mattoon, 2512 Hurst Dr., Mattoon, Illinois 61938 ([Robert.Good@Carle.com](mailto:Robert.Good@Carle.com)).

**Author Information:**

Emily Hayden is the Senior Director of Wellness and Youth Development at the Mattoon area Family YMCA.

Robert G Good, DO, MACOI is an internal medicine physician at the Carle Health Center in Mattoon, Illinois and a Clinical Professor at the Carle Illinois College of Medicine in Urbana, Illinois.

**References:**

1. Centers for Disease Control and Prevention. Prevalence and incidence of diabetes mellitus—United States, 1980–1987. *MMWR Morb Mortal Wkly Rep.* 1990;39(45):809–812. <https://www.cdc.gov/mmwr/preview/mmwrhtml/00001831.htm>
2. American Diabetes Association. The burden of diabetes in Illinois. 2025. <https://diabetes.org/sites/default/files/2025-05/the-burden-of-diabetes-illinois-05-08-25.pdf>
3. International Diabetes Federation. Diabetes facts and figures. 2025. [https://idf.org/about-diabetes/diabetes-facts-figures/American Diabetes Association Professional Practice Committee.](https://idf.org/about-diabetes/diabetes-facts-figures/American-Diabetes-Association-Professional-Practice-Committee)
4. Diagnosis and classification of diabetes: Standards of care in diabetes—2025. *Diabetes Care.* 2025;48(Suppl. 1):S27–S49. doi:10.2337/dc25-S002
5. Centers for Disease Control and Prevention. National Diabetes Prevention Program. U.S. Department of Health and Human Services; 2025.
6. Thomas JJ, Das BM, Lutes LD, et al. Translation and impact of the National Diabetes Prevention Program in two rural settings: Participant outcomes, individual experiences, and recommendations. *Diabetology.* 2024;5(7):690–705. doi:10.3390/diabetology507005
7. Diabetes Prevention Program Research Group. The Diabetes Prevention Program (DPP): Description of lifestyle intervention. *Diabetes Care.* 2002;25(12):2165–2171. doi:10.2337/diacare.25.12.2165