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Effect of Physical Activity on Blood Glucose Level and HbA1c in People with Diabetes Mellitus: A Review

[Malaysian Journal of Medicine and Health Sciences](#) • Review • 2026 •

DOI: 10.47836/mjmhs.22.s9.44

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Abstract

Among people with diabetes mellitus (DM), the two common strategies for evaluate DM management to reduce diabetic complication are to manage blood glucose and HbA1c level in the normal range. However, the reduction of this two element resulting from various forms and durations of exercise remains a subject of debate. Therefore, this study reviewed the blood glucose and HbA1c reduction based on various physical activity (PA) and its duration. The articles were sourced from three main scientific databases resulting 38 for full-text analysis. The endurance exercise is most widely used as part of PA with average duration range between 30-60 minutes. The most decrease in HbA1c levels is in the range of 0-0.9% whereas reduction in blood glucose levels was 72-126 mg/dl. The clinicians might recommend people with DM to cycling or walking as part of

endurance exercise for their PA at least 30-60 minutes to minimize the DM complication. © 2026
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Author keywords

blood glucose; Diabetes mellitus; exercise; HbA1c; physical activity

Funding details

Details about financial support for research, including funding sources and grant numbers as provided in academic publications.

Funding sponsor	Funding number	Acronym
Universitas Muhammadiyah Yogyakarta See opportunities by UMY ↗		UMY
Universitas Muhammadiyah Kalimantan Timur (UMKT)		
Master of Hospital Administration, UMY		

Funding text

The authors would like to express our sincere gratitude to my institution Universitas Muhammadiyah Yogyakarta (UMY) and Universitas Muhammadiyah Kalimantan Timur (UMKT) that made this research possible. and to Master of Hospital Administration, UMY for providing us SPSS guidance and collaboration were invaluable, and financial support was essential in bringing this academic endeavour to fruition.

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