

World Congress on **Public Health and Nutrition**

March 10-12, 2016 Madrid, Spain

Effectiveness of post meal exercise in glycemic control of type 2 diabetes mellitus patients

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An exercise is the non-pharmacological way to control the blood glucose by increasing uptake by muscles. The blood glucose rises after taking any meal. So, it is beneficial to do post meal exercise that includes only brisk walking for 15 minutes after each meal.

Objective: To evaluate the effectiveness of post meal exercise on glycemic control among patients with type 2 diabetes mellitus.

Design, Setting and Participants: The study design was a crossover design. A sample of 64 patients was selected which were divided into two groups- group A and group B. Each group consists of 32 patients which were selected by random sampling technique from Endocrinology OPD, PGIMER Chandigarh. In group A, from day1 to day 60 post meal exercise i.e. brisk walking for 15 minutes after each meal and from day 61 to day 120 the same study subjects did the normal routine exercise. Whereas in group B, from day1 to day 60 normal routine exercise was done which was followed by post meal exercise from day 61 to day 120. The five point blood glucose i.e. at 4am, fasting (FBS), post breakfast (PB), post lunch (PL), post dinner (PD) was monitored on day 1, day 30, day 60, day 90 and day 120 respectively. The data was analyzed by using non parametric tests.

Results: The findings of the study showed that post meal exercise of 15 minutes after each meal resulted in a statistically significant decrease in blood glucose and HbA1c level ($p < 0.001$) in both the groups. On other hand after doing normal routine exercise, there was a significant increase in post meal blood glucose and HbA1c value ($p < 0.001$). **Conclusion** So, it is concluded that Post meal exercise is more beneficial than normal routine exercise to control the high blood glucose. The other aspect of study is that telephonic intervention has proved to be more beneficial to make the patient to follow the treatment regimen.

Biography

Sandhya Ghai is working as a principal at National Institute of nursing Education, PGI, Chandigarh India. She has completed her Ph.D in 1998 from Punjab University Chandigarh, She is the Principal Coordinator of INC project GFATM. Dr. Ghai has chaired more than forty scientific sessions. She has more than 50 publications and more than 35 paper presentations at National and International Conferences to her credit. She has contributed chapters in Books and is co-author of "Management of Hospitals: Hospital Administration in the 21st Century" & Clinical Neurosciences & Critical Care Nursing". She has bagged National Mahila Rattan Gold Medal Award, Best Educationist Award, Basanti Rai Award for Best Thesis. She is recipient of Best poster awards at International Conference on Nursing and Emergency Medicine held in Las Vegas, USA; and at National Conference on the theme "Today's Learner's Tomorrow's Leader-Transforming Nursing Education held at The North Eastern Indira Gandhi Regional Institute of Health & Medical Sciences, Shillong.

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