

Comments on Sanjay Kalra et al (J Pak Med Assoc. 2019; 69(1): 127)**A. Diabetes as a communicable disease**Farooq Azam Rathore,¹ Ayesha Afridi,²

We have read with interest "Diabetes as a communicable disease" by Karla and Kumar¹ with interest. They have mentioned healthy life style and physical activity as one of the modes for primary prevention of diabetes mellitus. Healthy life style is associated with a reduced death Frequency among men with type 2 diabetes and regular physical activity is an indicator of a healthy life style.² We, as rehabilitation professionals, would like to highlight the role and value of exercise and physical activity in the management of diabetes and complications associated with long standing diabetes. Lack of physical activity and a sedentary life style among South Asians has been recognized as a risk factor for developing diabetes.³ Diabetic polyneuropathy is an important and sometimes disabling complication of long standing diabetes. Recent evidence suggests that regular aerobic exercise can reduce the progression of diabetic polyneuropathy and improve function of the peripheral nerves.^{4,5} Regular physical activity is also effective intervention for glycaemic control in non-diabetic healthy individuals as measured by HbA1c levels.⁶

Despite all the evidence in favour of exercise and physical activity as an effective strategy to prevent and improve glycaemic control in diabetes, exercise adherence remains a major issue in South Asia.⁷ The barriers identified towards exercise and physical activity in diabetes include health related (e.g patients complaining of joint pain or shortness of breath while doing exercise), time, and lifestyle management (e.g. lack of time and motivation to do exercise) and social circumstances (e.g. lack of dedicated space for exercise, social embarrassment for females who cannot exercise in public). Another important factor that has been identified as a barrier towards exercise is the inability to differentiate household and daily activities from physical activity and exercise. This is a common problem that we frequently encounter in Pakistan as well. Most of the patients erroneously think that the daily house hold work and office routine is enough exercise and physical activity for them. This misconception must be identified and

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corrected by the treating physician and patients should be referred to rehabilitation professionals for a structured exercise plan. Recently some new technologies have been developed to improve adherence to exercise in patients with diabetes. These include use of mobile applications along with internet, social media awareness campaigns, exercises through video games and virtual reality physical activity.⁸

Rehabilitation Medicine physicians and Physical Therapists are trained in prescription of exercise for different diseases. It is recommended that patients with diabetes in Pakistan must be referred to the rehabilitation professionals early in the course of the disease. This would likely improve the glycaemic control, reduce the drug intake and complications associated with diabetes. This will ultimately result in a better quality of life in patients with diabetes.

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References

- 1 Kalra S, Kumar A. Diabetes as a communicable disease. J Pak Med Assoc 2019; 69:127-29.
- 2 Patel YR, Gadiraju TV, Gaziano JM, Djoussé L. Adherence to healthy lifestyle factors and risk of death in men with diabetes mellitus: The Physicians' Health Study. Clin Nutr. 2018;37:139-143.
- 3 Misra A, Ramchandran A, Jayawardena R, Shrivastava U, Snehathatha C. Diabetes in South Asians. Diabet Med. 2014;31:1153-62.
- 4 Gu Y, Dennis SM, Kiernan MC, Harmer AR. Aerobic exercise training may improve nerve function in type 2 diabetes and pre-diabetes: A systematic review. Diabetes Metab Res Rev. 2018 Nov 21:e3099.
- 5 Gholami F, Nikookheslat S, Salekzamani Y, Boule N, Jafari A. Effect of aerobic training on nerve conduction in men with type 2 diabetes and peripheral neuropathy: A randomized controlled trial. Neurophysiol Clin. 2018;48:195-202.
- 6 Cavero-Redondo I, Peleteiro B, Álvarez-Bueno C, Artero EG, Garrido-Miguel M, Martínez-Vizcaino V. The Effect of Physical Activity Interventions on Glycosylated Haemoglobin (HbA1c) in Non-diabetic Populations: A Systematic Review and Meta-analysis. Sports Med. 2018;48:1151-1164.
- 7 Medagama A, Galgomuwa M. Comorbidities and Ethnocultural Factors Limit the Physical Activity of Rural Sri Lankan Patients with Diabetes Mellitus. J Diabetes Res. 2018;2018:4319604.
- 8 Tate, D.F., E.J. Lyons, and C.G. Valle. High-tech tools for exercise motivation: use and role of technologies such as the internet, mobile applications, social media, and video games. Diabetes Spectrum, 2015;45-54.