

# Non-communicable diseases and the preventive role of physical activity and exercise

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According to the World Health Organization (WHO), worldwide 41 million deaths occur per year due to non-communicable diseases (NCDs), constituting 71% of all deaths globally. Nearly 77 percent of all NCD-related deaths occur in low- and middle-income countries. It is estimated that 15 million premature deaths occur in low- and middle-income countries, which is 85% of all premature deaths worldwide. Approximately 80% of premature deaths throughout the world are caused by NCDs, such as cardiovascular diseases (17.9 million), cancers (9.3 million), respiratory diseases (4.1 million), and diabetes (1.5 million).(1)

In addition to genetic factors, physiological factors, environmental factors, and behavioral factors all play a role in NCDs. Following tobacco use, physical inactivity is the second biggest risk factor for NCDs, followed by alcohol consumption, and an unhealthy diet, both of which increase the risk of death from NCDs. Insufficient physical activity contributes to 1.6 million premature deaths annually and is associated with increased chronic disease risk. Exercise and increased physical activity are associated with a lower risk of NCDs. It is evident from the literature that the incorporation of regular PA and exercise into one's lifestyle will lower the risk and mortality for NCDs, making it an ideal preventive measure.(2) Taking part in physical activity or exercising can prevent diseases as well as improve longevity.(3)

To maintain cardiovascular fitness, respiratory fitness, muscle strength, and endurance for normal functioning without disability or limitation, it is imperative that all healthy populations follow a regular physical activity program throughout their lifetime. According to the American College of Sports Medicine

(ACSM), healthy adults aged 18–65 years should engage in a moderate-intensity aerobic physical activity program for 30 minutes, five days per week, or a vigorous-intensity aerobic activity program for 20 minutes 3 days/week. An additional recommendation for adults includes at least 2 days/week of activities that improve or maintain muscle endurance and strength.(4) Physical activity and exercise have been scientifically proven to improve the quality of life and reduce the risk and mortality rate for NCDs in the sedentary population through their multi-systemic positive effects on the human body.(5)

Pakistan is a developing country in the third world and faces many challenges because of its growing population and the prevalence, incidence, and mortality of chronic diseases. There is a need to increase awareness among the community about physical activity and exercise as well as other risk factors such as smoking and eating unhealthy food. It is crucial to develop NCD prevention strategies that emphasize exercise and physical activity programs in accordance with ACSM recommendations. In addition, it is recommended to create and enhance the number of public parks, playgrounds, and fitness centers throughout the country.

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