

CAPSULE COMMENTARIES

Capsule Commentary on Cheung et al., Leisure-Time Physical Activity and Cardiovascular Mortality in an Elderly Population in Northern Manhattan: A Prospective Cohort Study

William Cheung, MD

Zablocki VAMC, Milwaukee, WI, USA.

J Gen Intern Med 32(2):189

DOI: 10.1007/s11606-016-3923-8

© Society of General Internal Medicine 2016

In a prospective cohort, Cheung and colleagues examined the qualities of physical activities for enjoyment/pleasure (LTPA) that had an impact on all-cause and cardiovascular mortality among elderly subjects.¹ Guidelines suggest a minimum of 150 min of moderate-intensity or 60 min of vigorous-intensity exercise for older adults.² In this study, a cohort of nearly 3300 older Americans was followed for approximately 17 years. Being male, white, with at least a high school education, a former smoker, higher socioeconomic class and few chronic health conditions were associated with exercising more frequently, exercising at higher intensity, and also participating in a greater variety of activities. Higher frequency and greater variety of physical activities were associated with a decrease in cardiovascular and all-cause mortality. Paradoxically, intense activities, those with a high energy-to-duration ratio (EDR), were associated with increased cardiovascular mortality.

This study uses EDR, which measures intensity through energy consumption, and which makes it difficult to compare with other studies that use metabolic equivalents (METs) as their primary measure and with American College of Sports Medicine and American Heart Association (ACSM/AHA) recommendations. Nonetheless, similar observations of the potential harmful effects of high-intensity exercise have been noted in other studies, suggesting at least partial negation of cardiovascular mortality benefits from extreme versus moderate levels of LTPA.^{3,4}

While the benefit of exercise is undisputed, the best approach regarding exercise in older and elderly people is less certain. This study reiterates that physicians should recommend that their elderly patients engage in frequent and varied

exercise. The study also suggests that physicians should caution the elderly against participating in high-intensity activities, and that frequent, moderate activity is healthier than infrequent or high-intensity exercise. Increasing the variety of LTPA may require the use of a health club or access to venues enabling participation in new or different activities. Approximately 40 % of Americans report that they do not have access to fitness facilities, and the percentages are higher for older Americans.⁵ Thus, this issue also has public health implications, such as identifying and reducing structural barriers through urban planning, transportation access, and even sponsorship of gym memberships.

Corresponding Author: William Cheung, MD; Zablocki VAMC, Milwaukee, WI, USA (e-mail: William.cheung@va.gov).

Compliance with Ethical Standards:

Conflict of Interest: The author has no conflict of interest with this article.

REFERENCES

1. Cheung Y, Moon Y, Kulick E, Sacco R, Elkind M, Willey J. Leisure-time physical activity and cardiovascular mortality in an elderly population in northern Manhattan: a prospective cohort study. *J Gen Intern Med*. 2016. doi:10.1007/s11606-016-3884-y.
2. Nelson ME, Rejeski WJ, Blair SN, Duncan PW, Judge JO, King AC, Macera CA, Castaneda-Sceppa C. Physical activity and public health in older adults: recommendation from the American College of Sports Medicine and the American Heart Association (2007). *Circulation*. 2007;116(9):1094-1105.
3. Lee D, Pate R, Lavie C, Sui X, Church T, Blair S. Leisure-time running reduces all-cause and cardiovascular mortality risk. *J Am Coll Cardiol*. 2014;64(5):472-481. doi:10.1016/j.jacc.2014.04.058.
4. Arem H, Moore S, Patel A, Hartge P, Berrington de Gonzalez A, Viswanathan K, Matthews C. Leisure time physical activity and mortality: a detailed pooled analysis of the dose-response relationship. *JAMA Intern Med*. 2015;175(6):959-967. doi:10.1001/jamainternmed.2015.0533.
5. Kruger J, Carlson S, Kohl H III. Fitness facilities for adults: differences in perceived access and usage. *Am J Prev Med*. 2007;32(6):500-505. doi:10.1016/j.amepre.2007.02.003.