PHYSICAL FITNESS AND MORBIDITY/MORTALITY AMONG JAPANESE MEN

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Abstract

A lot of epidemiological studies suggest that physical activity may prevent several types of non-communicable diseases and premature death. However, there are not many studies among the Asian population. We studied the relationship between cardiorespiratory fitness (CRF), an objective marker of physical activity, and morbidity and mortality among Japanese male workers.

Cohort study among Japanese workers

We are following Japanese male employees. The number of participants is approximately 9,000. All participants underwent an exercise test to assess CRF. We followed up for over 20 years. We used Cox proportional hazards models to investigate the relationship between CRF, and morbidity and mortality, adjusted for several potential confounding factors such as age, smoking habit, drinking habit and so on.

Cardiorespiratory fitness and morbidity

We investigated the relationship between CRF and the incidence of hypertension and type 2 diabetes. Men in the highest CRF group had a 47% lower risk of hypertension when compared with men in the lowest CRF group. Also, Men in the high CRF group or CRF improved group had a lower risk of type 2 diabetes when compared with men in the low CRF group.

Cardiorespiratory fitness and mortality

We investigated the relationship between CRF and all-cause mortality and cancer mortality. The group with the highest CRF had a 61% lower risk of all-cause mortality and 59% lower risk of cancer mortality than the group with the lowest CRF.

These studies provide support for the hypothesis that low physical fitness is an important risk factor for several types of non-communicable diseases and mortality.

Key words: epidemiology, cohort study, non-communicable disease, premature death

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Education

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M.S., Department of Sports Science, Juntendo University, Chiba, Japan, March 1985

B.A., Department of Sports Science, Fukuoka University, Fukuoka, Japan, March 1983

Professional Experience

1985-2011	Health Promotion Center, Tokyo Gas Co., Ltd., Tokyo
2003-2014	Part-Time Lecturer, Dokkyo Medical University, Tochigi
2008-2015	Visiting Associate Professor, Juntendo University, Chiba
2012-Present	Section Chief of Physical Activity Assessment, Department of Health Promotion and Exercise, National Institutes of Biomedical Innovation, Health and Nutrition, Tokyo
2014-Present	Part-Time Lecturer, International Budo University, Chiba
2015-Present	Part-Time Lecturer, The Open University of Japan, Chiba
2015-Present	Visiting Professor, Tokyo University, Tokyo
2016-Present	Visiting Professor, Juntendo University, Chiba
2016-Present	Part-Time Lecturer, Waseda University, Tokyo
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Certifications and Honors

Board Member	Japanese Association of Exercise Epidemiology
Fellow	American College of Sports Medicine
Fellow	Japanese Society of Physical Fitness and Sports Medicine
Fellow, Member of editorial board	Japan Epidemiological Association
Fellow, Member of editorial board	Japan Society of Health Promotion
Member, Member of Committee	Japan Atherosclerosis Society
Member, Member of Committee	Japan Society for Occupational Health
Member	Japanese Society of Public Health

Honor Award	Japan Society for Occupational Health, 2004
Award of Distinction	Japan Total Health Promotion Plan, 2013
Honor Award	Japanese Society of Public Health, 2015