



Is moderate or vigorous physical activity more beneficial for health?

Answer: Physical activity of both a moderate and vigorous intensity has been associated with a range of beneficial health outcomes, including a reduced risk of:

- 1. Dying prematurely from heart disease or stroke**
- 2. Developing heart disease**
- 3. Developing some forms of cancer, such as colon, prostate, lung, breast and endometrial cancer.**
- 4. Developing type II diabetes, hypertension and obesity**

Vigorous physical activity is recommended for maximum cardiovascular protection and moderate intensity physical activity is recommended for general health benefits (The CMO, 2004).

Vigorous physical activity is recommended for maximum cardiovascular protection. The CMO, (2004) indicates that higher levels of cardiorespiratory fitness are associated with lower levels of coronary heart disease and that the 25% of the population with the lowest levels of cardiorespiratory fitness are at particularly high risk of coronary heart disease.¹ Swain et al., (2006) reviewed the literature addressing the cardioprotective benefits of vigorous compared to moderate intensity aerobic exercise. They concluded that although an accumulation of moderate intensity energy expenditure on a regular basis is enough to provide some benefit, the epidemiological studies generally found that exercise of a more vigorous nature resulted in a lower incidence of CHD than moderate intensity exercise.² With regards to cancer risk, Cerin et al., (2005) present the evidence that accrual of ≥ 420 minutes of at least moderate intensity physical activity in a week (1 hour per day) is considered the lower boundary for colon cancer risk reduction. This compares to accrual of a much lower ≥ 210 minutes per week (30 minutes per day) of vigorous intensity physical activity for the same risk reduction.³

However, moderate intensity physical activity does provide significant health benefits. The CMO's (2004) report outlines the evidence that moderate intensity aerobic exercise is associated with reductions in both systolic and diastolic blood pressure.¹ It is also documented in the report that studies have demonstrated that people who were highly active had a 27% lower risk of stroke incidence or mortality than less active people. Similar results were seen in moderately active compared with inactive people.¹ Other potential benefits of accruing 30 minutes of moderate intensity physical activity five

times per week include increased levels of HDL cholesterol and improved glucose metabolism. A study of Finnish adults found at least moderate intensity physical activity such as active commuting to reduce diabetes incidence.⁴

References:

¹ Department of Health (2004) CMO's report: At least five a week: Evidence on the impact of physical activity and its relationship to health. London: HMSO

² Swain, D.P. & Franklin, B.A. (2006). Comparison of cardioprotective benefits of vigorous versus moderate intensity aerobic exercise. *American Journal of Cardiology* 97: 141-147

³ Cerin, E., Leslie, E., Bauman, A. & Owen, N. (2005). Levels of Physical Activity for Colon Cancer Prevention Compared with Generic Public Health Recommendations: Population Prevalence and Sociodemographic Correlates. *Cancer Epidemiology, Biomarkers & Prevention* 14(4): 1000-1002

⁴ Bauman, A.E. (2004). Updating the evidence that physical activity is good for health: an epidemiological review 2000–2003. *Journal of Science and Medicine in Sport* 7(1), Supplement 1: 6-19

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