

Health benefits of physical activity more pronounced in women

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Many experimental studies have found that physical exercise can improve cholesterol levels and subsequently decrease the risks of cardiovascular disease; however, few of these studies have included enough participant diversity to provide ethnic breakdowns. Now, a long-term study of over 8,700 middle-aged men and women provides race-and gender- specific data on the cholesterol effects of physical activity, with the interesting result that women, particularly African-American women, experience greater benefits as a result of exercise than men.

The analysis of this large Atherosclerosis Risk in Communities (ARIC) Study, which appears in the August issue of *Journal of Lipid Research*, was carried out by Keri Monda and colleagues at North Carolina and Baylor. They found that over a 12 year period, all individuals who increased their exercise by about 180 metabolic units per week (equivalent to an additional hour of mild or 30 minutes of moderate activity per week) displayed decreased levels of triglycerides and increased levels of the "good" HDL cholesterol. However, statistically significant decreases in the "bad" LDL cholesterol were only observed in women, with particularly strong effects in menopausal women and African-American women. And total cholesterol levels were only significantly decreased in African-American women.

The authors speculate that these novel differences may arise from hormonal differences between the sexes, especially considering the extra effects seen post-menopause. The racial differences observed may stem from genetic variations that require further exploration.



The authors do also note that their exercise data was assessed by questionnaire and this was non-scientific, though the particular methodology used has been extremely reliable in other studies. They also note that all evaluated participants were healthy, so these results cannot be generalized to individuals with diabetes or those on cholesterol-lowering medications.

Source: American Society for Biochemistry and Molecular Biology

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