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From age 30 onwards, inactivity has greatest impact on women's lifetime heart disease risk

May 8 2014

From the age of 30 onwards, physical inactivity exerts a greater impact on a woman's lifetime risk of developing heart disease than the other well-known risk factors, suggests research published online in the *British Journal of Sports Medicine*.

This includes overweight, the finding show, prompting the researchers to suggest that greater effort needs to be made to promote exercise.

The researchers wanted to quantify the changing contribution made to a woman's likelihood of developing heart disease across her lifetime for each of the known top four risk factors in Australia: excess weight (high BMI); smoking; high blood pressure; and physical inactivity.

Together, these four risk factors account for over half the global prevalence of heart disease, which remains the leading cause of death in high income countries.

The researchers looked at the population attributable risk (PAR)—a mathematical formula used to define the proportion of disease in a defined population that would disappear if exposure to a specific risk factor were to be eliminated.

They based their calculations on estimates of the prevalence of the four risk factors among 32,154 participants in the Australian Longitudinal Study on Women's Health, which has been tracking the long term health of women born in 1921-6, 1946-51, and 1973-8, since 1996.

They found that the prevalence of smoking fell from 28% in women age 22-27 to 5% in 73-78 year olds. But the prevalence of inactivity and high blood pressure increased steadily across the lifespan from age 22 to 90. Overweight increased from age 22 to 64, then declined in older age.

The researchers also used estimates of relative risk from the Global Burden of Disease study and applied them to the Australian women. Relative risk data indicate the likelihood that a woman with a particular risk factor will develop heart disease compared with someone without that risk factor.

Combining the prevalence and relative risk data, the researchers found that up to the age of 30, smoking was the most important contributor to heart disease, with a PAR of 59%. But from age 30 until the late 80s, low physical activity levels were responsible for higher levels of population risk than any of the other risk factors.

The researchers estimate that if every woman between the ages of 30 and 90 were able to reach the recommended weekly exercise quota—150 minutes of at least moderate intensity physical activity—then the lives of more than 2000 middle aged and older women could be saved each year in Australia alone.

The authors conclude that the contribution of different risk factors to the likelihood of developing heart disease changes across the lifespan.

Continuing efforts to curb smoking among the young are warranted, they say. But much more emphasis should be placed on physical inactivity, which, they claim, has been dwarfed by the current focus on overweight and obesity.

"Our data suggest that national programmes for the promotion and maintenance of physical activity, across the adult lifespan, but especially

in young adulthood, deserve to be a much higher public health priority for women than they are now," they conclude.

More information: Comparing population attributable risks for heart disease across the adult lifespan in women, Online First, DOI: 10.1136/bjsports-2013-093090

Provided by British Medical Journal