

Younger men with erectile dysfunction at double risk of heart disease

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Men who experience erectile dysfunction between the ages of 40 and 49 are twice as likely to develop heart disease than men without dysfunction, according to a new Mayo Clinic study.

Researchers also found that men with erectile dysfunction have an 80 percent higher risk of heart disease.

"The highest risk for coronary heart disease was in younger men," says researcher Jennifer St. Sauver, Ph.D. The study was published in the February 2009 issue of *Mayo Clinic Proceedings*. The results suggest that younger men and their doctors may need to consider erectile dysfunction a harbinger of future risk of coronary heart disease -- and take appropriate steps to prevent it, says Dr. St. Sauver.

"The importance of the study cannot be overstated," writes Martin Miner, M.D., in an editorial in the same issue of *Mayo Clinic Proceedings*. The results "raise the possibility of a 'window of curability,' in which progression of cardiac disease might be slowed or halted by medical intervention," writes Dr. Miner, who practices at the Men's Health Center, Miriam Hospital, Providence, R.I.

Erectile dysfunction is common, and prevalence increases with age. It affects 5 to 10 percent of men at age 40. By age 70, from 40 to 60 percent of men have the condition.

Dr. St. Sauver says researchers wanted to learn more about the

connections between age, cardiovascular disease and erectile dysfunction. Two previous studies, both published in 2005, laid groundwork for the Mayo Clinic study. One found that erectile dysfunction predicted an increased risk of heart disease, but the erectile dysfunction of the study participants was not assessed with an externally validated questionnaire and cardiac events were not subjected to standardized review for diagnostic accuracy [Thompson et al, *JAMA*, 2005]. The second predicted that future cardiovascular disease would be higher in younger men with erectile dysfunction, but wasn't able to follow the men to determine if heart disease developed [Ponholzer et al, *Eur Urol*, 2005].

For the Mayo Clinic study, the investigators identified 1,402 men who lived in Olmsted County, Minn., in 1996 and did not have heart disease. Every two years for 10 years, these men were assessed for urological and sexual health.

Answers to questions from the Brief Male Sexual Function Inventory, a statistically validated questionnaire, were used to determine erectile dysfunction. The baseline prevalence of erectile dysfunction in study participants was: 2.4 percent in men aged 40-49; 5.6 percent in men aged 50-59; 17 percent in men aged 60-69 and 38.8 percent in men 70 years and older. Those initial data and the increasing incidence of erectile dysfunction over time were linked to data from a long-term study of heart disease in Olmsted County residents, led by Veronique Roger, M.D., Mayo Clinic cardiologist.

Over 10 years of follow-up, researchers found that men with erectile dysfunction were 80 percent more likely to develop coronary heart disease compared to men without erectile dysfunction. The highest risk of new heart disease was seen in the youngest study participants who had erectile dysfunction. In men 40 to 49 years old when the study began, the number of new cases in men with erectile dysfunction was more than

50-fold higher than in men without erectile dysfunction. Statistically, that's a cumulative incidence of 48.52 per 1,000 person years in those with erectile dysfunction compared to 0.94 per 1,000 person years in those without erectile dysfunction).

In men in their 50s, 60s and 70s, the total incidence of new cases of heart disease also was higher in those with erectile dysfunction. However, the differences were not as striking as those seen among the 40- to 49-year-olds.

"In older men, erectile dysfunction may be of less prognostic importance for development of future heart disease," says Dr. St. Sauver.

This study did not determine reasons for the increased risk of heart disease among men with erectile dysfunction. Some have theorized that erectile dysfunction and coronary artery disease may be different manifestations of the same underlying disease process. A buildup of plaque that can block arteries around the heart may plug the smaller penile arteries first, causing erectile dysfunction. Alternatively, arteries may lose elasticity over time, contributing to heart disease. This arterial stiffening may affect the smaller penile arteries first.

Source: Mayo Clinic

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