Marriage linked to lower heart risks in study of 3.5 million adults

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Credit: Jeff Belmonte / Wikipedia

People who are married have lower rates of several cardiovascular diseases compared with those who are single, divorced or widowed, according to research to be presented at the American College of Cardiology's 63rd Annual Scientific Session. The relationship between marriage and lower odds of vascular diseases is especially pronounced

before age 50.

"These findings certainly shouldn't drive people to get married, but it's important to know that decisions regarding who one is with, why, and why not may have important implications for vascular health," said Carlos L. Alviar M.D., cardiology fellow, New York University Langone Medical Center, and the lead investigator of the study.

Alviar said that while earlier, smaller studies reported similar findings, the size of this study, as well as the ability to consider four different vascular diseases – peripheral artery disease, cerebrovascular disease, abdominal aortic aneurysm and coronary artery disease – and to discriminate between various types of marital status makes this research different from anything that's previously been done.

"We are able to take a better look at a spectrum of relationships," Alviar said.

Researchers prospectively analyzed records from a database of more than 3.5 million people nationwide who were evaluated for cardiovascular diseases. Patients' demographic information and cardiovascular risk factors were obtained, and researchers estimated the odds of disease by marital status after analyzing the presence of vascular disease in different blood vessel locations such as the coronary arteries, leg arteries, carotids and the abdominal aorta. Traditional cardiovascular risk factors such as hypertension, diabetes, smoking and obesity were similar to the overall U.S. population, according to authors. Participants' ages ranged from 21 to 102 years old, with the average age of 64, and 63 percent were female. Overall, 69.1 percent (2.4 million) were married, 13 percent (477,577) were widowed, 8.3 percent (292,670) were single; 9 percent (319,321) were divorced.

After adjusting for age, sex, race and other cardiovascular risk factors,

researchers found marital status was independently associated with cardiovascular disease. These findings were consistent for both men and women across the four conditions.

In particular, married people were 5 percent less likely to have any vascular disease compared with singles. They also had 8 percent, 9 percent and 19 percent lower odds of abdominal aortic aneurysm, cerebrovascular disease and peripheral arterial disease, respectively. The odds of coronary disease were lower in married subjects compared with those who were widowed and divorced, but this was not statistically significant when compared to single subjects, which were used as the reference group for comparison.

On the other hand, being divorced or widowed was associated with a greater likelihood of vascular disease compared with being single or married. After multivariable adjustment, widowers had 3 percent higher odds of any vascular disease and 7 percent higher odds of coronary artery disease. Divorce was linked with a higher likelihood of any vascular disease, abdominal aortic aneurysm, coronary artery disease and cerebrovascular disease.

"The association between marriage and a lower likelihood of vascular disease is stronger among younger subjects, which we didn't anticipate," Alviar said.

For people aged 50 and younger, marriage is associated with 12 percent lower odds of any vascular disease. This number drops to 7 percent for people ages 51 to 60 and only 4 percent for those 61 and older.

"Of course, it's true that not all marriages are created equal, but we would expect the size of this study population to account for variations in good and bad marriages," Alviar said.

The database researchers used consists primarily of people who participated in the self-referred Life Line Screening program at more than 20,000 screening sites covering all 50 states and broad geographical and socioeconomic representation between 2003 and 2008. Potential limitations of the study are that the sample was drawn from people who sought and paid $100 for a vascular screening service and therefore may not be representative of the population. Additionally, the study included a relatively small proportion of racial/ethnic minorities.

Future research is needed to better understand what aspects of marriage might be associated with improved vascular health; for example, better access to health insurance and health care, socioeconomic status and the potential benefits of having companionship. Alviar said a long-term follow-up study would help identify dynamic changes in disease patterns as subjects move from one status to another such as moving from being married to divorced or widowed; or single to married, especially at later stages in life, and allow researchers to see if and how soon after these changes occur vascular disease appears.

More information: accscientificsession.cardiosou … aspx?WT.mc_id=A14255

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