Women's heart health linked to age at first menstrual period

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Early menarche has been associated with many cardiovascular disease (CVD) risk factors, but little is known about its association with overall heart health. One new study suggests that age at menarche plays an important role in maintaining and improving cardiovascular health, although there are a number of age differences. Study results are published online today in *Menopause*, the journal of The North American Menopause Society (NAMS).

Because CVD is the leading cause of death in women, a lot of research is devoted to identifying ways for women to improve their heart health and prevent major cardiovascular events. Cardiovascular health takes into account factors such as blood pressure, total cholesterol, and glucose levels, as well as behavioral factors including cigarette smoking, body mass index, physical activity, and diet. Ideal cardiovascular health is associated with a lower risk of CVD, as well as with other outcomes such as cancer, cognitive impairment, and depression. Studies have shown that ideal cardiovascular health is prevalent in 50% of the US population at 10 years of age and declines to less than 10% by 50 years of age.

Some forms of CVD have their origins during childhood, which is one reason why they have been previously associated with early menarche. To date, however, few if any studies have focused on the association between early menarche (generally defined as the occurrence of first menstruation before 12 years of age) and overall cardiovascular health. This new study involving more than 20,000 women not only found that increases in age at menarche are significantly associated with increases in heart health in women but also that there are major age differences in the association. In fact, significant associations between age at menarche and ideal cardiovascular health were observed only in young women, whereas little association was documented in older women. This suggests that age at menarche may be less of a predictor of heart health as women age.

Similarly, the researchers found that the protective effects of late menarche on cardiovascular health were apparent in women aged 25 to 44 years, whereas the detrimental effects of early menarche were only observed in those aged 25 to 34 years. Further studies are necessary to better understand the reason behind these declining associations.

"This study highlights a link between age at menarche and cardiovascular health, findings that were evident only in younger women and may be driven by associations with body mass index. Given that heart disease is the number one killer of women, identifying those women who experienced early menarche (aged younger than 12 years) may allow for earlier intervention to reduce cardiovascular risk," says Dr. Stephanie Faubion, NAMS medical director.
