MedicalXpress

Blacks, women face greater burden from CVD risk factors

August 11 2014

The impact of major cardiovascular risk factors combined is greater in women than men and in blacks than whites. While the gender gap may be narrowing, differences by race may be increasing, according to new research in the American Heart Association journal *Circulation*.

"We've been targeting traditional risk factors in public health campaigns for many years," said Susan Cheng, M.D., M.P.H., study lead author and Assistant Professor of Medicine at Brigham and Women's Hospital in Boston, Mass. "We wanted to take a look at how well we've been doing over time at keeping these risk factors from causing heart and vascular disease—both by preventing the risks from occurring and by minimizing their effects when they do occur."

Researchers studied population attributable risk (PAR) changes for the five major modifiable cardiovascular risk factors—high cholesterol, smoking, high blood pressure, obesity, and diabetes. The PAR is a measure that considers how common a risk factor is and by how much the factor raises the chance of future cardiovascular disease.

Researchers examined data on 13,541 people (56 percent women, 26 percent black) in the Atherosclerosis Risk in Communities study. Participants attended examinations during four periods (1987-89, 1990-92, 1993-95 or 1996-98) when they were 52-66 years old and free of cardiovascular disease. Researchers assessed risk factors at these exams and then calculated the contribution of each factor to the risk of developing cardiovascular disease over the next 10 years.

Among their findings:

- The combined PAR for the five major risk factors stayed the same in blacks while falling in whites (remaining at .67 in blacks, while changing from .56 to .48 in whites).
- The contribution of diabetes to cardiovascular disease is higher in women than men (most recently.21 versus .14), and more than twice as high in blacks than whites (most recently.28 versus .13).
- The contribution of high blood pressure to cardiovascular disease is higher in women than men (most recently.32 versus .19), and higher in blacks than whites (most recently .36 versus .21).
- The contribution of obesity to cardiovascular disease has stayed at the same level over time (remaining at .06). Researchers emphasize that, despite comparably lower PAR values, the importance of obesity as a risk factor may be seen in later years and could be through its mediating effect on diabetes.
- The contribution of smoking and high cholesterol has appeared to fall in recent years (changing from .15 to .13 for smoking, and from .18 to .09 for high cholesterol).

"Our results don't suggest that a risk factor like smoking has become any less dangerous, but that fewer people are smoking," Cheng said. "In fact, for current smokers the risk of heart and vascular disease has actually gone up, possibly because remaining smokers tend to smoke more heavily or carry additional risk factors."

Improvements in awareness and treatments for high cholesterol, such as dietary changes and statin therapy, likely account for the lessened impact of that risk factor, researchers said.

"As we know, statins not only treat cholesterol abnormalities but reduce inflammation and have other protective effects," Cheng said.

The study results highlight the ongoing need for targeted as well as population-based approaches to risk factor modification, despite progressive improvements in public health efforts to reduce the overall burden of risk for heart and vascular disease, researchers said.

Provided by American Heart Association