Cardiovascular health linked to cellular aging

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The age of a person's immune cells may predict risk of cardiovascular disease, according to a preliminary study presented at the American Heart Association's Scientific Sessions 2016.

DNA is packed into structures called chromosomes, and when cells copy themselves to replace old, damaged or dead cells, the tips of the chromosomes, called telomeres, shorten. Shorter telomere length is a sign of aging in a cell and has been associated with a number of diseases, including heart disease.

Researchers examined the relationship between telomere length of leukocytes, the body's immune cells, and overall cardiovascular health —defined using the American Heart Association's Life Simple 7 metrics (smoking, physical activity, diet, body mass index, blood pressure, total cholesterol and fasting blood glucose).

Using data from the 1999-2002 National Health and Nutrition Examination Survey, researchers measured telomere length and overall cardiovascular health in 5,194 subjects, researchers found:

- Participants with shorter leukocyte telomere length tended to have poorer cardiovascular health.
- Leukocyte telomere length reflected cardiovascular health more accurately in women and white people.

The findings support the link between cardiovascular health and cell aging even though it can vary by gender and race. More research is

needed to explain the gender and race differences, researchers said.

Provided by American Heart Association

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