

Hypertension-related changes may occur earlier in young women with family history

March 6 2019

New research suggests that young women with a family history of high blood pressure (hypertension) have decreased baroreflex function, which may increase their risk for hypertension later in life. The article, published ahead of print in the *Journal of Neurophysiology (JNP)*, was chosen as an APS*select* article for March.

The baroreceptor reflex—sometimes referred to simply as the baroreflex—helps maintain a steady blood pressure by changing heart rate or resistance in the [blood vessels](#). Baroreflex sensitivity measures how well the baroreflex is able to control blood pressure by changing heart rate. Reduced baroreflex sensitivity can be a marker for hypertension and [heart disease](#).

Researchers studied baroreflex function in two groups of healthy [young women](#). One group had at least one parent with hypertension and the other group did not. The research team measured the volunteers' blood pressure, heart rate and nerve activity during a period of rest and during a test called the Valsalva maneuver. The Valsalva maneuver is when a person tries to exhale with their mouth closed and nose blocked, which causes changes in blood pressure. Researchers measured [heart rate](#) responses during these changes in blood pressure to assess baroreflex sensitivity. The women with a family history of high [blood pressure](#) had reduced baroreflex sensitivity—both at rest and during exertion—compared with those without hypertensive parents.

"Demonstrating these findings in women is important given the

increased rates of hypertension during pregnancy as well as after menopause. Additional longitudinal data are needed to understand the association between altered autonomic function in women with a family history of hypertension and the risk of preeclampsia and hypertension later in life," wrote the researchers.

More information: Evan L. Matthews et al, Altered Baroreflex Sensitivity in Young Women with a Family History of Hypertension, *Journal of Neurophysiology* (2019). [DOI: 10.1152/jn.00471.2018](https://doi.org/10.1152/jn.00471.2018)

Provided by American Physiological Society

Citation: Hypertension-related changes may occur earlier in young women with family history (2019, March 6) retrieved 5 May 2024 from <https://medicalxpress.com/news/2019-03-hypertension-related-earlier-young-women-family.html>

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