E-cigarette use accelerates effects of cardiovascular aging

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A new study suggests that a single exposure to e-cigarette (e-cig) vapor may be enough to impair vascular function. Researchers from West Virginia University will present findings today at the Cardiovascular Aging: New Frontiers and Old Friends meeting in Westminster, Colo.

The researchers studied artery diameter, the blood vessels' ability to widen (vasodilation) and aortic stiffness in female mice after short- and long-term exposure to flavored e-cig vapor. Aortic stiffness is an age-related complication in the heart's main artery (aorta) that can be an indicator of cardiovascular disease. They found that within an hour of the five-minute e-cig exposure, the short-term group's arteries narrowed by approximately 30 percent. Vasodilation decreased as well.

Long-term exposure to e-cig vapor (20 hours per week over a period of eight months) also produced negative effects of chronic e-cig use, including aortic stiffness, which was more than twice as high as control groups exposed to normal room air. "These data indicate that e-cigs should not be considered safe and that they induce significant deleterious effects" on blood vessel function, wrote the authors.

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