

Intensive blood pressure treatment may help some middle-aged women with type 2 diabetes, early-onset hypertension

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Investigators in the Smidt Heart Institute at Cedars-Sinai and colleagues report that women with type 2 diabetes diagnosed with hypertension

before age 50 may benefit from intensive blood pressure treatment.

The [findings](#), published in *Diabetes Care*, show the risk of developing [cardiovascular disease](#) is reduced in women with type 2 diabetes diagnosed with [hypertension](#) in middle age who underwent intensive blood pressure [treatment](#). This risk was not reduced in women diagnosed with hypertension at age 50 or older, or in men.

"We have known for some time that women with type 2 diabetes have greater cardiovascular disease risks than men with type 2 diabetes," said Susan Cheng, MD, MPH, the Erika J. Glazer Chair in Women's Cardiovascular Health and Population Science in the Department of Cardiology in the Smidt Heart Institute, and co-corresponding author of the study.

"We also know blood pressure in women rises faster than in men. Given these two findings, we wanted to find out whether certain women might benefit from more intensive treatments," added Cheng, who is also director of the Institute for Research on Healthy Aging in the Smidt Heart Institute.

Blood pressure readings measure the force of blood pushing against the walls of the arteries. The readings measure two numbers: The larger number (systolic) is the pressure when your heart beats, and the smaller number (diastolic) represents the pressure between beats.

Experts define intensive blood pressure treatment as aiming to achieve and maintain a blood pressure below 120 mmHg systolic. Standard blood pressure treatment aims to achieve and maintain a reading less than 140 mmHg systolic. Uncontrolled blood pressure can damage the arteries and cause [heart attack](#), stroke and other cardiovascular issues.

Intensive blood pressure treatment typically involves higher doses of

antihypertensive drugs but can also involve increasing the number of antihypertensive drugs a patient is taking to achieve the blood pressure target.

The investigators analyzed data from the Action to Control Cardiovascular Risk in Diabetes (ACCORD) trial, which randomized 4,733 people with type 2 diabetes to intensive or standard antihypertensive treatment targets. A total of 3,792 participants provided their age at hypertension diagnosis.

Women with type 2 diabetes and early-onset hypertension who received intensive compared to standard antihypertensive treatment had significantly fewer strokes, heart attacks and other cardiovascular events over the course of 4½ years than women with type 2 diabetes and hypertension diagnosed at a later age.

"This study could help clinicians consider situations where more intensive lowering of [blood pressure](#) may be beneficial," said Christine M. Albert, MD, MPH, chair of the Department of Cardiology in the Smidt Heart Institute and the Lee and Harold Kapelovitz Distinguished Chair in Cardiology. "Research findings such as these remind us that we have to consider individual differences, including differences between women and men and between people who developed their conditions earlier or later in life."

Prospective studies are needed to validate these findings, according to the authors.

"This may be the first study to suggest intensive antihypertensive treatment is a preferred approach for women with type 2 [diabetes](#) and early-onset hypertension," said Joseph Ebinger, MD, associate professor of Cardiology in the Department of Cardiology in the Smidt Heart Institute and one of the study's authors.

"Our results are in line with the well-known adage that treating hypertension soon after diagnosis prevents many health issues later in life."

More information: Hongwei Ji et al, Early-Onset Hypertension and Sex-Specific Residual Risk for Cardiovascular Disease in Type 2 Diabetes, *Diabetes Care* (2024). [DOI: 10.2337/dc23-2275](https://doi.org/10.2337/dc23-2275)

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