

# Intensive Blood-Pressure Control in Patients with Type 2 Diabetes

A Research Summary based on Bi Y et al. | 10.1056/NEJMoa2412006 | Published on November 16, 2024

## WHY WAS THE TRIAL DONE?

Clinical guidelines recommend reducing elevated blood pressure in patients with type 2 diabetes to lower the risk of cardiovascular disease. However, effective targets for systolic blood-pressure reduction in this population are unclear.

## HOW WAS THE TRIAL CONDUCTED?

Adults 50 years of age or older who had type 2 diabetes, elevated systolic blood pressure, and increased risk of cardiovascular disease were assigned to receive intensive antihypertensive treatment (systolic blood-pressure target, <120 mm Hg) or standard treatment (target, <140 mm Hg) for up to 5 years. The primary outcome was a composite of the first occurrence of nonfatal stroke, nonfatal myocardial infarction, treatment or hospitalization for heart failure, or death from cardiovascular causes.

## TRIAL DESIGN

- Parallel-design
- Location: 145 clinical sites in China
- Randomized

## RESULTS

During a median follow-up of 4.2 years, the incidence of the composite primary outcome was significantly lower with intensive treatment than with standard treatment. The incidence of serious adverse events did not differ between the groups, although symptomatic hypotension and hyperkalemia occurred more often with intensive treatment than with standard treatment.

## LIMITATIONS AND REMAINING QUESTIONS

- Patients and trial physicians were aware of treatment group assignments.
- Telephone interviews were used to collect data, especially during lockdowns due to the Covid-19 pandemic, during which standard blood-pressure monitoring at home was encouraged.
- Only approximately 60% of patients in the intensive-treatment group met the target systolic blood pressure after 1 year.

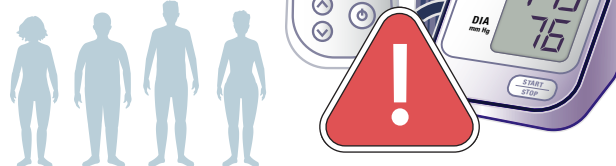
## CONCLUSIONS

**In patients with type 2 diabetes and increased risk of cardiovascular disease, the incidence of major cardiovascular events was significantly lower with intensive antihypertensive treatment targeting a systolic blood pressure of less than 120 mm Hg than with standard treatment targeting a systolic blood pressure of less than 140 mm Hg.**

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## Patients

- 12,821 adults
- Mean age, 64 years
- Men: 55%; Women: 45%

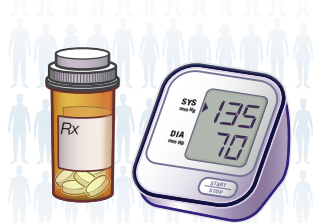


## Intensive Antihypertensive Treatment



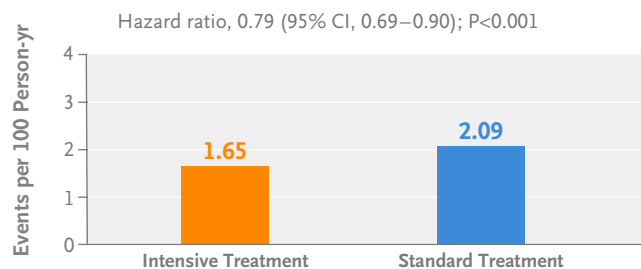
N = 6414

## Standard Antihypertensive Treatment



N = 6407

## Nonfatal Stroke, Nonfatal MI, Heart Failure, or Death



## Serious Adverse Events

