



# Does tight control of hypertension in pregnancy produce better perinatal outcomes?

**No.** Among 987 women with nonproteinuric preexisting or gestational hypertension who were randomly assigned to tight control (target diastolic blood pressure [BP], 85 mm Hg) versus less-tight control (target diastolic BP, 100 mm Hg), the primary outcome rates were similar: 31.4% versus 30.7% of women, respectively, experienced pregnancy loss or needed high-level neonatal care for more than 48 hours during the first 28 postnatal days.

Severe hypertension ( $\geq 160/110$  mm Hg) developed in 27.5% of women in the tight-control group and 40.6% of women in the less-tight control group ( $P < .001$ ).

*Magee LA, von Dadelszen P, Rey E, et al. Less-tight versus tight control of hypertension in pregnancy. N Engl J Med. 2015;372(5):407-417.*

#### ► EXPERT COMMENTARY

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The question of degree of control of hypertension during pregnancy has been debated for many years. The primary concern, which is mainly theoretical, is that tight control of hypertension may lead to underperfusion of the uterus, ultimately resulting in fetal growth restriction. This study adds to the available body of literature on this subject.

#### Details of the trial

In this pragmatic randomized clinical trial, 987 women with office diastolic BP of 90 to 105 mm Hg (or 85 to 105 mm Hg if they were

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taking a hypertensive medication) between 14 weeks, zero days of gestation and 33 weeks, 6 days of gestation were randomized to tight ( $n = 488$ ) versus less-tight control of hypertension ( $n = 493$ ).

Practitioners were encouraged to use labetalol for treatment. The primary outcome was pregnancy loss (miscarriage, ectopic pregnancy, pregnancy termination, stillbirth, or neonatal death) or the need for high-level neonatal care (defined as greater than normal newborn care for more than 48 hours until 28 days of life or discharge

#### WHAT THIS EVIDENCE MEANS FOR PRACTICE

This study does not establish a foundation for a change in clinical practice. At best, it supports the maternal safety of less-tight control of hypertension in pregnancy. That aspect of the trial may find its way into counseling of the patient.

►► **GEORGE MACONES, MD**

#### FAST TRACK

**Tight hypertension control did not result in better or worse neonatal outcomes, but it did result in better maternal outcomes**

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home). Secondary outcomes included serious maternal morbidity as late as 6 weeks postpartum. Statistical analysis was based on the intent-to-treat principle.

Adherence to assigned treatment was good, at approximately 75% in each arm. As stated above, the study found no differences in the combined primary endpoint between the two groups. It also found no differences in other perinatal outcomes, including small size for gestational age or other adverse neonatal outcomes. Maternal complications generally were similar as well, with the exception of severe hypertension, which was more common in the less-tight control group.

### **Strengths and weaknesses of the study**

This trial has several important strengths, including its pragmatic design, making it

more applicable to everyday practice. Other strengths include rigorous methods and a large sample size.

Two main weaknesses hamper the study, however:

- **the inclusion of both chronic hypertension and gestational hypertension.** In my opinion, the much more clinically relevant question concerns women with chronic hypertension, who have a long duration of treatment.
- **the choice of high-level neonatal care as part of the composite endpoint.** This aspect of the composite outcome drove the endpoint in terms of numbers, but it is unclear to me what its clinical relevance is. In my opinion, it is a poor surrogate for the neonatal outcomes we really care about. 🚫

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