

## Acupuncture lowers blood pressure in mild hypertension patients: A randomized, controlled, assessor-blinded pilot trial



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### ABSTRACT

**Objectives:** To preliminarily assess the effects of acupuncture on prehypertension and stage I hypertension, and to provide data for further research.

**Design:** A randomized, controlled, assessor-blinded study with an 8-week intervention period and a 4-week follow-up.

**Interventions:** Participants were patients with systolic blood pressure (SBP) of 120–159 mmHg or diastolic blood pressure (DBP) of 80–99 mmHg. Thirty participants were allocated to acupuncture group or untreated control group at a 1:1 ratio. The acupuncture group received standard acupuncture twice weekly for 8 weeks, and was followed-up for 4 weeks after treatment; the control group did not receive any type of anti-hypertensive treatment for 12 weeks.

**Main outcome measures:** Primary outcome measure was SBP and DBP at post-treatment. The secondary outcomes were SBP and DBP at follow-up; Euro Quality of life (EQ-5D), heart rate variability (HRV), body mass index (BMI), and blood lipid profile.

**Results:** DBP (−5.7 mmHg;  $P=0.025$ ), but not SBP (−6.0 mmHg;  $P=0.123$ ), was significantly different between groups at post-treatment. Both DBP (−7.8 mmHg;  $P=0.004$ ) and SBP (−8.6 mmHg;  $P=0.031$ ) were significantly different at follow-up. Among the HRV indices, only high frequency power was significantly different between groups at weeks 4 and 8 ( $P=0.047$  and  $P=0.030$ , respectively). There were no differences between groups in EQ-5D, BMI or lipid profile.

**Conclusion:** The results of this study show that acupuncture might lower blood pressure in prehypertension and stage I hypertension, and further RCT need 97 participants in each group. The effect of acupuncture on prehypertension and mild hypertension should be confirmed in larger studies.

Trial registration: KCT0000496.

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