



Is acetaminophen under pressure?

CLINICAL QUESTION

Does regular use of acetaminophen increase blood pressure?

BOTTOM LINE

Taking 3-4g of acetaminophen per day for 2-4 weeks increases systolic blood pressure by 3-4 mmHg. Clinicians should consider that regular use of acetaminophen can be a cause of elevated blood pressure in some patients.

EVIDENCE

- Evidence review focused on double-blind randomized controlled trials (RCTs).
- Results statistically significant unless stated.
- A 2022 systematic review identified 3 double-blind RCTs:¹
 - Largest crossover RCT, 110 hypertensive participants (mean age 62, baseline blood pressure ~134/81 mmHg, ~70% on blood pressure medications) given 1g acetaminophen 4 times daily or placebo for 2 weeks:²
 - Acetaminophen increased mean 24-hour systolic blood pressure by 4.2mmHg and 1.4mmHg diastolic over placebo.
 - Crossover RCT, 33 participants with stable coronary artery disease (mean age 61, baseline blood pressure ~122/73 mmHg) given acetaminophen 1g 3 times daily or placebo for 2 weeks:³

- Acetaminophen increased mean 24-hour systolic blood pressure by 3.4mmHg and 1.9mmHg diastolic over placebo.
- Parallel RCT, 29 treated hypertensive participants (mean age 52, baseline blood pressure 126/90 mmHg) given 1g acetaminophen 3 times daily or placebo for 3 weeks:⁴
 - No blood pressure difference.^{1,4}
- 1984 double-blind crossover RCT (not in above systematic review), 22 hypertensive participants using NSAIDs for pain given 1g acetaminophen 3 times daily or placebo.⁵ At 4 weeks:
 - Sitting blood pressure: No difference.
 - Supine and standing systolic blood pressure: 4mmHg higher with acetaminophen over placebo.

CONTEXT

- The RCT evidence for acetaminophen producing blood pressure changes is limited to a time frame of <4 weeks.
- Long-term blood pressure or cardiovascular safety data comes from observational studies only and results are inconsistent.⁶⁻¹⁴
- Long-term regular use of acetaminophen is ineffective for various chronic pain conditions such as osteoarthritis and low back pain.¹⁵⁻¹⁷

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AUTHORS

Nicolas Dugré, PharmD
MSc BCACP, **James
McCormack**, BSc (Pharm)
PharmD, **Émélie Braschi**,
MD PhD

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