

## BRINGING CLINICIANS TOGETHER TO DISCUSS CURRENT DRUG THERAPY

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### ACETAMINOPHEN

Recent evidence will stir up questions about whether acetaminophen is still the go-to for patients with hypertension.

We know NSAIDs are linked to increased BP...and their labels warn about CV risk.

Now evidence suggests acetaminophen may increase systolic BP by about 5 mm Hg versus placebo...similar to NSAIDs.

Put these recent headlines in perspective.

Point out that this new study is in about 100 patients with hypertension taking acetaminophen 4 g/day for 2 weeks. So it's too soon to say if these results apply to lower doses...or prn use.

And acetaminophen isn't shown to increase CV risk.

Plus researchers are scratching their heads about why acetaminophen might raise BP. One theory is that it has some COX-2 inhibition...similar to NSAIDs.

A few small, older studies also suggest acetaminophen may slightly increase BP...but this could be due to uncontrolled pain.

Continue to suggest nondrug measures first for pain...such as heat, ice, or physical therapy.

But stick with acetaminophen for fever or mild to moderate pain in patients who should avoid NSAIDs due to CV, GI, or kidney risks...especially for long-term use.

Recommend limiting acetaminophen to 3 to 4 g/day with chronic use...due to possible liver damage with high doses. And be aware, 1 g per dose doesn't seem much more effective than 500 mg.

Or consider a topical med...especially for localized pain. But there's not enough evidence to clearly say topical NSAIDs are safer than oral NSAIDs from a CV standpoint...they have the same warnings.

See our chart, *Topicals for Pain Relief*, to compare options.

And review our chart, *Meds That Can Increase BP*, to stay alert for other possible culprits.

(For more on this topic, see Clinical Resource #380406 at [PharmacistsLetter.com](http://PharmacistsLetter.com).)

MacIntyre IM, Turtle EJ, Farrah TE, et al. Regular Acetaminophen Use and Blood Pressure in People With Hypertension: The PATH-BP Trial. *Circulation*. 2022 Feb 8;145(6):416-423.

See LEADER NOTES for answers to discussion questions.

## DISCUSSION QUESTIONS

### OVERVIEW OF CURRENT THERAPY

1. What is known about the effect of acetaminophen on blood pressure?
2. What type of study was this? How were the patients selected for inclusion?
3. How were the study groups defined?
4. How were the outcomes evaluated?
5. What were the outcomes of this study?

See [LEADER NOTES](#) for answers to discussion questions.

6. What were the strengths and weaknesses of this study?

7. Were the results expressed in terms we care about and can use?

### HOW SHOULD THE NEW FINDINGS CHANGE CURRENT THERAPY?

8. Do the results change your practice? How?

### APPLY THE NEW FINDINGS TO THE FOLLOWING CASE

JH is a 64-year-old male admitted to your service with worsening shortness of breath on exertion and bilateral leg swelling. He has a history of hypertension and heart failure, although he admits his blood pressure is often elevated and he doesn't regularly follow-up with his PCP as advised. His medications include lisinopril 10 mg daily and carvedilol 3.125 mg twice daily. During his hospitalization, he received furosemide 40 mg IV daily for 3 days and responded appropriately. He also had an echocardiogram that showed an ejection fraction of 40%. His lab work is normal and his symptoms are significantly improved. He is now able to ambulate short distances without significant dyspnea, but still becomes dyspneic when walking longer distances around the hospital. You feel that he is ready for discharge.

Upon discharging the patient, the electronic medical record prompts you to classify JH's heart failure into a New York Heart Association (NYHA) functional classification.

See [LEADER NOTES](#) for answers to discussion questions.

**9. How would you classify JH's heart failure?**

JH's heart failure would qualify as NYHA Class III.

**10. What medication adjustments would you consider prior to discharging JH?**

You discharge JH on optimized meds and doses to manage his heart failure and educate him about these changes.

Four months later, you are surprised to see JH in your office for follow-up. His prior PCP retired and he has decided to transfer his care to you. His vitals are as follows: BP 127/79, HR 63. He is now on lisinopril 40 mg daily, carvedilol 12.5 mg twice daily, and spironolactone 25 mg daily. He also has a prescription for furosemide 40 mg daily as needed but has not had to use any in several months. He states his prior PCP tried to further increase his dose of carvedilol, but he developed dizziness and couldn't tolerate it. He also states that he had a recent echocardiogram, of which you review the results and note that his ejection fraction has improved to 50%. He endorses good exercise tolerance.

He has recently started playing pickleball and is complaining of bilateral knee pain. He is unsure of what he can take for his knee pain that is safe for his heart as well.

**11. What pharmacotherapy do you recommend for JH's knee pain?**

In addition to reinforcing nondrug measures such as heat or ice, you recommend acetaminophen as needed.

See [LEADER NOTES](#) for answers to discussion questions.

## REFERENCES

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MacIntyre IM, Turtle EJ, Farrah TE, et al. Regular Acetaminophen Use and Blood Pressure in People With Hypertension: The PATH-BP Trial. *Circulation*. 2022 Feb 8;145(6):416-423.

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Zeng C, Rosenberg L, Li X, et al. Sodium-containing acetaminophen and cardiovascular outcomes in individuals with and without hypertension. *Eur Heart J*. 2022 Feb 24;ehac059. doi: 10.1093/eurheartj/ehac059.

### **Additional Pharmacist's Letter Resources available at [PharmacistsLetter.com](https://www.pharmacistsletter.com)**

Chart, Meds That Can Increase Blood Pressure. *Pharmacist's Letter/Prescriber's Letter*. April 2022.

Chart, Analgesics for Acute Pain in Adults. *Pharmacist's Letter/Prescriber's Letter*. January 2020.

Chart, Analgesics for Osteoarthritis. *Pharmacist's Letter/Prescriber's Letter*. March 2020.

Chart, Topicals for Pain Relief. *Pharmacist's Letter/Prescriber's Letter*. April 2020.

Chart, Managing NSAID Risks. *Pharmacist's Letter/Prescriber's Letter*. July 2018.

Toolbox, Improving Heart Failure Care. *Pharmacist's Letter/Prescriber's Letter*. January 2021.

Chart, Target Doses of Meds for Systolic Heart Failure. *Pharmacist's Letter/Prescriber's Letter*. December 2017.

Chart, Treatment of Acute Low Back Pain. *Pharmacist's Letter/Prescriber's Letter*. August 2021.

Chart, Treatment of Chronic Low Back Pain. *Pharmacist's Letter/Prescriber's Letter*. May 2021.

Chart. Pharmacotherapy of Neuropathic Pain. *Pharmacist's Letter/Prescriber's Letter*. February 2022.

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