

BRINGING CLINICIANS TOGETHER TO DISCUSS CURRENT DRUG THERAPY

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HYPERTENSION

There will be renewed debate about whether taking blood pressure meds at bedtime improves CV outcomes.

The idea behind this "chronotherapy" is to combat the morning BP rise...or help patients whose BP doesn't "dip" at night like it should.

Now evidence suggests that CV risk is lower if patients take at least one of their once-daily BP meds at bedtime.

But many experts think these results are too good to be true... since the study implies a greater magnitude of CV benefit than simply treating hypertension. Plus prior studies show mixed effects on BP.

And be mindful that lowering BP too much at night can lead to nocturnal hypotension...and possibly orthostatic hypotension and falls.

Ask patients when it's most convenient to take their BP meds. Stress that med ADHERENCE is the best predictor of BP control.

If patients are on multiple BP meds, it's okay to suggest taking at least one at bedtime...especially if some blood pressure readings are high in the morning. This may do the trick to reach BP goals.

Also suggest taking at least one BP med at bedtime if you suspect the patient's a "non-dipper" at night. These are often patients with resistant hypertension, sleep apnea, diabetes, or kidney disease.

Point out that it's okay to take an ACEI, ARB, or calcium channel blocker at bedtime. But taking diuretics at bedtime may cause nocturia.

Review our chart, *Bedtime Dosing of BP Meds*, for more data on evening dosing and answers to frequently asked questions.

(For more on this topic, see Clinical Resource #360103 at PharmacistsLetter.com.)

Hermida RC, Crespo JJ, Dominguez-Sardina M, et al. Bedtime hypertension treatment improves cardiovascular risk reduction: the Hygia Chronotherapy Trial. *Eur Heart J*. 2019 Oct 22. doi: 10.1093/eurheartj/ehz754. [Epub ahead of print]

See LEADER NOTES for answers to discussion questions.

DISCUSSION QUESTIONS

OVERVIEW OF CURRENT THERAPY

1. What is known about how the timing of BP meds impacts control of hypertension or CV outcomes?

ANALYSIS OF NEW STUDY

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 trial?

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

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

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

SH is a 65-year-old African American female with a history of hypertension and CKD who presents for follow-up. Her blood pressure in your office is 156/95 mmHg and she is feeling well overall. Her antihypertensive medications are lisinopril 20 mg daily, amlodipine 5 mg daily, and hydrochlorothiazide 25 mg daily. She currently takes all of her medications in the morning, and says that she rarely misses a dose.

You ask SH if she monitors her BP at home. She says that she takes it every morning when she gets up, and that her readings are often in a similar range as today's measurement. However, she is unsure if her home measurements are accurate.

9. What should you review with SH about optimal home BP monitoring?

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

You encourage SH to continue to monitor her BP at home a few times each week, and to check it at staggered times. You review appropriate home BP monitoring technique and encourage SH to bring her monitor with her to her next visit to see how it compares to clinic readings.

You discuss that SH's BP is elevated, despite taking 3 medications for her blood pressure.

10. What medication changes should be considered for SH?

You ask SH about her diet and exercise regimen. She admits that she rarely exercises and has been eating out a lot lately. You recommend working toward exercising about 150 minutes/week, and reducing dietary sodium. You also recommend increasing her lisinopril dose to 40 mg/day, and advise her to continue her other two BP medications.

SH heard recent news about a study showing that taking BP medications in the evening may help control BP and possibly lower the risk of a heart attack or stroke. She asks if she should take her BP meds at bedtime.

11. What should you advise SH about the best time to take her BP meds?

You discuss the study results with SH and ask when it is most convenient for her to take her BP meds. SH says it should be easy for her to remember medications in the morning and at bedtime because she keeps them on her night stand. You recommend that SH continue to take hydrochlorothiazide and amlodipine in the morning, and to starting taking lisinopril at bedtime.

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

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- Additional Pharmacist's Letter Resources available at PharmacistsLetter.com**
- Chart, Treatment of Hypertension. *Pharmacist's Letter/Prescriber's Letter.* January 2018.
- Chart, Blood Pressure Monitoring. *Pharmacist's Letter/Prescriber's Letter.* January 2018.
- Chart, Hypertension in Patients With Diabetes. *Pharmacist's Letter/Prescriber's Letter.* May 2018.
- Chart, Hypertension in Women: Before, During, and After Pregnancy. *Pharmacist's Letter/Prescriber's Letter.* June 2019.
- Chart, Antihypertensive Combinations. *Pharmacist's Letter/Prescriber's Letter.* August 2018.
- Chart, Comparison of Angiotensin Receptor Blockers (ARBs). *Pharmacist's Letter/Prescriber's Letter.* September 2018.
- Chart, Comparison of Commonly Used Diuretics. *Pharmacist's Letter/Prescriber's Letter.* December 2016.
- Chart, Management of Orthostatic Hypotension. *Pharmacist's Letter/Prescriber's Letter.* March 2017.

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