White-Coat Hypertension: How Aggressively Should You Treat?

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Q: How is white-coat hypertension best managed?

A: More than 25% of hypertensive patients have white-coat hypertension, which has also been called "office hypertension" or "isolated clinic hypertension." It is defined as clinic or office blood pressure (BP) readings that are persistently higher than 140/90 mm Hg in conjunction with daytime ambulatory BP readings persistently lower than 135/85 mm Hg (the out-of-office BP equivalent of a clinic BP measurement of 140/90 mm Hg).

The seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure introduced the classification of "prehypertension" for patients with systolic BP readings between 130 and 139 mm Hg and diastolic readings between 80 and 89 mm Hg.1 Patients with prehypertension are at increased risk for eventual progression to sustained hypertension; those with higher prehypertensive readings are likely to have sustained hypertension within 4 to 5 years. White-coat hypertension is not a discrete entity; rather, it represents one end of the continuum of prehypertension. It cannot be diagnosed reliably by routine clinic or office measurements of BP.2

BP measurement. Accurate measurement of BP is essential to help determine a patient's BP-related risks, if any, and to guide management decisions. Conventional auscultatory measurements of BP in the clinic setting should provide an accurate assessment of a patient's true BP if they are taken repeatedly over prolonged periods to yield an average result. Unfortunately, clinic readings often give a poor estimate of true BP because of faulty measurement technique and because often only 1 or 2 readings are used to establish a diagnosis and determine treatment.

Office BP measurements correlate poorly with out-of-office measurements. Mounting evidence suggests that out-of-office readings predict future cardiovascular events more accurately than office readings; out-of-office readings may also be useful for monitoring the effects of treatment.3 These findings have led to increasing use of BP self-measurement.

I prefer a properly calibrated portable oscillometric device or automated ambulatory BP monitoring (ABPM) device for documentation of out-of-office BP. These are more likely to be accurate than home auscultatory devices. However, although ABPM devices may more accurately identify white-coat hypertension, the widespread availability of home monitoring devices makes the latter more practical for patients.4 Instruct patients to measure their BP 3 or 4 times a week and to contact you if they detect an upward trend during a 2- to 3-week period.

Oscillometric devices are suitable as long as they are calibrated periodically for accuracy. Calibrations can easily be done in the office or clinic with a simple Y-connector; measurements obtained with the oscillometric device are compared with those obtained with a mercury manometer. Although the use of
mercury has been discouraged in the clinic setting, it is important to keep a mercury manometer available for validation of a patient's home BP device.

**Treatment.** Some evidence suggests that persons with established white-coat hypertension may be at modestly increased risk for future cardiovascular event-compared with persons who have normal BP (lower than 120/80 mm Hg). Intervention trials are needed to determine whether pharmacologic treatment will prevent future cardiovascular events.

Currently, drug therapy is not generally recommended for patients with documented white-coat hypertension. However, because these persons may progress to sustained hypertension, they should be monitored periodically with careful office and out-of-office BP measurements.

Patients with white-coat hypertension may benefit from the same nonpharmacologic measures recommended for patients with prehypertension:

- Weight reduction when necessary.
- Increased consumption of fruits and vegetables.
- Decreased consumption of saturated and total fats and dietary sodium.
- Regular aerobic exercise.
- Moderation of alcohol intake.

**REFERENCES:**