

Blood-pressure Elevations

“Should I be worried about this blood pressure reading of 165 / 105?”

This is a common scenario in the community pharmacy; a patient will take their blood pressure at the machine in the pharmacy while waiting for their prescription, and anxiously ask you to interpret their out-of-target reading.

Patients can be put at ease by explaining how blood pressure dramatically fluctuates throughout the day. For the average person, systolic blood pressure can fluctuate up to 40 points in a day¹. Explain that this means if a reading in the morning showed a blood pressure of 120/85, four hours later it could be 160/95 – and this would still be considered normal. Some people may experience even greater variations; many factors influence these fluctuations, such as diet, activity and stress. For an example of how much blood pressure can fluctuate, check <http://tinyurl.com/d29mv3v>.²

The majority of patients who present with a higher-than-normal reading only need reassurance and education; drug therapy intervention is not required. Two scenarios will require intervention—**hypertensive urgency** and **hypertensive emergency**.

The 2013 CHEP guidelines do not define hypertensive urgency/emergency as a specific blood pressure reading, but place more emphasis on if the patient is experiencing any symptoms. An asymptomatic diastolic blood pressure of ≥ 130 mmHg would be considered **urgent**, whereas any elevated blood pressure in the setting of target organ damage (angina, worsening congestive heart failure, stroke symptoms, visual problems, severe headache, confusion) would be considered an **emergency**.³ A hypertensive emergency requires immediate medical treatment³; however, no management strategies are provided for urgent hypertension.

The American Heart Association guidelines provide more guidance in the case of hypertensive urgency. The AHA defines urgency as blood pressure of systolic ≥ 180 mmHg or diastolic ≥ 110 mmHg with no other symptoms. Often, a few minutes of rest in a quiet room will bring blood pressure down to normal levels. However, a person should seek emergency care if any of the follow symptoms develop^{4,5}:

- Severe headache
- Shortness of breath
- Nosebleeds
- Severe Anxiety
- Chest pain
- Visual changes

If the blood pressure does not return to normal within a few hours, or is frequently this high, then the patient should see their doctor as soon as possible to have their medications adjusted. Brief fluctuations of blood pressure this high are **not** a cause for alarm or immediate intervention.⁴

A community pharmacist is well placed to help patients interpret their blood pressure, but care is needed not to cause undue panic in the patient or overtreatment of their hypertension. The majority of patients can be managed with education, support, and possible changes to their medications, but those showing symptoms need immediate emergency care.

Resources:

- 1) J P Degaute, *Quantitative analysis of the 24-hour blood pressure and heart rate patterns in young men.* [Hypertension.](#) 1991 Aug;18(2):199-210.
- 2) Harvard Medical School. *Experts call for home blood pressure monitoring.* Online at: http://www.health.harvard.edu/newsletters/Harvard_Womens_Health_Watch/2009/August/Experts-call-for-home-blood-pressure-monitoring. Accessed 27 Nov 2012
- 3) CHEP 2013 Guidelines: Full Recommendations. Online at: [\[http://www.hypertension.ca/images/CHEP_2013/2013_CompleteCHEPRecommendations_EN_HCP1009.pdf\]](http://www.hypertension.ca/images/CHEP_2013/2013_CompleteCHEPRecommendations_EN_HCP1009.pdf) Accessed 13 Mar 2013.
- 4) American Heart Association, *Hypertensive Crisis.* Online at: [\[http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/AboutHighBloodPressure/Hypertensive-Crisis_UCM_301782_Article.jsp\]](http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/AboutHighBloodPressure/Hypertensive-Crisis_UCM_301782_Article.jsp) Accessed 27 Nov 2012.
- 5) Bakris, George. *Management of severe asymptomatic hypertension (hypertensive urgencies).* UpToDate, 18 July, 2012. Online at (subscription required): [\[http://www.uptodate.com/contents/management-of-severe-asymptomatic-hypertension-hypertensive-urgencies\]](http://www.uptodate.com/contents/management-of-severe-asymptomatic-hypertension-hypertensive-urgencies). Accessed 27 Nov 2012.

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March, 2013