

Tip of the month:

Tip 8 (November 2009)

Ambulatory and Home Blood Pressure Monitoring in the Diagnosis of Hypertension

24 hour ambulatory blood pressure monitoring is useful in the diagnosis of “white coat” hypertension, but it is also a useful tool for the diagnosis of (true) hypertension.

Typically in an individual with elevated office blood pressure, particularly $< 160/100$, in the absence of target organ damage, several office visits, over a period of weeks or months are indicated to obtain multiple resting blood pressure recordings, before a diagnosis of hypertension is made and drug therapy commenced.

A 24-hour ambulatory BP monitor can short circuit this process, and confirm (or refute) the diagnosis of true hypertension immediately.

Generally accepted thresholds for treatment on the ABPM (equivalent to office BP $\geq 140/90$) are $\geq 135/85$ for average awake blood pressure, or $\geq 130/80$ for the 24 hour average. Treatment threshold for those with diabetes, chronic kidney disease, or cardiovascular disease (equivalent to office BP $\geq 140/90$) is $\geq 125/75$ awake average blood pressure, or $\geq 120/70$ for the 24 hour average.

Similarly (in suitable patients who possess a validated home blood pressure monitor) a diagnosis of true hypertension can be expedited with home blood pressure monitoring. The patient should be asked to record morning (before medication) and evening seated blood pressures for 7 consecutive days. It is important that recommended technique is adhered to, and that each reading is done after 5 minutes quiet rest. In addition, the readings from the first day should be discarded. Threshold for treatment (equivalent to office BP $\geq 140/90$) is an average blood pressure for the week of $\geq 135/85$ (or $\geq 125/75$ for those with diabetes, chronic kidney disease, or cardiovascular disease).

Useful resources

- (1) The Canadian Hypertension Education Programme website <http://hypertension.ca/chep/> has a well laid-out up to date power point lecture on home and ambulatory BP monitoring which can be downloaded.
- (2) The British Hypertension Society website maintains an updated list of validated home blood pressure monitors http://www.bhsoc.org/bp_monitors/automatic.stm (or Google “British Hypertension Society” and click on “Blood Pressure Monitors”)