

5.2.4. Ambulatory blood pressure measurement

ABPM (summarized in [Figure 5](#)) is an out-of-office BP measurement that uses a fully automated device, usually for a 24-h period. The devices measure BP by the oscillometric method and are programmed to measure BP at set intervals. Readings are usually obtained at 15–30 min intervals during the day (typically 7 a.m. to 11 p.m.) and 30–60 min intervals at night (typically 11 p.m. to 7 a.m.). The software usually provides average BP measurements for daytime, night-time, and 24 h. A minimum of 70% useable BP recordings is required for a valid measurement session, typically

numbering ≥27 measurements over 24 h. Preferably, seven nocturnal readings should also be obtained.⁶² However, emerging data indicate that ≥8/≥4 wake/sleep readings may be adequate if more cannot be obtained.⁶³ Prior to using mean ABPM values (either 24 h, daytime, or night-time) the raw BP values at each measurement should be reviewed for possible outlier or erroneous values. A diary should record activities (e.g. meals and exercise) and sleep time to assist interpretation. The diagnostic thresholds for elevated BP and hypertension using ABPM, and comparison with office BP and HBPM, are provided in [Table 5](#).^{61,64}

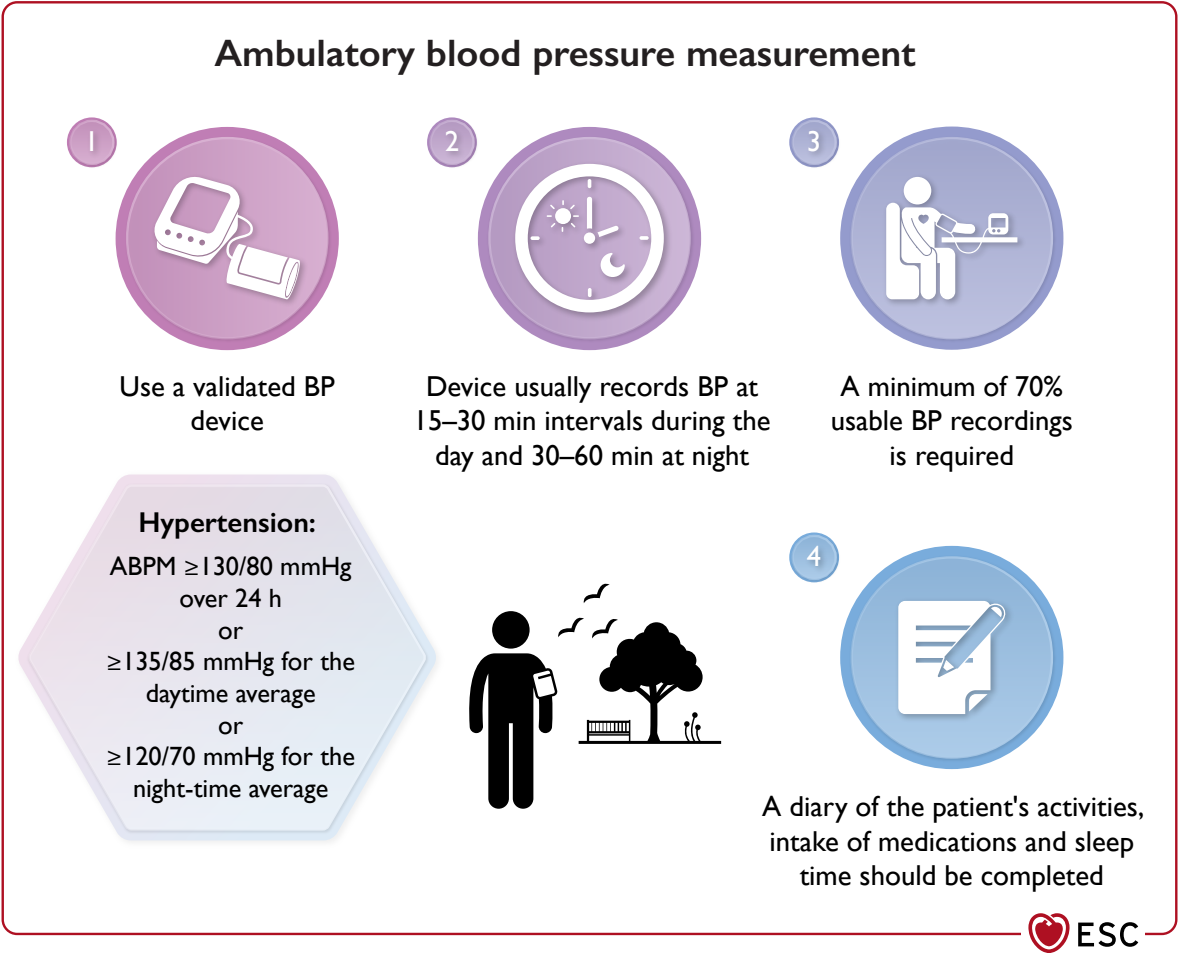


Figure 5 Summary of ambulatory blood pressure measurement. ABPM, ambulatory blood pressure measurement; BP, blood pressure.

Table 5 Comparison of office, home, and ambulatory blood pressure measurement thresholds for elevated blood pressure and hypertension

	Office BP (mmHg) ^a	Home BP (mmHg)	Daytime ABPM (mmHg)	24 h ABPM (mmHg)	Night-time ABPM (mmHg)
Reference					
Non-elevated BP	<120/70	<120/70	<120/70	<115/65	<110/60
Elevated BP	120/70–<140/90	120/70–<135/85	120/70–<135/85	115/65–<130/80	110/60–<120/70
Hypertension	≥140/90	≥135/85	≥135/85	≥130/80	≥120/70

ABPM, ambulatory blood pressure monitoring; BP, blood pressure.
^aThe BP thresholds provided assume that a standardized approach to office BP measurement is performed ([Figure 3](#)). However, evidence indicates that office BP measurement in routine clinical settings is often not done using a standardized approach and, in this case, the routine office BP value may be 5–10 mmHg higher than it would have been if measured using the recommended standardized approach.^{65,66}