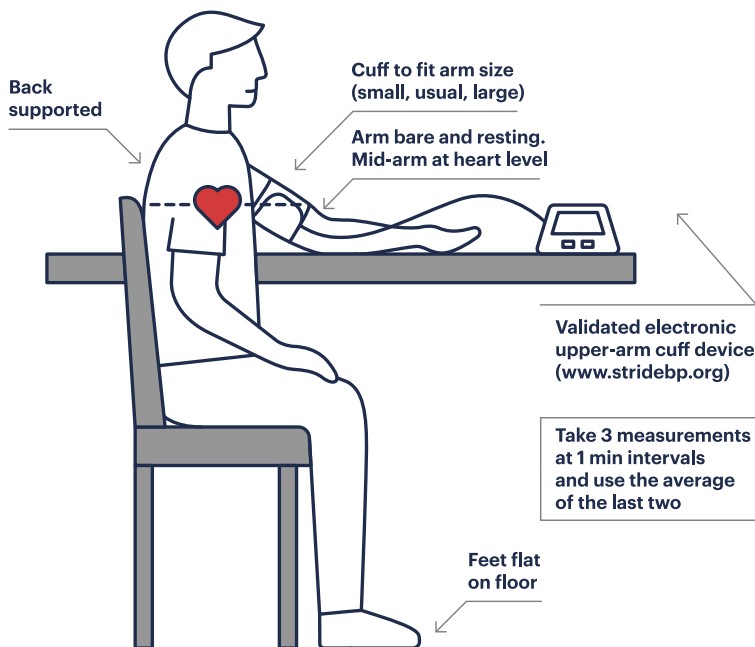
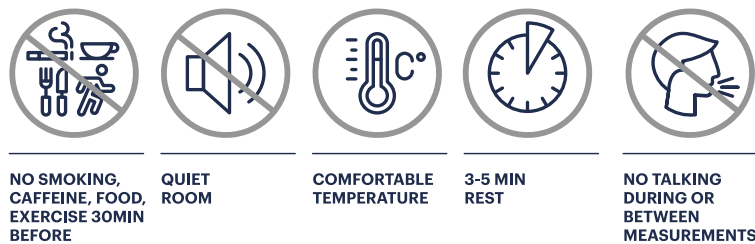


DEVICE

- Use validated automated electronic upper-arm cuff device.
- Prefer a device that takes triplicate readings automatically.
- If validated automated devices not available, use a manual electronic auscultatory device (LCD or LED display, or digital countdown, or good quality aneroid). Deflate at 2-3 mmHg/sec rate. Use 1st and 5th Korotkoff sound for systolic and diastolic BP.
- Annual maintenance of device is necessary.

CUFF

- Select cuff size according to the individual's arm circumference.
- *Automated electronic devices:* select cuff size according to device instructions. Each electronic device has its own cuffs, which are not interchangeable with those of other devices.
- *Manual auscultatory devices:* use a cuff with bladder length at 75-100% of individual's arm circumference and width 37-50%.



MEASUREMENTS

- 2-3 office visits at 1-4-week intervals are usually required.
- At initial visit measure BP in both arms.
- Measure standing BP in treated hypertensives when there are symptoms suggesting postural hypotension.

INTERPRETATION

Office BP (mmHg)	Diagnosis	Action
Normal-Optimal BP (<130/85)	Normotension highly probable	Remeasure after 1 year (6 months if other risk factors).
High-normal BP (130-139/85-89)	Consider masked hypertension	Perform home and/or ambulatory BP monitoring. If not available confirm with repeated office visits.
Hypertension Grade 1 (140-159/90-99)	Consider white-coat hypertension	Perform home and/or ambulatory BP monitoring. If not available confirm with repeated office visits.
Hypertension Grade 2-3 (≥160/100)	Sustained hypertension highly probable	Confirm within a few days or weeks*. Ideally use home or ambulatory BP monitoring.

* Treat immediately if office BP is very high (e.g. ≥180/110 mmHg) and there is evidence of target organ damage or cardiovascular disease.

DEVICE

- Use validated automated electronic upper-arm cuff device.
- Select cuff size according to device instructions.
- Each device has its own cuffs, which are not interchangeable with those of other devices.
- Annual maintenance of device is necessary.

IMPLEMENTATION

- Perform ABPM preferably on a routine working day.
- 10-15 min needed to initialise and fit the device.
- Frequency of measurement 20-30 min during day and night.
- Fit cuff on bare non-dominant arm.
- Select cuff size according to device instructions.
- Take a test measurement.
- Remove the monitor after 24 hours.

INSTRUCTIONS TO PATIENT

- Explain the device function and procedure.
- Advise to follow usual daily activities and to remain still with arm relaxed at each measurement.
- Advise not to drive. If this is necessary, then stop if possible or ignore measurement.
- Advise to avoid taking a shower or bath during ABPM.
- Provide a form to record sleeping times, drug intake, and any symptoms or problems during the recording.
- Mark the brachial artery so that if the cuff becomes loose the patient can refit it.
- Explain how to switch off the monitor in case of malfunctioning.

EVALUATION OF RECORDING

- Determine day (awake) and night (asleep) periods only according to patient's report.
- Repeat ABPM if <20 valid awake or <7 asleep BP readings.

INTERPRETATION

ABPM thresholds for hypertension diagnosis

24h average:	≥130/80 mmHg	Primary criterion
Daytime (awake) average:	≥135/85 mmHg	Daytime hypertension ¹
Night-time (awake) average:	≥120/70 mmHg	Night-time hypertension ¹

Asleep BP dip compared to awake BP (systolic and/or diastolic)

Asleep BP fall	≥10%	Dipper ^{1,2}
	<10%	Non-dipper ^{1,2}

¹ Apply only if day/night BP is calculated using the individuals' sleeping times.

² The diagnosis must be confirmed with repeat ABPM.

DEVICE

- Use validated automated upper-arm cuff device.
- Select cuff size according to device instructions. Each device has its own cuffs, which are not interchangeable with those of other devices.
- Prefer devices with automated storage and averaging of multiple readings, or with mobile phone, PC or internet link connectivity enabling data transfer.
- Manual auscultatory devices, automated wrist devices, finger-cuff devices, wristband wearables and cuffless devices are generally not recommended.

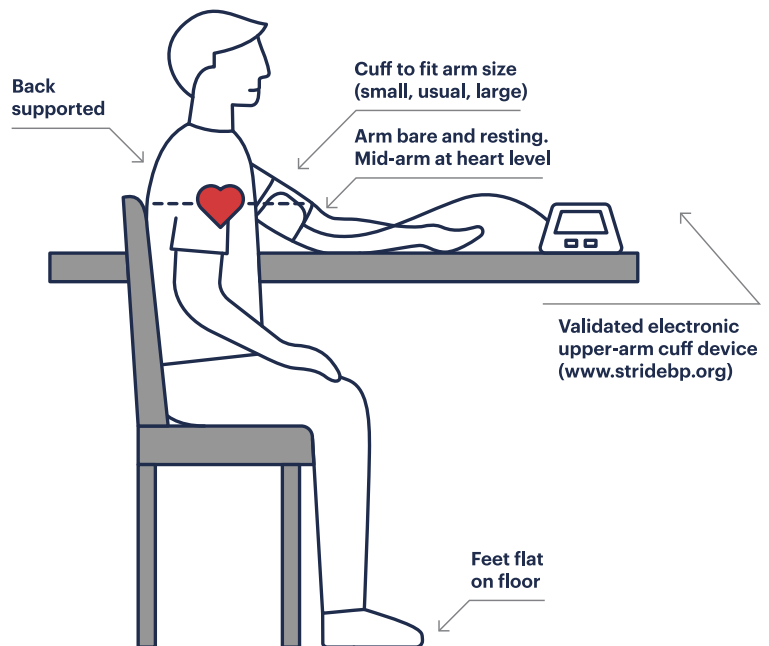
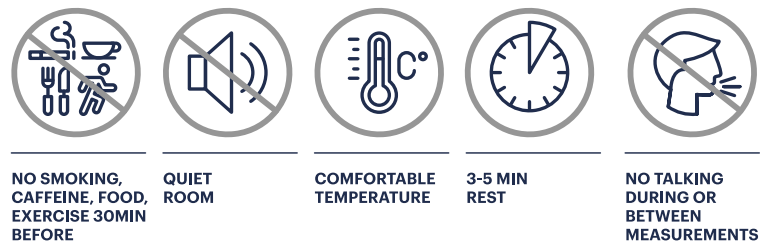
HBPM SCHEDULE

For diagnosis and before each office visit

- Measurements for 7 days (at least 3).
- Morning and evening measurements.
- Before drug intake if treated and before meals.
- Two measurements on each occasion with 1 min between them.

Long-term follow-up of treated hypertension

- Make duplicate measurements once or twice per week (most frequent) or per month (minimum requirement).



PATIENT TRAINING

- Use a reliable device.
- Conditions and posture for measurement.
- Measurement schedule before office visit and between visits.
- Interpretation of measurements. Inform patients about usual BP variability.
- Action if BP is too high or too low.

INTERPRETATION

- Prefer automated report and averaging of readings stored in device memory (or mobile). Otherwise, review readings reported in a logbook.
- Assess home measurements of 7 days (at least 3 days with at least 12 readings).
- Discard the first day and calculate the average of all the other readings.
- Average home BP $\geq 135/85$ mmHg indicates hypertension. Individual readings have little diagnostic accuracy.