  - Hypertensive in the clinic but normotensive at home (termed 'white-coat hyptertension').
  - Normotensive in the clinic but hypertensive at home (termed 'reverse white-coat hypertension', 'isolated ambulatory hypertension' or 'masked hypertension').
  - Hypertensive in both environments.
- Home monitoring and ambulatory BP monitoring are better correlated to target-organ damage.
- The average daytime BP, rather than the 24 h average, value should be used to inform management decisions.
- Threshold and target values for ambulatory BP monitoring are lower – add 12/7 mmHg to values obtained to reflect clinic measurements.

Which devices are used for measuring BP?

- The majority of readings are taken manually but automatic devices are available. Whichever method is used, multiple BP readings should be taken using a calibrated and validated sphygmomanometer.
- Be careful when using electronic monitors to measure BP in patients with an irregular pulse (ectopics or atrial fibrillation [AF]); check BP in both arms at least once.
- Validated machines from Microlife, Omron and AD instruments are recommended for home monitoring of BP.

Classification of hypertension and risk of CVD

- If the first measurement is high (>140/95 mmHg), retake BP at the end of the consultation and ask the patient to come back for two further appointments to test BP and for CV risk assessment.
- Hypertension is diagnosed if BP is consistently high for all readings: ≥140/90 mmHg (Figure 2.3), or ≥130/80 mmHg in people with diabetes.
- BP of 120–139/80–89 mmHg should be considered high-normal or 'pre-hypertensive'.
- Increased variability in SBP and the maximum value reached are strong predictors for stroke.
- SBP rises gradually with age and isolated systolic hypertension is common in the elderly:
  - Grade 1: 140–159/<90 mmHg.
  - Grade 2: ≥160/<90 mmHg.
- An artificially and falsely elevated BP reading, which is known as 'Osler's sign', is observed in patients with calcified arteries; for example, elderly patients who have atherosclerosis.

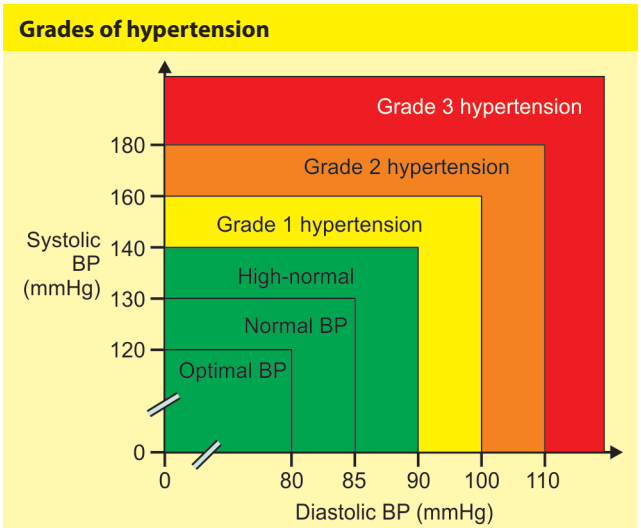

Figure 2.3 BP, blood pressure.

- The majority of those with white-coat hypertension go on to develop substantive BP problems within 5 years.

Role of the GP

- Know the difference between treatment thresholds (Figure 2.4) and targets (p. 41).
- Keep a register of patients with hypertension and people with type 2 diabetes mellitus who have a BP >145/85 mmHg.
- BP should be controlled to the auditable standard (the minimum recommended level of BP control) as quickly as possible.
- In people who are pre-hypertensive, provide lifestyle advice to prevent BP increasing to hypertensive levels and CVD.
- If BP is ≥140/85 mmHg, consider for evaluation of target-organ damage.
- Drug treatment is indicated if sustained SBP is ≥160 mmHg or DBP is ≥100 mmHg irrespective of therapeutic lifestyle changes of CV risk profile.
- Drug treatment is also indicated if sustained SBP is 140–159 mmHg or DBP is 90–99 mmHg and target-organ damage is present or there is evidence of established CVD, diabetes or high 10-year risk of CHD (p. 36–7).