Hypertension in adults: diagnosis and treatment

Offer lifestyle advice and continue to offer it periodically

### Clinic BP

**Under 140/90 mmHg**
- Check BP at least every 5 years and more often if close to 140/90 mmHg

**140/90 to 179/119 mmHg**
- Offer ABPM (or HBPM if ABPM is declined or not tolerated)
- Investigate for target organ damage
- Assess cardiovascular risk

Assess for target organ damage as soon as possible:
- Consider starting drug treatment immediately without ABPM/HBPM if target organ damage
- Repeat clinic BP in 7 days if no target organ damage

**180/120 mmHg or more**
- Refer for same-day specialist review if:
  - retinal haemorrhage or papilloedema (accelerated hypertension) or
  - life-threatening symptoms or
  - suspected pheochromocytoma

### ABPM or HBPM

**Under 135/85 mmHg**
- Offer lifestyle advice.

**135/85 to 149/94 mmHg (Stage 1)**
- Offer lifestyle advice.

**150/95 mmHg or more (Stage 2)**
- Offer lifestyle advice and drug treatment

**180/120 mmHg or more**
- Offer lifestyle advice and drug treatment

### Use clinical judgement for people with frailty or multimorbidity

- Check BP at least every 5 years and more often if clinic BP close to 140/90 mmHg
- If evidence of target organ damage, consider alternative causes

This is a summary of the recommendations on diagnosis and treatment from NICE's guideline on hypertension in adults. See the original guidance at [www.nice.org.uk/guidance/NG136](http://www.nice.org.uk/guidance/NG136).
Choice of antihypertensive drug, monitoring treatment and BP targets

### Monitoring treatment

Use clinic BP to monitor treatment. Measure standing and sitting BP in people with:
- type 2 diabetes or
- symptoms of postural hypotension or
- aged 80 and over.

Advise people who want to self-monitor to use HBPM. Provide training and advice. Consider ABPM or HBPM, in addition to clinic BP, for people with white-coat effect or masked hypertension.

### BP targets

Reduce and maintain BP to the following targets:

#### Age <80 years:
- Clinic BP <140/90 mmHg
- ABPM/HBPM <135/85 mmHg

#### Age ≥80 years:
- Clinic BP <150/90 mmHg
- ABPM/HBPM <145/85 mmHg

#### Postural hypotension:
- Base target on standing BP

### Monitoring

Confirm resistant hypertension: confirm elevated BP with ABPM or HBPM, check for postural hypotension and discuss adherence.

Consider seeking expert advice or adding a:
- low-dose spironolactone if blood potassium level is ≤4.5 mmol/l
- alpha-blocker or beta-blocker if blood potassium level is >4.5 mmol/l

Seek expert advice if BP is uncontrolled on optimal tolerated doses of 4 drugs.

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1. For women considering pregnancy or who are pregnant or breastfeeding, see NICE’s guideline on hypertension in pregnancy. For people with chronic kidney disease, see NICE’s guideline on chronic kidney disease. For people with heart failure, see NICE’s guideline on chronic heart failure.

2. See MHRA drug safety updates on ACE inhibitors and angiotensin-II receptor antagonists: not for use in pregnancy, which states ‘Use in women who are planning pregnancy should be avoided unless absolutely necessary, in which case the potential risks and benefits should be discussed.’

3. Consider an ARB in preference to an ACE inhibitor in adults of African and Caribbean family origin.

4. At the time of publication (August 2019), not all preparations of spironolactone have a UK marketing authorisation for this indication.

Abbreviations: ABPM, ambulatory blood pressure monitoring; ACEi, ACE inhibitor; ARB, angiotensin-II receptor blocker; BP, blood pressure; CCB, calcium-channel blocker; HBPM, home blood pressure monitoring.