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
  - Refer for same-day specialist review if:
    - retinal haemorrhage or papilloedema (accelerated hypertension) or
    - life-threatening symptoms or
    - suspected pheochromocytoma

- **180/120 mmHg or more**
  - Offer ABPM if ABPM is declined or not tolerated
  - Investigate for target organ damage
  - Assess cardiovascular risk
  - Consider starting drug treatment immediately without ABPM/HBPM if target organ damage
  - Repeat clinic BP in 7 days if no target organ damage
  - 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**
  - 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

- **135/85 to 149/94 mmHg (Stage 1)**
  - Offer lifestyle advice and consider drug treatment

- **150/95 mmHg or more (Stage 2)**
  - Offer lifestyle advice and drug treatment
  - Age <40:
    - Consider specialist evaluation of secondary causes and assessment long-term benefits and risks of treatment

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

- **Age >80 with clinic BP >150/90 mmHg:**
  - Offer lifestyle advice and consider drug treatment

- **Age <80 with target organ damage, CVD, renal disease, diabetes or 10-year CVD risk ≥10%:**
  - Offer lifestyle advice and discuss starting drug treatment

- **Age <60 with 10-year CVD risk <10%:**
  - Offer lifestyle advice and consider drug treatment

- **Age <40:**
  - Consider specialist evaluation of secondary causes and assessment long-term benefits and risks of treatment
  - Discuss the person’s CVD risk and preferences for treatment, including no treatment.
  - See NICE’s patient decision aid for hypertension
  - See next page for choice of drug, monitoring and BP targets.
  - Offer annual review
  - Support adherence to treatment

Abbreviations: ABPM, ambulatory blood pressure monitoring; BP, blood pressure; CVD, cardiovascular disease; HBPM, home blood pressure monitoring.

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
**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

**Frailty or multimorbidity:**
- Use clinical judgement

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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.’


4. See also NICE’s guideline on hypertension in pregnancy.

5. 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.