# 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

## 180/120 mmHg or more

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

## **ABPM or HPBM**

Use clinical judgement for people with frailty or multimorbidity

#### 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. In addition, for the following groups: Age over 80 with clinic BP over 150/90 mmHg:

Consider drug treatment

Age under 80 with target organ damage, CVD, renal disease, diabetes or 10-year CVD risk 10% or more:

• Discuss starting drug treatment

Age under 60 with 10-year CVD risk less than 10%:

Consider drug treatment

#### Age under 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

#### 150/95 mmHg or more (stage 2)

Offer lifestyle advice and drug treatment **Age under 40:** 

 Consider specialist evaluation of secondary causes and assessment long-term benefits and risks of treatment

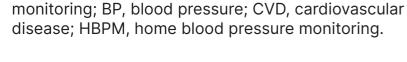
Discuss the person's CVD risk and preferences for treatment, including no treatment.

See NICE's patient decision aid for hypertension.

See next page for choice of drug, monitoring and BP targets.

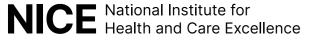
- Offer annual review
- Support adherence to treatment

This diagram covers only part of the guideline content. For full details, see <a href="NG136">NG136</a> Hypertension in adults.</a>
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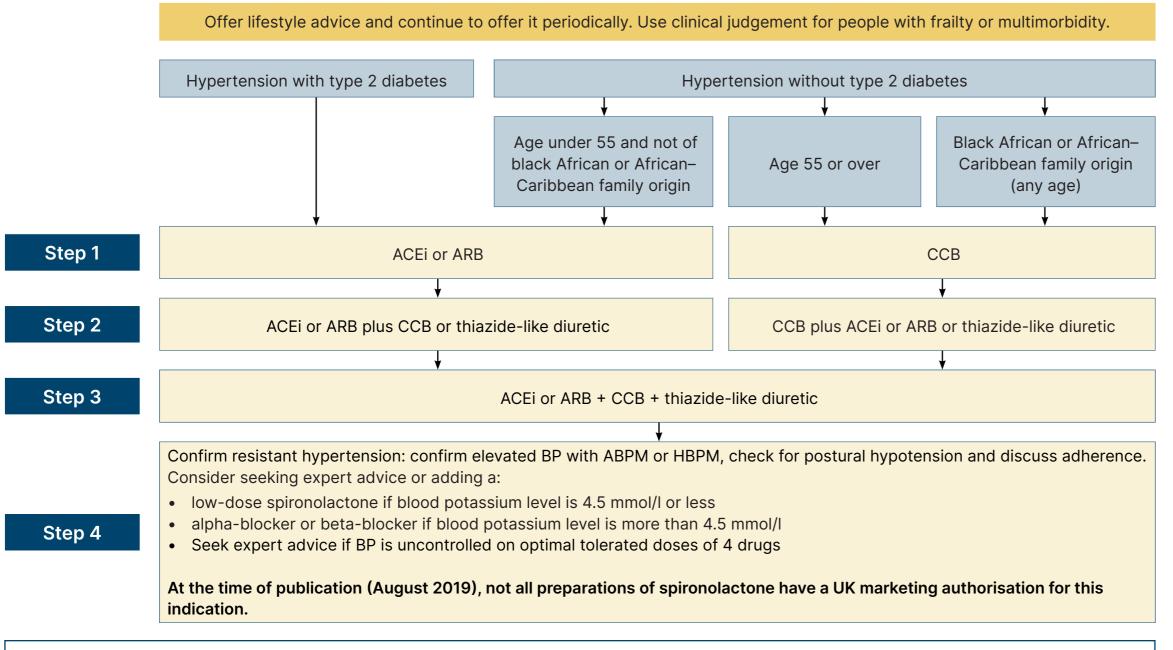
**Abbreviations:** ABPM, ambulatory blood pressure

ABPM should be based on average daytime readings,



ideally taken spread throughout the day.

# Choice of antihypertensive drug, monitoring treatment and BP targets



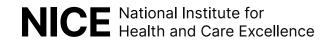
The advice in this diagram applies to people with hypertension with or without type 2 diabetes. For guidance on choosing antihypertensive drug treatments in people with type 1 diabetes, see the section on control of cardiovascular risk in NICE's guideline on type 1 diabetes.

For women considering pregnancy or who are pregnant or breastfeeding, see <u>NICE's guideline on hypertension in pregnancy</u>. For people with chronic kidney disease, see <u>NICE's guideline on chronic kidney disease</u>. For people with heart failure, see <u>NICE's guideline on chronic heart failure</u>.

ACEi or ARB: See MHRA drug safety updates on <u>ACE inhibitors and ARBs: not for use in pregnancy</u>, 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', as well as <u>ACE inhibitors and angiotensin II receptor antagonists: use during breastfeeding</u> and <u>clarification: ACE inhibitors and angiotensin II receptor antagonists</u>. Consider an ARB, in preference to an ACE inhibitor, in adults of African and Caribbean family origin.

ABPM should be based on average daytime readings, ideally taken spread throughout the day.

**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.



## 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 under 80 years:

- Clinic BP less than 140/90 mmHg
- ABPM/HBPM less than 135/85 mmHg

### Age 80 years and over:

- Clinic BP less than 150/90 mmHg
- ABPM/HBPM less than 145/85 mmHg

## Postural hypotension:

Base target on standing BP

#### Frailty or multimorbidity:

Use clinical judgement



This visual summary builds on and updates previous work on treatment published by the BIHS (formerly BHS)

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