

Cardiology Update

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Available clinics/services

- General Cardiology Outpatient Clinic
- Rapid Access Chest Pain Clinic (RACPC)
- Diagnostic Heart failure Clinic
- Lipid Clinic
- HOT clinic
- Valve Surveillance Clinic
- Device clinic
- Community Heart Failure Nurse (SWYFT)
- Cardiac Rehabilitation

Investigations

- Diagnostic coronary angiography
- Bradycardia pacemaker + follow up
- Loop recorder
- Exercise Tolerance Test
- CT Coronary Angiography
- Myocardial Perfusion Imaging
- Stress Echocardiography
- Transthoracic Echocardiography
- Transoesophageal Echocardiography
- Cardiac MRI (Leeds)

Directory of Service

- Chest pain/Angina
- Atrial Fibrillation/Arrhythmias
- Heart Failure
- Hypertension
- Valvular heart disease/murmur
- Blackout/Transient Loss of Consciousness (TLOC)
- GPOA procedures
 - ECG
 - Ambulatory ECG
 - Ambulatory BP monitor
 - Transthoracic echocardiogram
- Advice + Guidance

Chest pain

- NICE guideline CG95 + CG126
- If no past history and suggestive of angina – RACPC
- If established history of IHD and worsening symptoms – HOT clinic
- ‘Typical cardiac type chest pain’
 - Constricting/heavy
 - Provoked by exertion
 - Eased by rest/GTN within 5 mins
- Assess in context of PMHx and overall CVD risk
- 12 lead ECG
- If clinically angina start anti-anginal therapy
- CT Lung Health Checks
 - If no angina – No need to refer. Assess and optimise CVD risk
 - If angina – Refer in



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Atrial Fibrillation

- NICE guideline NG196 (2021)
- ESC guideline 2024
- Screening
- CARE-AF (ESC)
- CHADS2Va + Bleeding score
- Dosing + choice of DOAC/VKA
- Rate control options
- Who to refer into Cardiology clinic

AF Screening

- No formal screening program in UK
- SAFER trial
- Smart watches/BP monitors etc
- ‘Opportunistic’ screening/assessment
 - Pulse check
 - Higher risk individuals (e.g. >65 with risk factors)
- AliveCor

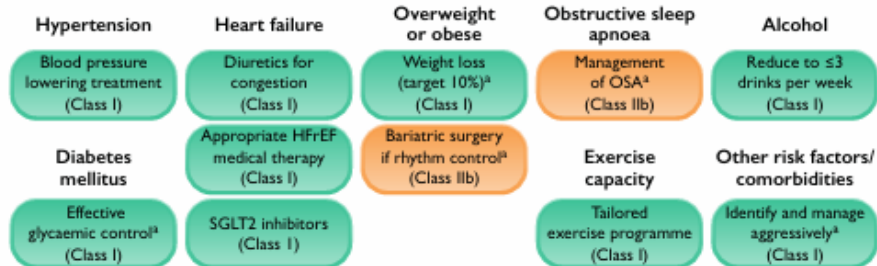
MANAGEMENT of AF (ESC 2024)



- Equality in healthcare provision (gender, ethnicity, socioeconomic) (Class I)
- Education for patients, families and healthcare professionals (Class I)
- Patient-centred AF management with a multidisciplinary approach (Class IIa)

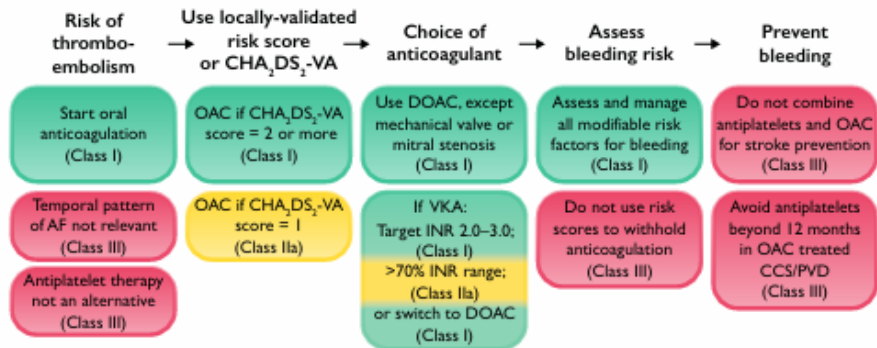
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Comorbidity and risk factor management



A

Avoid stroke and thromboembolism



R

Reduce symptoms by rate and rhythm control

See patient pathways for:

- First-diagnosed AF
- Paroxysmal AF
- Persistent AF
- Permanent AF

Consider:

- Rate control drugs
- Cardioversion
- Antiarrhythmic drugs
- Catheter ablation
- Endoscopic/hybrid ablation
- Surgical ablation
- Ablate and pace

E

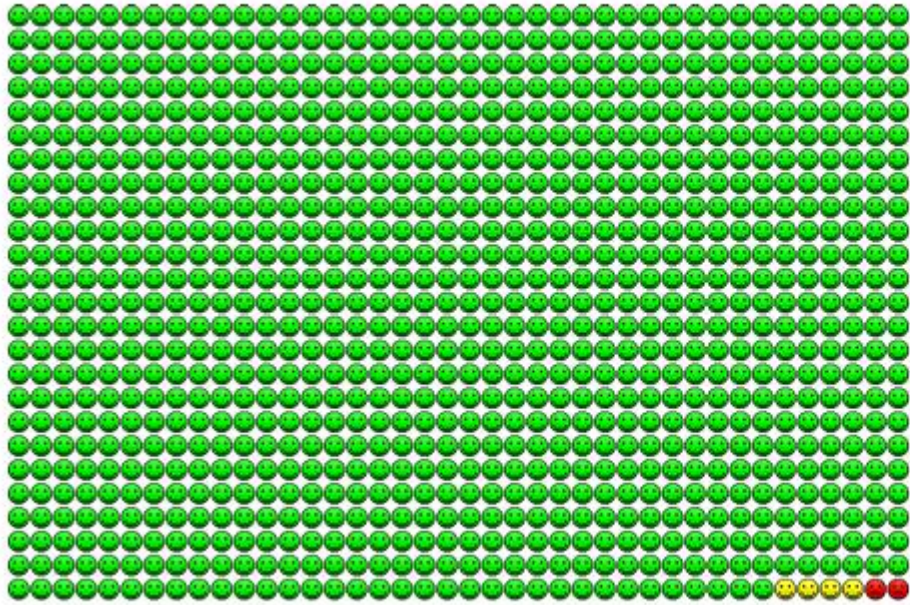
Evaluation and dynamic reassessment

Re-evaluate when AF episodes or non-AF admissions

Regular re-evaluation: 6 months after presentation, and then at least annually or based on clinical need



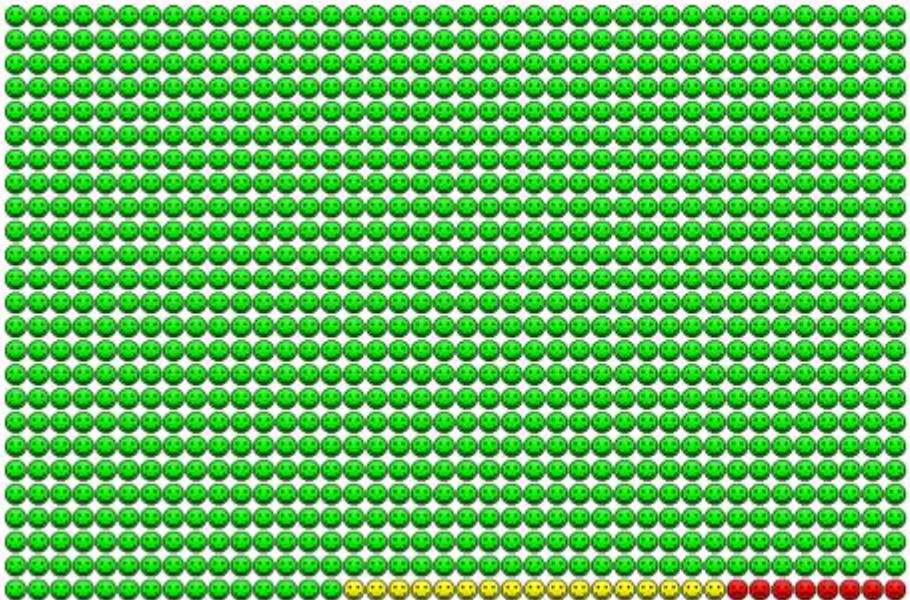
Anticoagulant: CHA₂DS₂-VASc score 1



If all 1000 people take an anticoagulant, over 1 year on average:

- 994 people will not have an AF-related stroke (the green faces), but would not have done anyway
- 4 people will be saved from having an AF-related stroke (the yellow faces)
- 2 people will still have an AF-related stroke (the red faces).

Anticoagulant: CHA₂DS₂-VASc score 2



If all 1000 people take an anticoagulant, over 1 year on average:

- 975 people will not have an AF-related stroke (the green faces), but would not have done anyway
- 17 people will be saved from having an AF-related stroke (the yellow faces)
- 8 people will still have an AF-related stroke (the red faces).

Anticoagulation

- ESC have dropped Sex category (CHADS2Va)
- Bleeding score
 - NICE: ORBIT
 - ESC: HASBLED
- A high bleeding score does not mean patient can not have anticoagulant
- Falls risk alone should not be used as a CI for anticoagulant
- ?Keep elderly patients on Warfarin?
- Drug interactions

Anticoagulant dosing

Table 11 Recommended doses for direct oral anticoagulant therapy

DOAC	Standard full dose	Criteria for dose reduction	Reduced dose only if criteria met
Apixaban	5 mg twice daily	Two out of three needed for dose reduction: (i) age \geq 80 years (ii) body weight \leq 60 kg (iii) serum creatinine \geq 133 μ mol/L.	2.5 mg twice daily
Dabigatran	150 mg twice daily	Dose reduction recommended if any apply: (i) age \geq 80 years (ii) receiving concomitant verapamil. Dose reduction considered on an individual basis if any apply: (i) age 75–80 (ii) moderate renal impairment (creatinine clearance 30–50 mL/min) (iii) patients with gastritis, oesophagitis, or gastro-oesophageal reflux (iv) others at increased risk of bleeding.	110 mg twice daily
Edoxaban	60 mg once daily	Dose reduction if any apply: (i) moderate or severe renal impairment (creatinine clearance 15–50 mL/min) (ii) body weight \leq 60 kg (iii) concomitant use of ciclosporin, dronedarone, erythromycin, or ketoconazole.	30 mg once daily
Rivaroxaban	20 mg once daily	Creatinine clearance 15–49 mL/min.	15 mg once daily

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DOAC: direct oral anticoagulant

Rate vs Rhythm control

- Initial objective of rate control
- Cardioselective beta-blocker
- Can use calcium channel blocker (Diltiazem/Verapamil) if LVEF >40%
- Digoxin as add on
- DC Cardioversion
- Rhythm control therapy
- AF ablation (PVI)
- Pace + ablate

Who to refer

- NICE

Refer people promptly at any stage if treatment fails to control the symptoms of atrial fibrillation and more specialised management is needed. This should be within 4 weeks after the failed treatment or after recurrence of atrial fibrillation after cardioversion. **[2014]**

- Uncontrolled heart rate
- Symptomatic
- Heart failure
- Medication intolerance

Hypertension

- NICE guideline NG136 (updated Feb 2026)
- ESC guideline 2024
- Definitions/categories
- Out of clinic readings
- Treatment
- Secondary hypertension
- Who to refer into Cardiology clinic

Measuring BP

- Manual vs automated BP check (e.g. in AF)
- Calibrated
- Cuff size
- Standardised environment
- Postural BP (if confirmed base BP on standing readings)
- Both arms
- Multiple readings
- HBPM vs ABPM

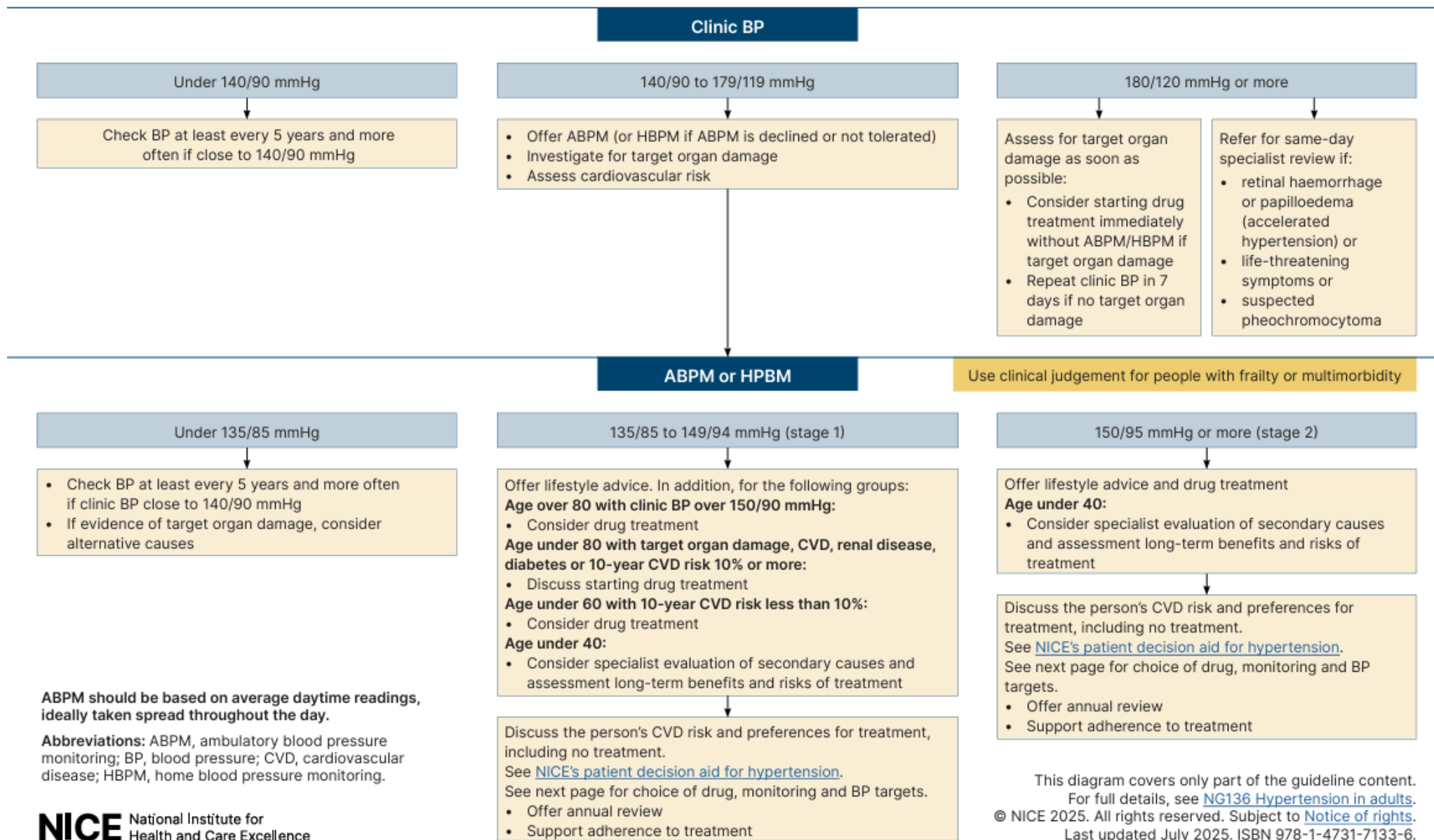
NICE 2026

- 1.2.11

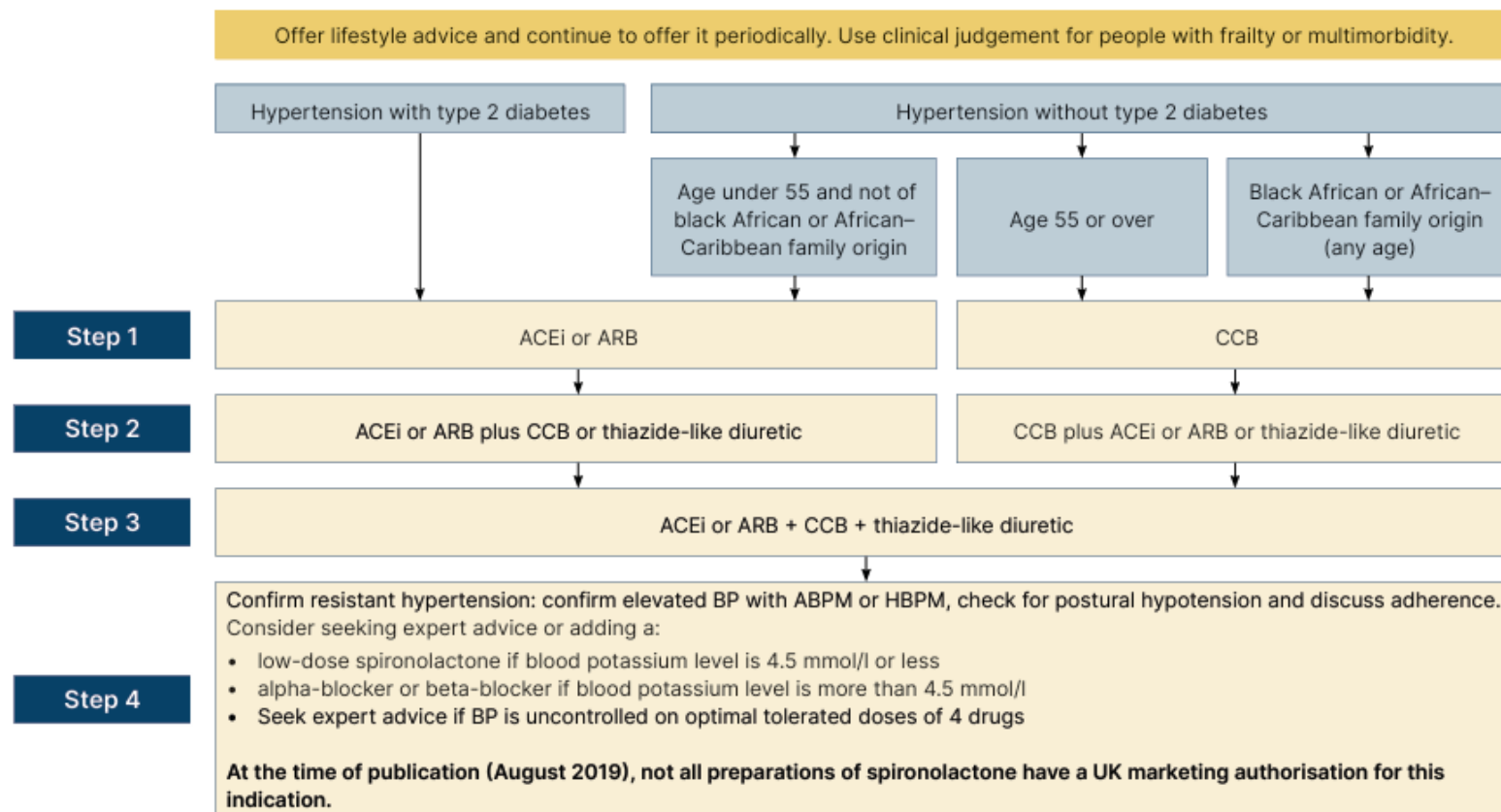
Offer advice on healthy living in line with the [NHS information on healthy living](#) to people who have raised blood pressure but have not been diagnosed with hypertension. **[2026]**

Hypertension in adults: diagnosis and treatment

Offer lifestyle advice and continue to offer it periodically



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 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

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 [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](#).

ACEi or ARB: See MHRA drug safety updates on [ACE inhibitors and ARBs: 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', as well as [ACE inhibitors and angiotensin II receptor antagonists: use during breastfeeding](#) and [clarification: ACE inhibitors and angiotensin II receptor antagonists](#). Consider an ARB, in preference to an ACE inhibitor, in adults of African and Caribbean family origin.

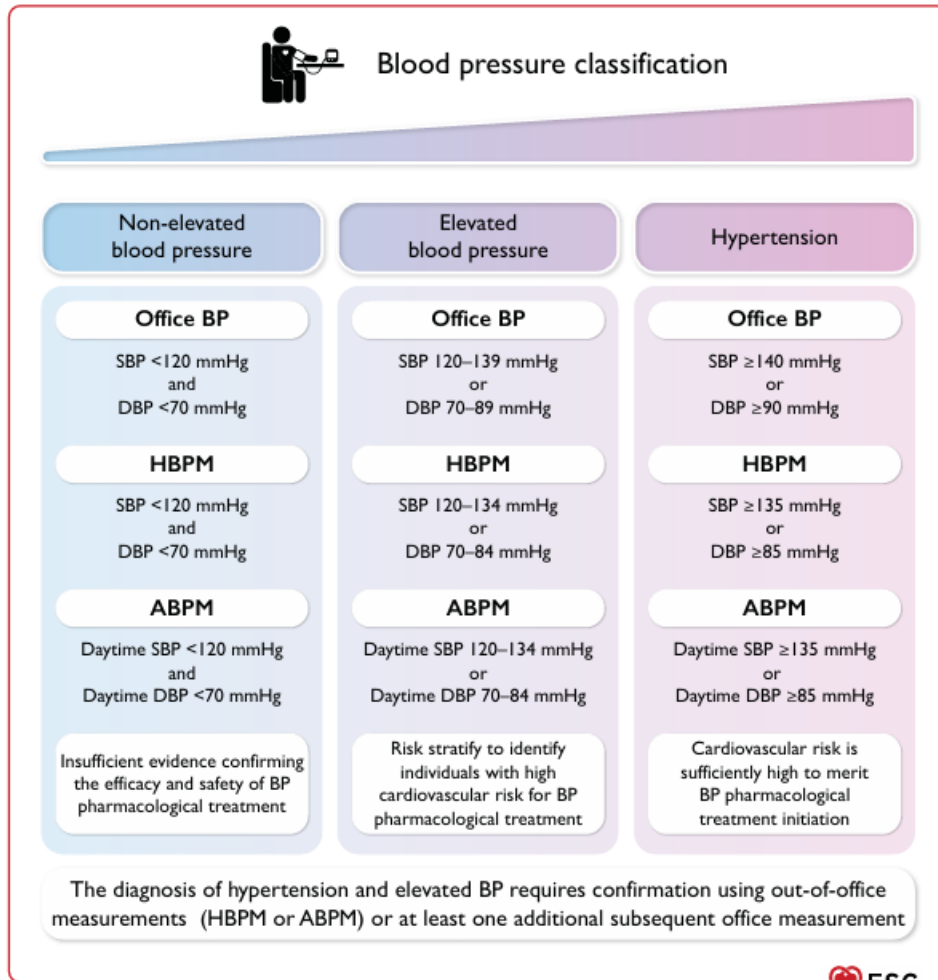
ABPM should be based on average daytime readings, ideally taken spread throughout the day.

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.

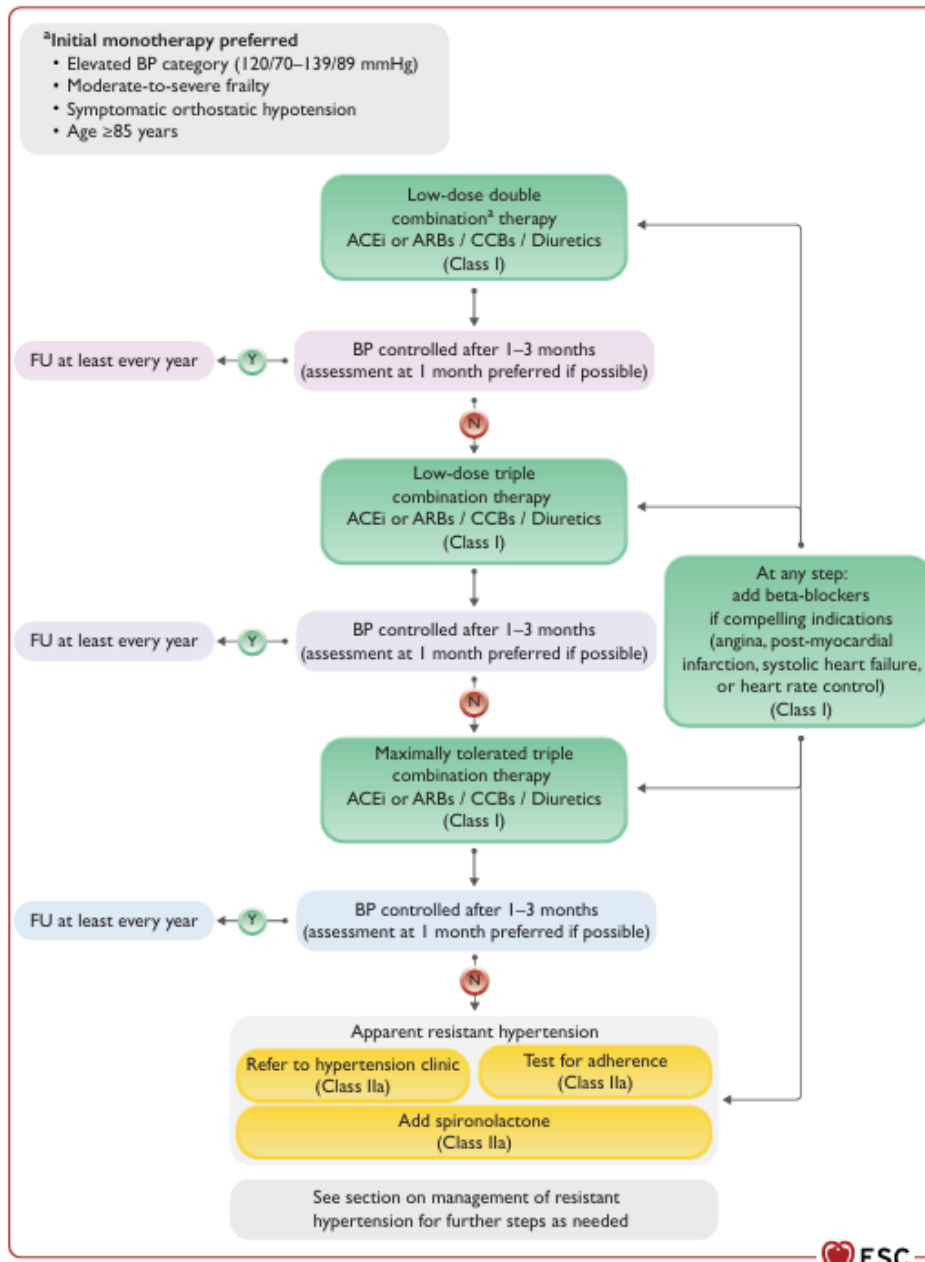


This visual summary builds on and updates previous work on treatment [published by the BIHS](#) (formerly BHS)

ESC 2024



Treatment Algorithm ESC 2024



Secondary Hypertension

- May be commoner than appreciated
- Resistant hypertension
- Suggestive signs + symptoms
- Primary aldosteronism (Low K, Aldosterone to renin ratio)
- Renovascular disease (Hx of vascular disease, elevated renin, bruit)
- Obstructive sleep apnoea (Snoring, apnoeic episodes, daytime somnolence)
- Phaemochromocytoma (palpitations, labile BP)

Who to refer

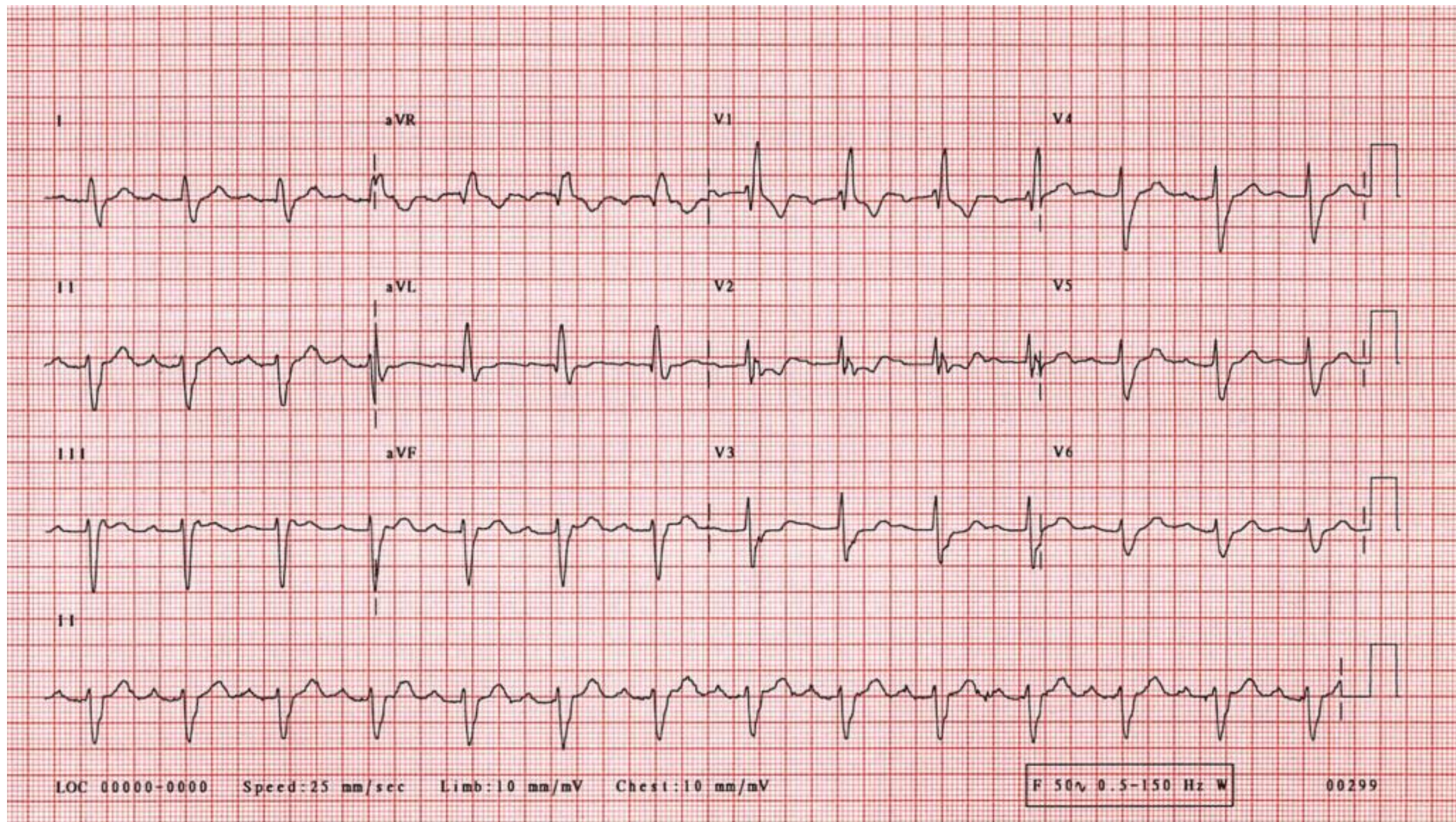
- Suspected secondary hypertension
- Young patients
- Resistant hypertension
- Check medication concordance/tolerance
- Check lifestyle factors
- STH specialist hypertension clinic

Transient loss of consciousness (Blackouts)

- NICE guideline CG109 (Updated 2023)
- History is key
- Eyewitness
- Circumstances (resting, sat, stood, exertion)
- PMHx
- Medications
- FHx
- Single vs recurrent episodes

TLOC

- Lying + standing BP
- Pulse
- ?Murmurs
- ?Focal neurology
- 12 lead ECG
- Prolonged ambulatory ECG monitoring/Loop recorder
- Echocardiogram
- TILT testing



- Reflex vasovagal syncope (3 Ps)
- Vasodepressor syncope
- Orthostatic hypotension
- Structural heart disease (HOCM, Aortic Stenosis)
- Arrhythmia (brady + tachyarrhythmia)
- Carotid sinus hypersensitivity
- Postural Orthostatic Tachycardia Syndrome (POTS)
- Non-Cardiac (Hypoglycaemia, Epilepsy, NEAD)

Orthostatic Hypotension

- Fall of >20mmHg systolic or 10mmHg diastolic on standing vs lying BP
- Review medications
- Increase fluid intake (2-3L non-alcoholic fluid per day)
- Orthotics referral for graded pressure stockings (Grade II) up to umbilicus
- Abdominal binders
- Isometric maneuvers on standing
- Raise up head end of bed
- Fludrocortisone
- Midodrine

POTS

- Increasing numbers being referred in as suspected POTS
- HR increase $>30/\text{min}$ or to $>120/\text{min}$ on standing WITHOUT drop in BP.
- Conservative measures similar to Mx of orthostatic hypotension
- Beta-blocker (Propranolol/Metoprolol)
- Ivabradine
- Fludrocortisone/Midodrine
- Pyridostigmine

Assessing fitness to drive

– a guide for medical professionals



www.gov.uk/dvla/fitnessdrive

November 2025



Unexplained loss of consciousness

	Group 1 Car and motorcycle	Group 2 Bus and lorry
Unexplained loss of consciousness (without seizure markers)		
Single episode	<ul style="list-style-type: none">● Must not drive and must notify DVLA.May resume driving 6 months after the episode of unexplained loss of consciousness.If the cause of loss of consciousness is established the relevant standard should be applied from the appropriate chapter of this guide.	<ul style="list-style-type: none">● Must not drive and must notify DVLA.Licence will be revoked for 12 months.If the cause of loss of consciousness is established the relevant standard should be applied.
Multiple episodes** (2 or more episodes within a 24 month period unless the most recent episode of that cluster has occurred more than 5 years ago)	<ul style="list-style-type: none">● Must not drive and must notify DVLA.Licence will be revoked for 12 months after most recent episode of unexplained loss of consciousness.If the cause of loss of consciousness is established the relevant standard should be applied from the appropriate chapter of this guide.	<ul style="list-style-type: none">● Must not drive and must notify DVLA.Licence will be revoked for 5 years after most recent episode of unexplained loss of consciousness.If the cause of loss of consciousness is established the relevant standard should be applied.

** for multiple episodes of mixed presentation/aetiology the relevant standard applies to each episode of loss of consciousness.

Who to refer

- NICE

2.3.1 Refer all people with TLoC (apart from the exceptions below) for a specialist cardiovascular assessment by the most appropriate local service.

Exceptions are people with a firm diagnosis, after the initial assessment, of:

Uncomplicated faint

Situational syncope

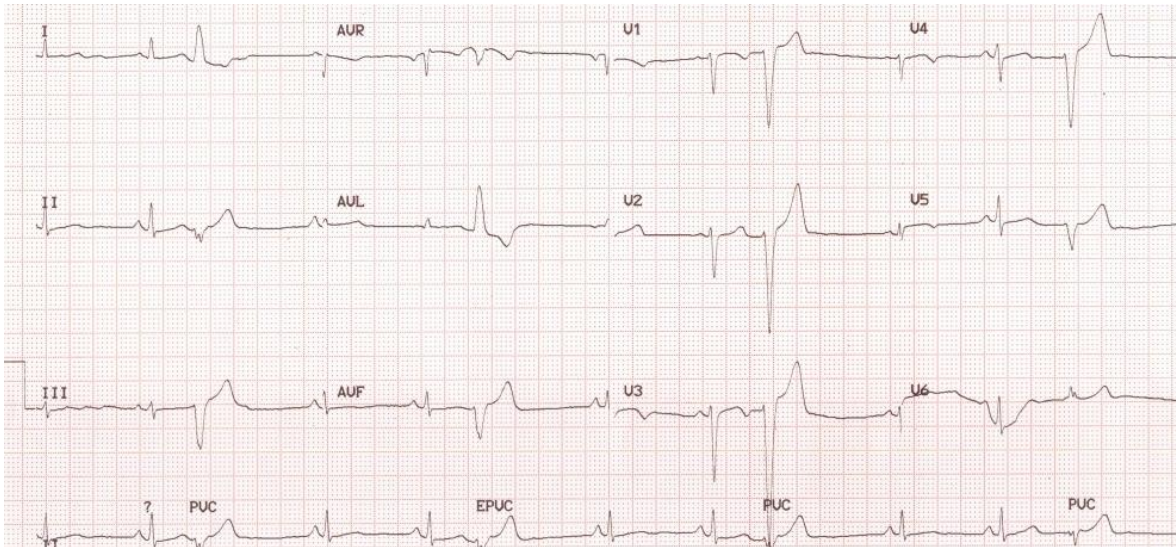
Postural hypotension

People whose presentation is strongly suggestive of epileptic seizures.

Ambulatory ECG

- Main indications
 - Palpitations
 - Dizziness/TLOC
 - Bradycardias
- Choose the right duration
- INTERPRETATION
 - Symptomatic vs asymptomatic?
 - Medications/reversible cause?
 - Higher degree AV block (Mobitz II, CHB) – Refer
 - Asymptomatic first degree/Mobitz II – No need to refer
 - Pauses –Any symptomatic or asymptomatic >6 seconds

Ventricular ectopics



- Symptomatic
- History of IHD
- Ectopic burden (>10%)
- Structural heart disease
- Echocardiogram
- Beta-blocker
- Calcium channel blocker
- NSVT-Refer