

# Actualité sur l'hypertension artérielle en 10 points



**ESC**

European Society  
of Cardiology



**European  
Society of  
Hypertension**

## **2018 ESC/ESH Guidelines for the management of arterial hypertension**

**The Task Force for the management of arterial hypertension of the European Society of Cardiology (ESC) and the European Society of Hypertension (ESH)**

2023 ESH Guidelines for the management of arterial hypertension

*The Task Force for the management of arterial hypertension of the European Society of Hypertension*

Endorsed by the European Renal Association (ERA) and the International Society of Hypertension (ISH)

## **2024 ESC Guidelines for the management of elevated blood pressure and hypertension**

**Developed by the task force on the management of elevated blood pressure and hypertension of the European Society of Cardiology (ESC) and endorsed by the European Society of Endocrinology (ESE) and the European Stroke Organisation (ESO)**

# 1. Une simplification de la classification

## ESC 2018 / ESH 2023

Category	Systolic (mmHg)		Diastolic (mmHg)
Optimal	<120	and	<80
Normal	120–129	and	80–84
High-normal	130–139	and/or	85–89
Grade 1 hypertension	140–159	and/or	90–99
Grade 2 hypertension	160–179	and/or	100–109
Grade 3 hypertension	≥180	and/or	≥110
Isolated systolic hypertension <sup>a</sup>	≥140	and	<90
Isolated diastolic hypertension <sup>a</sup>	<140	and	≥90

## ESC 2018 / ESH 2023

Recommendation	Class <sup>a</sup>	Level <sup>b</sup>
It is recommended that BP be categorized as non-elevated BP, elevated BP, and hypertension to aid treatment decisions. <a href="#">116,121,122,131–138</a>	<b>I</b>	<b>B</b>

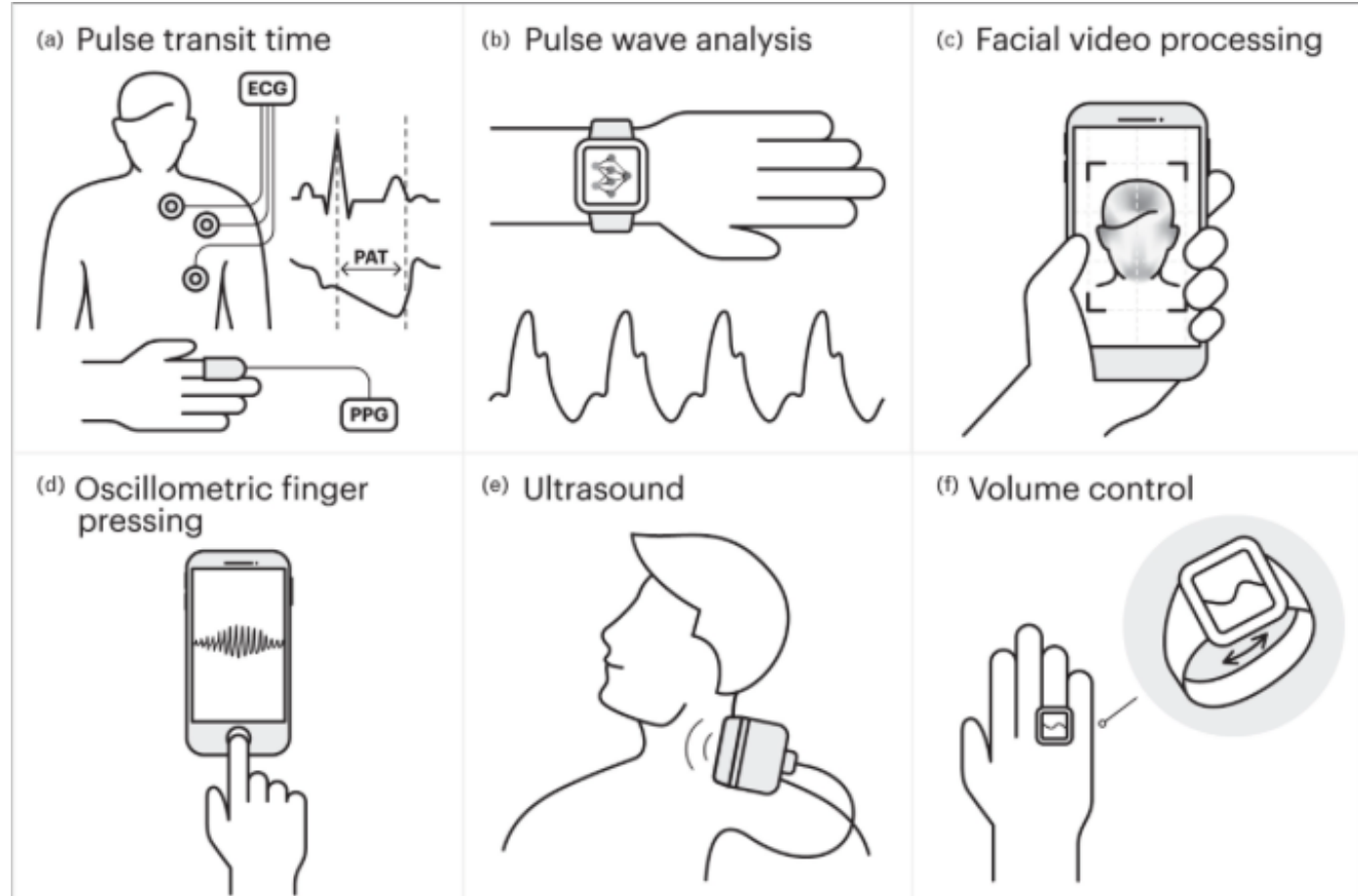
# 1. Une simplification de la classification

**But = simplification de la décision thérapeutique**

Non-elevated blood pressure	Elevated blood pressure	Hypertension
<b>Office BP</b> SBP <120 mmHg and DBP <70 mmHg	<b>Office BP</b> SBP 120–139 mmHg or DBP 70–89 mmHg	<b>Office BP</b> SBP ≥140 mmHg or DBP ≥90 mmHg
<b>HBPM</b> SBP <120 mmHg and DBP <70 mmHg	<b>HBPM</b> SBP 120–134 mmHg or DBP 70–84 mmHg	<b>HBPM</b> SBP ≥135 mmHg or DBP ≥85 mmHg
<b>ABPM</b> Daytime SBP <120 mmHg and Daytime DBP <70 mmHg	<b>ABPM</b> Daytime SBP 120–134 mmHg or Daytime DBP 70–84 mmHg	<b>ABPM</b> Daytime SBP ≥135 mmHg or Daytime DBP ≥85 mmHg
Insufficient evidence confirming the efficacy and safety of BP pharmacological treatment	Risk stratify to identify individuals with high cardiovascular risk for BP pharmacological treatment	Cardiovascular risk is sufficiently high to merit BP pharmacological treatment initiation

## 2. Nouvelles méthodes de mesure « cuffless »

Category	Method
<b>Requiring user cuff calibration</b> <i>(Estimate BP changes)</i>	PTT (a)
	PWA (b)
	Facial video processing (c)
<b>Not requiring user cuff calibration</b> <i>(Estimate BP values)</i>	Oscillometric finger pressing (d)
	Ultrasound (e)
	Volume control (f)



## 2. Nouvelles méthodes de mesure « cuffless »

Avec brassard	Sans brassard « cuffless »
Mesure intermittente, en condition statique Erreurs liées au brassard Disponibilité +/- limitée	Mesure continue, plus exhaustive Plus confortable

## 2. Nouvelles méthodes de mesure « cuffless »

- ESH 2023, ESC 2024 : non recommandé
- Raison : efficacité non encore prouvée, protocole de validation des appareils (AAMI, ESH, ISO) non valables

Cuffless BP devices should not be used for the evaluation or management of hypertension in clinical practice.

III

C

# 3. Interêt de la mesure ambulatoire

## ESC 2018

It is recommended that the diagnosis of hypertension should be based on:

- Repeated office BP measurements on more than one visit, except when hypertension is severe (e.g. grade 3 and especially in high-risk patients). At each visit, three BP measurements should be recorded, 1–2 min apart, and additional measurements should be performed if the first two readings differ by >10 mmHg. The patient's BP is the average of the last two BP readings.  
Or
- Out-of-office BP measurement with ABPM and/or HBPM, provided that these measurements are logistically and economically feasible.

**I**

**C**

## ESC 2024

Where screening office BP is 140–159/90–99 mmHg, it is recommended that the diagnosis of hypertension should be based on out-of-office BP measurement with ABPM and/or HBPM. If these measurements are not logistically or economically feasible, then diagnosis can be made on repeated office BP measurements on more than one visit.

**I**

**B**

Where screening office BP is  $\geq 160/100$  mmHg:

- It is recommended that BP 160–179/100–109 mmHg be confirmed as soon as possible (e.g. within 1 month) preferably by either home or ambulatory BP measurements.
- It is recommended when BP  $\geq 180/110$  mmHg that hypertensive emergency be excluded.

**I**

**C**



# 4. Recherche de cause secondaire

- Indications globalement inchangées

**TABLE 13. Patient characteristics that should raise the suspicion of secondary hypertension**

Younger patients (<40 years) with grade 2 or 3 hypertension or hypertension of any grade in childhood
Sudden onset of hypertension in individuals with previously documented normotension
Acute worsening of BP control in patients with previously well controlled by treatment
True resistant hypertension
Hypertensive emergency
Severe (grade 3) or malignant hypertension
Severe and/or extensive HMOD, particularly if disproportionate for the duration and severity of the BP elevation
Clinical or biochemical features suggestive of endocrine causes of hypertension
Clinical features suggestive of renovascular hypertension or fibromuscular dysplasia
Clinical features suggestive of obstructive sleep apnea
Severe hypertension in pregnancy (>160/110 mmHg) or acute worsening of BP control in pregnant women with preexisting hypertension

## 4. Recherche de cause secondaire

- Bilan de base : Hb, ionogramme, créat, RAC, GAJ, EAL, TSH, ECG

Screening for primary aldosteronism by renin and aldosterone measurements should be considered in all adults with confirmed hypertension (BP  $\geq$ 140/90 mmHg).<sup>313,316,323,339</sup>

**IIa**

**B**

© ESC 2024

- Rationnel : dosage facile, dosage plus simple en pré-thérapeutique, prévalence non négligeable

# 5. Incrémentation thérapeutique dans l'HTA résistante

## ESC 2018

Recommended treatment of resistant hypertension is:

- Reinforcement of lifestyle measures, especially sodium restriction.
- Addition of low-dose spironolactone to existing treatment.
- Or the addition of further diuretic therapy if intolerant to spironolactone, with either eplerenone, amiloride, a higher dose thiazide/thiazide-like diuretic, or a loop diuretic.
- Or the addition of bisoprolol or doxazosin.

<b>I</b>	<b>B</b>
----------	----------

## ESC 2024

In patients with resistant hypertension and uncontrolled BP despite use of first-line BP-lowering therapies, the addition of spironolactone to existing treatment should be considered.

<b>IIa</b>	<b>B</b>
------------	----------

In patients with resistant hypertension in whom spironolactone is not effective or tolerated, treatment with eplerenone instead of spironolactone, or the addition of a beta-blocker if not already indicated, and, next, a centrally acting BP-lowering medication, an alpha-blocker, or hydralazine, or a potassium-sparing diuretic should be considered.

<b>IIa</b>	<b>B</b>
------------	----------

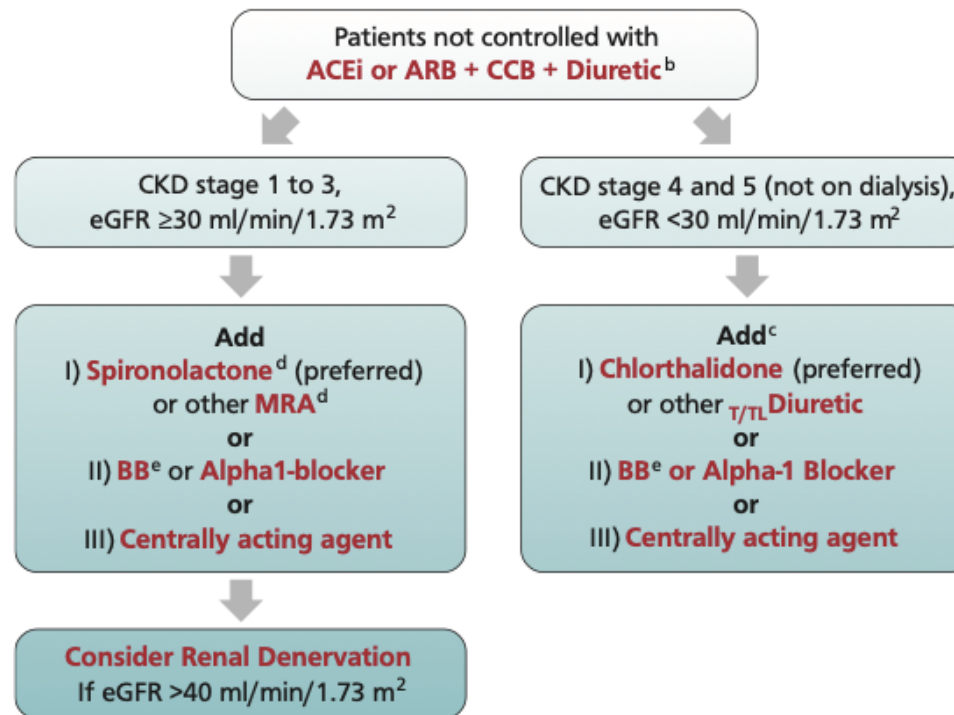
## ESH 2023

Drugs that can be considered as additional therapy in patients with resistant hypertension are preferably spironolactone (or other MRA), or BB or Alpha-1 blockers or Centrally acting agents (clonidine), or amiloride (if available).

<b>II</b>	<b>B</b>
-----------	----------

# 5. Incrémentation thérapeutique dans l'HTA résistante

- MRA rétrogradé en IIa (preuves insuffisante)
- Niveau de preuve très peu élevé pour les autres



# 6. Place des bêta-bloquants

- En 5ème ligne thérapeutique ou avant si indication autre

**ESC 2018**

Among all antihypertensive drugs, ACE inhibitors, ARBs, beta-blockers, CCBs, and diuretics (thiazides and thiazide-like drugs such as chlorthalidone and indapamide) have demonstrated effective reduction of BP and CV events in RCTs, and thus are indicated as the basis of antihypertensive treatment strategies.<sup>2</sup>

I

A

**ESC 2024**

Among all BP-lowering drugs, ACE inhibitors, ARBs, dihydropyridine CCBs, and diuretics (thiazides and thiazide-like drugs such as chlorthalidone and indapamide) have demonstrated the most effective reduction of BP and CVD events, and are therefore recommended as first-line treatments to lower BP.<sup>122,446</sup>

I

A

It is recommended that beta-blockers are combined with any of the other major BP-lowering drug classes when there are other compelling indications for their use, e.g. angina, post-myocardial infarction, heart failure with reduced ejection fraction, or for heart rate control.<sup>122,448–450</sup>

I

A

# 7. Objectifs tensionnels un peu plus ambitieux

## ESH 2023

Patients 18 to 64 years old		
The goal is to lower office BP to <130/80mmHg	I	A
Patients 65 to 79 years old		
The primary goal of treatment is to lower BP to <140/80mmHg	I	A
However, lowering BP to below 130/80mmHg can be considered if treatment is well tolerated.	I	B
Patients 65 to 79 years old with ISH		
The primary goal of treatment is to lower SBP in the 140 to 150 mmHg range.	I	A
However, a reduction of office SBP in the 130 to 139 mmHg range may be considered if well tolerated, albeit cautiously if DBP is already below 70 mmHg.	II	B
Patients ≥80 years old		
Office BP should be lowered to a SBP in the 140 to 150 mmHg range and to a DBP <80mmHg.	I	A
However, reduction of office SBP between 130 to 139 mmHg may be considered if well tolerated, albeit cautiously if DBP is already below 70 mmHg.	II	B

## ESC 2024

To reduce CVD risk, it is recommended that treated systolic BP values in most adults be targeted to 120–129 mmHg, provided the treatment is well tolerated.<sup>22,122,131,523,541</sup>

In cases where BP-lowering treatment is poorly tolerated and achieving a systolic of 120–129 mmHg is not possible, it is recommended to target a systolic BP level that is 'as low as reasonably achievable' (ALARA principle).<sup>22,122,131,523,541</sup>

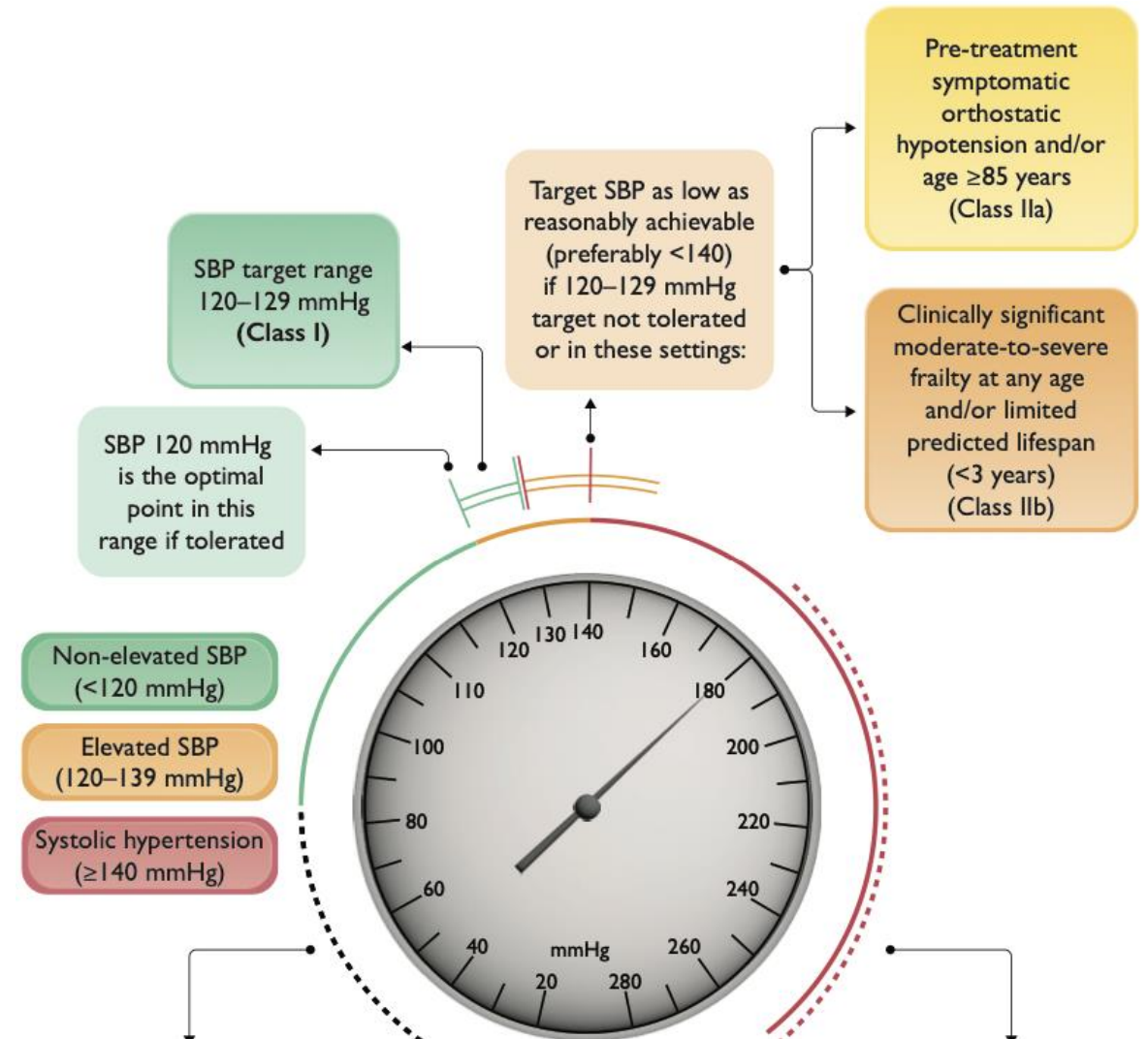
Because the CVD benefit of an on-treatment systolic BP target of 120–129 mmHg may not generalize to the following specific settings, personalized and more lenient BP targets (e.g. <140 mmHg) should be considered among patients meeting the following criteria: pre-treatment symptomatic orthostatic hypotension, and/or age ≥85 years.<sup>131</sup>

I	A
I	A
IIa	C

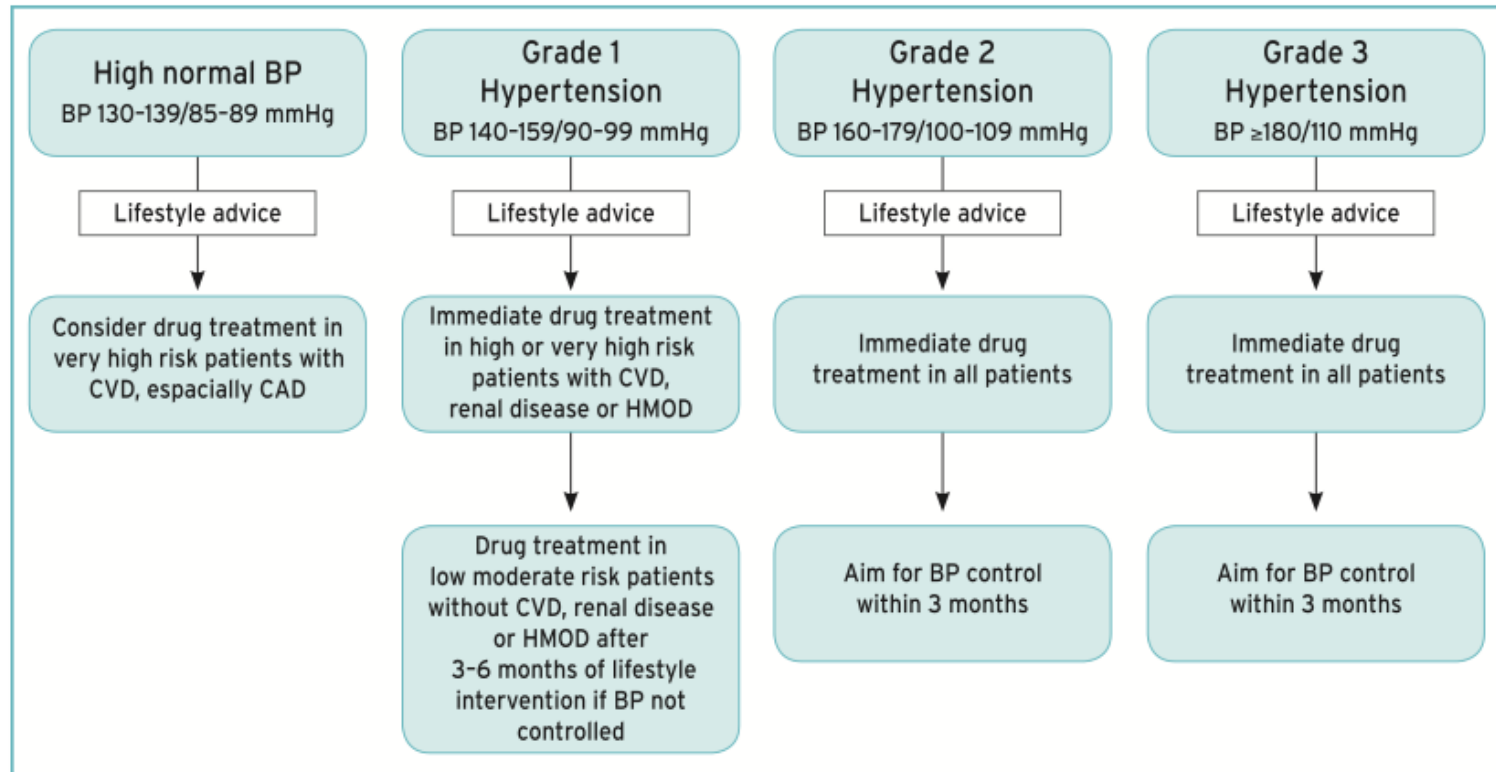


# 7. Objectifs tensionnels un peu plus ambitieux

- Au mieux : 120/70 mmHg
- Chez la plupart des patients : < 130/80 mmHg
- Patient âgé, fragile, espérance de vie faible, HTO : < 140/90 mmHg



# 8. Indications de traitement





# 8. Indications de traitement

Blood pressure (mmHg)	Non-elevated BP (<120/70)	Elevated BP (120/70 to 139/89)		Hypertension (≥140/90)
<b>Risk</b>		(a) All adults with SBP 120–129 mmHg (b) SBP 130–139 AND 10-year estimated CVD risk <10% AND no high-risk conditions or risk modifiers or abnormal risk tool tests	(a) SBP 130–139 AND high-risk conditions (e.g. established CVD, diabetes mellitus, CKD, FH or HMOD) (b) SBP 130–139 AND 10-year estimated CVD risk ≥10% (c) SBP 130–139 AND 10-year estimated CVD risk 5% - <10% AND risk modifiers or abnormal risk tool tests	Assumed all at sufficiently high risk to benefit from pharmacological treatment
<b>Treatment</b>	Lifestyle measures for prevention Screen BP and CVD risk opportunistically	Lifestyle measures for treatment Monitor BP and CVD risk yearly	Lifestyle measures and pharmacological treatment (after 3-month delay). Monitor BP yearly once treatment control is established	Lifestyle measures and pharmacological treatment (immediate) Monitor BP yearly once treatment control is established
<b>Target (mmHg)</b>	<b>Maintain BP &lt;120/70</b>	<b>Aim BP 120–129/70–79 mmHg<sup>a</sup></b>		

## 8. Indications de traitement : quel traitement ?

Low-dose double  
combination<sup>a</sup> therapy  
ACEi or ARBs / CCBs / Diuretics  
(Class I)

### <sup>a</sup>Initial monotherapy preferred

- Elevated BP category (120/70–139/89 mmHg)
- Moderate-to-severe frailty
- Symptomatic orthostatic hypotension
- Age  $\geq 85$  years

# 9. Dénervation rénale

Recommendation	Class <sup>a</sup>	Level <sup>b</sup>
Use of device-based therapies is not recommended for the routine treatment of hypertension, unless in the context of clinical studies and RCTs, until further evidence regarding their safety and efficacy becomes available. <sup>367,368</sup>	III	B

To reduce BP, and if performed at a medium-to-high volume centre, catheter-based renal denervation may be considered for resistant hypertension patients who have BP that is uncontrolled despite a three BP-lowering drug combination (including a thiazide or thiazide-like diuretic), and who express a preference to undergo renal denervation after a shared risk-benefit discussion and multidisciplinary assessment.

To reduce BP, and if performed at a medium-to-high volume centre, catheter-based renal denervation may be considered for patients with both increased CVD risk and uncontrolled hypertension on fewer than three drugs, if they express a preference to undergo renal denervation after a shared risk-benefit discussion and multidisciplinary assessment.

IIb	B
IIb	A

# 10. Chronothérapie

- A quel moment de la journée prendre le traitement ?
  - Certains essais en faveur d'une prise le soir mais biaisés (HYGIA, TIME)
  - Essai BEDMED : pas de différence
  - Essai BEDMED-FRAIL : pas de différence chez les patients fragiles
  - Confirmé en méta-analyse

