

2024

# Essential Messages from ESC Guidelines

Clinical Practice  
Guidelines Committee

Guidelines for the management of  
**Elevated Blood Pressure and  
Hypertension**



**ESC**

European Society  
of Cardiology

# Essential Messages

## 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).  
Endorsed by the the European Society of Endocrinology (ESE)  
and the European Stroke Organisation (ESO).

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### ESC subspecialty communities having participated in the development of this document

Associations: Association of Cardiovascular Nursing & Allied Professions (ACNAP), European Association of Preventive Cardiology (EAPC), European Association of Percutaneous Cardiovascular Interventions (EAPCI), Heart Failure Association (HFA).

Councils: Council for Cardiology Practice, Council on Hypertension, Council on Stroke.

Working Groups: Aorta and Peripheral Vascular Diseases, Cardiovascular Pharmacotherapy, E-Cardiology, Patient Forum

Adapted from the 2024 ESC Guidelines for the management of elevated blood pressure and hypertension  
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# ESSENTIAL MESSAGES FROM THE 2024 ESC GUIDELINES FOR THE MANAGEMENT OF ELEVATED BLOOD PRESSURE AND HYPERTENSION

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# Key messages

1. Given the demographic transition and the worldwide ageing of populations, the number of individuals with elevated BP or hypertension is increasing worldwide.
2. The trajectory of BP control appears to be worsening in North America, in some (but not all) European countries, and elsewhere around the world.
3. The risk for CVD attributable to BP is on a continuous log-linear exposure variable scale, not a binary scale of normotension vs. hypertension.
4. BP-lowering drugs can reduce CVD risk even among individuals not traditionally classified as hypertensive. Accordingly, a new BP category called 'elevated BP' is introduced. Elevated BP is defined as an office systolic BP of 120-139 mmHg or diastolic BP of 70-89 mmHg. Hypertension remains defined as office BP of  $\geq 140/90$  mmHg.
5. Hypertension in women is under-studied in basic, clinical, and population research.
6. HMOD suggests long-standing or severe hypertension and is associated with increased CVD risk.
7. Absolute CVD risk must be considered when assessing and managing elevated BP.
8. Despite the growing number of hypertension guidelines, the rates of diagnosis, treatment, and control of hypertension (and elevated BP) remain suboptimal. A major factor underlying this is poor implementation of evidence-based guidelines in real-world clinical practice.
9. One of the most important changes in the 2024 Guidelines is the focus on evidence related to CVD outcomes of BP-lowering interventions rather than BP lowering alone.
10. Irrespective of the threshold BP above which BP-lowering treatment (lifestyle or pharmacological or other treatment) is recommended, the on-treatment BP target is 120-129/70-79 mmHg for all adults, provided this treatment is well tolerated. There are several important exceptions to these targets and individualized decision-making is always the most important priority.

# Gaps in evidence

1. Drivers of worsening trajectories of BP control in women and men.
2. Need for sex-specific data on epidemiology, risk factors, and pathophysiology of hypertension. Need for more prospective studies to assess women's and men's specific CVD risk factors pertinent to adults with elevated BP and hypertension, due to biological and socio-cultural conditions. This includes sex-specific weighting of traditional risk factors, as well as inclusion of sexdependent, non-traditional, vascular risk factors such as stress, socio-economic conditions, and others. We are also lacking data on sex-specific hormonal and genetic mechanisms and pathophysiology in the human. Another important area in need of investigation is a better understanding of the role of gender in the management of elevated BP and hypertension (including gender-driven barriers in accessing medical care and adherence).
3. More widespread validation of home BP measuring devices. Validation protocols for cuffless BP measurement devices have just recently been proposed and need to be tested.
4. Clinical effectiveness of HMOD in directing intensity of care and personalized approaches in managing elevated BP and hypertension.
5. Best practice to screen and manage primary aldosteronism.
6. Clinical benefits of treating low CVD-risk individuals with elevated BP and further data strengthening the use of BP-lowering medication among high-risk persons with baseline systolic BP of 120-129 mmHg.
7. Need for more data on the sex-specific optimal dosing, effects, and adverse effects of BP-lowering drugs,1020 in particular from specifically planned prospective randomized trials.
8. More consideration for overall CVD outcomes of BP-lowering interventions.
9. More European data (RCTs, real life) about the beneficial effect of treating patients with elevated BP and hypertension with polypills (inclusive of non-BP lowering medications).
10. CVD outcomes-based data on MRAs as add-on therapy solely for resistant hypertension.

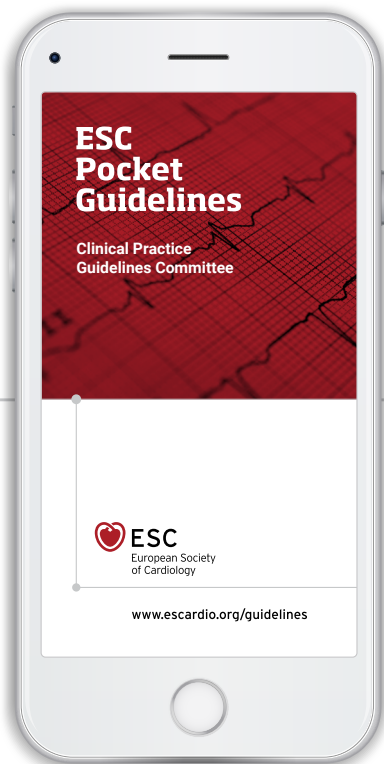
# Gaps in evidence

11. Trials on the BP-lowering effects of newer antidiabetic drugs (such as SGLT2 inhibitors and GLP-1 receptor agonists) or drugs that now have indications for other conditions, such as finerenone or sacubitril-valsartan.
12. Beneficial BP and CVD effects of increasing dietary potassium intake and other lifestyle interventions. Studies to disentangle the effect of sodium reduction vs. the effect of potassium supplementation on BP control and CVD outcomes.
13. RCTs comparing single-pill combination therapy with fixed doses vs. multiple monotherapies and their effects on CVD outcomes.
14. Cardiovascular outcomes trials of renal denervation.
15. BP-lowering treatment RCTs on different ethnic and migrant groups established in Europe.
16. Pharmacological BP management in young adults (aged <40 years) and better data on the efficacy of a life-course approach for the drug management of BP.
17. CVD outcomes in moderately to severely frail and/or very elderly persons where BP medications have been deprescribed, and the impact of competing risks.
18. Management of renal artery disease with haemodynamically stable but severe stenosis (i.e. without high-risk features).
19. Need for clinical trials on managing hypertension in patients treated with anticancer drugs or anti-rejection drugs in recipients of an allograft transplant.
20. Hypertension management in the setting of climate changes, global warming, air and other forms of pollution, pandemics, war zones, and in the context of drug restrictions experienced in some low-to-middle-income countries.
21. Need to improve implementation of guidelines by healthcare providers.
22. How to develop sustainable hypertension care at the intersection of growing numbers of patients and limited resources.
23. Treat-to-target trials specifically testing BP-lowering drugs among drug-naïve persons with baseline BP of 120-129 mmHg and increased CVD risk.

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The following material was adapted from the 2024 ESC Guidelines for the management of elevated blood pressure and hypertension (European Heart Journal; 2024 - doi: 10.1093/eurheartj/ehae178) as published on 30 August 2024.

Post-publication corrections and updates are available at: [www.escardio.org/guidelines](http://www.escardio.org/guidelines)

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