



## **Updated Hypertension Management in the 2024 European Society of Cardiology (ESC) Guidelines for Family Physicians**

Aile Hekimleri İçin 2024 European Society of Cardiology (ESC) Kılavuzlarındaki Güncellenmiş Hipertansiyon Yönetimi

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### **Dear Editor**

In this article, we wanted to draw attention to outline key updates from the 2024 European Society of Cardiology (ESC) guidelines on the management of elevated blood pressure and hypertension for family physicians.

Hypertension is one of the most common cardiovascular risk factors worldwide, leading to serious outcomes such as heart attack, heart failure, and stroke. Often termed a "silent killer" due to its asymptomatic nature, hypertension can cause severe complications if not diagnosed early and properly treated. Given these implications, it is essential for family physicians, who provide lifelong healthcare to individuals, to actively participate in screening, diagnosing, and managing hypertension and to stay updated on the latest approaches in this area.

### **What is Elevated Blood Pressure?**

The new guideline introduces significant changes in target blood pressure levels, as reflected in the updated terminology. The previous guideline defined hypertension as blood pressure (BP)  $\geq 140/90$  mmHg and high-normal BP as 130-139/85-89 mmHg. In the new guideline, while the threshold for hypertension remains the same, a new category termed "elevated blood pressure" has been added, defined as 120-139/70-89 mmHg. The high-normal category is no longer included. This change underscores the importance of incorporating individuals with BP levels of 120-139/70-89 mmHg into the treatment plan. BP levels below 120/70 mmHg are now classified as "normal BP." In Ambulatory Blood Pressure Monitoring (ABPM), the upper limits are defined as over 135/85 mmHg for daytime average, over 120/70 mmHg for nighttime average, and over 130/80 mmHg for 24-hour average (1).

### **How to Measure Blood Pressure Correctly?**

The guideline recommends at least two measurements for a hypertension diagnosis. If an in-office measurement is high ( $\geq 140/90$  mmHg), BP should be confirmed with home BP monitoring or ABPM, which can help detect masked hypertension and white-coat hypertension. Accurate blood pressure measurement is achieved by using an appropriately sized cuff and an approved device, resting the patient for at least five minutes, and taking at least three measurements. A 1–2-minute interval between measurements is required, and the average of the last two readings should be used. If there is more than 10 mmHg difference between readings, additional measurements are recommended. If there is an inter-arm BP difference of  $>10$  mmHg, further evaluation is required (e.g., for conditions like aortic coarctation). Subsequent measurements should be taken on the arm with the higher BP. Patients should also be assessed for rhythm abnormalities and orthostatic hypotension (2).

### **Screening Recommendations**

For individuals under 40 with BP  $<120/70$  mmHg, BP should be measured every three years. For those over 40, annual measures are advised. In all patients diagnosed with hypertension, laboratory tests including glucose, HbA1c, lipids, electrolytes, hemoglobin, TSH, creatinine, GFR, proteinuria, and ECG are recommended. Additionally, echocardiography, coronary artery calcium score, high-sensitive troponin, ankle-brachial index, abdominal ultrasound, and fundoscopy may be considered as needed (3).

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### **Approach to Elevated Blood Pressure Treatment**

The guideline highlights increased cardiovascular risk for individuals with BP in the 120-139/70-89 mmHg range and offers specific recommendations for initiating treatment. For those with risk factors such as known diabetes, cardiovascular disease, chronic kidney disease, hypertension-related organ damage or familial hyperlipidemia (excluding patients under 60 with type 2 diabetes, who are assessed with Systematic Coronary Risk Evaluation 2-Diabetes), treatment should be considered after three months of monitoring. For those without these risk factors, cardiovascular risk should be assessed using SCORE2 in individuals over 40 or SCORE-OP in those over 70. If the 10-year cardiovascular risk is  $\geq 10\%$ , lifestyle modifications and medical treatment should begin. If the 10-year risk is 5-10%, additional risk factors should be evaluated (e.g., family history, mental health conditions, HIV, carotid or femoral plaque, arrhythmias). If additional risk factors are present, treatment should be considered. For a 10-year cardiovascular risk  $< 5\%$ , medication is unnecessary, though lifestyle modifications (LM) and annual BP follow-ups are recommended (4,5).

### **Lifestyle Modifications**

Lifestyle modification is a cornerstone of hypertension management and often implemented in primary care. Recommended physical activities include at least 150 minutes of moderate aerobic exercise weekly, such as walking, jogging, cycling, or swimming, or 75 minutes of intense exercise, like running or fast cycling, plus 2-3 weekly sessions of resistance exercises. Nutritional recommendations include the Mediterranean diet and Dietary Approaches to Stop Hypertension (DASH). The guideline emphasizes limiting daily sodium intake and ensuring optimal potassium intake. Patients should also be encouraged to quit smoking and reduce alcohol consumption (6).

### **Pharmacologic Treatment Options**

Pharmacologic management includes calcium channel blockers, ACE inhibitors, ARBs and thiazide or thiazide-like diuretics (chlorthalidone and indapamide) (7). ACE inhibitors are preferred in diabetic patients and those with heart failure, while ARBs are suitable for ACE intolerance. Dihydropyridine calcium channel blockers are preferred in older adults and those with peripheral artery disease. Beta-blockers are not first-line for hypertension but are used in patients with angina, heart failure, myocardial infarction, or arrhythmias. Vasodilating beta-blockers, such as carvedilol, labetalol, and nebivolol, may be preferred in these cases. However, combinations with thiazides should be avoided because these may significantly increase

the risk of diabetes. Newer options include angiotensin receptor-neprilysin inhibitors (ARNIs) for heart failure, GLP-1 agonists and SGLT2 inhibitors for diabetes.

Combination therapy is generally recommended, starting with two drugs and re-evaluating BP after 1-3 months. If BP drops below 130/80 mmHg, patients enter annual follow-up. If the target is not met, triple combination therapy at low doses is initiated, followed by dose adjustments as needed. If BP remains uncontrolled, resistant hypertension should be considered, and spironolactone may be added (8). In frail individuals, those with symptomatic orthostatic hypotension, or patients over 85, monotherapy is advised for elevated blood pressure. In summary, this guideline emphasizes early diagnosis and a combined treatment approach. By introducing the elevated blood pressure category, the goal is to enable earlier intervention and reduce cardiovascular risk. Accurate BP measurement and out-of-office monitoring are highlighted, along with recommendations to investigate secondary causes in cases of resistant hypertension. This guideline provides valuable updates to enhance family physicians' ability to manage hypertension more effectively.

### **Author's Contribution**

The authors declare no conflict of interest.

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