



# British Cardiovascular Society

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## 2018 ESC/ESH Guidelines for the management of Arterial Hypertension

<https://www.escardio.org/Guidelines/Clinical-Practice-Guidelines/Arterial-Hypertension-Management-of>

### **Introduction**

The European Society of Cardiology (ESC) and European Society of Hypertension (ESH) jointly issued new guidelines for the management of arterial hypertension, which were presented at the European Society of Cardiology Congress in August 2018. The 2018 ESC/ESH guidelines focus on improving the diagnosis and treatment of hypertension and promoting simple and effective treatment strategies including both lifestyle advice and medications, for poorly controlled blood pressure (BP).

One of the main messages was no change in the definition of hypertension with office systolic BP (SBP)  $\geq 140$  mmHg and/or diastolic BP (DBP)  $\geq 90$  mmHg, which is equivalent to a 24 h ambulatory BP monitoring (ABPM) average of  $\geq 130/80$  mmHg or a home BP monitoring (HBPM) average  $\geq 135/85$  mmHg.

Several new concepts are introduced in the current guidelines:

### **BP Measurement**

In addition to office BP, the diagnosis of hypertension can be made using out-of-office measurements with 24h-ABPM and/or HBPM (Class Ic).

### **Low threshold for BP treatment in old and very old patients**

For the age group between 65-79 years with grade 1 hypertension (SBP:140-159 mmHg) and those  $>80$  years with grade 2 hypertension (SBP 160-179 mmHg), hypertension drug treatment is recommended, alongside lifestyle changes, provided the treatment is tolerated (Class Ia).

### **Two drug combination in a single pill to treat hypertension**

As poor control of blood pressure is directly related to nonadherence and greater number of pills, the new guidelines recommend initiating two-drug combination in most of the patients, preferably in a single pill, called a single pill combination (SPC) (Class Ia). This is in contrast to a stepwise treatment in the previous guidelines. Three drug combinations are also recommended when required. The new guideline includes a core treatment strategy which recommends the preferred initial therapy. For most patients this will be a combination of an angiotensin converting enzyme (ACE) inhibitor or an angiotensin receptor blocker (ARB) with a calcium channel blocker (CCB) or thiazide/thiazide-like diuretics. For those requiring three

drugs, a combination of an ACE-inhibitor or ARB with a CCB and a thiazide/thiazide-like diuretic should be used (Class Ia). For patients with angina, heart failure, atrial fibrillation or younger women with/or planning pregnancy, beta blockers are recommended at any treatment stage (Class Ia). For patients with resistant hypertension, addition of spironolactone or amiloride is now recommended (Class Ib).

### **New treatment target ranges for hypertension**

The guidelines introduced a major change in BP treatment targets both for the SBP and DBP, thus defining BP target ranges rather than just upper limits of BP targets. The initial target of the treatment, in all patients, is to lower BP to <140/90mmHg. If treatment is well tolerated, then target the BP to 130/80 mmHg (Class Ia).

In the age group of <65 years, aim for SBP in range of 120-129 mmHg (Class Ia).

In the age group between 65 -80 years, the recommended BP target range is 130-139 mmHg (Class Ia), in contrast to previous recommendation of 140-150 mmHg.

In older patients aged over 80 years, a lower BP target range is accepted (130-139 mmHg) (Class Ia) as compared to the higher target range in the previous guidelines (140-150 mmHg).

In any circumstances, aim for BP treatment no lower than 120/70 mmHg.

### **Detecting non- adherence to antihypertensive therapy**

A major emphasis is given in the current guidelines on non- adherence to treatment leading to poor BP control. Several interventions are introduced to minimise non-adherence including single pill combination, reminder packing, self-monitoring, group sessions, collaboration with healthcare providers, especially nurses and pharmacists, monitoring systems etc. Authors also emphasised the key role of nurses and pharmacists in educating, supporting and following-up patients to achieve better BP control.

### **Start treatment for low risk grade 1 hypertension**

For patients with low-risk grade 1 hypertension and no signs of hypertension-mediated organ damage, the new guidelines recommend commencing anti-hypertensive treatment, if lifestyle intervention fails (Class Ia), in contrast to higher threshold for commencing BP treatment previously (Class IIa).

In the past, patients with high normal BP (130-139/85-89 mmHg) were not treated with drug therapy unless necessary (class III), however, the new guidelines recommend initiating drug therapy if cardiovascular risk is high, especially coronary artery disease (class IIb).

### **Stricter DBP**

Stricter DBP control is recommended with a new target of <80 mmHg for all groups of patients, in contrast to <90 mmHg in the past. However, a downgrade in recommendation is seen from Class I to Class IIb, as it is difficult to regulate both systolic and diastolic BP.

### **Role of devices**

The use of device-based therapy to control BP including renal denervation and baroreceptor stimulation has seen a downgrade from Class IIb to Class III and is no longer recommended unless used for the purpose of research studies and trials.

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#### **Affiliated Societies**

Arrhythmia Alliance (A-A)  
Association for Inherited Cardiac Conditions (AICC)  
British and Irish Hypertension Society (BIHS)  
British Association for Cardiovascular Prevention and Rehabilitation (BACPR)  
British Association for Nursing in Cardiovascular Care (BANCC)  
British Atherosclerosis Society (BAS)

British Cardio-Oncology Society (BCOS)  
British Cardiovascular Intervention Society (BCIS)  
British Congenital Cardiac Association (BCCA)  
British Heart Rhythm Society (BHRS)  
British Heart Valve Society (BHVS)  
British Junior Cardiologists' Association (BJCA)  
British Nuclear Cardiology Society (BNCS)

British Society for Cardiovascular Imaging (BSCI)  
British Society for Cardiovascular Research (BSCR)  
British Society for Heart Failure (BSHF)  
British Society of Cardiovascular Magnetic Resonance (BSCMR)  
British Society of Echocardiography (BSE)  
Cardiovascular Care Partnership (UK) (CCPUK)  
Society for Cardiological Science and Technology (SCST)

## NICE v ESC

The current NICE guidelines for the management of hypertension (published in 2011 with some more recent amendments) are largely in accordance with the 2013 ESC guidelines and summarised in table 1. The new evidence included in the ESC 2018 guidelines will need to be considered in the next update to the NICE guidance on hypertension management.

## Conclusion

In summary, the new 2018 ESC/ESH hypertension guidelines have focused on detecting high blood pressure and on how to optimally treat it with new treatment target ranges. Treatment with antihypertensive drugs has been extended to additional groups of patients. Blood pressure targets on treatment are lower than in the past. Lastly, dual or triple combination of drug therapy in a single pill is now recommended as the initial treatment strategy in most patients.

Dr Siddhartha Mengi  
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