

# Hypertension in Adults: Diagnosis and Treatment

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## Description

The diagnostic limit for hypertension based on clinic blood pressure is still 140/90 mmHg (BP). The risk of white-coat hypertension, which is defined as a difference of >20/10 mmHg between clinic readings and typical daytime home or ambulatory measures, continues to support the recommendation that diagnosis be based on outside measurement. The gold standard is ambulatory blood pressure monitoring (ABPM), however as not everyone is comfortable with or can tolerate this, home blood pressure monitoring (HBPM) is provided as a substitute. Patients should be instructed to take at least two recordings for HBPM, spaced one minute apart, and twice day for four to seven days. The mean of the remaining measurements should be utilised and the first day's results should be discarded. Particularly in younger individuals (for instance, those under the age of 60), where the implications of a new hypertension diagnosis may be more important, ABPM may be necessary to confirm the diagnosis if the mean blood pressure is close to the diagnostic threshold [1]. For ABPM or HBPM, the diagnostic cut off remains 135/85 mmHg. Patients with postural hypotension symptoms and type 2 diabetics under the age of 80 should have their standing blood pressure taken. After the subject has stood for at least a minute, their standing blood pressure should be checked. Treatment should focus on raising standing blood pressure when there is a large postural drop in systolic blood pressure (>20 mmHg) [2].

When making a diagnosis, blood pressure should be tested in both arms since a big discrepancy in readings between the arms is a key indicator of vascular disease and can result in under treatment. NICE changed its definition of a substantial between-arm difference from 20 mmHg to 15 mmHg in response. When possible, follow-up monitoring should be done with higher BP monitored regularly in the arm. Only those with stage 3 hypertension (BP >180/120 mmHg) who also exhibit symptoms of acute end organ damage, such as papilloedema or retinal haemorrhage, or life-threatening symptoms, such as acute chest pain, confusion, or decompensated heart failure, are advised to seek urgent admission for BP assessment or control. Additionally, if a pheochromocytoma is suspected due to substantial hypertension and symptoms including headache, abdominal pain, pallor, nesses diaphoresis, immediate admission is advised. Patients who have just received a diagnosis of hypertension should be offered tests to check for damage to target organs (fundoscopy, urinalysis, renal function, ECG), as well as a cardiovascular risk score (for example, using the latest version of the QRISK score for patients residing in the UK) [3]. Patients under the age of 80 who have stage 1 hypertension and a 10-year risk score of 10% or who have target organ damage, renal illness, cardiovascular disease, or diabetes are now advised to seek treatment. This aligns the risk threshold for hypertension treatment with the statin risk threshold. A new cost-effectiveness analysis indicated that starting therapy at the 10% threshold generated an incremental cost-effectiveness ratio of 10,000 GBP at age 60 years, and was therefore regarded

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to be cost-effective, which led to the lowering in risk threshold from 20%. Given that risk calculators frequently underestimate lifetime cardiovascular risk in these younger people, NICE recommends considering treatment for patients diagnosed before the age of 60 where the QRISK is 10%, based on shared decision-making and patient preference. Treating at a 5% risk threshold may also be cost-effective for patients under the age of 60 [4].

The majority of people with stage 1 hypertension who are between the ages of 60 and 80 will now be eligible for therapy as a result of the advice. In the UK, around 50% of people with uncomplicated stage 1 hypertension are already taking BP-lowering medication, and many of these carry a 10% risk. This suggests that a change in treatment strategy may not result in significantly more work for healthcare providers. There is a dearth of information addressing treatment objectives for patients older than 80 years, and the hazards of therapy are higher in this population. The HyVET trial, a groundbreaking study, employed a treatment threshold of 150 mmHg systolic blood pressure. As a result, NICE encourages physicians to examine characteristics including frailty and other comorbidities when deciding whether to suggest medication, particularly when treating blood pressure below 150 mmHg [5]. Now that hypertension in diabetic patients is covered by the guideline, it's crucial to note that the diagnostic and therapeutic thresholds have been adjusted to be consistent with those for people without diabetes. According to the ACCORD research, there was no benefit to treating individuals with type 2 diabetes to a target systolic blood pressure of 120 mmHg rather than 140 mmHg in terms of fatal and non-fatal major cardiovascular events. Treatment for people under the age of 80 should seek to lower their clinic blood pressure to less than 140/90 mmHg, or 135/85 mmHg if using HBPM. In contrast to current US and European recommendations, NICE does not advocate striving for lower blood pressure targets due to a dearth of primary prevention-related research and the elevated risk it entails, including falls and electrolyte imbalance.

All patients with suspected or diagnosed hypertension should receive regular lifestyle guidance from their doctors, including advice on nutrition and exercise. Even if a combination tablet is taken, dual therapy (for example, with an ACE and CCB) is not advised in the beginning because NICE identified insufficient data about the risks and benefits of this technique and says further research is needed. At the very least, patients with hypertension should have an annual evaluation to talk about their blood pressure, lifestyle, symptoms, and medication. If BP management with a single agent is insufficient, a second medication should be administered [3,5]. At the best tolerated doses, the treatment combines an ACE/ARB, CCB, and thiazide-like diuretic. Resistant hypertension is the term used to describe patients who continue to have high blood pressure. Adherence should be examined, and ABPM or HBPM blood pressure data should be validated. If further therapy is required, patients with potassium levels below 4.5 mmol/l may benefit the most from low-dose spironolactone, while those with higher potassium levels may benefit more from an alpha- or beta-blocker. Expert counsel and more frequent monitoring might be necessary.

## Conflict of Interest

None.

## References

1. Clark, Christopher E, Rod S. Taylor, Angela C. Shore and John L. Campbell. "The difference in blood pressure readings between arms and survival: primary care cohort study." *Bmj* 344 (2012).

2. Brunström, Mattias and Bo Carlberg. "Association of blood pressure lowering with mortality and cardiovascular disease across blood pressure levels: A systematic review and meta-analysis." *JAMA Intern Med* 178 (2018): 28-36.
3. Sheppard, James P, Sarah Stevens, Richard J. Stevens and Richard J. McManus, et al. "Association of guideline and policy changes with incidence of lifestyle advice and treatment for uncomplicated mild hypertension in primary care: A longitudinal cohort study in the Clinical Practice Research Datalink." *Bmj open* 8 (2018): e021827.
4. Beckett, Nigel, Ruth Peters, Jaakko Tuomilehto and Terry McCormack, et al. "Immediate and late benefits of treating very elderly people with hypertension: Results from active treatment extension to Hypertension in the Very Elderly randomised controlled trial." *Bmj* 344 (2012).
5. ACCORD Study Group. "Effects of intensive blood-pressure control in type 2 diabetes mellitus." *N Engl J Med* 362 (2010): 1575-1585.

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