

February 2023 surveillance of hypertension in adults: diagnosis and management (NICE guideline NG136) and transient loss of consciousness ('blackouts') in over 16s (NICE guideline CG109)

Surveillance report

Published: 15 February 2023

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Surveillance decision

We will update the recommendations related to the measurement of blood pressure in suspected 'postural' or 'orthostatic' hypotension in the [NICE guidelines on hypertension in adults](#) and [transient loss of consciousness \('blackouts'\) in over 16s](#). Amendments will also be made to change 'orthostatic hypotension' to 'postural hypotension' in all NICE guidelines so that a consistent term is used.

Background

We received an enquiry highlighting a potential diagnosis issue with recommendations in the NICE guideline on hypertension in adults. The guideline recommends initial measurement of blood pressure either in the seated or supine position in people with symptoms of postural hypotension (falls or postural dizziness). The recommendation then requires that blood pressure is measured again with the person standing for at least 1 minute before measurement. This is to establish if the systolic blood pressure falls by 20 mmHg or more when the person is standing. The enquirer stated that measuring blood pressure in the sitting (rather than the supine position) followed by the standing position may miss a significant proportion of postural hypotension cases, particularly in older and frail people.

We reviewed this issue to establish whether the guideline should be updated. We also considered all NICE guidelines which cover 'postural hypotension' or 'orthostatic hypotension' to check they are consistent and clear.

Methods

The surveillance process consisted of:

- Considering and addressing comments from the enquiry.
- Examining and comparing NICE guidance and quality standards related to postural or orthostatic hypotension.
- Considering the evidence and committee rationales used to develop recommendations in the NICE guidelines on hypertension in adults and transient loss of consciousness.

- Gathering feedback from topic experts on the current recommendations to establish preferred terminology, standards of measurement and potential implementation challenges.
- Assessing the topic expert feedback against current recommendations to determine whether to update the recommendations and terminology used.
- Consulting on the proposal with stakeholders.
- Further validation of proposed updated recommendations based on stakeholders' feedback after the consultation with additional topic experts.

Current NICE recommendations related to postural hypotension

We have reviewed our recommendations related to 'postural' or 'orthostatic' hypotension across all NICE guidelines. We identified the following inconsistencies:

- Recommendations on measurement of blood pressure when postural or orthostatic hypotension is suspected are made in NICE's guidelines on hypertension in adults and transient loss of consciousness, and the criteria used are inconsistent (see [table 1 for a summary in the overall decision section](#)).
- 'Orthostatic' or 'postural' hypotension is mentioned in 13 NICE guidelines. In [NICE's guidelines on type 1 diabetes in adults](#) and [rehabilitation after traumatic injury](#), both terms are used interchangeably.

Information considered when developing the guideline

There was no evidence review for the postural hypotension recommendations in the NICE guideline on hypertension in adults, and there was only 1 study identified on postural hypotension in diagnosing the cause of transient loss of consciousness in the NICE guideline on transient loss of consciousness.

Views of topic experts on existing recommendations (pre-consultation)

We received feedback from 5 members of the existing cardiovascular disease (CVD) committee (1 GP lecturer, 2 cardiologists, 1 hypertension specialist, and 1 nephrologist) with an interest in hypertension. One respondent declared a potential conflict of interest in receiving (non-commercially) funded research in postural hypotension. Key points raised in the feedback were:

- A consistent term for orthostatic or postural hypotension should be used in all NICE guideline recommendations.
- Standardised measurement criteria and terminology should be used across all NICE guideline recommendations.
- Supine to standing blood pressure measurement is the best practice based on international consensus and is preferable.
- There are implementation challenges in measuring blood pressure in the supine position in general practice, and there should be an option to do this seated if getting the patient into the supine position is not practical.

Stakeholder consultation

Based on the feedback from the topic experts, we proposed an update to the existing recommendations and consulted with stakeholders on the proposed changes. See the [overall decision](#).

We received consultation comments from 6 stakeholders, which included 3 patient organisations, 1 professional organisation, 1 hospital trust and NHS England. See [appendix A for stakeholder consultation comments and responses](#). Four stakeholders agreed with our proposals, while 2 disagreed (1 professional organisation and 1 patient organisation).

The stakeholders who agreed thought that 'this is a step in the right direction', and 'will help to ensure postural hypotension cases are not missed'. One also welcomed that the recommendation proposed (new recommendation 1.1.5 for the NICE guideline on hypertension in adults) allowed for a seated position option when the supine position is not feasible.

The 2 stakeholders who disagreed commented that while the recommendations should be standardised, they disagreed with the proposed recommendations on how blood pressure should be measured in a person with suspected postural hypotension such as the timing of measurement after standing up and suggested that diastolic thresholds should be added. One stakeholder was concerned that measuring blood pressure in the supine position is impractical and thought that the guidelines should continue to distinguish the methods suggested for people in NICE's guideline on hypertension, who may have signs and symptoms such as dizziness or pre-syncope but might not have experienced a transient loss of consciousness. The same stakeholder preferred 'orthostatic hypotension' as this is more 'accurate', and in line with other terminologies used to describe other related symptoms such as orthostatic intolerances.

Two stakeholders were also concerned that the recommendations did not go far enough to address the symptoms experienced by people with postural tachycardia syndrome (PoTS) or chronic kidney disease. One stakeholder suggested that a separate guideline for orthostatic hypotension (preferably syndromes of intolerance) should be developed by NICE.

In addition to these, there were comments from stakeholders that the topic experts from the existing CVD committee did not involve a geriatrician and experts with special interests in postural hypotension.

We had asked stakeholders whether they are aware of any evidence which could support the blood pressure recommendations in postural hypotension assessment but did not receive any submissions.

The stakeholders suggested there may be health inequality issues in this topic area, where older people are more at risk of having postural hypotension, especially if they are frail or have multiple conditions or polypharmacy. It may also be more difficult to conduct the supine or sitting to standing blood pressure measurement in these groups of older people, and therefore it is more likely that their postural hypotension is missed. There is also a concern that certain groups of younger people are overlooked (for example: myalgic encephalomyelitis or encephalopathy/chronic fatigue syndrome [ME/CFS], long covid, hypermobile Ehlers-Danlos syndromes [EDS] and Addison's disease) due to the perception that only older people are at higher risk.

View of topic experts (after stakeholder

consultation)

Based on the comments from stakeholders, we have further validated the proposed updated recommendations with additional topic expertise in geriatric care or/and cardiology in both the primary and secondary care settings.

We received feedback from 5 topic experts (1 GP lecturer, 1 GP, 1 cardiologist, 1 geriatrician, and 1 consultant nurse).

All the topic experts agreed with the standardisation of terminology and preferred 'postural hypotension' over 'orthostatic hypotension'.

Three of the topic experts thought that the proposed changes adequately addressed the key concerns raised by stakeholders; with 2 having further suggestions. The main concerns raised by both topic experts were related to the timing of blood pressure measurement after the patient stands up from the sitting or supine position. One topic expert (geriatrician) suggested that 'the timing of measurement is crucial after the postural change as there are many types of postural hypotension (and probably postural hypertension)', and suggested the measurement is taken 'between 1 to 3 minutes'. The other topic expert (general practitioner) had noted that one of the reasons [recommendation 1.1.5 in the NICE guideline on hypertension in adults](#) suggested 'at least 1 minute' is because 'most people in the primary care setting would not have the time to wait 3 minutes, and that the difference between 1 and 3 minutes would not be significant'. There is a concern that if we recommend blood pressure should be taken 'within 3 minutes', that will cause people 'to hurry'.

Equalities

See [stakeholder consultation](#) for information about inequalities raised.

Overall decision

The following changes will be made:

- [Recommendations 1.1.5, 1.1.6 and 1.4.16 in the NICE guideline on hypertension in adults](#) will be updated to emphasise that the supine position is preferred when trying to determine the degree of blood pressure drop in people with suspected postural

hypotension.

- Recommendation 1.2.1.1 in the NICE guideline on transient loss of consciousness will be cross-referenced to recommendation 1.1.5 in the NICE guideline on hypertension in adults once it has been updated.
- All other NICE recommendations related to 'orthostatic' or 'postural' hypotension will be standardised. Only the term 'postural hypotension', rather than 'orthostatic hypotension', will be used across NICE guidelines.
- See table 1 and table 2 for details of all the changes to recommendations.

Table 1: Comparison of definitions and diagnosis methods for blood pressure measurement for postural hypotension

Area under review	Recommendations 1.1.5 and 1.16 in NICE's guideline on hypertension in adults	Recommendation 1.2.1.1 in NICE's guideline on transient loss of consciousness	New recommendations (2023)
Position of measurement	Seated or supine	Lying down	Lying down (supine) is preferred to a seated position
Duration of standing before measurement	At least 1 minute	3 minutes	At least 1 minute
Threshold of difference between standing versus seated or supine	Systolic BP falls by 20 mmHg or more when standing	No mention of the threshold	Systolic blood pressure falls by 20 mmHg or more, or diastolic blood pressure falls by 10 mmHg or more when standing

Area under review	Recommendations 1.1.5 and 1.16 in NICE's guideline on hypertension in adults	Recommendation 1.2.1.1 in NICE's guideline on transient loss of consciousness	New recommendations (2023)
Management	<ul style="list-style-type: none"> • review medication • measure subsequent blood pressures with the person standing • consider referral to specialist care if symptoms of postural hypotension persist. [2004, amended 2011] 	<p>If orthostatic hypotension is confirmed, consider likely causes, including drug therapy, and manage appropriately (for example, see the NICE guideline on falls in older people: assessing risk and prevention).</p>	<p>If the systolic blood pressure falls by 20 mmHg or more, or if the diastolic blood pressure falls by 10 mmHg or more when the person is standing:</p> <ul style="list-style-type: none"> • consider likely causes, including reviewing current medications • manage appropriately (for example, see the NICE guideline on falls in older people: assessing risk and prevention) • consider referral to specialist care if symptoms of postural hypotension persist. <p>If the blood pressure drop is less than the specified thresholds despite a suggestive</p>

Area under review	Recommendations 1.1.5 and 1.16 in NICE's guideline on hypertension in adults	Recommendation 1.2.1.1 in NICE's guideline on transient loss of consciousness	New recommendations (2023)
			<p>history:</p> <ul style="list-style-type: none"> • repeat the measurements with the person in the supine position if the first measurement was taken while seated • refer the person for further specialist cardiovascular assessment.

Table 2: Comparison of existing versus proposed recommendations

Guideline	Existing recommendations	New recommendations (2023)
Recommendation 1.1.5 in the NICE guideline on hypertension in adults	<p>In people with symptoms of postural hypotension (falls or postural dizziness):</p> <ul style="list-style-type: none">• blood pressure with the person either supine or seated• measure blood pressure again with the person standing for at least 1 minute before measurement. [2004, amended 2011]	<p>In people with suspected postural hypotension (with symptoms such as falls or postural dizziness):</p> <ul style="list-style-type: none">• measure blood pressure with the person in the supine position• measure blood pressure again with the person standing for at least 1 minute before the measurement. <p>If it is inconvenient to take the blood pressure measurement in the supine position, a seated position may be considered.</p>

Guideline	Existing recommendations	New recommendations (2023)
<p>Recommendation 1.1.6 in the NICE guideline on hypertension in adults</p>	<p>If the systolic blood pressure falls by 20 mmHg or more when the person is standing:</p> <ul style="list-style-type: none"> • review medication • measure subsequent blood pressures with the person standing • consider referral to specialist care if symptoms of postural hypotension persist. [2004, amended 2011] 	<p>If the systolic blood pressure falls by 20 mmHg or more, or if the diastolic blood pressure falls by 10 mmHg or more when the person is standing:</p> <ul style="list-style-type: none"> • consider likely causes, including reviewing current medications • manage appropriately (for example, see the NICE guideline on falls in older people: assessing risk and prevention) • consider referral to specialist care if symptoms of postural hypotension persist. <p>If the blood pressure drop is less than the specific thresholds despite a suggestive history:</p>

Guideline	Existing recommendations	New recommendations (2023)
		<ul style="list-style-type: none">• repeat the measurements with the person in the supine position if the first measurement was taken while seated• refer the person for further specialist cardiovascular assessment.

Guideline	Existing recommendations	New recommendations (2023)
<p>Recommendation 1.4.16 in the NICE guideline on hypertension in adults</p>	<p>Measure standing as well as seated blood pressure (see recommendation 1.1.6) in people with hypertension and:</p> <ul style="list-style-type: none"> • with type 2 diabetes or • with symptoms of postural hypotension or • aged 80 and over. <p>In people with a significant postural drop or symptoms of postural hypotension, treat to a blood pressure target based on standing blood pressure.</p>	<p>Measure standing as well as supine blood pressure (see recommendation 1.1.6) in people with hypertension and:</p> <ul style="list-style-type: none"> • with type 2 diabetes or • with symptoms of postural hypotension or • aged 80 and over. <p>In people with a significant postural drop or symptoms of postural hypotension, treat to a blood pressure target based on standing blood pressure.</p>

Guideline	Existing recommendations	New recommendations (2023)
Recommendation 1.2.1.1 in the NICE guideline on transient loss of consciousness	<p>Suspect <u>orthostatic hypotension</u> on the basis of the initial assessment when:</p> <ul style="list-style-type: none">• there are no features suggesting an alternative diagnosis and• the history is typical. <p>If these criteria are met, measure lying and standing blood pressure (with repeated measurements while standing for 3 minutes). If clinical measurements do not confirm orthostatic hypotension despite a suggestive history, refer the person for further specialist cardiovascular assessment.</p> <p>If orthostatic hypotension is confirmed, consider likely causes, including drug therapy, and manage appropriately (for example, see the <u>NICE guideline on falls in older people: assessing risk and prevention</u>).</p>	<p>Suspect postural hypotension on the basis of the initial assessment when:</p> <ul style="list-style-type: none">• there are no features suggesting an alternative diagnosis and• the history is typical. <p>See <u>recommendations 1.1.5 and 1.1.6 in NICE's guideline on hypertension in adults</u> for details of diagnostic criteria.</p>

ISBN: 978-1-4731-5039-3