

comment on the updated recommendations, research recommendations and the rationale and impact section.

Sections of the guideline that have had no changes at all have been temporarily removed for this consultation and will be reinstated when the final guideline is published. See the existing [NICE guideline on stroke and transient ischaemic attack in over 16s](#).

Full details of the evidence and the committee's discussion on the 2022 recommendations are in the [evidence reviews](#).

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1 Recommendations

People have the right to be involved in discussions and make informed decisions about their care, as described in [NICE's information on making decisions about your care](#)

[Making decisions using NICE guidelines](#) explains how we use words to show the strength (or certainty) of our recommendations, and has information about prescribing medicines (including off-label use), professional guidelines, standards and laws (including on consent and mental capacity), and safeguarding.

[NICE has also produced patient decision aids on decompressive hemicraniectomy](#).

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3 1.5 Maintenance or restoration of homeostasis

4 Blood pressure control for people with acute intracerebral haemorrhage

5 1.5.4 Consider rapid blood pressure lowering for people with acute intracerebral
6 haemorrhage who do not have any of the exclusions listed in
7 recommendation 1.5.7 and who:

- 8 • present within 6 hours of symptom onset **and**
- 9 • have a systolic blood pressure of between 150 and 220 mmHg. **[2022]**

10 1.5.5 Consider rapid blood pressure lowering for people with acute intracerebral
11 haemorrhage who do not have any of the exclusions listed in
12 recommendation 1.5.7 and who:

- 13 • present beyond 6 hours of symptom onset **or**
- 14 • have a systolic blood pressure greater than 220 mmHg. **[2022]**

15 1.5.6 When rapidly lowering blood pressure in people with acute intracerebral
16 haemorrhage, aim for a systolic blood pressure target of 140 mmHg or
17 lower within 1 hour of starting treatment and avoid a magnitude drop of

1 more than 60 mmHg within 1 hour. Maintain this blood pressure for at
2 least 7 days. **[2022]**

3 1.5.7 Do not offer rapid blood pressure lowering to people who:

- 4 • have an underlying structural cause (for example, tumour,
5 arteriovenous malformation, or aneurysm)
- 6 • have a score on the Glasgow Coma Scale of below 6
- 7 • are going to have early neurosurgery to evacuate the haematoma
- 8 • have a massive haematoma with a poor expected prognosis. **[2019]**

For a short explanation of why the committee made these recommendations see the [rationale and impact section on blood pressure control for people with acute intracerebral haemorrhage](#).

Full details of the evidence and the committee's discussion are in [evidence review E: blood pressure \(maintenance of homeostasis\)](#).

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10 **Recommendations for research**

11 As part of the 2022 update the guideline committee made an additional 2 research
12 recommendations.

13 **1 Older, frailer people**

14 What is the efficacy and safety of intensive interventions to lower blood pressure
15 compared with less intensive interventions for older people with acute intracerebral
16 haemorrhage who are frail or have a high frailty index score at presentation?

For a short explanation of why the committee made this recommendation see the [rationale section on blood pressure control for people with acute intracerebral haemorrhage](#).

Full details of the evidence and the committee's discussion are in [evidence review E: blood pressure \(maintenance of homeostasis\)](#).

1 **2. Impact of intensive interventions to lower blood pressure on cognitive**
2 **function**

3 What are the long-term effects on cognitive function of intensive interventions to
4 lower blood pressure compared with less intensive interventions in people with acute
5 intracerebral haemorrhage?

For a short explanation of why the committee made this recommendation see the [rationale section on blood pressure control for people with acute intracerebral haemorrhage](#).

Full details of the evidence and the committee's discussion are in [evidence review E: blood pressure \(maintenance of homeostasis\)](#).

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7 **Rationale and impact**

8 These sections briefly explain why the committee made the recommendations and
9 how they might affect practice.

10 **Blood pressure control for people with acute intracerebral**
11 **haemorrhage**

12 [Recommendations 1.5.4 to 1.5.7](#)

13 **Why the committee made the recommendations**

14 Moderate quality evidence from a large clinical trial showed a modest benefit in
15 rapidly lowering blood pressure for the groups covered by the recommendation using
16 a systolic blood pressure target of 140 mmHg or lower within 1 hour of starting
17 treatment, compared with less intensive blood pressure lowering treatment.

18 There was evidence to say that rapidly lowering blood pressure does not increase
19 the risk of neurological deterioration caused by reduced blood flow to the brain, and
20 has the potential to improve quality of life.

21 In contrast, the committee noted in another clinical trial that there was no benefit to
22 rapidly lowering blood pressure and there was an increase in adverse renal events.

1 The committee noted the treatment regimens were more aggressive in this trial
2 compared with other trials included in the review.

3 The committee agreed that while there is some evidence that rapid blood pressure
4 lowering treatment is beneficial, there may be an increase in adverse renal events,
5 and they were concerned about the lack of evidence in older people who are
6 clinically frail. Taking this into account, the committee agreed that rapid blood
7 pressure lowering treatment should be considered as a treatment option except for
8 the groups highlighted in recommendation 1.5.7.

9 There was evidence that a moderate reduction of up to 60 mmHg within the first hour
10 was associated with better outcomes such as functional independence. A reduction
11 of more than 60 mmHg within 1 hour was associated with significantly worse
12 outcomes such as renal failure, early neurological deterioration and death, compared
13 with less intensive blood pressure lowering treatment. Therefore, the committee
14 agreed that a large reduction of 60 mmHg or more within 1 hour should be avoided.

15 The 2019 guideline included a 130 mmHg lower target limit. However, the committee
16 were concerned that a narrow range would be too restrictive, and the variation in the
17 class of drugs used in practice means it is difficult to predict the blood pressure
18 reduction. The committee decided to remove the 130 mmHg lower target limit. The
19 committee considered the potential risk of systolic blood pressure dropping too low
20 but noted that this potential concern is addressed by the avoidance of a large
21 reduction of 60 mmHg or more within 1 hour. The committee also agreed that the
22 target systolic blood pressure and the systolic blood pressure reduction should be
23 made into a separate recommendation (1.5.6).

24 There was little evidence on people presenting beyond 6 hours or those with a
25 systolic blood pressure over 220 mmHg. However, the committee agreed that some
26 guidance is needed on treating hypertension in these groups and that it is
27 appropriate to extrapolate from the available data to these groups, but that
28 healthcare professionals could consider rapid blood pressure lowering using clinical
29 judgement.

1 The committee did not change the existing practice of not offering rapid blood
2 pressure lowering to specific groups that were excluded from the key clinical trial.
3 This is because there is no evidence of whether this would be safe or beneficial.

4 The committee wanted to consider the long-term effect of intensive blood pressure
5 lowering on quality of life, but limited evidence was available to show how it affected
6 quality of life at 6 and 12 months, and no evidence was available on cognitive
7 function. Given the lack of evidence for these important outcomes, the committee
8 made a [research recommendation about the impact on cognitive function of](#)
9 [intensive interventions to lower blood pressure compared with less intensive](#)
10 [interventions](#).

11 The committee identified a gap in the evidence on the impact of intensive blood
12 pressure treatment on older, frailer people. There is currently no guidance or
13 treatment pathway for people who are frail, so the committee also made a [research](#)
14 [recommendation about the impact of intensive blood pressure lowering on older](#)
15 [people who are clinically frail](#) and encouraged the use of frailty scores to evaluate
16 the impact of frailty on outcomes and treatment prognoses.

17 **How the recommendations might affect practice**

18 The recommendations reflect a small change to current best practice. The difference
19 in target blood pressure range and magnitude in drop from starting treatment up to
20 the first hour in the 2022 update may require additional planning and closer
21 management by the nursing team. Given that these people currently require close
22 monitoring, any change is likely to be very small. There may be an increased cost of
23 intravenous antihypertension medication, but the recommendations should save
24 resources because of reduced harms. Overall, the recommendations should not
25 have a resource impact to the NHS in England.

26 [Return to recommendations](#)

27 **Update information**

28 **April 2022**

29 We have:

DRAFT FOR CONSULTATION

- 1 • reviewed the evidence on blood pressure control for people with acute
- 2 intracerebral haemorrhage
- 3 • updated recommendations 1.5.4, 1.5.5 and 1.5.6.
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