

Amendment of recommendation 1.3.17 about the use of propranolol, topiramate and amitriptyline in Headaches in over 12s: diagnosis and management (NICE guideline CG150)

April 2025

Amendment proposal

We propose changing recommendation 1.3.17 in NICE guideline CG150 - 'Headaches in over 12s: diagnosis and management' to a 'consider' recommendation for propranolol, topiramate or amitriptyline. Currently the guideline recommends to 'offer topiramate or propranolol after a full discussion of the benefits and risks of each option' for the prophylaxis of migraine, and to 'consider amitriptyline for the prophylactic treatment of migraine according to the person's preference, comorbidities and risk of adverse events'. We propose changing the recommendation for topiramate or propranolol from 'offer' to 'consider' to better reflect the benefits and harms associated with all 3 medicines.

The following wording is proposed:

For migraine prevention, consider propranolol, topiramate or amitriptyline after a full discussion of the benefits, risks and suitability of each option. Take into account:

- The potential benefit in reducing migraine recurrence and severity
- People with depression and migraine could be at an increased risk of using propranolol for self-harm. Use caution when prescribing propranolol to minimise the risk of harm from toxicity and rapid deterioration in overdose in line with the [Healthcare Safety](#)

[Investigation Branch's report on the under-recognised risk of harm from propranolol.](#)

- Topiramate should not be used in pregnancy for prophylaxis of migraine, or in women able to have children unless the conditions of the Pregnancy Prevention Programme are fulfilled. See the [MHRA advice on the use of topiramate.](#)
- For guidance on safe prescribing of antidepressants (such as amitriptyline) and managing withdrawal, see [NICE's guideline on medicines associated with dependence or withdrawal symptoms.](#)

In April 2025, this was an off-label use of topiramate and amitriptyline in children and young people. See [NICE's information on prescribing medicines.](#)

Reasons for the proposal

The recommendation to offer propranolol and topiramate was developed in 2012, with a consider recommendation for amitriptyline added in 2015.

Overall, the 2015 committee considered that evidence supported the use of topiramate and propranolol as effective treatments for the prevention of migraine across a range of outcomes, and so these medicines were given an 'offer' recommendation. The Committee judged that evidence also favoured amitriptyline, but it was less certain. They noted that amitriptyline did not have a marketing authorisation for migraine prophylaxis at that time, whereas topiramate and propranolol did. The Committee considered that the balance of evidence favoured amitriptyline less strongly than topiramate and propranolol and warranted a weaker 'consider' recommendation.

The 2015 NICE health economic model found that propranolol had the highest probability of being the most cost-effective treatment. Topiramate was also cost effective, with the point estimates close between propranolol and topiramate, and a wide degree of uncertainty around the results. Amitriptyline

had the lowest probability of being cost-effective (but was still cost-effective) and there was a high degree of uncertainty around the results. The committee noted that topiramate, propranolol and amitriptyline had been successfully used in clinical practice for many years; and the choice of medication may depend on individual patient preference and comorbidities, and the acceptability of side effects.

In June 2024, the MHRA published a Drug Safety Update on [Topiramate \(Topamax\): introduction of new safety measures, including a Pregnancy Prevention Programme](#). Due to the accumulating data on harms, further restrictions have been introduced with regards to the use of topiramate in women of childbearing potential and in pregnancy. The use of topiramate is now contraindicated in pregnancy for prophylaxis of migraine and in women of childbearing potential unless the conditions of the Pregnancy Prevention Programme are fulfilled.

In addition, a [Health Services Safety Investigations Body \(HSSIB\) report on propranolol](#) was published in 2020 which recommended that NICE review and update guidance on the use of propranolol in the treatment of anxiety and migraine, with particular reference to the toxicity of propranolol in overdose. NICE added a footnote to CG150 that people with depression and migraine could be at an increased risk of using propranolol for self-harm.

Both the MHRA advice on topiramate and the HSSIB report on propranolol have been assessed by NICE as acting to reduce the certainty around the benefit-harm balance of topiramate and propranolol in the prophylaxis of migraine, and by extension reducing the certainty of the original benefit-harm assessment made by the committee. In addition, amitriptyline is now licensed for the prophylactic treatment of migraine.

It is therefore proposed to reduce the strength of recommendation 1.3.17 by making it a 'consider' recommendation for topiramate and propranolol, alongside amitriptyline; with wording around individualised choice and the safety issues of each option. NICE uses 'consider' to reflect a recommendation for which the evidence of benefit is less certain (see

['Developing NICE guidelines: the manual section 9.3 wording the recommendations'\)'.](#)

Equalities

Medicines options for migraine prophylaxis are reduced in people who are pregnant, planning to become pregnant, or of childbearing potential unless the conditions of the Pregnancy Prevention Programme are fulfilled because of the [risk of serious harm to the unborn child from topiramate](#).

Overall proposal

We propose amending recommendation 1.3.17 about the use of propranolol and topiramate for the prevention of migraine to make it a 'consider' recommendation alongside amitriptyline to better reflect the balance between the benefits and harms associated with the use of these medicines.

Current Recommendation	Proposed change
<p>1.3.17</p> <p>For the prophylaxis of migraine, offer topiramate or propranolol after a full discussion of the benefits and risks of each option. Include in the discussion:</p> <p>the potential benefit in reducing migraine recurrence and severity</p> <p>the risk of fetal malformations with topiramate</p>	<p>For migraine prevention, consider propranolol, topiramate or amitriptyline after a full discussion of the benefits, risks and suitability of each option. Take into account:</p> <p>The potential benefit in reducing migraine recurrence and severity</p> <p>People with depression and migraine could be at an increased risk of using propranolol for self-harm. Use caution when prescribing</p>

<p>the risk of reduced effectiveness of hormonal contraceptives with topiramate</p> <p>the importance of effective contraception for women and girls of childbearing potential who are taking topiramate (for example, by using medroxyprogesterone acetate depot injection, an intrauterine method or combined hormonal contraception with a barrier method).</p> <p>Follow the MHRA safety advice on antiepileptic drugs in pregnancy. [2015, amended 2021]</p> <p>In November 2015, this was an off-label use of topiramate in children and young people. See NICE's information on prescribing medicines.</p> <p>People with depression and migraine could be at an increased risk of using propranolol for self-harm. Use caution when prescribing propranolol, in line with the Healthcare Safety Investigation Branch's report on the under-recognised risk of harm from propranolol.</p>	<p>propranolol to minimise the risk of harm from toxicity and rapid deterioration in overdose in line with the Healthcare Safety Investigation Branch's report on the under-recognised risk of harm from propranolol.</p> <p>Topiramate should not be used in pregnancy for prophylaxis of migraine, or in women able to have children unless the conditions of the Pregnancy Prevention Programme are fulfilled. See the MHRA advice on the use of topiramate.</p> <p>For guidance on safe prescribing of antidepressants (such as amitriptyline) and managing withdrawal, see NICE's guideline on medicines associated with dependence or withdrawal symptoms.</p> <p>In April 2025, this was an off-label use of topiramate and amitriptyline in children and young people. See NICE's information on prescribing medicines.</p>
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1.3.18

Consider amitriptyline for the prophylactic treatment of migraine according to the person's preference, comorbidities and risk of adverse events.

In November 2015, this was an off-label use of amitriptyline. See NICE's information on prescribing medicines. [2015]

For guidance on safe prescribing of antidepressants (such as amitriptyline) and managing withdrawal, see NICE's guideline on medicines associated with dependence or withdrawal symptoms.