# **Migraine preventive medications – Evidence summary**

| **Medication** | **BASH\* 2019**1 | **BMJ Best practice 2023**2 | **European Consensus statement 2021**3 **and 2022 update**4 | **AAN\*\* 2012**5 **& 2015**6 | **AHS\*\* Consensus statement 2021**7 **and 2024 update**8 | **SIGN 2018**9 |
| --- | --- | --- | --- | --- | --- | --- |
| **Antidepressants** |  |  |  |  |  |  |
| Amitriptyline | Recommended | Recommended; low quality evidence | Recommended 2nd | Level B | Level B | Conditional recommendation |
| Venlafaxine |  | Recommended for comorbid depression |  | Level B | Level B | Limited evidence |
| **Beta blockers** |  |  |  |  |  |  |
| Propranolol | Recommended | Recommended | Recommended 1st | Level A | Level A | Strong recommendation |
| Atenolol | Appendix | Recommended | Recommended 1st | Level B | Level B | Limited evidence |
| Metoprolol | Appendix | Recommended | Recommended 1st | Level A | Level A | Limited evidence |
| Nadolol | Appendix |  |  | Level B | Level B |  |
| Timolol | Appendix | Recommended |  | Level A | Level A |  |
| **Antihypertensives** |  |  |  |  |  |  |
| Candesartan | Recommended |  | Recommended 1st | Level C | Level A | Conditional recommendation |
| Lisinopril | Appendix |  |  | Level C | Level B | Limited evidence |
| Flunarizine | Appendix – not available in UK | Recommended but limited access | Recommended 2nd |  |  | Conditional recommendation |
| Verapamil |  | 1st choice for hemiplegic/ brainstem aura; used in migraine with aura |  | Level U |  | Limited evidence for migraine |
| **Antiepileptics** |  |  |  |  |  |  |
| Topiramate | Recommended | Recommended | Recommended 1st | Level A | Level A | Strong recommendation |
| Sodium valproate | Appendix |  | Recommended 2nd | Level A | Level A | Conditional recommendation |
| Lamotrigine |  |  |  | Other |  | Limited/no evidence |
| Gabapentin |  |  |  | Level U |  | Strong recommendation **against** use |
| Zonisamide |  | Limited evidence |  |  |  | No evidence for efficacy |
| Levetiracetam |  |  |  |  |  | Limited evidence; more needed |
| **Anti-CGRP meds** |  |  |  |  |  |  |
| Galcanezumab | Recommended | 2nd line | Recommended 1st |  | Level A |  |
| Erenumab | Recommended | 2nd line | Recommended 1st |  | Level A |  |
| Fremanezumb | Recommended | 2nd line | Recommended 1st |  | Level A |  |
| Eptinezumab |  | 2nd line | Recommended 1st |  | Level A |  |
| Atogepant |  |  |  |  | Level A |  |
| **Other** |  |  |  |  |  |  |
| Onabotulinumtoxin A (chronic migraine only) | Recommended | Recommended; assess over time | Recommended |  | Level A | Strong recommendation (with 3 or more preventive failures) |
| Occipital nerve injections | Appendix |  |  |  |  | Insufficient evidence; widely used |
| Pizotifen |  |  |  |  |  | Insufficient evidence; widely used |
| Frovatriptan (menstrual migraine) |  | Appendix | Appendix | Level A | Level A | Strong recommendation |
| Melatonin |  |  | No recommendation: Limited evidence |  |  |  |

\* British Association for the Study of Headache (BASH) guideline listed recommended preventives in the text then all preventive treatments with randomized controlled trial evidence in an appendix

\*\* American Academy of Neurology (AAN) and American Headache Society (AHS): Level A=established as effective; Level B=probably effective; Level C=possibly effective; Level U=inadequate or conflicting data; Other=possibly or probably ineffective

**References**

1. British Association for the Study of Headache (BASH). *National Headache Management System for Adults 2019*. http://www.bash.org.uk/guidelines/ (2019).

2. Collins, T. *Migraine Headache in Adults: BMJ Best Practice*. https://soundcloud.com/bmjpodcasts/migraine-with-prof-tim-collins? (2023).

3. Eigenbrodt, A. K. *et al.* Diagnosis and management of migraine in ten steps. *Nat Rev Neurol* **17**, 501–514 (2021).

4. Sacco, S. *et al.* European Headache Federation guideline on the use of monoclonal antibodies targeting the calcitonin gene related peptide pathway for migraine prevention – 2022 update. *The Journal of Headache and Pain 2022 23:1* **23**, 1–19 (2022).

5. Silberstein, S. D. *et al.* Evidence-based guideline update: Pharmacologic treatment for episodic migraine prevention in adults: Report of the Quality Standards Subcommittee of the American Academy of Neurology and the American Headache Society. *Neurology* **78**, 1337 (2012).

6. Silberstein, S. D. Preventive Migraine Treatment. *Continuum* **21**, 973–989 (2015).

7. Ailani, J., Burch, R. C. & Robbins, M. S. The American Headache Society Consensus Statement: Update on integrating new migraine treatments into clinical practice. *Headache: The Journal of Head and Face Pain* **61**, 1021–1039 (2021).

8. Charles, A. C., Digre, K. B., Goadsby, P. J., Robbins, M. S. & Hershey, A. Calcitonin gene-related peptide-targeting therapies are a first-line option for the prevention of migraine: An American Headache Society position statement update. *Headache: The Journal of Head and Face Pain* **64**, 333–341 (2024).

9. Scottish Intercollegiate Guidelines Network (SIGN). *Pharmacological Management of Migraine: A National Clinical Guideline (SIGN 155)*. www.nice.org.uk/ (2018).