VA/DoD clinical practice guideline for the management of headache.

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Department of Veterans Affairs (VA) | Department of Defense (DoD) | Veterans Health Administration (VHA)

Management of Headache Work Group. VA/DoD clinical practice guideline for the management of headache. Version 2.0. Washington (DC): Department of Veterans Affairs, Department of Defense; 2023 Sep. 255 p. [388 references]

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Overview

Guideline Objective

To provide an evidence-based framework for evaluating and managing care for individuals living with headache toward improving clinical outcomes

Patient Population

Patients who are living with headache who are eligible for care in the VA or DoD healthcare delivery systems, and those who receive care from community-based clinicians

Note: This guideline includes Veterans and active duty Service members as well as their dependents.

Recommendations

Recommendation Statements

A. Medication Overuse Headache Screening and Other Considerations

1. We suggest providers assess for and consider the following high-risk factors for medication overuse headache in patients with headache (in order of relative impact):

    - Headache frequency (greater than or equal to 7 days per month)
    - Migraine diagnosis
    - Medication use: frequent use of anxiolytics, analgesics (for any condition, including use of opioids or non-opioid analgesics for acute treatment of migraine), or sedative hypnotics
    - History of anxiety or depression, especially in combination with musculoskeletal complaints or gastrointestinal complaints
    - Physical inactivity
    - Sick leave of greater than 2 weeks in the last year
    - Self-reported whiplash
    - Smoking (tobacco use).

    (**Weak For; Not reviewed, Amended**)

    The Work Group's confidence in the quality of the evidence was **very low**.

B. Pharmacotherapy

a. Headache – Preventive

2. There is insufficient evidence to recommend for or against coenzyme Q10, feverfew, melatonin, omega-3, vitamin B2, or vitamin B6 for the prevention of headache. (**Neither For nor Against; Not reviewed, Amended**)

The Work Group's confidence in the quality of the evidence was **very low**.

3. There is insufficient evidence to recommend for or against fluoxetine or venlafaxine for the prevention of headache. (**Neither For nor Against; Reviewed, Not changed**)

   The Work Group's confidence in the quality of the evidence was **very low**.

b. Migraine – Preventive

4. We recommend candesartan or telmisartan for the prevention of episodic migraine. (**Strong For; Reviewed, New-replaced**)

   The Work Group's confidence in the quality of the evidence was **moderate**.

5. We recommend erenumab, fremanezumab, or galcanezumab for the prevention of episodic or chronic migraine. (**Strong For; Reviewed, New-replaced**)

   The Work Group's confidence in the quality of the evidence was **moderate**.

6. We suggest intravenous eptinezumab for the prevention of episodic or chronic migraine. (**Weak For; Reviewed, New-added**)

   The Work Group's confidence in the quality of the evidence was **high**.

7. We suggest lisinopril for the prevention of episodic migraine. (**Weak For; Reviewed, Not changed**)

   The Work Group's confidence in the quality of the evidence was **low**.

8. We suggest oral magnesium for the prevention of migraine. (**Weak For; Not reviewed, Not changed**)

   The Work Group's confidence in the quality of the evidence was **moderate**.

9. We suggest topiramate for the prevention of episodic and chronic migraine. (**Weak For; Reviewed, New-replaced**)

   The Work Group's confidence in the quality of the evidence was **moderate**.

10. We suggest propranolol for the prevention of migraine. (**Weak For; Reviewed, Not changed**)

    The Work Group's confidence in the quality of the evidence was **moderate**.

11. We suggest valproate for the prevention of episodic migraine. (**Weak For; Reviewed, New-replaced**)

    The Work Group's confidence in the quality of the evidence was **moderate**.

12. We suggest memantine for the prevention of episodic migraine. (**Weak For; Reviewed, New-added**)

    The Work Group's confidence in the quality of the evidence was **moderate**.

13. We suggest atogepant for the prevention of episodic migraine. (**Weak For; Reviewed, New-added**)

    The Work Group's confidence in the quality of the evidence was **moderate**.

14. We suggest onabotulinumtoxinA injection for the prevention of chronic migraine. (**Weak For; Reviewed, Not changed**)

    The Work Group's confidence in the quality of the evidence was **moderate**.

15. We suggest against abobotulinumtoxinA or onabotulinumtoxinA injection for the prevention of episodic migraine. (**Weak Against; Reviewed, Not changed**)

    The Work Group's confidence in the quality of the evidence was **low**.

16. There is insufficient evidence to recommend for or against rimegepant for the prevention of episodic migraine. (**Neither For nor Against | Reviewed, New-added**)

    The Work Group's confidence in the quality of the evidence was **moderate**.

17. We suggest against the use of gabapentin for the prevention of episodic migraine. (**Weak Against; Reviewed, New-replaced**)

    The Work Group's confidence in the quality of the evidence was **low**.

18. There is insufficient evidence to recommend for or against levetiracetam for the prevention of episodic migraine. (**Neither For nor Against; Reviewed, New-added**)

    The Work Group's confidence in the quality of the evidence was **very low**.

c. Migraine – Abortive

19. We recommend eletriptan, frovatriptan, rizatriptan, sumatriptan (oral or subcutaneous), the combination of sumatriptan and naproxen, or zolmitriptan (oral or intranasal) for the acute treatment of migraine. (**Strong For; Reviewed New-replaced**)

    The Work Group's confidence in the quality of the evidence was **moderate**.

20. We recommend aspirin/acetaminophen/caffeine for the acute treatment of migraine. (**Strong For; Reviewed, New-added**)

    The Work Group's confidence in the quality of the evidence was **high**.

21. We suggest acetaminophen, aspirin, ibuprofen, or naproxen for the acute treatment of migraine. (**Weak For; Reviewed, Amended**)

    The Work Group's confidence in the quality of the evidence was **low**.

22. We suggest rimegepant or ubrogepant for the acute treatment of migraine. (**Weak For; Reviewed, New-added**)

The Work Group's confidence in the quality of the evidence was **moderate**.

23. We suggest against intravenous ketamine for the acute treatment of migraine. (**Weak Against; Reviewed, Amended**)

    The Work Group's confidence in the quality of the evidence was **low**.

24. There is insufficient evidence to recommend for or against lasmiditan for the acute treatment of migraine. (**Neither For nor Against; Reviewed, New-added**)

    The Work Group's confidence in the quality of the evidence was **low**.

d. Tension-Type Headache – Preventive

25. We suggest amitriptyline for the prevention of chronic tension-type headache. (**Weak For; Reviewed, Not changed**)

    The Work Group's confidence in the quality of the evidence was **low**.

26. We suggest against botulinum/neurotoxin injection for the prevention of chronic tension-type headache. (**Weak Against; Reviewed, Not changed**)

    The Work Group's confidence in the quality of the evidence was **very low**.

e. Tension-Type Headache – Abortive

27. We suggest ibuprofen (400 mg) or acetaminophen (1,000 mg) for the acute treatment of tension-type headache. (**Weak For; Reviewed, Not changed**)

    The Work Group's confidence in the quality of the evidence was **very low**.

f. Cluster Headache – Preventive

28. We suggest galcanezumab for the prevention of episodic cluster headache. (**Weak For; Reviewed, Not changed**)

The Work Group's confidence in the quality of the evidence was **low**.

29. We suggest against galcanezumab for the prevention of chronic cluster headache. (**Weak Against; Reviewed, New-added**)

    The Work Group's confidence in the quality of the evidence was **low**.

30. There is insufficient evidence to recommend for or against verapamil for the prevention of episodic or chronic cluster headache. (**Neither For nor Against; Reviewed, New-added**)

    The Work Group's confidence in the quality of the evidence was **very low**.

g. Cluster Headache – Abortive

31. We suggest subcutaneous sumatriptan (6 mg) or intranasal zolmitriptan (10 mg) for the acute treatment of cluster headache. (**Weak For; Reviewed, New-replaced**)

    The Work Group's confidence in the quality of the evidence was **low**.

32. We suggest the use of normobaric oxygen therapy for the acute treatment of cluster headache. (**Weak For; Not reviewed, Amended**)

    The Work Group's confidence in the quality of the evidence was **very low**.

h. Medication Overuse Headache

33. There is insufficient evidence to recommend for or against the addition of any specific preventive agent or withdrawal strategy to guide the treatment of medication overuse headache. (**Neither For nor Against | Reviewed, New-replaced**)

    The Work Group's confidence in the quality of the evidence was **very low**.

C. Injections, Procedures, and Invasive Interventions

34. We suggest greater occipital nerve block for the acute treatment of migraine. (**Weak For; Reviewed, Not changed**)

    The Work Group's confidence in the quality of the evidence was **very low**.

35. There is insufficient evidence to recommend for or against greater occipital nerve block for the prevention of chronic migraine. (**Neither For nor Against; Reviewed, New-added**)

    The Work Group's confidence in the quality of the evidence was **low**.

36. There is insufficient evidence to recommend for or against supra orbital nerve block for acute treatment of migraine. (**Neither For nor Against; Reviewed, New-added**)

    The Work Group's confidence in the quality of the evidence was **very low**.

37. There is insufficient evidence to recommend for or against intravenous antiemetics (i.e., intravenous chlorpromazine, intravenous metoclopramide, intravenous prochlorperazine), intravenous magnesium, or intranasal lidocaine for the acute treatment of headache. (**Neither For nor Against; Reviewed, New-replaced**)

    The Work Group's confidence in the quality of the evidence was **low**.

38. There is insufficient evidence to recommend for or against pulsed radiofrequency procedure of the upper cervical nerves or sphenopalatine ganglion block for the treatment of chronic migraine. (**Neither For nor Against; Reviewed, New-replaced**)

    The Work Group's confidence in the quality of the evidence was **low**.

39. We suggest against an implantable sphenopalatine ganglion stimulator for the treatment of cluster headache. (**Weak Against; Reviewed, New-added**)

    The Work Group's confidence in the quality of the evidence was **very low**.

40. We suggest against patent foramen ovale closure for the treatment or prevention of migraine. (**Weak Against; Reviewed, New-added**)

    The Work Group's confidence in the quality of the evidence was **low**.

D. Non-pharmacologic Therapy

41. We suggest non-invasive vagus nerve stimulation for the acute treatment of episodic cluster headache. (**Weak For; Reviewed, Not changed**)

    The Work Group's confidence in the quality of the evidence was **low**.

42. We suggest physical therapy for the management of tension-type, migraine, or cervicogenic headache. (**Weak For; Reviewed, New-replaced**)

    The Work Group's confidence in the quality of the evidence was **low**.

43. We suggest aerobic exercise or progressive strength training for the prevention of tension-type and migraine headache. (**Weak For; Not reviewed, Amended**)

    The Work Group's confidence in the quality of the evidence was **low**.

44. There is insufficient evidence to recommend for or against the following behavioral interventions for the treatment and/or prevention of headache:

    - Biofeedback and smartphone application-based heartrate variability monitoring
    - Cognitive behavioral therapy
    - Mindfulness-based therapies
    - Progressive muscle relaxation

    (**Neither For nor Against; Reviewed, New-replaced**)

The Work Group's confidence in the quality of the evidence was **very low**.

45. There is insufficient evidence to recommend for or against acupuncture, dry needling, or yoga for the treatment and/or prevention of headache. (**Neither For nor Against; Reviewed, New-replaced**)

    The Work Group's confidence in the quality of the evidence was **very low**.

46. There is insufficient evidence to recommend for or against dietary trigger avoidance for the prevention of headache. (**Neither For nor Against; Not reviewed, Amended**)

    The Work Group's confidence in the quality of the evidence was **low**.

47. We suggest against immunoglobulin G antibody testing for dietary trigger avoidance for the prevention of headache. (**Weak Against; Not reviewed, Amended**)

    The Work Group's confidence in the quality of the evidence was **very low**.

48. There is insufficient evidence to recommend for or against any form of neuromodulation for the treatment and/or prevention of migraine:

    - Non-invasive vagus nerve stimulation (n-VNS)
    - Supraorbital, or external trigeminal, nerve (SON) stimulation
    - Remote electrical neurostimulation
    - External combined occipital and trigeminal neurostimulation
    - Repetitive transcranial magnetic stimulation (rTMS)
    - Transcranial direct current stimulation (tDCS)

    (**Neither For nor Against; Reviewed, New-replaced**)

    For external combined occipital and trigeminal neurostimulation system, SON stimulation, and tDCS, the Work Group's confidence in the quality of the evidence was **very low**. For n-VNS, remote electrical neurostimulation, and rTMS, the confidence in the quality of the evidence was **low**.

E. Comparative Effectiveness and Combination Therapies

49. There is insufficient evidence to recommend for or against choosing a specific treatment strategy for posttraumatic headache. (**Neither For nor Against; Reviewed, New-added**)

    The Work Group's confidence in the quality of the evidence was **very low**.

50. There is insufficient evidence to recommend for or against any specific medication over another for the acute treatment of migraine. (**Neither For nor Against; Reviewed, New-added**)

    The Work Group's confidence in the quality of the evidence was **very low**.

51. There is insufficient evidence to recommend for or against any specific medication over another for the prevention of migraine headache, tension headache, or cluster headache. (**Neither For nor Against; Reviewed, New-added**)

    The Work Group's confidence in the quality of the evidence was **very low**.

52. There is insufficient evidence to recommend for or against any specific combination of therapies for the prevention of headache. (**Neither For nor Against; Reviewed, New-replaced**)

    The Work Group's confidence in the quality of the evidence was **very low**.

Evidence Rating Scheme

Quality of Evidence and Definitions*

High quality: Further research is very unlikely to change our confidence in the estimate of effect

Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate

Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate

Very low quality: Any estimate of effect is very uncertain

***** Guyatt GH, Oxman AD, Vist GE, Kunz R, Falck-Ytter Y, Alonso-Coello P, Schünemann HJ, GRADE Working Group. GRADE: an emerging consensus on rating quality of evidence and strength of recommendations. BMJ. 2008 Apr 26;336(7650):924-6.

Recommendation Rating Scheme

The Work Group determined the relative strength of each recommendation (*Strong* or *Weak*). The strength of a recommendation is defined as the extent to which one can be confident that the desirable effects of an intervention outweigh its undesirable effects and is based on the Grading of Recommendations Assessment, Development and Evaluation (GRADE) framework (refer to the original guideline), which incorporates the four domains. A *Strong* recommendation generally indicates *High* or *Moderate* confidence in the quality of the available evidence, a clear difference in magnitude between the benefits and harms of an intervention, similar patient values and preferences, and understood influence of other implications (e.g., resource use, feasibility).

In some instances, insufficient evidence exists on which to base a recommendation for or against a particular therapy, preventive measure, or other intervention. For example, the systematic evidence review might have found little or no relevant evidence, inconclusive evidence, or conflicting evidence for the intervention. The manner in which this finding is expressed in the clinical practice guideline (CPG) might vary. In such instances, the Work Group might include among its set of recommendations a statement of insufficient evidence for an intervention that might be in common practice although it is unsupported by clinical evidence and particularly if other risks of continuing its use might exist (e.g., high opportunity cost, misallocation of resources). In other cases, the Work Group might decide to exclude this type of statement about an intervention. For example, the Work Group might remain silent where an absence of evidence occurs for a rarely used intervention. In other cases, an intervention might have a favorable balance of benefits and harms but might be a standard of care for which no recent evidence has been generated.

Using these elements, the Work Group determines the strength and direction of each recommendation and formulates the recommendation with the general corresponding text:

- **Strong For** (We recommend...)
- **Weak For** (We suggest...)

- **Neither For nor Against** (There is insufficient evidence to recommend for or against...)
- **Weak Against** (We suggest against...")
- **Strong Against** (We recommend against...)

That a recommendation's strength (i.e., *Strong* versus *Weak*) is distinct from its clinical importance (e.g., a *Weak* recommendation is evidence based and still important to clinical care) is important to note.

This CPG's use of GRADE reflects a more rigorous application of the methodology than previous iterations; the determination of the strength of the recommendation is more directly linked to the confidence in the quality of the evidence on outcomes that are critical to clinical decision making. The confidence in the quality of the evidence is assessed using an objective, systematic approach independent of the clinical topic of interest. Therefore, recommendations on topics for which designing and conducting rigorous studies might be inherently more difficult (e.g., randomized controlled trials) are typically supported by lower quality evidence and, in turn, *Weak* recommendations. Recommendations on topics for which rigorous studies can be designed and conducted might more often be *Strong* recommendations. Per GRADE, if the quality of evidence differs across the relevant critical outcomes, the lowest quality of evidence for any of the critical outcomes determines the overall quality of the evidence for a recommendation.

Recommendation Categories and Definitions

Recommendation categories were used to track how the previous CPG's recommendations could be reconciled. These categories and their corresponding definitions are similar to those used by the National Institute for Health and Care Excellence (NICE, England). These categories are based on whether the evidence supporting a recommendation was systematically reviewed, the degree to which the previous CPG's recommendation was modified, and whether a previous CPG's recommendation is relevant in the updated CPG.

Evidence Reviewed*	Recommendation Category*	Definition*
Reviewed	New-added	New recommendation
Reviewed	New-replaced	Recommendation from previous CPG was carried forward and revised

Reviewed	Not changed	Recommendation from previous CPG was carried forward but unchanged
Reviewed	Amended	Recommendation from previous CPG was carried forward with a nominal change
Reviewed	Deleted	Recommendation from previous CPG was deleted
Not reviewed	Not changed	Recommendation from previous CPG was carried forward but unchanged
Not reviewed	Amended	Recommendation from previous CPG was carried forward with a nominal change
Not reviewed	Deleted	Recommendation from previous CPG was deleted

***Adapted from:** The guidelines manual. London (UK): NICE; 2012 & Martinez Garcia L, et al. Updated recommendations: An assessment of NICE clinical guidelines. Implement Sci. 2014;9:72.

Related Content

Supporting Documents

- Guideline for Guidelines; 2022 Aug 26.

Implementation Tools

- Provider Summary; 2023 Sep.
- Pocket Card; 2023 Sep.
- Webinar Slides.
- The Original Guideline includes the following:
    - Module A: Evaluation and Treatment of Headache Algorithm (p. 28)

Patient Education

- Patient Summary; 2023 Sep.

Note: This patient information is intended to help patients better understand their health and their diagnosed disorders. Patients and their representatives should still consult with a licensed health care professional for evaluation of treatment options as well as answers to their personal medical questions.

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ECRI's Guideline Profiles are designed to provide information and assist decision-making. Variations in practice will inevitably, and appropriately, occur when clinicians take into account the needs and preferences of individual patients, available resources, and limitations unique to an institution or type of practice. Every healthcare professional using these Guideline Profiles is responsible for evaluating the appropriateness of applying them in a clinical setting.

TRUST Scorecard

Composition of Guideline Development Group (GDG)

Multidisciplinary GDG Members	**Yes**
Methodologist Involvement	**Yes**
Incorporation of Patient and Public Perspective	★★★★★

Systematic Review of Evidence

Literature Search	★★★★★
Study Selection	★★★★★
Evidence Synthesis	★★★★★

Foundations for Recommendations

Strength of Evidence Grade	★★★★★
Description of Benefits and Harms of Recommendations	★★★★★
Summary of Evidence Supporting Recommendations	★★★★★
Strength of Recommendations Rating	★★★★★
Clear Articulation of Recommendations	★★★★☆

Funding Source — **Yes**

Disclosure and Management of Financial Conflicts of Interests — ★★★★★

External Review — ★★★★☆

Updating — ★★★★★

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