

# Expert Perspectives on the Management of Stroke, Migraine, Dementia, and Cognitive Disorders in Indian Settings

**Keywords:** Ischemic Stroke; Nicergoline; Post-Stroke Rehabilitation; Migraine; Alzheimer's Disease; MCI.

## Abstract

**Objective:** To assess current clinical practice patterns among Indian clinicians in the diagnosis and management of neurological disorders, including stroke, migraine, dementia, and mild cognitive impairment (MCI), with a particular focus on nicergoline use, treatment preferences, rehabilitation strategies, diagnostic approaches, and clinician-reported treatment outcomes.

**Methods:** This cross-sectional, questionnaire-based survey was conducted among clinicians across India to assess clinical practice patterns in neurological disorders, with emphasis on nicergoline use, treatment preferences, rehabilitation strategies, and cognitive assessment. Data from both the main and extended studies were analysed using descriptive statistics.

**Results:** A total of 212 clinicians participated in the main survey. Of these, 92 clinicians additionally completed 15 questions constituting the extended survey. Ischemic stroke was reported as the most frequently encountered type of stroke in routine clinical practice by 74% of clinicians. Approximately 61% of respondents preferred prescribing nicergoline for 6–12 weeks following stroke, while nearly 70% favored a dosage of 30 mg twice daily. Nearly 69% identified the combined influence of genetic predisposition, peripheral triggers, and stress as the major contributors to migraine pathogenesis. Furthermore, 62% considered the Mini-Mental State Examination (MMSE) or other neuropsychological assessment tools essential for evaluating patients with Alzheimer's disease. Nearly 60% of clinicians reported that comprehensive post-stroke rehabilitation should include physical, speech, and cognitive rehabilitation in combination with pharmacological therapy, such as nicergoline. In the NICE Extended Study, 73% of clinicians identified alcohol as the major risk factor for young-onset dementia, while approximately 61% preferred donepezil as the first-line treatment for patients with MCI and dementia.

**Conclusion:** The findings demonstrate widespread use of nicergoline in stroke rehabilitation and vascular dementia, emphasize the importance of MMSE and other neuropsychological assessments for cognitive evaluation, identify major clinician-perceived risk factors for migraine and young-onset dementia, and indicate a preference for donepezil as first-line therapy for MCI and dementia.

## Introduction

Neurological disorders, including stroke, migraine, dementia, and mild cognitive impairment (MCI), are major contributors to disability and healthcare burden worldwide. In 2021, approximately 69.9 million people were living with ischemic stroke globally, while migraine affected nearly 1.1 billion individuals, accounting for approximately 14–15% of the world's population.[1,2] Dementia affected an estimated 56.9 million people worldwide in 2021, with projections indicating that this number will exceed 137 million by

## Open Access

## Research Article



## Journal of Neurology and Psychology

Manjula S<sup>1\*</sup> and Krishna Kumar M<sup>2</sup>

<sup>1</sup>Department of Medical Services, Micro Labs Limited, Bangalore, Karnataka, India

<sup>2</sup>Department of Medical Services, Micro Labs Limited, Bangalore, Karnataka, India.

### \*Address for Correspondence

Dr Manjula S, Department of Medical Services, Micro Labs Limited, Bangalore, India, E-mail Id: drmanjulas@gmail.com

**Submission:** July 30, 2026

**Accepted:** September 10, 2026

**Published:** September 14, 2026

**Copyright:** © 2026 Manjula S, et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

2050.[2] MCI affects approximately 15–20% of adults aged 65 years and older, placing a substantial burden on patients, caregivers, and healthcare systems.[2]

India bears a significant share of this neurological disease burden. Stroke remains the leading contributor to neurological disability, with an age-standardized prevalence of approximately 922 cases per 100,000 population.[3] Approximately 213.9 million Indians were living with migraine in 2019, making it one of the most common neurological disorders in the country.[3] The national prevalence of dementia among adults aged ≥60 years is 7.4%, corresponding to approximately 8.8 million affected individuals.[4] The growing prevalence of these disorders highlights the need for timely diagnosis, comprehensive rehabilitation, and effective pharmacological interventions to improve functional and cognitive outcomes.

Nicergoline is a semisynthetic ergoline derivative with vasodilatory, hemorheological, neuroprotective, antioxidant, anti-inflammatory, and cholinergic-enhancing properties. Through these complementary mechanisms, it improves cerebral blood flow, enhances neuronal metabolism, preserves neuronal integrity, and supports cognitive and functional recovery in conditions such as ischemic stroke, vascular dementia, Alzheimer's disease, MCI, and chronic cerebrovascular insufficiency.[5,6] Despite its long-standing clinical use, there is limited contemporary evidence describing usage, treatment preferences, rehabilitation strategies, and clinician perceptions regarding the use of nicergoline in routine neurological practice across India.

The present survey aimed to assess current clinical practice patterns among Indian clinicians in the diagnosis and management of neurological disorders, including stroke, migraine, dementia, and MCI, with particular emphasis on nicergoline usage, treatment preferences, rehabilitation strategies, diagnostic approaches, and clinician-reported treatment outcomes.

Methodology

A cross-sectional study was carried out among clinicians across India involved in the diagnosis and management of neurological disorders, including stroke, dementia, migraine, MCI, peripheral arterial disease, Parkinson’s disease, and post-stroke rehabilitation across various clinical settings in India from June 2025 to December 2025. The study was performed in accordance with Bangalore Ethics, an Independent Ethics Committee (ECR/355/Indt/KA/2022), which was recognized by the Indian Regulatory Authority, the Drug Controller General of India.

The NICE questionnaire was developed specifically for this clinician survey to capture practice patterns and treatment preferences related to neurological disorders and nicergoline use. The questionnaire comprised 37 structured multiple-choice questions. The instrument was reviewed for content relevance and clarity before use. As the questionnaire was designed as a descriptive clinical-practice survey rather than a psychometric assessment tool, formal reliability and psychometric validation were not performed.

This cross-sectional questionnaire-based survey was conducted among clinicians across India involved in the diagnosis and management of neurological disorders. Clinicians interested in participating were invited to complete the NICE (Nicergoline Efficacy and Tolerability Profile) questionnaire. A total of 212 clinicians participated in the main survey. Of these, 92 clinicians additionally completed 15 questions constituting the extended survey. Twenty-two questions were common to both components and were included in the main/combined analysis, whereas the 15 additional questions were analysed separately among the 92 extended-survey participants

A convenience sampling approach was used. Clinicians involved in the diagnosis and management of neurological disorders were identified based on their professional expertise and clinical experience and were invited to participate. Invitations were circulated across India in March 2025. Approximately 212 clinicians expressed willingness to participate. Written informed consent was obtained from each participant before completion of the questionnaire. Following confirmation of willingness to participate and completion of the consent process, questionnaire-based data collection was conducted from June 2025 to December 2025.

Statistical analysis

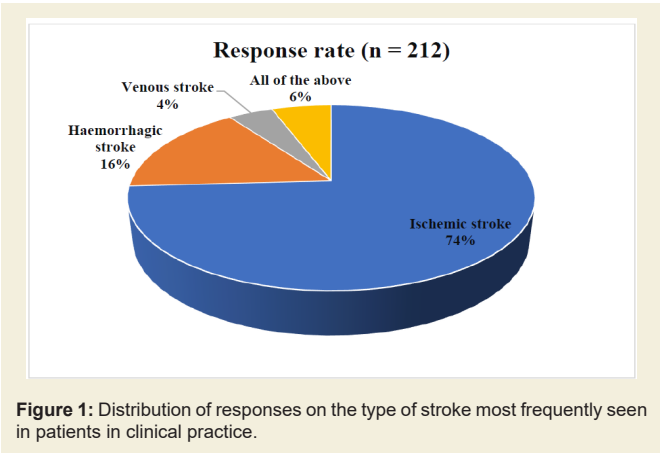
Given the descriptive and exploratory objective of the survey, the primary analysis consisted of descriptive statistics. Categorical variables were summarized using frequencies and percentages. Percentages were calculated using the number of valid responses to each question as the denominator. Missing, non-response and “not attempted/not applicable” responses, where applicable, were excluded from the denominator. No formal hypothesis testing was prespecified. Where appropriate and where sufficient data were available, exploratory subgroup analyses were performed according to clinician

characteristics. Confidence intervals for selected major proportions were additionally considered to provide an estimate of precision. All subgroup findings were interpreted descriptively.

Results

A total of 212 clinicians participated in the main survey. Of these, 92 clinicians additionally completed 15 questions constituting the extended survey. Ischemic stroke was reported as the most frequently encountered type of stroke in routine clinical practice by 74% of clinicians (Figure 1). Nearly 58% of clinicians reported that they would consider nicergoline as an adjunct to nimodipine in 11-25% of patients with acute subarachnoid hemorrhage to overcome vasospasm, while 63% of the clinicians reported using nicergoline in hypertensive and diabetic patients with multiple lacunar infarcts to reduce cerebral microvascular ischemia. Furthermore, 54% of the participants believed that untreated cerebral microvascular disease could result in increased stroke incidence, vascular dementia, and late-onset seizures. Approximately 61% of the participants preferred prescribing nicergoline for 6-12 weeks following stroke (Table 1).

Nearly 40% of clinicians considered postural hypotension, dizziness, and skin disorders as important adverse effects to monitor



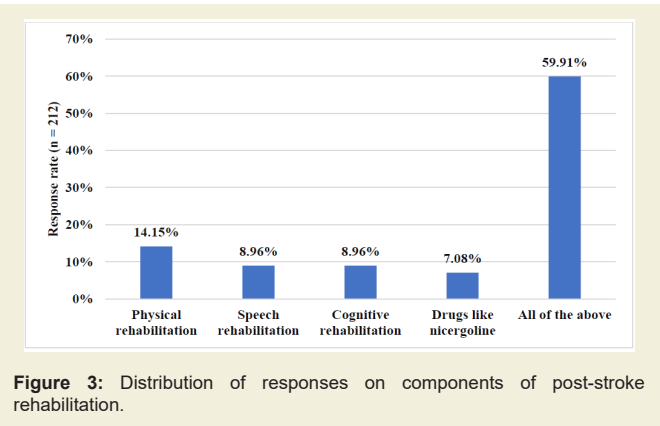
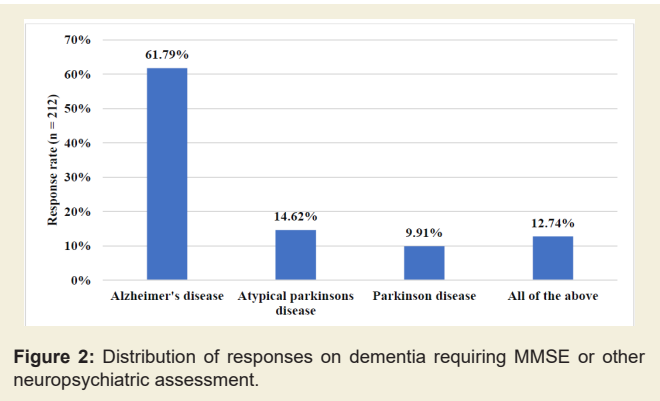
**Figure 1:** Distribution of responses on the type of stroke most frequently seen in patients in clinical practice.

**Table 1:** Distribution of responses on the preferred duration of nicergoline therapy following stroke.

| Duration (weeks) | Response rate (n = 212) |
|------------------|-------------------------|
| 1-3              | 5.66%                   |
| 3-6              | 33.02%                  |
| 6-12             | 60.85%                  |
| Not attempted    | 0.47%                   |

**Table 2:** Distribution of responses on important factors involved in migraine pathogenesis.

| Pathogenesis                    | Response rate (n = 212) |
|---------------------------------|-------------------------|
| Genetic predisposition          | 10.85%                  |
| Peripheral trigger              | 7.55%                   |
| Stress related to work and life | 11.79%                  |
| All of the above                | 68.87%                  |
| Not attempted                   | 0.94%                   |



in elderly patients receiving nicergoline. Nearly 47% of participants identified vasodilation as the principal mechanism underlying migraine pathogenesis when considering nicergoline as an adjunctive therapy. Additionally, around 69% recognized genetic predisposition, peripheral triggers, and stress as major contributors to migraine pathogenesis (Table 2).

Approximately 37% of clinicians reported prescribing nicergoline in 21-30% of patients with transformed migraine, while 47% indicated that 26-50% of their patients responded well to nicergoline treatment. Alzheimer's disease was identified as the most common type of dementia by 39% of clinicians, and 62% considered the MMSE or other neuropsychological assessment tools essential for the evaluation of patients with Alzheimer's disease (Figure 2). Furthermore, nearly 60% of clinicians reported that comprehensive post-stroke rehabilitation should include physical, speech, and cognitive rehabilitation in combination with pharmacological therapy, such as nicergoline (Figure 3).

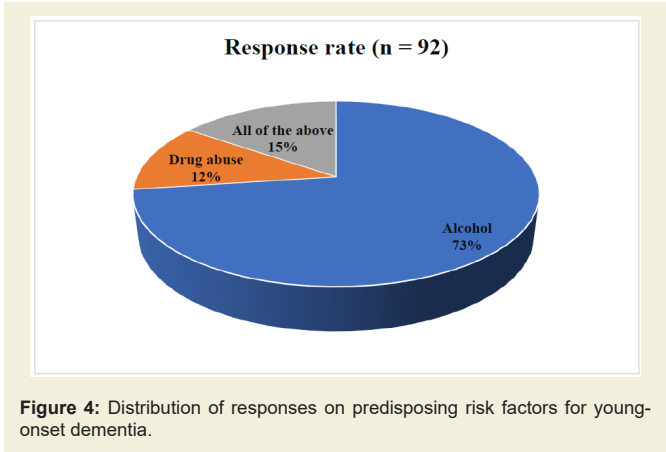
Nearly 58% of experts prescribed nicergoline in 11-20% of patients with MCI or dementia, while 48% identified improvement in cerebral microcirculation as its primary therapeutic mechanism. Half (50%) of the clinicians reported prescribing nicergoline to 11-20% of patients with vascular dementia. Approximately 70% of clinicians reported a preference for nicergoline 30 mg twice daily. (Table 3).

Approximately 43% of the participants reported prescribing nicergoline in 11-20% of patients with Raynaud's disease, and 51% described its effectiveness in Parkinson's disease-associated cognitive impairment as satisfactory. Nearly half (49.53%) prescribed nicergoline in 11-20% of patients with peripheral arterial disease. Most clinicians (86.32%) had not encountered adverse drug reactions associated with nicergoline. Approximately 42% rated treatment outcomes as showing moderate improvement and 35.85% reported marked improvement on the 5-point Global Improvement Scale.

Of the 92 clinicians who participated in the extended survey, 53% reported the highest incidence of stroke among patients aged 41-50 years. Around 51% estimated that 11-15% of patients presented with memory impairment or personality changes. Cognitive impairment was considered most prevalent among individuals aged 50-60 years by 38% of respondents. Approximately 51% identified Parkinson's disease as the neurodegenerative disorder most commonly associated with dementia. Alcohol was considered the major risk factor for young-onset dementia by 73% of clinicians (Figure 4).

About 50% of participants reported that 16–20% of patients were classified as having treatable dementia. Approximately 46% identified metabolic derangements, such as diabetes, as the principal mechanism underlying vascular dementia. Around 43% considered lack of awareness to be the major limitation of current dementia treatment, whereas 51% identified the cost of medications as the leading cause of poor medication adherence. Approximately 60% preferred donepezil as the first-line treatment for MCI and dementia (Table 4).

About 40% of participants identified duplex ultrasonography as the preferred diagnostic investigation for peripheral arterial disease,



| Table 3: Distribution of responses on the preferred nicergoline dosage in clinical practice. |                         |
|----------------------------------------------------------------------------------------------|-------------------------|
| Dose                                                                                         | Response rate (n = 212) |
| 30 mg OD                                                                                     | 19.34%                  |
| 30 mg BID                                                                                    | 69.81%                  |
| Both                                                                                         | 9.91%                   |
| Not attempted                                                                                | 0.94%                   |

| Table 4: Distribution of responses on the preferred first-line drug for patients with MCI/dementia. |                        |
|-----------------------------------------------------------------------------------------------------|------------------------|
| Drugs                                                                                               | Response rate (n = 92) |
| Rivastigmine                                                                                        | 17.39%                 |
| Donepezil                                                                                           | 60.87%                 |
| Combination of any of the above                                                                     | 21.74%                 |

while 47% favored mass education programmes to improve patient awareness. Most clinicians (65.22%) reported regularly monitoring patients for adverse effects, and 49% considered product quality the most important factor when selecting a drug brand.

Discussion

Ischemic stroke was the most frequently encountered type of stroke in routine clinical practice in the present survey. This observation aligns with the Global Burden of Disease (GBD) 2021 analysis, which reported that ischemic stroke accounts for 65.3% of all incident strokes worldwide, making it the predominant pathological subtype.[7] Likewise, Prust et al. reported that ischemic stroke remains the most common stroke subtype globally, with the greatest disease burden occurring in low- and middle-income countries.[8]

Most clinicians preferred prescribing nicergoline for 6-12 weeks following stroke. This practice is supported by previous clinical studies evaluating nicergoline in post-stroke patients. Brola et al. evaluated nicergoline in patients with ischemic stroke, administering intravenous nicergoline followed by oral nicergoline (30 mg/day) for 30 days, demonstrating its feasibility in routine clinical practice.<sup>9</sup> Furthermore, Kovalchuk evaluated nicergoline in 880 post-stroke patients with cognitive and psychoemotional disorders and reported improvements in cognitive function and emotional outcomes, supporting its role as an adjunct in post-stroke rehabilitation.[10]

In the migraine section, clinicians identified genetic predisposition, peripheral triggers and stress as important contributors to migraine pathogenesis. These findings represent clinician perceptions and are consistent with the multifactorial nature of migraine. However, responses to this survey question should not be interpreted as evidence of the efficacy or therapeutic role of nicergoline in migraine. Further clinical studies would be required to establish the efficacy and clinical positioning of nicergoline in this indication. Khan et al. highlighted that stress, metabolic disturbances, and peripheral stimuli contribute to migraine attacks in genetically susceptible individuals. [11] Similarly, Yeh et al. reported that both genetic and environmental factors play equally important roles in migraine pathogenesis and identified stress, sleep disturbances, fasting, hormonal changes, and sensory stimuli as common migraine triggers, particularly among genetically predisposed individuals.[12]

Regarding cognitive assessment, many clinicians considered the MMSE or similar neuropsychological tests essential for evaluating patients with Alzheimer’s disease. Current recommendations from the National Institute on Aging–Alzheimer’s Association (NIA-

AA) advocate objective cognitive assessment using standardized instruments such as the MMSE, Montreal Cognitive Assessment (MoCA), or equivalent validated tools to establish baseline cognitive impairment and monitor disease progression.[13]The updated Alzheimer’s Association clinical practice guideline recommends that validated cognitive assessment tools, including the MMSE, MoCA, should be used as part of the initial evaluation and longitudinal assessment of individuals with suspected Alzheimer’s disease and other dementias.[14]

More than half of the clinicians reported that comprehensive post-stroke rehabilitation should include physical, speech, and cognitive rehabilitation, together with pharmacological therapy such as nicergoline. This multidisciplinary approach is consistent with the National Institute for Health and Care Excellence (NICE) guideline, which recommends individualized rehabilitation delivered by specialist multidisciplinary teams, including physiotherapists, occupational therapists, speech and language therapists, psychologists, and physicians.[15] Similarly, the Veterans Affairs/Department of Defense (VA/DoD) guideline advocates early multidisciplinary rehabilitation, incorporating physical, speech, occupational, and cognitive therapies to optimize functional recovery following stroke. [16]

The majority of clinicians preferred prescribing nicergoline at a dose of 30 mg twice daily. Approximately 70% of clinicians reported a preference for nicergoline 30 mg twice daily. This finding reflects the dosing preference reported by participating clinicians and should not be interpreted as establishing a universal or contemporary recommended dose. Historical clinical trials have evaluated nicergoline 30 mg twice daily in selected populations, including patients with mild-to-moderate senile dementia and multi-infarct dementia. This finding is consistent with previous clinical studies. Nappi et al. administered nicergoline 30 mg twice daily for 12 months in a multicentre, double-blind, placebo-controlled trial involving patients with mild-to-moderate senile dementia.[17] Similarly, Herrmann et al. used the same dosage (30 mg twice daily) for 6 months in a multicentre, randomized, placebo-controlled trial of patients with multi-infarct dementia, supporting the widespread clinical use of this dosing regimen.[18]

In the present survey, many clinicians considered alcohol to be the major risk factor for young-onset dementia. This finding is consistent with the World Health Organization, which identifies heavy alcohol consumption as one of the leading modifiable risk factors for young-onset dementia, with alcohol-related brain damage and alcohol use disorders contributing substantially to dementia cases occurring before the age of 65 years.[19] Similarly, Schwarzwinger et al., in a nationwide cohort study involving more than one million patients with dementia, reported that alcohol use disorders were the strongest modifiable risk factor for early-onset dementia (<65 years). The study further demonstrated that alcohol use disorders were associated with

a more than threefold increased risk of dementia and were present in over half of early-onset dementia cases among men, underscoring the significant contribution of alcohol to the development of young-onset dementia.[20]

In the present survey, approximately 61% of clinicians reported donepezil as the preferred first-line treatment for patients with MCI and dementia. This finding is partly consistent with current evidence. Several clinical guidelines recommend donepezil as a first-line acetylcholinesterase inhibitor for patients with mild-to-moderate Alzheimer's disease. Similarly, the British Association for Psychopharmacology (BAP) recommends cholinesterase inhibitors, including donepezil, for the management of mild-to-moderate Alzheimer's disease. However, current evidence does not support the routine use of donepezil in MCI, as major guidelines and Cochrane reviews have concluded that there is insufficient evidence of sustained clinical benefit, and therefore it is not recommended as standard therapy for MCI. [19,21]

The present survey provides comprehensive insights into clinicians' practices regarding the management of stroke, migraine, dementia, cognitive impairment, and other neurological disorders across India. Inclusion of both the main and extended surveys enabled assessment of a broad range of clinical scenarios and prescribing patterns for nicergoline. However, the study has several limitations. Several limitations should be considered. First, the use of convenience sampling may have introduced selection and non-response bias, limiting the generalizability of the findings to the broader population of clinicians managing neurological disorders in India. Second, the study relied on self-reported clinician responses, which may be subject to recall, reporting and social-desirability biases. Third, the cross-sectional design provides a snapshot of reported practice patterns and does not permit assessment of temporal or causal relationships. Fourth, the questionnaire was developed specifically for this survey and was not designed as a formal psychometric instrument; therefore, formal reliability and construct validation were not performed. Fifth, clinician-reported treatment preferences were not verified against objective prescribing records or patient-level clinical data. Consequently, reported treatment preferences and perceived outcomes cannot be interpreted as evidence of treatment efficacy or patient benefit. Finally, given the funding and sponsor involvement in study conceptualization and questionnaire development, the possibility of sponsor-related influence cannot be completely excluded.

## Conclusion

This survey describes clinician-reported practice patterns and treatment preferences in the management of stroke, migraine, dementia, MCI and other neurological disorders in participating clinical settings across India. The findings provide insights into reported preferences regarding nicergoline use, post-stroke rehabilitation, cognitive assessment, treatment duration and dosing, and medication adherence. These findings should be interpreted as

descriptive clinician perceptions rather than evidence of comparative treatment efficacy or patient outcomes. Further prospective studies incorporating objective prescribing data and patient-level clinical outcomes are warranted.

## Acknowledgement

We would like to thank all the clinicians who participated in this study.

## Conflict of Interest

The authors are employees of Micro Labs Limited, which funded the study. Micro Labs Limited was involved in study conceptualization and questionnaire development. The authors recognize that sponsor involvement may introduce the potential for bias in study design or interpretation. The results are therefore presented descriptively and should be interpreted as clinician-reported practice patterns rather than evidence of comparative treatment efficacy.

## Funding

This study was funded by Micro Labs Limited. The sponsor had a role in study conceptualization and questionnaire development but did not influence the interpretation of results.

## References

1. Ding C, Wu Y, Chen X, Chen Y, Wu Z, Lin Z, et al. (2022) Global, regional, and national burden and attributable risk factors of neurological disorders: the Global Burden of Disease study 1990–2019. *Front Public Health* 10: 952161.
2. Cai Y, Mok VCT, Markus HS (2026) Vascular dementia: World Stroke Organization fact sheet 2026. *Int J Stroke* 21: 152-163.
3. India State-Level Disease Burden Initiative Neurological Disorders Collaborators (2021) The burden of neurological disorders across the states of India: The Global Burden of Disease Study 1990-2019. *Lancet Glob Health* 9: e1129-e1144.
4. Lee J, Meijer E, Langa KM, Ganguli M, Varghese M, Banerjee J, et al. (2023) Prevalence of dementia in India: national and state estimates from a nationwide study. *Alzheimers Dement* 19: 2898-2912.
5. Fioravanti M, Flicker L (2001) Nicergoline for dementia and other age associated forms of cognitive impairment. *Cochrane Database Syst Rev* 4: CD003159.
6. Winblad B, Fioravanti M, Dolezal T, Logina I, Milanov IG, Popescu DC, et al. (2008) Therapeutic use of nicergoline. *Clin Drug Investig* 28: 533-552.
7. GBD 2021 Stroke Risk Factor Collaborators (2024) Global, regional, and national burden of stroke and its risk factors, 1990-2021: a systematic analysis for the Global Burden of Disease Study 2021. *Lancet Neurol* 23: 973-1003.
8. Prust ML, Forman R, Ovbiagele B (2024) Addressing disparities in the global epidemiology of stroke. *Nat Rev Neurol* 20: 207-221.
9. Broła W (1997) Evaluation of treatment outcome after nicergoline and pentoxifylline in patients with ischemic stroke. *Przegl Lek* 54: 79-82.
10. Kovalchuk VV (2014) Treatment of cognitive and psychoemotional disorders in poststroke patients. *Zh Nevrol Psikhiatr Im S S Korsakova* 114: 81-86.
11. Khan J, Al Asoom LI, Al Sunni A, Rafique N, Latif R, Al Saif S, et al. (2021) Genetics, pathophysiology, diagnosis, treatment, management, and prevention of migraine. *Biomed Pharmacother* 139: 111557.
12. Yeh PK, An YC, Hung KS, Yang FC (2024) Influences of genetic and environmental factors on chronic migraine: a narrative review. *Curr Pain*

ISSN: 2332-3469

---

Headache Rep 28: 169-180.

13. Alzheimer's Association (2026) Criteria for diagnosis and staging of Alzheimer's disease [Internet]. Chicago (IL): Alzheimer's Association; [cited 2026 Jul 28].
14. Atri A, Dickerson BC, Clevenger C, Karlawish J, Knopman D, Lin PJ, et al. (2024) Alzheimer's Association clinical practice guideline for the diagnostic evaluation, testing, counseling, and disclosure of suspected Alzheimer's disease and related disorders (DETeCD-ADRD): executive summary of recommendations for primary care. *Alzheimers Dement* 20: 6600-6628.
15. National Institute for Health and Care Excellence (NICE) (2023) *Stroke rehabilitation in adults* [Internet]. London: National Institute for Health and Care Excellence (NICE); 2023 [cited 2026 Jul 28]. (National Institute for Health and Care Excellence: Clinical Guidelines).
16. Bates B, Choi JY, Duncan PW, Glasberg JJ, Graham GD, Katz RC, et al. (2005) Veterans Affairs/Department of Defense Clinical Practice Guideline for the Management of Adult Stroke Rehabilitation Care: executive summary. *Stroke* 36: 2049-2056.
17. Nappi G, Bono G, Merlo P, Borromei A, Caltagirone C, Lomeo C, et al. (1997) Long-term nicergoline treatment of mild to moderate senile dementia: results of a multicentre, double-blind, placebo-controlled study. *Clin Drug Investig* 13: 308-316.
18. Herrmann WM, Stephan K, Gaede K, Apeceche M (1997) A multicenter randomized double-blind study on the efficacy and safety of nicergoline in patients with multi-infarct dementia. *Dement Geriatr Cogn Disord* 8: 9-17.
19. World Health Organization (2026) New WHO guidelines: up to 45% of dementia risk could be prevented or delayed [Internet]. Geneva: World Health Organization; 2026 [cited 2026 Jul 28].
20. Schwarzing M, Pollock BG, Hasan OSM, Dufouil C, QalyDays Study Group (2018) Contribution of alcohol use disorders to the burden of dementia in France, 2008-13: a nationwide retrospective cohort study. *Lancet Public Health* 3: e124-e132.
21. O'Brien JT, Holmes C, Jones M, Jones R, Livingston G, McKeith I, et al. (2017) Clinical practice with anti-dementia drugs: a revised (third) consensus statement from the British Association for Psychopharmacology. *J Psychopharmacol* 31: 147-168.