



Complete Summary

GUIDELINE TITLE

Practice parameters for the nonpharmacologic treatment of chronic primary insomnia in the elderly.

BIBLIOGRAPHIC SOURCE(S)

University of Texas, School of Nursing, Family Nurse Practitioner Program. Practice parameters for the nonpharmacologic treatment of chronic primary insomnia in the elderly. Austin (TX): University of Texas, School of Nursing; 2005 May 9.

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE
METHODOLOGY - including Rating Scheme and Cost Analysis
RECOMMENDATIONS
EVIDENCE SUPPORTING THE RECOMMENDATIONS
BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS
CONTRAINDICATIONS
QUALIFYING STATEMENTS
IMPLEMENTATION OF THE GUIDELINE
INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES
IDENTIFYING INFORMATION AND AVAILABILITY
DISCLAIMER

SCOPE

DISEASE/CONDITION(S)

Chronic primary insomnia

Note: Chronic primary insomnia is defined as difficulty initiating or maintaining sleep, or non-restorative sleep occurring an average of three or more nights per week for more than one month without a secondary cause.

GUIDELINE CATEGORY

Assessment of Therapeutic Effectiveness
Management
Treatment

CLINICAL SPECIALTY

Family Practice
Geriatrics
Internal Medicine
Nursing
Psychiatry
Sleep Medicine

INTENDED USERS

Advanced Practice Nurses
Health Care Providers
Nurses
Physician Assistants
Physicians
Psychologists/Non-physician Behavioral Health Clinicians

GUIDELINE OBJECTIVE(S)

To provide health care providers with evidence-based practice guidelines regarding the nonpharmacologic treatment of chronic primary insomnia

TARGET POPULATION

Male and female active or institutionalized elderly ages 65 years and up

INTERVENTIONS AND PRACTICES CONSIDERED

Nonpharmacological Therapy

1. Stimulus control
2. Sleep hygiene education
3. Sleep restriction
4. Paradoxical intention
5. Progressive muscle relaxation therapy
6. Biofeedback (electromyography, electroencephalography)
7. Cognitive behavioral therapy

Note: Tai chi, bright light exposure, and yoga are presented as options but are not recommended due to insufficient evidence.

General Management Principles

1. Follow-up
2. Referral

MAJOR OUTCOMES CONSIDERED

- Quality of life
- Sleep patterns

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The literature was searched through PubMed, Medline, Medscape, Google, CINAHL, Cochrane Review 2005, and medical references.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Levels of Evidence

Level I (Grade A): Randomized well-designed trials with low-alpha and low-beta errors

Level II (Grade B): Randomized trials with high-beta errors

Level III (Grade C): Nonrandomized controlled or concurrent cohort studies

Level IV (Grade C): Nonrandomized historical cohort studies

Level V (Grade C): Case series

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

A group of three family nurse practitioner students at the University of Texas at Austin conducted a search and used systematic review, review, and review of meta-analysis to analyze the evidence.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus
Informal Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Three University of Texas at Austin (UT Austin) family nurse practitioner students developed a draft based on the 1999 American Academy of Sleep Medicine (AASM) Guideline.

The developers considered low patient cost, natural therapy, and patient preference when formulating the recommendations.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Levels of Recommendation

Standard: This is a generally accepted patient-care strategy which reflects a high degree of clinical certainty. The term standard generally implies the use of Level I evidence, which directly addresses the clinical issue, or overwhelming Level II evidence.

Guideline: This is a patient-care strategy that reflects a moderate degree of clinical certainty. The term guideline implies the use of Level II evidence of a consensus of Level III evidence.

Option: This is a patient-care strategy that reflects uncertain clinical use. The term option implies either inconclusive or conflicting evidence of conflicting expert opinion.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The draft was submitted to University of Texas, Austin nursing faculty and expert reviewers for consideration, and revisions were made from their recommendations.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Levels of evidence (I-V) and levels of recommendation (standard, guideline, and option) are defined at the end of the "Major Recommendations" field.

1. **Stimulus control is effective therapy in the treatment of chronic insomnia. (Standard)**

Recommended by Level II evidence, and is a Grade B recommendation.

This intervention focuses on helping the patient re-associate the bed and bedroom with relaxing cues and sleep, instead of on arousal. Treatment consists of behavioral instructions of a) using the bed and bedroom for sleep and sex only, b) getting into bed only when feeling sleepy, c) getting out of bed when one is unable to fall asleep after 20 minutes, engaging in relaxing activity until drowsy, and then returning to bed, d) getting out of bed at the same time every morning, and e) avoiding naps. For the elderly, naps should be limited to 30 minutes in the early afternoon.

2. **Sleep Hygiene Education (Option)**

Insufficient evidence was available for Sleep Hygiene Education to be recommended as a single therapy; however, it is effective when used in combination with other nonpharmacological therapies.

Sleep hygiene is typically added to other established beneficial treatments in order to be effective. This type of intervention is an educational approach designed to teach patients healthy behavioral habits to promote enhanced sleep.

Therapy includes suggestions such as:

- Regular exercise (not within 3-4 hours of bedtime)
- Avoid sleeping in after a poor night of sleep
- Avoid watching the clock
- Avoid excessive liquids or heavy evening meals
- Avoid tobacco, stimulants, caffeine, alcohol 4-6 hours before bed
- Avoid poor sleeping environments
- Avoid stimulating late-night activities, and eliminate bedroom clocks
- Vigorous exercise enhances sleep quality, unless it is performed 2-3 hours before bedtime.
- Make bedroom comfortable, dark, and quiet; sleep with earplugs or a mask if necessary.
- Avoid unpleasant tasks right before bedtime; read or think about pleasant thoughts before trying to sleep.

- In the elderly, low-impact activities such as board games and gentle stretching have been shown to improve sleep quality and daytime performance.
- All medications need to be reviewed for their effects related to sleep.

3. Sleep restriction is effective therapy in the treatment of chronic insomnia. (Option)

Recommended by Level II, III, and V evidence, and is a Grade B-C recommendation.

Involves re-associating the bed with sleep alone in order to increase sleep efficiency (% sleep) and sleep quality and decrease frustration with attempts to fall asleep. Treatment geared toward decreasing the amount of time in bed to only sleep time. Includes instructing patients to maintain a sleep log and determine average total sleep time. Patients are given a "sleep prescription" by a health care provider and are followed closely with weekly visits to evaluate sleep efficiency (% sleep). Their sleep prescription is adjusted up or down based on these visits. A sleep prescription should never be less than 5 hours.

4. Paradoxical intention is effective therapy in the treatment of chronic insomnia. (Guideline)

Recommended by Level II and III evidence, and is a Grade B-C recommendation.

Paradoxical intention involves advising a patient to remain awake in order to decrease any performance anxiety that could interfere with the ability to fall asleep. Patients confront fears of sleeplessness by remaining awake for as long as they can. Leads to increased sleep pattern satisfaction with chronic insomnia patients.

5. Progressive muscle relaxation is effective therapy in the treatment of chronic insomnia. (Guideline)

Recommended by Level II and III evidence, and is a Grade B-C recommendation.

Progressive muscle relaxation involves alternating contraction and relaxation of muscle groups throughout the body. Intended to produce relaxation and inhibit anxiety-associated arousal that could inhibit sleep. Useful for patients who have increased levels of arousal at night and during the day.

Two types of relaxation therapies are used for insomnia. The primary focus is to reduce arousal to allow for sleep initiation or to reduce sleep latency. Progressive muscle relaxation therapy focuses on physiological arousal, and other types focus on psychological arousal (meditation).

6. Biofeedback (electromyography, electroencephalography) (Guideline)

Recommended by Level II and III evidence, and is a Grade B-C recommendation.

Biofeedback involves the "use of devices that amplify physiological processes (e.g., blood pressure, muscle activity) that are ordinarily difficult to perceive without some type of amplification. Participants are typically guided through relaxation and imagery exercises and instructed to alter their physiological processes using as a guide the provided biofeedback (typically visual or auditory)."

7. Cognitive Behavioral Therapy (CBT) (Guideline)

Recommended by Level II and III evidence, and is a Grade B-C recommendation.

Also termed restructuring, this attempts to identify maladaptive and distorted cognitions that are common among those with insomnia and replace these with more adaptive beliefs and attitudes. This form of therapy seeks to alter faulty beliefs and attitudes about sleep and uses multiple patient-specific techniques. Examples include decatastrophizing, reappraisal, and attention shifting. Objective of this form of therapy is to diminish the cycle of insomnia, emotional stress, dysfunctional cognitions, and further sleep disturbances.

8. Tai Chi (Option)

There are no current recommendations for tai chi related to insufficient evidence supporting its use (Option).

Tai chi is a traditional Chinese low- to moderate-intensity self-paced health promoting exercise that incorporates a meditation component accompanying the rhythmical movements.

9. Bright Light Exposure (Option)

There are no current recommendations for bright light therapy related to insufficient evidence supporting its use (Option).

In the elderly population, exposure to bright outdoor sunlight (preferably in the late afternoon or early evening) can improve alertness, motivation, sleep quality, and mood.

10. Yoga (Option)

Yoga consists of physical exercises, breathing techniques, postures, and meditation for the purpose of improving health and well-being.

There is little research supporting the use of yoga for chronic insomnia in the elderly.

Definitions:

Levels of Evidence

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Level V (Grade C): Case series

Levels of Recommendation

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CLINICAL ALGORITHM(S)

A clinical algorithm is provided in the original guideline document for the nonpharmacologic management of chronic primary insomnia in the elderly.

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence is identified and graded for selected recommendations (see "Major Recommendations" field).

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

This guideline will help clinicians manage insomnia of elderly patients using non-pharmacological treatments.

POTENTIAL HARMS

- False reassurance
- No relief of insomnia

CONTRAINDICATIONS

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These interventions should not be used on clients unable to give informed consent for therapy (e.g., mentally incompetent to participate in therapy).

QUALIFYING STATEMENTS

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Few randomized, double blind studies have been completed on the non-pharmacological treatment of insomnia. However, it is possible to draw some conclusions based on the evidence that is available.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Clinical Algorithm

For information about [availability](#), see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

American Academy of Sleep Medicine Report, Standards of Practice Committee of
the American Academy of Sleep Medicine, Practice Parameters for the
Nonpharmacologic Treatment of Chronic Insomnia, 1999.

Chesson, A.L., Anderson, W.M., Littner, M., Davila, D., Hartse, K., Johnson, S.,
Wise, M., & Rafecas, J. (1999). Practice parameters for the nonpharmacologic
treatment of chronic insomnia. *Sleep*, 22(8), 1-5.

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GUIDELINE DEVELOPER(S)

University of Texas at Austin School of Nursing, Family Nurse Practitioner Program
- Academic Institution

SOURCE(S) OF FUNDING

University of Texas at Austin, School of Nursing, Family Nurse Practitioner
Program

GUIDELINE COMMITTEE

Practice Guidelines Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: None available

Print copies: Available from the University of Texas at Austin, School of Nursing.
1700 Red River, Austin, Texas, 78701-1499

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on July 28, 2005. The information was verified by the guideline developer on August 12, 2005.

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