Complete Summary

GUIDELINE TITLE

Neurogenic bowel management in adults with spinal cord injury.

BIBLIOGRAPHIC SOURCE(S)

Neurogenic bowel management in adults with spinal cord injury. Washington (DC): Paralyzed Veterans of America; 1998. 39 p. [139 references]

GUIDELINE STATUS

This is the current release of the guideline.

According to the guideline developer, this guideline is still considered to be current as of January 2005, based on a review of literature published since the original guideline publication.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Neurogenic bowel

GUIDELINE CATEGORY

Evaluation
Management

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Physical Medicine and Rehabilitation

INTENDED USERS

Health Care Providers
Patients
Physicians

GUIDELINE OBJECTIVE(S)

To improve management of neurogenic bowel, thereby promoting physical/functional and psychosocial quality of life in individuals with neurogenic bowel. The specific aims are to:

- Encourage clinicians in conjunction with the individual with SCI, to assess physical and psychosocial health outcomes over the continuum of care and to modify management programs.
- Describe options to maximize independence in bowel management.
- Identify risk factors for negative outcomes.
- Critically review and synthesize the scientific literature on neurogenic bowel assessment and management, short- and long-term outcomes, and effects on gastrointestinal function.
- Identify gaps in the scientific knowledge on neurogenic bowel management and outcomes.

TARGET POPULATION

Individuals with spinal cord injury (SCI)

INTERVENTIONS AND PRACTICES CONSIDERED

1. Assessment of bowel function (i.e., patient history and physical examination)
2. Management strategies for designing a bowel program to provide predictable and effective elimination
3. Management strategies for complications of neurogenic bowel (i.e., diet, activity, medication, biofeedback, colostomy or ileostomy)
4. Structured and comprehensive education programs

MAJOR OUTCOMES CONSIDERED

1. Bowel function.
2. Quality of life (i.e., independence, sense of self-control).
3. Patient satisfaction.

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

An initial search of the MEDLINE database from 1966 to 1997 was conducted, the main issues associated with neurogenic bowel were identified, and the volume of literature available on the subject was estimated. A limited number of selected overviews and review articles was retrieved and used to identify relevant topics. The main areas of interest were pathophysiology, management, prophylaxis, treatment of complications, epidemiology, and economic issues related to neurogenic bowel.

Data extraction forms were developed to standardize the collection of data used for evaluation. This form included sections on study design; study population; demographics; inclusion and exclusion criteria; intervention, management, and prophylactic techniques: methods used to measure bowel function (if applicable); techniques for statistical analysis (if any); results; and conclusions. The forms were pilot-tested by 5 abstractors who evaluated a sample of 10 articles from the initial searches. The results of this pilot-test were used to revise the extraction form.

The primary search strategy was identified during a conference call to explicate the guideline topic, identify the intended audience, and establish inclusion and exclusion criteria for the literature searches. The initial focus of the articles-traumatic or nonprogressive etiologies of spinal cord dysfunction-was broadened to include articles on nontraumatic SCI because many authors grouped both traumatic and nontraumatic SCI together in samples. Articles on progressive and congenital spinal cord disorders and animal studies were excluded. Initially, the literature search included children and adults, but was subsequently narrowed to concentrate on adults of all ages with SCI. Consequently, articles discussing neurogenic bowel in pediatric populations were excluded from further consideration. Initially all articles written in English, French, and German were included; unanticipated difficulties later limited articles to English only. Case series, case studies, crossover studies, and "n-of-one" studies were included because the literature is relatively lacking in nonobservational studies. Review articles and articles examining functional outcomes for individuals with SCI were included if bowel management or neurogenic bowel was the focus of discussion.

Appropriate key words and Index Medicus subheadings (MeSH) were identified during the topic explication process and were used to search the MEDLINE database (1966-97) and the CINAHL nursing and allied health database (1982-97). For related nonclinical topics, such as quality of life and individual satisfaction, literature searches were conducted using the PsychLit database (1974-present). Whenever possible, "exploded" MeSH subheadings were used, allowing the capture of more relevant literature than would be discovered using text word searches. Second-level searches were conducted using the major and minor MeSH subheadings retrieved from relevant articles.

The data extraction forms were used to compile information from the approximately 200 articles found in the primary and secondary searches. Extracted information was compiled into evidence tables.

NUMBER OF SOURCE DOCUMENTS

Approximately 200 source documents were found in the primary and secondary literature searches.

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

Hierarchy of the Levels of Scientific Evidence:

I. Large randomized trials with clear-cut results (and low risk of error).
II. Small randomized trials with uncertain results (and moderate to high risk of error).
III. Nonrandomized trials with concurrent or contemporaneous controls.
IV. Nonrandomized trials with historical controls.
V. Case series with no controls.

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Extracted information was compiled into evidence tables according to subject area, including adjunctive therapies, biofeedback and behavioral therapy, comparisons of bowel management programs, complications, dietary intake and nutrition, educational interventions, prokinetic agents, quality of life, oral laxatives and rectal stimulants, and surgical interventions. Additional tables were created for epidemiology, economic issues, physiology (normal and pathophysiology), as well as for review articles of neurogenic bowel management and related topics, (such as pulsed irrigation enhanced evacuation, functional electrical stimulation, and the bowel management protocols of various rehabilitation institutions).

The methodologists employed the hierarchy of the levels of scientific evidence first discussed by Sackett (1989) and later enhanced by Cook et al. (1992) and the U.S. Preventive Health Services Task Force (1996).

Each study was evaluated for internal and external validity.

Each of the guideline recommendations was classified, according to the level of scientific evidence used in the development of the recommendation.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The guideline development process adopted by the Spinal Cord Medicine Consortium consists of 12 steps, leading to panel consensus and organizational endorsement. After the steering committee chooses a topic, the group selects a panel of experts who have conducted independent scientific investigations, published in the field, and demonstrated their leadership in the topic area. Following a detailed explication of the topic by select steering committee and panel members, consultant methodologists review the international literature, grade and rank the quality of the research studies, prepare evidence tables, and conduct statistical meta-analyses and other specialized studies, as warranted. The panel chair then assigns specific sections of the topic to individual panel members, based on their area of expertise, and writing begins on each component. The panel members draw heavily from the references and other materials furnished by the methodological support group.

When the panel members have completed their sections, a draft guideline document is generated. The Clinical Practice Guideline (CPG) panel incorporates new literature citations and other evidence-based information not previously available. After panel members have reviewed all the sections and chapters, some parts are rewritten to ensure that the document is complete and accurate. Then, each guideline recommendation is discussed and voted on to determine the level of consensus among panel members.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Categories of the Strength of Evidence Associated with the Recommendation:

A. The recommendation is supported by scientific evidence from properly designed and implemented controlled trials providing statistical results that consistently support the guidelines statement
B. The recommendation is supported by scientific evidence from properly designed and implemented clinical series that support the guidelines statement
C. The recommendation is supported by 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

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

After legal analysis, by legal consultants, the draft CPG document is reviewed by clinical experts from each of the consortium organizations and by other select experts and consumers. Forty-one expert reviewers are acknowledged in the document. The review comments are assembled, analyzed, and entered into a database by the PVA Consortium Coordinating Office staff and incorporated into the document. Following a second legal review, the CPG document is distributed to all consortium organization governing boards. Final technical details are negotiated among the panel chair, members of the organizations' boards, and expert panelists. If substantive changes are required, the draft receives a final legal review.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Assessment of Impairment and Disability

1. **A systematic, comprehensive evaluation of bowel function, impairment, and possible problems should be completed at the onset of SCI and at least annually throughout the continuum of care.**

   (Scientific evidence-none; grade of recommendation-expert consensus; strength of panel opinion-strong).

2. **The patient history should include the following elements**:
   - Premorbid gastrointestinal function and medical conditions.
   - Current bowel program, including patient satisfaction.
   - Current symptoms, including abdominal distention, respiratory compromise, early satiety, nausea, evacuation difficulty, unplanned evacuations, rectal bleeding, diarrhea, constipation, and pain.
   - Defecation or bowel care (assisted defecation procedure) frequency, and duration and characteristics of stool.
   - Medication use and potential effect on bowel program.

   (Scientific evidence-three level V studies for assessment of symptoms, otherwise none; grade of recommendation-C/expert consensus; strength of panel opinion-strong).

3. **A physical examination should be done at the onset of SCI and annually thereafter. The examination should include**:
   - Complete abdominal assessment, including palpation along the course of the colon.
   - Rectal examination.
   - Assessment of anal sphincter tone.
   - Elicitation of anocutaneous and bulbocavernosus reflexes to determine if the patient has UMN or LMN bowel.
   - Stool testing for occult blood beginning at age 50.

(Scientific evidence-none, clinical practice guidelines for colorectal cancer screening; grade of recommendation-C/expert consensus; strength of panel opinion-strong[onset], moderate [annual]).

Assessment of Function (Disability)

4. **An assessment of knowledge, cognition, function, and performance should be conducted to determine the ability of the individual to complete bowel care or to direct a caregiver to complete the procedure safely and effectively. The assessment should include the following elements**:
    - Ability to learn.
    - Ability to direct others.
    - Sitting tolerance and angle.
    - Sitting balance.
    - Upper extremity strength and proprioception.
    - Hand and arm function.
    - Spasticity.
    - Transfer skills.
    - Actual and potential risks to skin.
    - Anthropometric characteristics.
    - Home accessibility and equipment needs.

    (Scientific evidence-V; grade of recommendation-C; Strength of panel opinion-strong).

Designing A Bowel Program

5. **The bowel program should provide predictable and effective elimination and reduce evacuation problems and gastrointestinal complaints. Bowel programs should be revised as needed throughout the continuum of care.**

    (Scientific evidence-two level V studies, one review article, and one clinical textbook; grade of recommendation C/expert consensus; strength of panel opinion-strong).

6. **Within established parameters of safety and effectiveness, the design of the bowel program should take into account attendant care, personal goals, life schedules, role obligations of the individual, and self-rated quality of life.**

    (Scientific evidence-V; grade of recommendation-C; strength of panel opinion-strong).

7. **Bowel programs should be initiated during acute care and continued throughout life, unless full recovery of bowel function returns. Differences in bowel programs for reflexic and areflexic bowels include type of rectal stimulant, consistency of stool, and frequency of bowel care. To establish a bowel program**:
    - Encourage appropriate fluids, diet, and activity.

- Choose an appropriate rectal stimulant.
- Provide rectal stimulation initially to trigger defecation daily.
- Select optimal scheduling and positioning.
- Select appropriate assistive techniques.
- Evaluate medications that promote or inhibit bowel function.

(Scientific evidence-none, clinical textbooks and nursing procedure manuals; grade of recommendation-expert consensus; strength of panel opinion-strong).

8. **A consistent schedule for defecation should be established based on factors that influence elimination, preinjury patterns of elimination, and anticipated life demands.**

   (Scientific evidence-none; grade of recommendation-expert consensus; strength of panel opinion-strong).

9. **Mechanical and/or chemical rectal stimulation should be prescribed to predictably and effectively evacuate stool.**

   (Mechanical: Scientific evidence-none; grade of recommendation-expert consensus; strength of panel opinion-strong. Chemical: Scientific evidence-two level III studies and one level V study; grade of recommendation-C; strength of panel opinion-strong).

10. **The use of assistive techniques should be individualized and their effectiveness in aiding evacuation should be evaluated. Push-ups, abdominal massage, Valsalva maneuver, deep breathing, ingestion of warm fluids, and a seated or forward-leaning position are some of the techniques used to aid in bowel emptying.**

    (Scientific evidence-none; grade of recommendation-expert consensus; strength of panel opinion-moderate).

Nutrition

11. **Individuals with SCI should not be placed uniformly on high fiber diets. A diet history should be taken to determine the individual's usual fiber intake. The effects of current fiber intake on consistency of stool and frequency of evacuation should be evaluated. A diet containing no less than 15 grams of fiber daily is needed initially. Increases in fiber intake should be done gradually, from a wide variety of sources. Symptoms of intolerance should be monitored, and reductions in fiber are recommended, if they occur.**

    (Scientific evidence-V; grade of recommendation-C; strength of panel opinion-strong).

12. **The amount of fluid needed to promote optimal stool consistency must be balanced with the amount needed for bladder management. In general, fluid intake should be approximately 500 ml/day greater**

than the standard guidelines used to estimate the needs of the general public (National Research Council, 1989). Standard guidelines indicate that adult fluid needs can be estimated by either of the following formulas:

1 ml fluid/Kcal of energy needs + 500 ml/day

OR

40 ml/kg body weight + 500 ml/day

(Scientific evidence-none; grade of recommendation-expert consensus; strength of panel opinion-moderate).

Managing The Neurogenic Bowel At Home Or In The Community

13. **Appropriate adaptive equipment for bowel care should be prescribed based on the individual's functional status and discharge environment.**

    (Scientific evidence-one level V study for bowel care/shower chair, otherwise none; grade of recommendation-C/expert consensus; strength of panel opinion-strong).

14. **Careful measures should be taken to avoid pressure ulcers and falls related to the use of bowel care equipment.**

    (Scientific evidence-one level V study; grade of recommendation-C/expert consensus; strength of panel opinion-strong).

15. **Adequate social and emotional support should be available to help individuals manage actual or potential disabilities and handicaps associated with neurogenic bowel.**

    (Scientific evidence-none; grade of recommendation-expert consensus; strength of panel opinion-strong).

16. **All aspects of the bowel management program should be designed to be easily replicated in the individual's home and community setting.**

    (Scientific evidence-none; grade of recommendation-expert consensus; strength of panel opinion-strong).

Monitoring Program Effectiveness

17. **The following variables should be monitored during and documented after every bowel care procedure during hospitalization or when developing or revising a bowel program in any community setting**:
    - Date and time of day.
    - Time from rectal stimulation until defecation is completed.
    - Total time for completion of bowel care.

- Mechanical stimulation techniques.
- Pharmacological stimulation.
- Position.
- Color, consistency, and amount of stool.
- Adverse reactions.
- Unplanned evacuations.

(Scientific evidence-none; grade of recommendation-expert consensus; strength of panel opinion-strong).

18. **When a bowel program is not effective (i.e., if constipation, GI symptoms or complications, or unplanned or delayed evacuations occur) and a consistent schedule has been adhered to, changes in the following components should be considered**:
    - Diet.
    - Fluid intake.
    - Level of activity.
    - Frequency of bowel care.
    - Position/assistive techniques.
    - Type of rectal stimulant.
    - Oral medications.

    (Scientific evidence-none; grade of recommendation-expert consensus; strength of panel opinion-strong).

19. **In the absence of adverse reactions and indicators for potential medical complications, the bowel care regimen should be maintained for 3 to 5 bowel care cycles prior to considering possible modifications. Only one element should be changed at a time.**

    Scientific evidence-none; grade of recommendation-expert consensus; strength of panel opinion-strong).

20. **When evaluating individuals complaining of bowel management difficulties, adherence to treatment recommendations should be assessed.**

    Scientific evidence-V; grade of recommendation-C; strength of panel opinion-strong).

21. **Colorectal cancer must be ruled out in individuals with SCI over the age of 50 with a positive fecal occult blood test or with a change in bowel function that does not respond to corrective interventions.**

    (Scientific evidence-clinical practice guideline; grade of recommendation-none given; strength of panel opinion-strong).

Managing Complications of the Neurogenic Bowel

22. **Knowledge of the unique clinical presentation and prompt diagnosis of common complications are necessary for the effective treatment of**

conditions associated with the neurogenic bowel in individuals with spinal cord injury.

Scientific evidence-V; grade of recommendation-C; strength of panel opinion-strong).

23. **Constipation after SCI is manifested by unusually long bowel care periods, small amounts of results, and dry, hard stools. Its causes should be investigated.**

    (Scientific evidence-none; grade of recommendations-expert consensus; strength of panel opinion-strong).

24. **Management of chronic constipation in individuals with SCI should start with the establishment of a balanced diet, adequate fluid and fiber intake, increased daily activity, and to the extent possible, reduction or elimination of medication contributing to constipation. If evacuation of stool has not occurred within 24 hours of scheduled evacuation or if stool is hard-formed and difficult to pass, a trial is warranted of a bulk-forming agent or of one or more of the following categories of laxative agents: lubricants, osmotics, and stimulant cathartics. These agents should be ingested at least 8 hours before planned bowel care.**

    (Scientific evidence-none; grade of recommendation-expert consensus; strength of panel opinion-strong).

25. **Effective treatment of common complications of neurogenic bowel in individuals with spinal cord injury, including fecal impaction and hemorrhoids, is necessary to minimize potential long-term morbidities.**

    (Scientific evidence-none; grade of recommendation-expert consensus; strength of panel opinion-strong).

26. **Prokinetic medication should be reserved for use in individuals with severe constipation or difficulty with evacuation that is resistant to modification of the bowel program.**

    (Non-SCI patients: scientific evidence-one study in each of levels I, II, and V; grade of recommendation-A; strength of panel opinion-strong. SCI patients: scientific evidence-two studies in each of levels II and V, and one level III study; grade of recommendation-B; strength of panel opinion-strong).

Surgical and Nonsurgical Therapies

27. **Biofeedback is not likely to be an effective treatment modality for most individuals with spinal cord injury.**

    (Scientific evidence-none; grade of recommendation-expert consensus; strength of panel opinion-strong).

28. **The decision about a colostomy or ileostomy should be based upon the results of specialized screening procedures and the individual's expectations. If surgery is decided upon, a permanent stoma is the best option.**

    (Scientific evidence-V; grade of recommendation-C; strength of panel opinion-strong).

29. **Proposed surgical changes in the anatomy of individuals with SCI should be reviewed with the individual and the interdisciplinary team. These considerations should include discussions of anesthesia, surgical and postoperative risks, body image, independence in self management after the procedure, and realization of the permanence of the procedure.**

    (Scientific evidence-none; grade of recommendation-expert consensus; strength of panel opinion-strong).

Education Strategies for the Neurogenic Bowel

30. **Educational programs for bowel management should be structured and comprehensive; should consider the home setting and available resources; and should be directed at all levels of healthcare providers, patients, and caregivers. The content and timing of such programs will depend on medical stability, readiness to learn, safety, and related factors. An educational program for bowel management after SCI should include**:
    - Anatomy.
    - Process of defecation.
    - Effect of SCI on bowel function.
    - Description, goals, and rationale of successful bowel program management.
    - Factors that promote successful bowel management.
    - Role of regularity, timing, and positioning in successful bowel management.
    - Safe, effective use of assistive devices and equipment.
    - Techniques for manual evacuation, digital stimulation, and suppository insertion.
    - Prescription bowel medications.
    - Prevention and treatment of common bowel problems, including constipation, impactions, diarrhea, hemorrhoids, incontinence, and autonomic dysreflexia.
    - When and how to make changes in medications and schedules.
    - Management of emergencies.
    - Long-term implications of neurogenic bowel dysfunction.
    - Economic analyses including cost-effectiveness and cost-utility analyses, of bowel management interventions and programs. Studies should meet currently accepted standards (Gold et al., 1996).

    (Scientific evidence-none; grade of recommendation-expert consensus; strength of panel opinion-strong).

31. **Patient and caregiver knowledge of, performance of, and confidence in the recommended bowel management program should be assessed at each follow-up evaluation.**

    (Scientific evidence-none; grade of recommendation-expert consensus; strength of panel opinion-strong).

Definitions

Hierarchy of levels of scientific evidence:

I. Large randomized trial with definite results
II. Small randomized trials with uncertain results
III. Nonrandomized studies with concurrent controls
IV. Nonrandomized studies with historic controls
V. Case series with no controls

Categories of the Strength of Evidence Associated with the Recommendation:

A. The recommendation is supported by scientific evidence from properly designed and implemented controlled trials providing statistical results that consistently support the guidelines statement
B. The recommendation is supported by scientific evidence from properly designed and implemented clinical series that support the guidelines statement
C. The recommendation is supported by expert opinion

CLINICAL ALGORITHM(S)

Algorithms are provided for designing a neurogenic bowel management program for spinal cord injured individuals.

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

Because there have been so few randomized controlled trials published on this topic, many of the recommendations in this set of guidelines are based on expert opinion rather than research.

The type of supporting evidence is identified for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- Improved management of the patient with neurogenic bowel and complications

- Restored health, independence, and a sense of self-control to individuals with spinal cord injury

POTENTIAL HARMS

Not stated

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

Dissemination via consortium dissemination strategy of twelve (12) avenues of distribution.

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)

Neurogenic bowel management in adults with spinal cord injury. Washington (DC): Paralyzed Veterans of America; 1998. 39 p. [139 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1998 Mar (reviewed 2005)

GUIDELINE DEVELOPER(S)

Consortium for Spinal Cord Medicine - Private Nonprofit Organization
Paralyzed Veterans of America - Private Nonprofit Organization

GUIDELINE DEVELOPER COMMENT

Consortium Member Organizations include: American Academy of Orthopedic Surgeons, American Academy of Physical Medicine and Rehabilitation, American Association of Neurological Surgeons, American Association of Spinal Cord Injury Nurses, American Association of Spinal Cord Injury Psychologists and Social Workers, American Congress of Rehabilitation Medicine, American Occupational Therapy Association, American Paraplegia Society, American Physical Therapy Association, American Psychological Association, American Spinal Injury Association, Association of Academic Physiatrists, Association of Rehabilitation Nurses, Congress of Neurological Surgeons, Insurance Rehabilitation Study Group, Paralyzed Veterans of America, U.S. Department of Veterans Affairs.

SOURCE(S) OF FUNDING

Paralyzed Veterans of America

GUIDELINE COMMITTEE

Spinal Cord Medicine Consortium Steering Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Names of Panel Members: Rosemarie B. King, PhD, RN (Chair); Andrea K. Biddle, PhD, MPH (Methodologist); Carol Braunschweig, PhD; David Chen, MD; Fred Cowell; C. Mary Dingus, PhD; Margaret C. Hammond, MD (Steering Committee Liaison); Cindy Hartley, OTR; Walter E. Longo, MD; Peggy Matthews Kirk, BSN, RN; Audrey Nelson, PhD, RN; Steven A. Stiens, MD

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

ENDORSER(S)

American Academy of Physical Medicine and Rehabilitation - Medical Specialty Society
American Association of Spinal Cord Injury Nurses - Professional Association
American Association of Spinal Cord Injury Psychologists and Social Workers - Professional Association
American Congress of Rehabilitation and Medicine - Professional Association
American Paraplegia Society - Disease Specific Society
American Spinal Injury Association - Disease Specific Society
Association of Rehabilitation Nurses - Professional Association

GUIDELINE STATUS

This is the current release of the guideline.

According to the guideline developer, this guideline is still considered to be current as of January 2005, based on a review of literature published since the original guideline publication.

GUIDELINE AVAILABILITY

Electronic copies: Available from the Paralyzed Veterans of America (PVA) Web site.

Print copies: Available from the Consortium for Spinal Cord Medicine, Clinical Practice Guidelines, 801 18th Street, NW, Washington, DC 20006.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on June 30, 1998. The information was verified by the guideline developer on December 1, 1998.

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