

Brief Summary



GUIDELINE TITLE

Neck and upper back (acute & chronic).

BIBLIOGRAPHIC SOURCE(S)

Work Loss Data Institute. Neck and upper back (acute & chronic). Corpus Christi (TX): Work Loss Data Institute; 2008. 283 p. [329 references]

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Work Loss Data Institute. Neck and upper back (acute & chronic). Corpus Christi (TX): Work Loss Data Institute; 2007 Jul 5. 266 p.

The *Official Disability Guidelines* product line, including *ODG Treatment in Workers Comp*, is updated annually, as it has been since the first release in 1996.

**** REGULATORY ALERT ****

FDA WARNING/REGULATORY ALERT

Note from the National Guideline Clearinghouse: This guideline references a drug(s) for which important revised regulatory and/or warning information has been released.

- [August 3, 2009 - OnabotulinumtoxinA \(Botox/Botox Cosmetic\), AbobotulinumtoxinA \(Dysport\) and RimabotulinumtoxinB \(Myobloc\)](#): The U.S. Food and Drug Administration (FDA) notified healthcare professionals of changes to the established drug names for Botox/Botox Cosmetic, Dysport and Myobloc to reinforce individual potencies and prevent medication errors, and provided recommendations for healthcare professionals to consider, plus information for patients, family members, and caregivers.

BRIEF SUMMARY CONTENT

**** REGULATORY ALERT ****

[RECOMMENDATIONS](#)

[EVIDENCE SUPPORTING THE RECOMMENDATIONS](#)

[IDENTIFYING INFORMATION AND AVAILABILITY](#)

[DISCLAIMER](#)

[Go to the Complete Summary](#)

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Identify Neurologic Findings

- First visit: may be with Primary Care Physician MD/DO (50%), Orthopedist (35%), or Chiropractor (15%)
- Determine Neurologic Findings -- Initial Evaluation

History

- Note any previous neck problems or related disabilities.
- Determine the onset of the injury and mechanism of injury (any direct trauma, head injury, or fall).
- Determine any history of trauma to the neck and any initial acute episode of pain or whiplash injury.
- Search for any symptoms of possible neurologic impairment, such as weakness in an upper extremity, numbness, or radicular pain radiating into upper extremities.
- History of work activities, hobbies, and sports
- Note any psychosocial problems, such as substance abuse, job dissatisfaction, conflict with supervisors, marital problems, and/or financial problems.
- Determine relevant medical history, history of systemic disease, or previous neck injury or disability. Note any history which produces radiating pain in the neck from structures such as the thyroid, the lymph nodes, the esophagus, the trachea, or from a Pancoast tumor in the apex of the lung. Note any history of cancer.

Physical Examination

- Perform a comprehensive examination of the neck and upper extremities including attention to flexibility, strength, and range-of-motion of the neck.
- Perform a careful limited neurological examination of the neck and the upper and lower extremities to determine which diagnostic tests and therapy should be performed. This examination should include reflexes of the biceps, triceps, and brachioradialis tendons and those of the lower extremities, as well as weakness and sensory changes to pin prick by anatomical area (dermatomes) when needed. Check for long tract signs (Babinski and clonus).
- Evaluate for any evidence of weakness or atrophy of muscle groups of the arm.
- Evaluate for any signs of systemic disease.
- Note that any patient with an acute injury and positive neurologic findings requires a neck splint, immobilization, and referral to a spinal surgeon.

Imaging

- Imaging modalities are often not necessary for patients with typical nontraumatic acute neck pain, but due to the risk of treating patients with undiagnosed **cervical** vertebral fractures, x-rays are necessary if there is any possibility of a fracture, even in patients without neurologic findings. Any patient with a minimal fracture of the **cervical** spine should have a computed tomography (CT) scan to evaluate the status of the neural arch.
- Indications for x-rays of the **cervical** spine include the following:
 - A history of direct trauma, blow to the head, any significant whiplash type injury, or any significant fall. These patients should have an x-ray of the **cervical** spine. Patients with fractures of the **cervical** spine should be referred to a spinal surgeon.
 - Whiplash with any evidence of neurologic deficit or persistent pain
 - Chronic, slow onset of pain, especially if it is increasing or night pain
 - A history of systemic disease such as cancer, long-term steroid therapy, or alcohol abuse
 - Patients over 50 years of age with any question of etiology of symptoms
 - Patients with significant stiffness of the **cervical** spine
 - Lateral flexion and extension views may demonstrate instability of the spine and indicate the need for consultation even in the absence of a fracture (fingertip test), muscle atrophy (calf measurement), local areas of tenderness, visual pain analog
- Indications for magnetic resonance imaging (MRI) of the **cervical** spine include the following:
 - Any suggestion of abnormal neurologic findings below the level of injury
 - Progressive neurologic deficit
 - Persistent unremitting pain with or without positive neurologic findings
 - Previous herniated intervertebral disk within the last two years and radicular pain with positive neurologic findings
 - Patients with significant neurologic findings and failure to respond to conservative therapy despite compliance with the therapeutic regimen
- Imaging procedures such as CT scans are necessary for any fracture of the **cervical** spine, with referral to a spinal surgeon.
- Additional imaging procedures, such as bone scan, myelography, etc., have special indications and are rarely needed at this stage, unless strong evidence of systemic disease exists and further evaluations thought necessary by the spinal surgeon.
- Other tests such as electromyography (EMG) or nerve conduction studies are not necessary in the initial evaluation of patients with new symptoms, due to the fact that these tests will not become positive until four to six weeks after the onset of symptoms. An EMG is not necessary for the diagnosis of intervertebral disk disease with **radiculopathy**; rather, its value lies in differentiating other types of neuritis, neuropathy, or muscle abnormalities from radicular neuropathy and for cases where the etiology of the pain is not clear. An EMG is most appropriate to perform after an evaluation by a specialist.
- Consider the New Classification System for Neck Pain from the Bone and Joint Decade 2000-2010 Task Force on Neck Pain.

Presumptive Diagnosis (see original guideline document for International Classification of Diseases, Ninth Revision [ICD-9] codes)

- **Without Neurologic Findings**
 - Neck pain with no radiation of pain beyond the neck area
 - Neck pain with radiation of pain in shoulders and upper back, but with no radicular signs
 - Chronic neck pain or chronic neck problems or whiplash
- **With Neurologic Findings**
 - Fracture of **cervical** spine
 - Radicular pain and positive signs indicate a presumptive diagnosis of herniated intervertebral disk
 - Neurologic signs and symptoms at the **cervical** level and in the lower body or lower extremities
 - Radicular pain and positive signs indicate a presumptive diagnosis of herniated intervertebral disk and an MRI or CT scan shows positive findings of a herniated intervertebral disk that matches the clinical findings

Cases Without Neurologic Findings (95% of cases)

- Also first visit (day 1):
 - Prescribe decreased activity if necessary based on severity and difficulty of job, passive therapy with heat/ice (3 to 4 times/day), stretching/exercise, appropriate analgesia (i.e., acetaminophen) and/or anti-inflammatory (i.e., ibuprofen) [*Benchmark cost: \$14*], back to work except for severe cases in 72 hours, possibly modified duty. Avoid bed rest.
 - No x-rays unless major trauma (e.g., a fall)
 - If muscle spasms, then prescribe muscle relaxant with limited sedative side effects [*Benchmark cost: \$44*]
 - Reassure patient: common problem (90% of patients recover spontaneously in 4 weeks)

Official Disability Guidelines (ODG) Return-To-Work Pathways (neck sprain)

Whiplash grade 0 (Quebec Task Force grades): 0 days

(See *ODG Capabilities & Activity Modifications for Restricted Work* under "Work" in the Procedure Summary of the original guideline document)

- Second visit (day 3 to 10 – about 1 week after first visit, or sooner, because delayed treatment is not recommended)
 - Document progress (areas of tenderness, motor strength)
 - If still 50% disabled then prescribe manual therapy [*Benchmark cost: \$250*]: Refer to massage therapist, chiropractor, physical therapist, or occupational therapist (3 visits in first week), or by treating DO
 - Probably discontinue muscle relaxant

ODG Return-To-Work Pathways (neck sprain)

Whiplash grade I-III, clerical/modified work: 5 days

- Third visit (day 10 to 17 – about 1 week after second visit)
 - Document progress
 - Prescribe muscle-conditioning exercises
 - At this point 66% to 75% should be back to regular work
 - If still disabled, then first imaging study (anteroposterior [AP]/lateral 2-view x-ray of upper back) [*Benchmark cost: \$150*] to rule out **cervical** spondylolysis or joint narrowing/spinal stenosis (age related, not caused by recent trauma - will not change treatment)
 - Continue therapist, change from passive to active modality, 2 visits in next week, teach home exercises
 - End manual therapy (physical therapy or manipulation) at 4 weeks

ODG Return-To-Work Pathways (neck sprain)

Whiplash grade I-III, manual work: 21 days

Whiplash grade I-III, heavy manual work: 28 days

- Up to 3 more visits for follow up and documentation of progress

Cases With Neurologic Findings (5% of cases)

- Also first visit (day 1)
 - Same as non-radicular

ODG Return-To-Work Pathways (cervical disc disorders)

Mild cases with back pain, avoid strenuous activity: 0 days

Initial conservative medical treatment, clerical/modified work: 0 to 3 days

- Second visit (day 3 to 10 – about 1 week after first visit)
 - Same as non-radicular
 - Reassure, but warn of increased numbness or weakness of either arm: if so, get back to provider in one day
 - Consider referral to musculoskeletal physician (orthopedist/physical medicine and rehabilitation (PM&R)/sports medicine)
- Third visit (day 10 to 17 – about 1 week after second visit)
 - Same as non-radicular
 - About 50% can be back at modified duty
 - If improvement, then add strengthening exercises, increased activity
- Fourth visit (day 21 to 28 – about 1 to 2 weeks after third visit)

- Document, if no improvement then:
- First MRI (about 3% of total cases, or 30% of cases with neurologic symptoms) to confirm extruded disk with nerve root displacement [*Benchmark cost: \$1,600*]
- MRI or CT **not** indicated without obvious clinical level of nerve root dysfunction or before 3 to 4 weeks
- Consider epidural steroid injection (ESI) for severe cases hoping to avoid surgery [*Benchmark cost: \$676*]
- Bone scan if spondylolisthesis
- Second MRI only if progression of neurological symptoms (less than 1% of cases)
- Refer to fellowship trained Spine Surgeon: Neurosurgeon (50%), Orthopedist (50%)
- Before surgery, screen for psychological symptoms that could affect surgical outcome (e.g., substance abuse, child abuse, work conflicts, somatization, verbalizations, attorney involvement, smoking)
- If psychological factors retarding recovery are suspected, possibly refer to psychologist for testing (Minnesota Multiphasic Personality Inventory [MMPI] or, better, Waddell test) [*Benchmark cost: \$540*]

ODG Return-To-Work Pathways (*cervical* disc disorders)

Initial conservative medical treatment, manual work: 35 days

- Surgery (day 28 to 35) (about 2% of total cases, or 20% of radicular cases) (See also "ODG Indications for Surgery™ – Discectomy" in the Procedure Summary of the original guideline document.)
 - Review options/outcomes with patient, let patient decide
 - Simple discectomy/laminectomy, minimally invasive [*Benchmark cost: \$17,400*]
 - Outpatient (23 hour stay)
 - Post-operative pain, walking exercises

ODG Return-To-Work Pathways (*cervical* disc disorders)

Cervical discectomy, clerical/modified work: 28 to 56 days

Cervical discectomy, manual work: 56 days

Cervical discectomy, heavy manual work: 126 days to indefinite

Cervical laminectomy/decompression, clerical/modified work: 28 days

Cervical laminectomy/decompression, manual work: 63 days

Cervical laminectomy/decompression, heavy manual work: 105 days to indefinite

- Follow-up visits as required

CLINICAL ALGORITHM(S)

None provided

[Top^](#)

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

During the comprehensive medical literature review, preference was given to high quality systematic reviews, meta-analyses, and clinical trials over the past ten years, plus existing nationally recognized treatment guidelines from the leading specialty societies.

The heart of each Work Loss Data Institute guideline is the Procedure Summary (see the original guideline document), which provides a concise synopsis of effectiveness, if any, of each treatment method based on existing medical evidence. Each summary and subsequent recommendation is hyper-linked into the studies on which they are based, in abstract form, which have been ranked, highlighted and indexed.

[Top^](#)

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Work Loss Data Institute. Neck and upper back (acute & chronic). Corpus Christi (TX): Work Loss Data Institute; 2008. 283 p. [329 references]

ADAPTATION

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

DATE RELEASED

2003 (revised 2008 May 7)

Neck and upper back (acute & chronic).

GUIDELINE DEVELOPER(S)

Work Loss Data Institute - Public For Profit Organization

SOURCE(S) OF FUNDING

Not stated

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Editor-in-Chief, Philip L. Denniston, Jr. and Senior Medical Editor, Charles W. Kennedy, MD, together pilot the group of approximately 80 members. See the ODG *Treatment in Workers Comp* [Editorial Advisory Board](#).

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

There are no conflicts of interest among the guideline development members.

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Work Loss Data Institute. Neck and upper back (acute & chronic). Corpus Christi (TX): Work Loss Data Institute; 2007 Jul 5. 266 p.

The *Official Disability Guidelines* product line, including *ODG Treatment in Workers Comp*, is updated annually, as it has been since the first release in 1996.

GUIDELINE AVAILABILITY

Electronic copies: Available to subscribers from the [Work Loss Data Institute Web site](#).

Print copies: Available from the Work Loss Data Institute, 169 Saxony Road, Suite 210, Encinitas, CA 92024; Phone: 800-488-5548, 760-753-9992, Fax: 760-753-9995; www.worklossdata.com.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Background information on the development of the Official Disability Guidelines of the Work Loss Data Institute is available from the [Work Loss Data Institute Web site](#).
- Appendix A. ODG Treatment in Workers' Comp. Methodology description using the AGREE instrument. Available to subscribers from the [Work Loss Data Institute Web site](#).

PATIENT RESOURCES

The following is available:

- Appendix C. ODG Treatment in Workers' Comp. Patient information resources. 2008.

Electronic copies: Available to subscribers from the [Work Loss Data Institute Web site](#).

Print copies: Available from the Work Loss Data Institute, 169 Saxony Road, Suite 210, Encinitas, CA 92024; Phone: 800-488-5548, 760-753-9992, Fax: 760-753-9995; www.worklossdata.com.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This summary was completed by ECRI on February 2, 2004. The information was verified by the guideline developer on February 13, 2004. This NGC summary was updated by ECRI on March 28, 2005, January 13, 2006, April 12, 2006, November 13, 2006, April 2, 2007, and August 28, 2007. This NGC summary was updated by ECRI Institute on January 22, 2009. This summary was updated by ECRI Institute on May 26, 2009, following the U.S. Food and Drug Administration advisory on Botox, Botox Cosmetic (Botulinum toxin Type A), and Myobloc (Botulinum toxin Type B). This summary was updated by ECRI Institute on August 17, 2009, following the updated FDA advisory on Botox and Botox Cosmetic (Botulinum toxin Type A), and Myobloc (Botulinum toxin Type B).

COPYRIGHT STATEMENT

This NGC summary is based on the original guideline, which is subject to the guideline developer's copyright restrictions.

[Top^](#)

DISCLAIMER

NGC DISCLAIMER

The National Guideline Clearinghouse™ (NGC) does not develop, produce, approve, or endorse the guidelines represented on this site.

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria which may be found at <http://www.guideline.gov/about/inclusion.aspx>.

NGC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect those of NGC, AHRQ, or its contractor ECRI Institute, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.

[Top^](#)

