**GL’S**

**NECK PT**

New York State Workers’ Compensation Board

Neck Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES: NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.10 THERAPY: ACTIVE

The following active therapies are based on the philosophy that therapeutic exercise and/or activity are beneficial for restoring flexibility, strength, endurance, function, range of motion, and can alleviate discomfort. Active therapy requires an internal effort by the individual to complete a specific exercise or task. This form of therapy requires supervision from a therapist or medical provider such as verbal, visual, and/or tactile instruction(s). At times, the provider may help stabilize the patient or guide the movement pattern but the energy required to complete the task is predominately executed by the patient. Patients should be instructed to continue active therapies at home as an extension of the treatment process in order to maintain improvement levels. Follow-up visits to reinforce and monitor progress and proper technique are recommended. Home exercise can include exercise with or without mechanical assistance or resistance and functional activities with assistive devices.

D.10.g Therapeutic Exercise

Therapeutic Exercise with or without mechanical assistance or resistance, may include isoinertial, isotonic, isometric and isokinetic types of exercises. Indications include the need for cardiovascular fitness, reduced edema, improved muscle strength, improved connective tissue strength and integrity, increased bone density, promotion of circulation to enhance soft tissue healing, improvement of muscle recruitment, improved proprioception and coordination, increased range of motion and are used to promote normal movement patterns. Therapeutic exercise can also include complementary/ alternative exercise movement therapy (with oversight of a physician or appropriate healthcare professional).

-Time to Produce Effect: 2 to 6 treatments.

-Frequency: 3 to 5 times per week.

- Optimum Duration: 4 to 8 weeks.

-Maximum Duration: 8 weeks.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.4 RE-EVALUATE TREATMENT

If a given treatment or modality is not producing positive results, the provider should either modify or discontinue the treatment regime. The provider should evaluate the efficacy of the treatment or modality 2 to 3 weeks after the initial visit and 3 to 4 weeks thereafter. Reconsideration of diagnosis should also occur in the event of poor response to a rational intervention.

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses.

Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

A.11 ACTIVE THERAPEUTIC EXERCISE PROGRAM

Active therapeutic exercise program goals should incorporate patient strength, endurance, flexibility, range of motion, coordination, and education. This includes functional application in vocational or community settings.

Official Disability Guidelines-Treatment in Worker's Compensation, Online Edition

Chapter: Neck and Upper Back

Physical Therapy

ODG Physical Therapy Guidelines -

Allow for fading of treatment frequency (from up to 3 or more visits per week to 1 or less), plus active self-directed home PT. Also see other general guidelines that apply to all conditions under Physical Therapy in the ODG Preface, including assessment after a "six-visit clinical trial".

ODG Preface

There are a number of overall physical therapy philosophies that may not be specifically mentioned within each guideline: (1) As time goes by, one should see an increase in the active regimen of care, a decrease in the passive regimen of care, and a fading of treatment frequency; (2) The exclusive use of "passive care" (e.g., palliative modalities) is not recommended; (3) Home programs should be initiated with the first therapy session and must include ongoing assessments of compliance as well as upgrades to the program; (4) Use of self-directed home therapy will facilitate the fading of treatment frequency, from several visits per week at the initiation of therapy to much less towards the end; (5) Patients should be formally assessed after a "six-visit clinical trial" to see if the patient is moving in a positive direction, no direction, or a negative direction (prior to continuing with the physical therapy); & (6) When treatment duration and/or number of visits exceeds the guideline, exceptional factors should be noted.

**LOW BACK PT**

New York State Worker's Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES-NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.9 THERAPY: ACTIVE

D.9.a Therapeutic Exercise

Therapeutic Exercise (WCB) with or without mechanical assistance or resistance, may include isoinertial, isotonic, isometric and isokinetic types of exercises. Indications include the need for cardiovascular fitness, reduced edema, improved muscle strength, improved connective tissue strength and integrity, increased bone density, promotion of circulation to enhance soft tissue healing, improvement of muscle recruitment, improved proprioception and coordination, increased range of motion and are used to promote normal movement patterns. Therapeutic exercise can also include complementary/ alternative exercise movement therapy (with oversight of a physician or appropriate healthcare professional).

-Time to Produce Effect: 2 to 6 treatments.

-Frequency: 3 to 5 times per week.

-Optimum Duration: 4 to 8 weeks.

-Maximum Duration: 8 weeks.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.4 RE-EVALUATE TREATMENT

If a given treatment or modality is not producing positive results, the provider should either modify or discontinue the treatment regime. The provider should evaluate the efficacy of the treatment or modality 2 to 3 weeks after the initial visit and 3 to 4 weeks thereafter. Reconsideration of diagnosis should also occur in the event of poor response to a rational intervention.

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses.

Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

A.11 ACTIVE THERAPEUTIC EXERCISE PROGRAM

Active therapeutic exercise program goals should incorporate patient strength, endurance, flexibility, range of motion, coordination, and education. This includes functional application in vocational or community settings.

Official Disability Guidelines-Treatment in Worker's Compensation, Online Edition

Chapter: Low Back - Lumbar & Thoracic

Physical Therapy

ODG Physical Therapy Guidelines -

Allow for fading of treatment frequency (from up to 3 or more visits per week to 1 or less), plus active self-directed home PT. Also see other general guidelines that apply to all conditions under Physical Therapy in the ODG Preface, including assessment after a "six-visit clinical trial".

ODG Preface

There are a number of overall physical therapy philosophies that may not be specifically mentioned within each guideline: (1) As time goes by, one should see an increase in the active regimen of care, a decrease in the passive regimen of care, and a fading of treatment frequency; (2) The exclusive use of "passive care" (e.g., palliative modalities) is not recommended; (3) Home programs should be initiated with the first therapy session and must include ongoing assessments of compliance as well as upgrades to the program; (4) Use of self-directed home therapy will facilitate the fading of treatment frequency, from several visits per week at the initiation of therapy to much less towards the end; (5) Patients should be formally assessed after a "six-visit clinical trial" to see if the patient is moving in a positive direction, no direction, or a negative direction (prior to continuing with the physical therapy); & (6) When treatment duration and/or number of visits exceeds the guideline, exceptional factors should be noted.

**SHOULDER PT**

New York State Workers’ Compensation Board

Shoulder Injury Medical Treatment Guidelines

D SPECIFIC DIAGNOSES, TESTING AND TREATMENT PROCEDURES

E THERAPEUTIC PROCEDURES: NON-OPERATIVE

E.4 THERAPEUTIC EXERCISE

Therapeutic Exercise where the therapist instructs the patient in a supervised clinic and home program to increase strength of the supporting shoulder musculature. Motions and muscles to be strengthened include shoulder internal and external rotators, abductors and scapula stabilizers. Isometrics are performed initially, progressing to Isotonic exercises as tolerated.

- Frequency of visits: 2-3 times/week for 8-12 weeks.

- Weeks 1-3: Isometrics in sling.

- Weeks 3-8: Progressive Isotonic exercises.

- Weeks 8-12: Begin overhead activities when the rotator cuff strength is normalized and full active elevation has been achieved.

E.11 PHYSICAL MEDICINE AND REHABILITATION

E.11.b Manual Therapy Techniques

Soft tissue mobilization/ manipulation techniques may be used as an adjunctive treatment modality.

E.11.c Post-Operative Treatment

Post-Operative Treatment may include scar/adhesion reduction techniques.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.4 RE-EVALUATE TREATMENT

If a given treatment or modality is not producing positive results, the provider should either modify or discontinue the treatment regime. The provider should evaluate the efficacy of the treatment or modality 2 to 3 weeks after the initial visit and 3 to 4 weeks thereafter. Reconsideration of diagnosis should also occur in the event of poor response to a rational intervention.

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses.

Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

A.11 ACTIVE THERAPEUTIC EXERCISE PROGRAM

Active therapeutic exercise program goals should incorporate patient strength, endurance, flexibility, range of motion, coordination, and education. This includes functional application in vocational or community settings.

Official Disability Guidelines Treatment in Workers' Compensation, Online Edition

Chapter: Shoulder

Physical Therapy

ODG Physical Therapy Guidelines –

Allow for fading of treatment frequency (from up to 3 or more visits per week to 1 or less), plus active self-directed home PT. Also see other general guidelines that apply to all conditions under Physical Therapy in the ODG Preface, including assessment after a "six-visit clinical trial".

ODG Preface

There are a number of overall physical therapy philosophies that may not be specifically mentioned within each guideline: (1) As time goes by, one should see an increase in the active regimen of care, a decrease in the passive regimen of care, and a fading of treatment frequency; (2) The exclusive use of "passive care" (e.g., palliative modalities) is not recommended; (3) Home programs should be initiated with the first therapy session and must include ongoing assessments of compliance as well as upgrades to the program; (4) Use of self-directed home therapy will facilitate the fading of treatment frequency, from several visits per week at the initiation of therapy to much less towards the end; (5) Patients should be formally assessed after a "six-visit clinical trial" to see if the patient is moving in a positive direction, no direction, or a negative direction (prior to continuing with the physical therapy); & (6) When treatment duration and/or number of visits exceeds the guideline, exceptional factors should be noted.

**KNEE PT**

New York State Workers’ Compensation Board

Knee Injury Medical Treatment Guidelines

D SPECIFIC KNEE INJURY DIAGNOSES, TESTING, AND TREATMENT

E THERAPEUTIC PROCEDURES, NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer and insurer must consider these important issues in the care of the injured worker.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified, restricted, or full duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

In unusual cases where a patient is unable to attend an outpatient center, home therapy may be necessary. Home therapy may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone. Home therapy is usually of short duration.

E.7 THERAPY-ACTIVE

Most of the following active therapies have some evidence and are based on the philosophy that therapeutic exercise and/or activity are beneficial for restoring flexibility, strength, endurance, function, range of motion, and can alleviate discomfort. Active therapy requires an internal effort by the individual to complete a specific exercise or task. This form of therapy requires supervision from a therapist or medical provider such as verbal, visual and/or tactile instruction(s). At times, the provider may help stabilize the patient or guide the movement pattern but the energy required to complete the task is predominately executed by the patient.

Patients should be instructed to continue active therapies at home as an extension of the treatment process in order to maintain improvement levels. Home exercise can include exercise with or without mechanical assistance or resistance and functional activities with assistive devices.

E.7.e Therapeutic Exercise

Therapeutic Exercise, with or without mechanical assistance or resistance, may include isoinertial, isotonic, isometric and isokinetic types of exercises. Indications include the need for cardiovascular fitness, reduced edema, improved muscle strength, improved connective tissue strength and integrity, increased bone density, promotion of circulation to enhance soft tissue healing, improvement of muscle recruitment, increased range of motion and are used to promote normal movement patterns. Can also include complementary/ alternative exercise movement therapy.

- Time to produce effect: 2 to 6 treatments.

- Frequency: 3 to 5 times per week.

- Optimum duration: 4 to 8 weeks.

- Maximum duration: 8 weeks.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.4 RE-EVALUATE TREATMENT

If a given treatment or modality is not producing positive results, the provider should either modify or discontinue the treatment regime. The provider should evaluate the efficacy of the treatment or modality 2 to 3 weeks after the initial visit and 3 to 4 weeks thereafter. Reconsideration of diagnosis should also occur in the event of poor response to a rational intervention.

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

A.11 ACTIVE THERAPEUTIC EXERCISE PROGRAMS

Active therapeutic exercise program goals should incorporate patient strength, endurance, flexibility, range of motion, coordination, and education. This includes functional application in vocational or community settings.

Official Disability Guidelines Treatment in Workers' Compensation, Online Edition

Chapter: Knee & Leg

Physical Therapy

ODG Physical Therapy Guidelines –

Allow for fading of treatment frequency (from up to 3 or more visits per week to 1 or less), plus active self-directed home PT. Also see other general guidelines that apply to all conditions under Physical Therapy in the ODG Preface, including assessment after a "six-visit clinical trial".

ODG Preface

There are a number of overall physical therapy philosophies that may not be specifically mentioned within each guideline: (1) As time goes by, one should see an increase in the active regimen of care, a decrease in the passive regimen of care, and a fading of treatment frequency; (2) The exclusive use of "passive care" (e.g., palliative modalities) is not recommended; (3) Home programs should be initiated with the first therapy session and must include ongoing assessments of compliance as well as upgrades to the program; (4) Use of self-directed home therapy will facilitate the fading of treatment frequency, from several visits per week at the initiation of therapy to much less towards the end; (5) Patients should be formally assessed after a "six-visit clinical trial" to see if the patient is moving in a positive direction, no direction, or a negative direction (prior to continuing with the physical therapy); & (6) When treatment duration and/or number of visits exceeds the guideline, exceptional factors should be noted.

**CTS PT**

New York State Workers’ Compensation Board

Carpal Tunnel Syndrome Medical Treatment Guidelines

E NON-OPERATIVE TREATMENT PROCEDURES

E.4 MEDICATIONS AND MEDICAL TREATMENT

Use of medications in the treatment of CTS is appropriate for controlling acute and chronic pain and inflammation. All drugs should be used within the boundaries of recognized medical practice according to the patient’s needs. A thorough medication history, including use of alternative and over the counter medications, should be performed at the time of the initial visit and updated periodically.

Nonsteroidal anti-inflammatory medications (NSAIDs), oral steroids, and diuretics, have not been shown to have significant long-term beneficial effect in treating CTS. Although NSAIDs are not curative, they and other analgesics may provide symptomatic relief.

E.4.e. Therapy: Active

The following active therapies are widely used and accepted methods of care for a variety of work-related injuries. They are based on the philosophy that therapeutic exercise and/or activity are beneficial for restoring flexibility, strength, endurance, function, range of motion, and alleviating discomfort. Active therapy requires an internal effort by the individual to complete a specific exercise or task, and thus assists in developing skills promoting independence to allow self-care after discharge. This form of therapy requires supervision from a therapist or medical provider such as verbal, visual, and/or tactile instructions. At times a provider may help stabilize the patient or guide the movement pattern but the energy required to complete the task is predominately executed by the patient.

Patients should be instructed to continue active therapies at home as an extension of the treatment process in order to maintain improvement levels. Follow-up visits to reinforce and monitor progress and proper technique are recommended. Home exercise can include exercise with or without mechanical assistance or resistance and functional activities with assistive devices. The following active therapies and modalities are listed in alphabetical order.

E.4.e.v Therapeutic Exercise with or without medical assistance or resistance may include isointertial, isotonic, isometric, and isokinetic types of exercises. Indications include: reduce edema, improve muscle strength, improve connective tissue strength and integrity, increase bone density, promote circulation to enhance soft tissue healing, improve muscle recruitment, increase range of motion, and promote normal movement patterns. Can also include complementary/alternative exercise such as movement therapy (with oversight of a physician or other appropriate healthcare professional).

- Time to Produce Effect: 2 to 6 treatments.

- Frequency: 3 to 5 times per week.

- Optimum Duration: 4 to 8 weeks.

- Maximum Duration: 8 weeks.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.4 RE-EVALUATE TREATMENT

If a given treatment or modality is not producing positive results, the provider should either modify or discontinue the treatment regime. The provider should evaluate the efficacy of the treatment or modality 2 to 3 weeks after the initial visit and 3 to 4 weeks thereafter. Reconsideration of diagnosis should also occur in the event of poor response to a rational intervention.

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses.

Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

A.11 ACTIVE THERAPEUTIC EXERCISE PROGRAM

Active therapeutic exercise program goals should incorporate patient strength, endurance, flexibility, range of motion, coordination, and education. This includes functional application in vocational or community settings.

**LOW BACK LUMBAR MMI**

D.11 THERAPY: ONGOING MAINTENANCE CARE

A maintenance program of PT, OT or spinal manipulation (by a physician (MD/DO), chiropractor or physical therapist) may be indicated in certain situations, after the determination of MMI, when tied to maintenance of functional status.

-Although the current body of scientific evidence as reviewed does not support the routine use of this intervention, maintenance therapy modalities may be indicated in certain situations in order to maintain functional status, without which an objective deterioration of function has been previously observed and documented in the medical record.

-Specific objective goals should be identified and measured in order to support the need for ongoing maintenance care.

-Progressively longer trials of therapeutic withdrawal are to be attempted to ascertain whether therapeutic goals can be maintained in the absence of clinical interventions.

-Within a year and annually thereafter, a trial without maintenance treatment should be instituted.

-The care of chronic back symptoms should include an ongoing patient self -management program performed by the patient regularly and a self-directed pain management program initiated as indicated:

-- An ongoing clinically appropriate self-management program, typically independent, home-based and self-directed, developed jointly by the provider and patient, should be implemented to encourage physical activity and/or work activities despite residual pain, with the goal of preserving function.

-- In addition to the self-management program, a self-directed pain management plan should be developed which can be initiated by the patient in the event that symptoms worsen and function decreases.

-If deterioration of ability to maintain function is documented, reinstatement of ongoing maintenance may be acceptable.

Frequency: Maximum up to 10 visits/year, after the determination of MMI, according to objectively documented maintenance of functional status. No variance from the maximum frequency is permitted.

**LUMBAR ACUPUNCTURE**

New York State Workers’ Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES-NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

The following are listed in alphabetical order.

D.1 ACUPUNTURE

Recommendations:

D.1.a.i Routine use of acupuncture is not recommended for acute, subacute back pain, radicular pain. Although it is not high cost and its use is not associated with high potential for patient harm, it is not recommended.

D.1.a.ii Acupuncture is recommended for select use in chronic back pain as an adjunct to more efficacious treatments.

D.1.a.iii Acupuncture may be recommended as treatment of chronic back pain as a limited course during which time there are clear objective and functional goals that are to be achieved.

Consideration for time-limited use in chronic back pain patients without underlying serious pathology is as an adjunct to a conditioning program that has both graded aerobic exercise and strengthening exercises. Acupuncture is only recommended to assist in increasing functional activity levels more rapidly and the primary attention should remain on the conditioning program.

This intervention is not recommended for patients not involved in a conditioning program, or who are non-compliant with graded increases in activity levels.

Frequency/Duration:

a. There are different patterns which are used in quality studies. These range from weekly for a month to 20 appointments over 6 months; however the norm is generally no more than 8 to 12 sessions.

b. An initial trial of 5 to 6 appointments would appear reasonable in combination with a conditioning program of aerobic and strengthening exercises.

c. Future appointments should be tied to improvements in objective measures and would justify an additional 6 sessions, for a total of 12 sessions.

Discontinuation: Resolution, intolerance, or non compliance, including non-compliance with aerobic and strengthening exercises.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

Official Disability Guidelines Treatment in Workers' Compensation, Online Edition

Chapter: Low Back - Lumbar & Thoracic

Acupuncture

Not recommended for acute low back pain. (Tulder-Cochrane, 2000) (Furlan-Cochrane, 2005) Recommended as an option for chronic low back pain using a short course of treatment in conjunction with other interventions. (See the Pain Chapter.) Acupuncture has been found to be more effective than no treatment for short-term pain relief in chronic low back pain, but the evidence for acute back pain does not support its use. (Furlan-Cochrane, 2005) (Manheimer, 2005) (van Tulder, 2005) (Thomas, 2005) (Ratcliffe, 2006) (Thomas, 2006) (Haake, 2007) (Santaguida, 2009) These authors have reported that acupuncture provides a greater effect than sham treatment, while others have reported non-significant differences between the two modalities. (Brinkhaus, 2006) In this latter case, both modalities were shown to be more effective than no treatment. (Haake, 2007) Acupuncture has not been found to be better than other treatment (either conventional or alternative) in terms of pain or function. Acupuncture has been shown to add to the treatment effect of conventional therapy (improving pain and function) when compared to conventional therapy alone. (van Tulder, 2005) (Manheimer, 2005) (Furlan-Cochrane, 2005) Overall outcomes from trials have been mixed, with some lower-quality trials producing positive results, but trials with higher validity scores tending to be negative or inconclusive. There is a tendency for patient expectations to influence the outcome independently of the treatment itself. (Tulder-Cochrane, 2000) (Cherkin, 2001) (van Tulder-Spine, 1999) (Smith, 2000) (Cherkin-Annals, 2003) (Giles-Spine, 2003) (Muller, 2005) (Airaksinen, 2006) This systematic review found insufficient evidence to support the effectiveness of acupuncture for either acute or subacute low back pain in general, but it may be valuable for some patients. (McIntosh, 2011) Another systematic review found that acupuncture was cost-effective for both subacute or chronic LBP. (Lin, 2011) This passive intervention should be an adjunct to active rehab efforts. Payers may want to consider a trial of acupuncture for acute LBP if it would facilitate participation in active rehab efforts.

ODG Acupuncture Guidelines:

Initial trial of 3-4 visits over 2 weeks

With evidence of objective functional improvement, total of up to 8-12 visits over 4-6 weeks (Note: The evidence is inconclusive for repeating this procedure beyond an initial short course of therapy.)

**CESI**

New York State Workers’ Compensation Board

Neck Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES: NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.3 INJECTIONS: THERAPEUTIC

D.3.a Therapeutic Spinal Injections

Description:

Therapeutic spinal injections may be used after initial conservative treatments, such as physical and occupational therapy, medication, manual therapy, exercise, acupuncture, have been undertaken.

Therapeutic injections should be used only after imaging studies and diagnostic injections have established pathology. Injections are invasive procedures that can cause catastrophic complications; thus clinical indications and contraindications should be closely adhered to. The purpose of spinal injections is to facilitate active therapy by providing short-term relief through reduction of pain and inflammation. All patients should continue appropriate exercise with functionally directed rehabilitation. Active treatment, which patients should have had prior to injections, will frequently require a repeat of the sessions previously ordered. Injections, by themselves, are not likely to provide long-term relief. Rather, active rehabilitation with modified work achieves long-term relief by increasing active range of motion, strength, and stability. If the first injection does not provide a diagnostic response with temporary and sustained pain relief substantiated by accepted pain scales, (i.e., 80% pain reduction on the Visual Analog Scale), and improvement in function, similar injections should not be repeated.

Special Considerations:

For all injections (excluding trigger point and occipital nerve blocks) multi-planar fluoroscopy during procedures is required (except in cases where radiation exposure is contraindicated and ultrasound evaluation of needle placement may be used) to document technique and needle placement. All injections should be performed by a physician experienced in the procedure. Permanent images are required to verify needle placement. The subspecialty disciplines of the physicians performing injections may be varied, including, but not limited to: anesthesiology, radiology, surgery, or physiatry. The practitioner should have completed fellowship training in pain medicine with interventional training, or its equivalent. They must also be knowledgeable in radiation safety.

Complications:

General complications of spinal injections may include transient neurapraxia, local pain, nerve injury, infection, headache, vasovagal effects. epidural hematoma, permanent neurologic damage, dural perforation and CSF leakage, and/or spinal meningeal abscess. More serious complications are rare but can include spinal cord damage; quadriplegia; permanent ataxia, and death. Injections at a C2-C3 level frequently cause temporary neuritis with ataxia. With steroid injections, there may be a dose-dependent suppression of the hypothalamic-pituitary-adrenal axis lasting between one and three months.

Contraindications:

Absolute contraindications to therapeutic injections include: (a) bacterial infection – systemic or localized to region of injection, (b) bleeding diatheses, (c) hematological conditions, and (d) possible pregnancy.

Relative contraindications to diagnostic injections may include: allergy to contrast, poorly controlled Diabetes Mellitus and hypertension. Drugs affecting coagulation require restriction from use. The following are suggested time period restrictions:

- Aspirin-withhold for seven days;

- NSAIDs-withhold for three days;

- Clopidogrel – withhold for 3 days;

- Other anti-platelet therapy and anti-coagulants should also be addressed individually by a knowledgeable specialist.

D.3.a.i Cervical Epidural Steroid Injection (ESI):

Description:

Cervical ESIs are injections of corticosteroid into the epidural space. The purpose of ESI is to reduce pain and inflammation in the acute or subacute phases of injury, restoring range-of-motion, and thereby, facilitating progress in more active treatment programs.

Needle placement: Multi-planar fluoroscopy is required for all epidural steroid injections, except in cases where radiation exposure is contraindicated and ultrasound evaluation of needle placement may be used. Contrast epidurograms allow one to verify the flow of medication into the epidural space. Permanent images are required to verify needle placement.

Recommendations:

Cervical ESIs are useful in patients with symptoms of cervical radicular pain syndromes.

Epidural injections are not effective for cervical axial pain or non radicular pain syndromes and they are not recommended for this indication.

- Time to Produce Effect: Local anesthetic, less than 30 minutes; corticosteroid, 48 to 72 hours for 80% of patients and 72 hours to 2 weeks for 20% of patients.

- Frequency: One or more divided levels can be injected in one injection. If the first injection does not provide a diagnostic response with temporary and sustained pain relief (at least 2 to 6 weeks) substantiated by accepted pain scales (i.e., 80% pain reduction as measured by tools such as VAS), and improvement in function, repeat injections are not recommended.

- Optimal Duration: Usually 1 to 3 injection(s), depending upon each patient’s response (improved functional gain and pain reduction).

- Maximum Duration: 3 injections per spinal region may be done in one year depending upon patient’s response (improved functional gain and pain reduction). Patients should be reassessed after each injection for an 80% improvement in pain (as measured by accepted pain scales) and evidence of functional improvement.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

**LESI**

New York State Workers’ Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES-NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.6 INJECTION THERAPIES

D.6.a Lumbar/Transforaminal/Epidural Injections

Recommendations:

Lumbar/Transforaminal/Epidural Injections must be fluoroscopically guided, except in cases where radiation exposure is contraindicated and ultrasound evaluation of needle placement may be used.

D.6.a.i An epidural glucocorticosteroid injection is an option for acute or subacute radicular pain syndromes.

Its purpose is a few weeks of partial pain relief while hopefully awaiting spontaneous improvement. An epidural steroid injection may provide short-term improvement, which may assist in successfully accruing sufficient time to ascertain whether conservative care will succeed.

The term “option” in the paragraph above means there is no requirement that a patient receive and fail treatment with epidural glucocorticosteroids, especially repeated injections, prior to discectomy.

These injections must be fluoroscopically guided except in cases where radiation exposure is contraindicated and ultrasound evaluation of needle placement may be used.

-Frequency/Duration: It is recommended that each injection be scheduled separately, and effects of each injection be evaluated, depending upon patient response (improved function and pain reduction) rather than scheduling a “Series of 3.” Medications most often used in randomized controlled studies were triamcinolone and methylprednisolone combined with an anesthetic. The anesthetic has most often been bupivacaine. There are no head to head comparisons of different medications to ascertain the optimum medication(s) and/or dose(s).

-Maximum Duration: 3 injections may be done in one year depending upon patient response (improved function and pain reduction).

-Discontinuation: A second epidural steroid injection is not recommended if following the first injection there has been resolution of the symptoms of the acute radicular pain syndrome, particularly resolution of leg symptoms, or a decrease in symptoms to a tolerable level. If there has not been a response to a first epidural injection, there would be no recommendation for a second epidural injection, a 2nd injection is not recommended. In patients who respond with a pharmacologically appropriate 3 to 6 weeks of temporary, partial relief of leg pain, but who then have a worsening of leg pain and function, and who are not (yet) interested in surgical discectomy, a repeat epidural steroid injection is an option. Generally, there are not believed to be benefits beyond 3 injections for a given episode of radicular pain. Patients requesting a fourth injection should be counseled for discectomy, or considered to have chronic radicular symptoms for which epidural steroids are not recommended.

D.6.a.ii Is an option for radicular pain syndromes lasting at least 3 weeks having been treated with NSAIDs and without evidence of trending towards spontaneous resolution.

Consideration may also be given for an optional short course of an oral glucocorticosteroid before an injection.

- Frequency/Duration: Same as acute or subacute radicular pain above.

- Discontinuation: Same for acute or subacute radicular pain above.

D.6.a.iii Epidural glucocorticosteroid injections are an option for second-line treatment for acute flare ups of spinal stenosis, although the evidence is less robust than it is for herniated discs.

- Frequency/Duration: It is recommended that each injection be scheduled, and the effects of each injection be evaluated depending upon patient response (improved function and pain reduction) before additional injections are considered, rather than scheduling a “Series of 3.”

- Maximum Duration: 3 injections may be done in one year depending upon patient response (improved function and pain reduction).

- Discontinuation: Resolution of the symptoms of spinal stenosis, or decrease in symptoms to a tolerable level.

D.6.a.iv Is an option for symptoms of spinal stenosis of at least 1 to 2 months, with prior treatment that has included NSAIDs and progressive exercise.

- Frequency/Duration: It is recommended that each injection be scheduled, and the effects of each injection be evaluated depending upon patient response (improved function and pain reduction) before additional injections are considered, rather than scheduling a “Series of 3.”

- Maximum Duration: 3 injections may be done in one year depending upon patient response (improved function and pain reduction).

- Discontinuation: Resolution of the symptoms of spinal stenosis, or decrease in symptoms to a tolerable level.

D.6.a.v Epidural glucocorticosteroid injections are not recommended for acute, subacute or chronic back pain in the absence of significant radicular symptoms.

D.6.a.vi They are also not recommended as first or second line treatment in individuals with back pain symptoms that predominate over leg pain.

D.6.a.vii They are not recommended as treatment for any chronic back pain problem.

A. GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

**LUMBAR TRIGGER POINT INJECTION**

New York State Workers’ Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES-NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.6 INJECTION THERAPIES

D.6.d Tender and Trigger Point Injections

Recommendations:

D.6.d.i Trigger and/or tender point injections are not recommended for treatment of acute back pain. There are other more efficacious treatment strategies available.

D.6.d.ii Trigger or tender point injections may be reasonable second or tertiary options for subacute or chronic back pain that is not resolving with more conservative means (e.g., NSAID, progressive aerobic exercises, other exercises).

These injections are recommended to consist solely of a topical anesthetic (e.g., bupivacaine). Repeated injections should be linked to subjective and objective improvements. The use of therapeutic injections without participation in an active therapy program or in the context of maintaining employment is not recommended. An alternative option to these injections is acupuncture.

-Frequency/Duration: It is recommended to allow at least 3 to 4 weeks between injections. If the results are not satisfactory after the first set of injections, a second set is reasonable. If there are not subjective and objective improvements at that point, further injections are not recommended.

-Discontinuation: Resolution, intolerance or completing two set(s) of injections without materially affecting the condition.

A. GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

Official Disability Guidelines Treatment in Workers' Compensation, Online Edition

Chapter: Low Back - Lumbar & Thoracic

Trigger point injections (TPIs)

Not recommended in the absence of myofascial pain syndrome. See Criteria for use below. The primary goal of trigger point therapy is the short-term relief of pain and tightness of the involved muscles in order to facilitate participation in an active rehabilitation program and restoration of functional capacity. The evidence for TPIs when used as a sole treatment for patients with chronic low-back pain (regardless of injectate) is inconclusive and the treatment does not appear to be more effective than treatments such as laser or ultrasound. The effectiveness of trigger point injection is uncertain, in part due to the difficulty of demonstrating advantages of active medication over injection of saline. Needling alone may be responsible for some of the therapeutic response. These injections are not recommended for typical chronic low back or neck pain, nor are they recommended for radicular pain. (Scott, 2005) (Scott, 2008) The advantage appears to be in enabling patients to undergo remedial exercise therapy more quickly. TPIs are generally considered an adjunct rather than a primary form of treatment and should not be offered as either a primary or a sole treatment modality. Steroid injection is not generally recommended nor is Botulinum toxin. (Bigos, 1999) (Nelemans-Cochrane, 2000) (Vad, 2002) (BlueCross BlueShield, 2004) (van Tulder, 2006) (VanTulder-BMJ, 2004) (Peloso, 2007) (Ho, 2007) An updated Cochrane review of injection therapies (ESIs, facets, trigger points) for low back pain concluded that there is no strong evidence for or against the use of any type of injection therapy, but it cannot be ruled out that specific subgroups of patients may respond to a specific type of injection therapy. (Staal-Cochrane, 2009)

Criteria for the use of Trigger point injections:

Trigger point injections (TPI) with a local anesthetic with or without steroid may be recommended for the treatment of chronic low back or neck pain with myofascial pain syndrome (MPS) when all of the following criteria are met:

(1) Documentation of circumscribed trigger points with evidence upon palpation of a twitch response as well as referred pain;

(2) Symptoms have persisted for more than three months;

(3) Medical management therapies such as ongoing stretching exercises, physical therapy, NSAIDs and muscle relaxants have failed to control pain;

(4) Radiculopathy is not an indication (however, if a patient has MPS plus radiculopathy a TPI may be given to treat the MPS);

(5) Not more than 3-4 injections per session;

(6) No repeat injections unless a greater than 50% pain relief with reduced medication use is obtained for six weeks after an injection and there is documented evidence of functional improvement;

(7) Frequency should not be at an interval less than two months;

(8) Trigger point injections with any substance (e.g., saline or glucose) other than local anesthetic with or without steroid are not recommended;

(9) There should be evidence of continued ongoing conservative treatment including home exercise and stretching. Use as a sole treatment is not recommended;

(10) If pain persists after 2 to 3 injections the treatment plan should be re-examined as this may indicate an incorrect diagnosis, a lack of success with this procedure, or a lack of incorporation of other more conservative treatment

**CERVICAL TPI**

New York State Workers’ Compensation Board

Neck Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES: NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.3 INJECTIONS: THERAPEUTIC

D.3.a Therapeutic Spinal Injections

Description:

Therapeutic spinal injections may be used after initial conservative treatments, such as physical and occupational therapy, medication, manual therapy, exercise, acupuncture, have been undertaken.

Therapeutic injections should be used only after imaging studies and diagnostic injections have established pathology. Injections are invasive procedures that can cause catastrophic complications; thus clinical indications and contraindications should be closely adhered to. The purpose of spinal injections is to facilitate active therapy by providing short-term relief through reduction of pain and inflammation. All patients should continue appropriate exercise with functionally directed rehabilitation. Active treatment, which patients should have had prior to injections, will frequently require a repeat of the sessions previously ordered. Injections, by themselves, are not likely to provide long-term relief. Rather, active rehabilitation with modified work achieves long-term relief by increasing active range of motion, strength, and stability. If the first injection does not provide a diagnostic response with temporary and sustained pain relief substantiated by accepted pain scales, (i.e., 80% pain reduction on the Visual Analog Scale), and improvement in function, similar injections should not be repeated.

Special Considerations:

For all injections (excluding trigger point and occipital nerve blocks) multi-planar fluoroscopy during procedures is required (except in cases where radiation exposure is contraindicated and ultrasound evaluation of needle placement may be used) to document technique and needle placement. All injections should be performed by a physician experienced in the procedure. Permanent images are required to verify needle placement. The subspecialty disciplines of the physicians performing injections may be varied, including, but not limited to: anesthesiology, radiology, surgery, or physiatry. The practitioner should have completed fellowship training in pain medicine with interventional training, or its equivalent. They must also be knowledgeable in radiation safety.

Complications:

General complications of spinal injections may include transient neurapraxia, local pain, nerve injury, infection, headache, vasovagal effects. epidural hematoma, permanent neurologic damage, dural perforation and CSF leakage, and/or spinal meningeal abscess. More serious complications are rare but can include spinal cord damage; quadriplegia; permanent ataxia, and death. Injections at a C2-C3 level frequently cause temporary neuritis with ataxia. With steroid injections, there may be a dose-dependent suppression of the hypothalamic-pituitary-adrenal axis lasting between one and three months.

Contraindications:

Absolute contraindications to therapeutic injections include: (a) bacterial infection – systemic or localized to region of injection, (b) bleeding diatheses, (c) hematological conditions, and (d) possible pregnancy.

Relative contraindications to diagnostic injections may include: allergy to contrast, poorly controlled Diabetes Mellitus and hypertension. Drugs affecting coagulation require restriction from use. The following are suggested time period restrictions:

- Aspirin-withhold for seven days;

- NSAIDs-withhold for three days;

- Clopidogrel – withhold for 3 days;

- Other anti-platelet therapy and anti-coagulants should also be addressed individually by a knowledgeable specialist.

D.3.c Trigger Point Injections and Dry Needling Treatment

D.3.c.i Description:

Trigger point treatment can consist of dry needling or injection of local anesthetic with or without corticosteroid into highly localized, extremely sensitive bands of skeletal muscle fibers that produce local and referred pain when activated. Medication is injected in a four-quadrant manner in the area of maximum tenderness. Injection efficacy can be enhanced if injections are immediately followed by Myofascial therapeutic interventions, such as vapo-coolant spray and stretch, ischemic pressure massage (myotherapy), specific soft tissue mobilization and physical modalities. There is conflicting evidence regarding the benefit of trigger point injections. A truly blinded study comparing dry needle treatment of trigger points is not feasible. There is no evidence that injection of medications improves the results of trigger-point injections. Needling alone may account for some of the therapeutic response.

There is no indication for conscious sedation for patients receiving trigger point injections. The patient must be alert to help identify the site of the injection.

D.3.c.ii Recommendations:

Trigger point injections may be used to relieve myofascial pain and facilitate active therapy and stretching of the affected areas. They are to be used as an adjunctive treatment in combination with other treatment modalities such as functional restoration programs. Trigger point injections should be utilized primarily for the purpose of facilitating functional progress. Patients should continue in an aggressive aerobic and stretching therapeutic exercise program as tolerated throughout the time period they are undergoing intensive myofascial interventions. Myofascial pain is often associated with other underlying structural problems and any abnormalities need to be ruled out prior to injection.

Trigger point injections are indicated in those patients where well circumscribed trigger points have been consistently observed, demonstrating a local twitch response, characteristic radiation of pain pattern and local autonomic reaction, such as persistent hyperemia following palpation. Generally, these injections are not necessary unless consistently observed trigger points are not responding to specific, noninvasive, Myofascial interventions within approximately a 6-week time frame.

D.3.c.iii Complications:

Potential but rare complications of trigger point injections include infection, pneumothorax, anaphylaxis, neurapraxia, and neuropathy. Severe pain on injection suggests the possibility of an intraneural injection, and the needle should be immediately repositioned.

-Time to Produce Effect: Local anesthetic 30 minutes; no anesthetic 24 to 48 hours.

- Frequency: Weekly, suggest no more than 4 injection sites per session per week to avoid significant postinjection soreness.

- Optimal Duration: 4 Weeks.

- Maximum Duration: 8 weeks. On rare occasions additional treatments may be warranted.

A GENERAL GUIDELINE PRINCIPLES

Med cal Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses.

Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

Official Disability Guidelines Treatment in Workers' Compensation, Online Edition

Chapter: Neck and Upper Back

Trigger point injections

Not recommended in the absence of myofascial pain syndrome. See the Pain Chapter for Criteria for the use of Trigger point injections. The effectiveness of trigger point injection is uncertain, in part due to the difficulty of demonstrating advantages of active medication over injection of saline. Needling alone may be responsible for some of the therapeutic response. The only indication with some positive data is myofascial pain; may be appropriate when myofascial trigger points are present on examination. Trigger point injections are not recommended when there are radicular signs, but they may be used for cervicalgia. (Bigos, 1999) (Colorado, 2001) (Nelemans-Cochrane, 2000) (BlueCross BlueShield, 2004)

Chapter: Pain

Trigger point injections (TPIs)

Criteria for the use of TPIs (Trigger point injections):

TPIs with a local anesthetic may be recommended for the treatment of chronic low back or neck pain with myofascial pain syndrome when all of the following criteria are met: (1) Documentation of circumscribed trigger points with evidence upon palpation of a twitch response as well as referred pain; (2) Symptoms have persisted for more than three months; (3) Medical management therapies such as ongoing stretching exercises, physical therapy, NSAIDs and muscle relaxants have failed to control pain; (4) Radiculopathy is not present (by exam, imaging, or neuro-testing); (5) No more than 3-4 injections per session; (6) No repeat injections unless a greater than 50% pain relief with reduced medication use is obtained for six weeks after an injection and there is documented evidence of functional improvement; (7) Frequency should not be at an interval less than two months; (8)TPIs with any substance (e.g., saline or glucose) other than local anesthetic with or without steroid are not recommended; (9) There should be evidence of continued ongoing conservative treatment including home exercise and stretching. Use as a sole treatment is not recommended; (10) If pain persists after 2 to 3 injections the treatment plan should be reexamined as this may indicate a lack of appropriate diagnosis, a lack of success with this procedure, or a lack of incorporation of other more conservative treatment modalities for myofascial pain. It should be remembered that trigger point injections are considered an adjunct, not a primary treatment.

**SI JOINT INJECTION**

New York State Workers’ Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES-NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.6 INJECTION THERAPIES

D.6.h Sacroiliac Joint Injections

Recommendations:

D.6.h.i Sacroiliac joint corticosteroid injections are recommended as a treatment option for patients with a specific cause of sacroiliitis, meaning a work-related aggravation of proven rheumatologic inflammatory arthritis involving the sacroiliac joints.

D.6.h.ii Sacroiliac joint injections are recommended for the treatment of sacroiliac joint sprain/dysfunction.

Sacroiliac sprain may present with local tenderness corresponding to the anatomical sacroiliac joint. Such presentation is an extra-axial finding, without radiation, and may be the result of inflammation or trauma. The pain may be acute, subacute or chronic.

-Frequency/Duration: If the results after the first injection are not satisfactory, fluoroscopic guidance must be used for the second injection except in cases where radiation exposure is contraindicated (e.g. pregnancy) ultrasound evaluation of needle placement may be used. Subsequent injections are not recommended unless significant improvement is noted after the initial injections.

A. GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

**CERVICAL NECK TRIGGER POINT INJECTION**

New York State Workers’ Compensation Board

Neck Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES: NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.3 INJECTIONS: THERAPEUTIC

D.3.a Therapeutic Spinal Injections

Description:

Therapeutic spinal injections may be used after initial conservative treatments, such as physical and occupational therapy, medication, manual therapy, exercise, acupuncture, have been undertaken.

Therapeutic injections should be used only after imaging studies and diagnostic injections have established pathology. Injections are invasive procedures that can cause catastrophic complications; thus clinical indications and contraindications should be closely adhered to. The purpose of spinal injections is to facilitate active therapy by providing short-term relief through reduction of pain and inflammation. All patients should continue appropriate exercise with functionally directed rehabilitation. Active treatment, which patients should have had prior to injections, will frequently require a repeat of the sessions previously ordered. Injections, by themselves, are not likely to provide long-term relief. Rather, active rehabilitation with modified work achieves long-term relief by increasing active range of motion, strength, and stability. If the first injection does not provide a diagnostic response with temporary and sustained pain relief substantiated by accepted pain scales, (i.e., 80% pain reduction on the Visual Analog Scale), and improvement in function, similar injections should not be repeated.

Special Considerations:

For all injections (excluding trigger point and occipital nerve blocks) multi-planar fluoroscopy during procedures is required (except in cases where radiation exposure is contraindicated and ultrasound evaluation of needle placement may be used) to document technique and needle placement. All injections should be performed by a physician experienced in the procedure. Permanent images are required to verify needle placement. The subspecialty disciplines of the physicians performing injections may be varied, including, but not limited to: anesthesiology, radiology, surgery, or physiatry. The practitioner should have completed fellowship training in pain medicine with interventional training, or its equivalent. They must also be knowledgeable in radiation safety.

Complications:

General complications of spinal injections may include transient neurapraxia, local pain, nerve injury, infection, headache, vasovagal effects. epidural hematoma, permanent neurologic damage, dural perforation and CSF leakage, and/or spinal meningeal abscess. More serious complications are rare but can include spinal cord damage; quadriplegia; permanent ataxia, and death. Injections at a C2-C3 level frequently cause temporary neuritis with ataxia. With steroid injections, there may be a dose-dependent suppression of the hypothalamic-pituitary-adrenal axis lasting between one and three months.

Contraindications:

Absolute contraindications to therapeutic injections include: (a) bacterial infection – systemic or localized to region of injection, (b) bleeding diatheses, (c) hematological conditions, and (d) possible pregnancy.

Relative contraindications to diagnostic injections may include: allergy to contrast, poorly controlled Diabetes Mellitus and hypertension. Drugs affecting coagulation require restriction from use. The following are suggested time period restrictions:

- Aspirin-withhold for seven days;

- NSAIDs-withhold for three days;

- Clopidogrel – withhold for 3 days;

- Other anti-platelet therapy and anti-coagulants should also be addressed individually by a knowledgeable specialist.

D.3.c Trigger Point Injections and Dry Needling Treatment

D.3.c.i Description:

Trigger point treatment can consist of dry needling or injection of local anesthetic with or without corticosteroid into highly localized, extremely sensitive bands of skeletal muscle fibers that produce local and referred pain when activated. Medication is injected in a four-quadrant manner in the area of maximum tenderness. Injection efficacy can be enhanced if injections are immediately followed by myofascial therapeutic interventions, such as vapo-coolant spray and stretch, ischemic pressure massage (myotherapy), specific soft tissue mobilization and physical modalities. There is conflicting evidence regarding the benefit of trigger point injections. A truly blinded study comparing dry needle treatment of trigger points is not feasible. There is no evidence that injection of medications improves the results of trigger-point injections. Needling alone may account for some of the therapeutic response.

There is no indication for conscious sedation for patients receiving trigger point injections. The patient must be alert to help identify the site of the injection.

D.3.c.ii Recommendations:

Trigger point injections may be used to relieve myofascial pain and facilitate active therapy and stretching of the affected areas. They are to be used as an adjunctive treatment in combination with other treatment modalities such as functional restoration programs. Trigger point injections should be utilized primarily for the purpose of facilitating functional progress. Patients should continue in an aggressive aerobic and stretching therapeutic exercise program as tolerated throughout the time period they are undergoing intensive myofascial interventions. Myofascial pain is often associated with other underlying structural problems and any abnormalities need to be ruled out prior to injection.

Trigger point injections are indicated in those patients where well circumscribed trigger points have been consistently observed, demonstrating a local twitch response, characteristic radiation of pain pattern and local autonomic reaction, such as persistent hyperemia following palpation. Generally, these injections are not necessary unless consistently observed trigger points are not responding to specific, noninvasive, myofascial interventions within approximately a 6-week time frame.

D.3.c.iii Complications:

Potential but rare complications of trigger point injections include infection, pneumothorax, anaphylaxis, neurapraxia, and neuropathy. Severe pain on injection suggests the possibility of an intraneural injection, and the needle should be immediately repositioned.

Time to Produce Effect: Local anesthetic 30 minutes; no anesthetic 24 to 48 hours.

-Frequency: Weekly, suggest no more than 4 injection sites per session per week to avoid significant post-injection soreness.

-Optimal Duration: 4 Weeks.

-Maximum Duration: 8 weeks. On rare occasions additional treatments may be warranted.

A. GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1. MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient's daily and work activities and return to work, while striving to restore the patient's health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

**CERVICAL RFA**

New York State Workers’ Compensation Board

Neck Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES: NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.3 INJECTIONS: THERAPEUTIC

D.3.a Therapeutic Spinal Injections

Description:

Therapeutic spinal injections may be used after initial conservative treatments, such as physical and occupational therapy, medication, manual therapy, exercise, acupuncture, have been undertaken.

Therapeutic injections should be used only after imaging studies and diagnostic injections have established pathology. Injections are invasive procedures that can cause catastrophic complications; thus clinical indications and contraindications should be closely adhered to. The purpose of spinal injections is to facilitate active therapy by providing short-term relief through reduction of pain and inflammation. All patients should continue appropriate exercise with functionally directed rehabilitation. Active treatment, which patients should have had prior to injections, will frequently require a repeat of the sessions previously ordered. Injections, by themselves, are not likely to provide long-term relief. Rather, active rehabilitation with modified work achieves long-term relief by increasing active range of motion, strength, and stability. If the first injection does not provide a diagnostic response with temporary and sustained pain relief substantiated by accepted pain scales, (i.e., 80% pain reduction on the Visual Analog Scale), and improvement in function, similar injections should not be repeated.

Special Considerations:

For all injections (excluding trigger point and occipital nerve blocks) multi-planar fluoroscopy during procedures is required (except in cases where radiation exposure is contraindicated and ultrasound evaluation of needle placement may be used) to document technique and needle placement. All injections should be performed by a physician experienced in the procedure. Permanent images are required to verify needle placement. The subspecialty disciplines of the physicians performing injections may be varied, including, but not limited to: anesthesiology, radiology, surgery, or physiatry. The practitioner should have completed fellowship training in pain medicine with interventional training, or its equivalent. They must also be knowledgeable in radiation safety.

Complications:

General complications of spinal injections may include transient neurapraxia, local pain, nerve injury, infection, headache, vasovagal effects. epidural hematoma, permanent neurologic damage, dural perforation and CSF leakage, and/or spinal meningeal abscess. More serious complications are rare but can include spinal cord damage; quadriplegia; permanent ataxia, and death. Injections at a C2-C3 level frequently cause temporary neuritis with ataxia. With steroid injections, there may be a dose-dependent suppression of the hypothalamic-pituitary-adrenal axis lasting between one and three months.

Contraindications:

Absolute contraindications to therapeutic injections include: (a) bacterial infection – systemic or localized to region of injection, (b) bleeding diatheses, (c) hematological conditions, and (d) possible pregnancy.

Relative contraindications to diagnostic injections may include: allergy to contrast, poorly controlled Diabetes Mellitus and hypertension. Drugs affecting coagulation require restriction from use. The following are suggested time period restrictions:

- Aspirin-withhold for seven days;

- NSAIDs-withhold for three days;

- Clopidogrel – withhold for 3 days;

- Other anti-platelet therapy and anti-coagulants should also be addressed individually by a knowledgeable specialist.

D.3.a.ii Zygapophyseal (Facet) Injection

Zygapophyseal (Facet) injections must be fluoroscopically guided, except in cases where radiation exposure is contraindicated and ultrasound evaluation of needed placement may be used.

Description: Intra-articular or pericapsular injection of local anesthetic and corticosteroid. There is no justification for a combined facet and medial branch block.

Recommendations:

Patients with pain 1) suspected to be facet in origin based on exam findings and 2) affecting activity; OR patients who have refused a rhizotomy; OR patients who have facet findings with a thoracic component. In these patients, facet injections may be occasionally useful in facilitating a functionally-directed rehabilitation program and to aid in identifying pain generators. Patients with recurrent pain should be evaluated with more definitive

diagnostic injections, such as medial nerve branch injections, to determine the need for a rhizotomy. Because facet injections are not likely to produce long-term benefit by themselves and are not the most accurate diagnostic tool, they should not be performed at more than two levels.

Therapeutic facet injections may be repeated if they result in increased documented functional benefit for at least 4 to 6 weeks and at least an 80% initial improvement in pain scales as measured by accepted pain scales (such as VAS).

- Time to Produce Effect: Up to 30 minutes for local anesthetic; corticosteroid up to 72 hours.

- Frequency: 1 injection per side per level, not to exceed two levels with a diagnostic response. If the first injection does not provide a diagnostic response of temporary and sustained pain relief substantiated by accepted pain scales, (i.e., 80% pain reduction substantiated by tools such as VAS), and improvement in function, repeat injections are not recommended. At least 4 to 6 weeks of functional benefit should be obtained with each therapeutic injection.

- Optimum Duration: 2 to 3 injections for each applicable joint per year. Not to exceed two joint levels depending upon patient’s response (improved functional gain and pain reduction).

- Maximum Duration: 3 injections per application may be done in one year depending upon patient’s response (improved functional gain and pain reduction).

D.4 RADIO FREQUENCY (RF) MEDIAL BRANCH NEUROTOMY/ FACET RHIZOTOMY

D.4.a.i Description:

A procedure designed to denervate the facet joint by ablating the corresponding sensory medial branches. Continuous percutaneous radio-frequency is the method generally used.

There is good evidence to support this procedure in the cervical spine but benefits beyond one year are not yet established. Radio-frequency medial branch neurotomy is the procedure of choice over alcohol, phenol, or cryoablation. Precise positioning of the probe under fluoroscopic guidance is required since the maximum effective diameter of the device is a 5 x 8 millimeter oval.

Permanent images should be recorded to verify placement of the device.

D.4.a.ii Recommendations:

Those patients with proven, significant, facetogenic pain. This procedure is not recommended for patients with multiple pain generators or involvement of more than 3 medial branch nerves.

Individuals should have met the following indications: pain of well-documented facet origin, unresponsive to active and/or passive therapy, manual therapy, and in which a psychosocial screening has been performed (e.g., pain diagram, thorough psychosocial history, screening questionnaire). It is generally recommended that this procedure not be performed until three months of active therapy and manual therapy have been completed. All patients should continue appropriate exercise with functionally directed rehabilitation. Active treatment, which patients will have had prior to the procedure, will frequently require a repeat of the sessions previously ordered.

All patients should have a successful response to a diagnostic medial nerve branch block and a separate comparative block. To be a positive diagnostic block the patient should report a reduction of pain of 80% or greater from baseline for the length of time appropriate for the local anesthetic used. In almost all cases this will mean a reduction of pain to 1 or 2 on the VAS 10-point scale correlated with functional improvement. The patient should also identify activities of daily living (which may include measurements of range-of-motion) that are impeded by their pain and can be observed to document functional improvement in the clinical setting. Ideally, these activities should be assessed throughout the observation period for function. The observer should not be the physician who performed the procedure.

A separate comparative block should be performed on a different date to confirm the level of involvement. A comparative block uses anesthetics with varying lengths of activity.

D.4.a.iii Complications:

Bleeding, infection, or neural injury. The clinician must be aware of the risk of developing a localized neuritis, and rarely, a deafferentation centralized pain syndrome as a complication of this and other neuroablative procedures.

D.4.a.iv Post-Procedure Therapy:

Active therapy. Implementation of a gentle reconditioning program within the first post-procedure week is recommended, barring complications. Instruction and participation in a long-term home-based program of range of motion, cervical, scapular, and thoracic strengthening, postural or neuromuscular re-education, endurance, and stability exercises should be accomplished over a period of four to ten visits post-procedure.

D.4.a.v Requirements for repeat RF neurotomy (or additional level RF neurotomies):

In some cases pain may recur. Successful rhizotomy usually provides from six to eighteen months of relief.

Before a repeat RF neurotomy is done, a confirmatory medial branch injection should be performed if the patient’s pain pattern presents differently than in the initial evaluation. In occasional patients, additional levels of RF neurotomy may be necessary. The same indications and limitations apply.

A. GENERAL GUIDELINE PRINCIPLES

Medical Care

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Treatment Approaches

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**CERVICAL FACET MBB**

New York State Workers’ Compensation Board

Neck Injury Medical Treatment Guidelines

C DIAGNOSTIC STUDIES

C.2 OTHER TESTS

C.2.b Injections – Diagnostic

Including median branch blocks, atlanto-axial/atlanto-occipital.

Not Recommended.

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General complications of spinal injections may include transient neurapraxia, local pain, nerve injury, infection, headache, vasovagal effects. epidural hematoma, permanent neurologic damage, dural perforation and CSF leakage, and/or spinal meningeal abscess. More serious complications are rare but can include spinal cord damage; quadriplegia; permanent ataxia, and death. Injections at a C2-C3 level frequently cause temporary neuritis with ataxia. With steroid injections, there may be a dose-dependent suppression of the hypothalamic-pituitary-adrenal axis lasting between one and three months.

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Recommendations:

Patients with pain 1) suspected to be facet in origin based on exam findings and 2) affecting activity; OR patients who have refused a rhizotomy; OR patients who have facet findings with a thoracic component. In these patients, facet injections may be occasionally useful in facilitating a functionally-directed rehabilitation program and to aid in identifying pain generators. Patients with recurrent pain should be evaluated with more definitive diagnostic injections, such as medial nerve branch injections, to determine the need for a rhizotomy. Because facet injections are not likely to produce long-term benefit by themselves and are not the most accurate diagnostic tool, they should not be performed at more than two levels.

Therapeutic facet injections may be repeated if they result in increased documented functional benefit for at least 4 to 6 weeks and at least an 80% initial improvement in pain scales as measured by accepted pain scales (such as VAS).

- Time to Produce Effect: Up to 30 minutes for local anesthetic; corticosteroid up to 72 hours.

- Frequency: 1 injection per side per level, not to exceed two levels with a diagnostic response. If the first injection does not provide a diagnostic response of temporary and sustained pain relief substantiated by accepted pain scales, (i.e., 80% pain reduction substantiated by tools such as VAS), and improvement in function, repeat injections are not recommended. At least 4 to 6 weeks of functional benefit should be obtained with each therapeutic injection.

- Optimum Duration: 2 to 3 injections for each applicable joint per year. Not to exceed two joint levels depending upon patient’s response (improved functional gain and pain reduction).

- Maximum Duration: 3 injections per application may be done in one year depending upon patient’s response (improved functional gain and pain reduction).

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

A.12 DIAGNOSTIC IMAGING AND TESTING PROCEDURES

Clinical information obtained by history taking and physical examination should be the basis for selection and interpretation of imaging procedure results. All diagnostic procedures have variable specificity and sensitivity for various diagnoses.

When a diagnostic procedure, in conjunction with clinical information, provides sufficient information to establish an accurate diagnosis, a second diagnostic procedure will be redundant if it is performed only for diagnostic purposes. At the same time, a subsequent diagnostic procedure (that may be a repeat of the same procedure, when the rehabilitation physician, radiologist or surgeon documents the study was of inadequate quality to make a diagnosis) can be a complementary diagnostic procedure if the first or preceding procedures, in conjunction with clinical information, cannot provide an accurate diagnosis.

It is recognized that repeat imaging and other tests may be warranted by the clinical course and to follow the progress of treatment in some cases. It may be of value to repeat diagnostic procedures (e.g. imaging studies) during the course of care to reassess or stage the pathology when there is progression of symptoms or findings, prior to surgical interventions and therapeutic injections when warranted, and post-operatively to follow the healing process. Regarding CT examinations, it must be recognized that repeat procedures result in an increase in cumulative radiation dose and associated risks.

**LUMBAR RFA**

New York State Workers’ Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES-NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.6 INJECTION THERAPIES

D.6.e Diagnostic Facet Joint Injections (Intra-articular and Nerve Blocks)

Recommendations:

D.6.e.i One fluoroscopically guided (except in cases where radiation exposure is contraindicated and ultrasound evaluation of needle placement may be used) diagnostic facet joint injection, except in cases where radiation exposure is contraindicated (e.g. pregnancy) ultrasound evaluation of needle placement may be used, per side per level may be recommended for patients with chronic back pain that is significantly exacerbated by extension and rotation or associated with lumbar rigidity, and not alleviated with other conservative treatments (e.g., medication, aerobic exercise, other exercise, manipulation) in order to determine whether specific interventions targeting the facet joint are recommended. Repeated diagnostic injections in the same level(s) are not recommended.

Maximum Duration: One diagnostic facet joint injection per side per level, not to exceed two levels.

D.6.e.ii Diagnostic facet joint injections are not recommended for acute, subacute back pain, or sciatic pain.

D.6.f Therapeutic Facet Joint Injections

Recommendations:

D.6.f.i Fluoroscopically guided (except in cases where radiation exposure is contraindicated and ultrasound evaluation of needle placement may be used) therapeutic facet joint injections may be considered for a select group of patients with chronic low back pain (back pain) who have completed a full course of conservative management, including but not limited to medication, modalities, active exercises, and have chronic believed to be the result of facet dysfunction (see Diagnostic Facet Joint Injections D.6.e).

- Optimal Duration: 2-3 injections for each applicable joint per year depending upon patient response (improved function and pain reduction) not to exceed two levels.

- Maximum: 3 injections may be done in one year depending upon patient response (improved function and pain reduction).

D.12 RADIOFREQUENCY NEUROTOMY, NEUROTOMY, AND FACET RHIZOTOMY

D.12.a Radiofrequency Neurotomy, Neurotomy, and Facet Rhizotomy

Recommendations:

D.12.a.i Radiofrequency neurotomy, neurotomy, and facet rhizotomy may be considered as procedures of last resort in patients with chronic back pain.

D.12.a.ii For patients in whom facet joint injections have been therapeutically successful, the use of radiofrequency neurotomy, neurotomy, and facet rhizotomy may be indicated.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses.

**LOW BACK FACET JOINT INJECTIONS**

New York State Workers’ Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES-NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

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Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.6 INJECTION THERAPIES

D.6.e Diagnostic Facet Joint Injections (Intra-articular and Nerve Blocks)

Recommendations:

D.6.e.i One fluoroscopically guided (except in cases where radiation exposure is contraindicated and ultrasound evaluation of needle placement may be used) diagnostic facet joint injection, except in cases where radiation exposure is contraindicated (e.g. pregnancy) ultrasound evaluation of needle placement may be used, per side per level may be recommended for patients with chronic back pain that is significantly exacerbated by extension and rotation or associated with lumbar rigidity, and not alleviated with other conservative treatments (e.g., medication, aerobic exercise, other exercise, manipulation) in order to determine whether specific interventions targeting the facet joint are recommended. Repeated diagnostic injections in the same level(s) are not recommended.

Maximum Duration: One diagnostic facet joint injection per side per level, not to exceed two levels.

D.6.e.ii Diagnostic facet joint injections are not recommended for acute, subacute back pain, or sciatic pain.

D.6.f Therapeutic Facet Joint Injections

Recommendations:

D.6.f.i Fluoroscopically guided (except in cases where radiation exposure is contraindicated and ultrasound evaluation of needle placement may be used) therapeutic facet joint injections may be considered for a select group of patients with chronic low back pain (back pain) who have completed a full course of conservative management, including but not limited to medication, modalities, active exercises, and have chronic believed to be the result of facet dysfunction (see Diagnostic Facet Joint Injections D.6.e).

- Optimal Duration: 2-3 injections for each applicable joint per year depending upon patient response (improved function and pain reduction) not to exceed two levels.

- Maximum: 3 injections may be done in one year depending upon patient response (improved function and pain reduction).

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses.

**LOW BACK - TENS**

New York State Worker’s Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES-NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.5 ELECTRICAL THERAPIES

D.5.b Transcutaneous Electrical Neurostimulation (TENS)

Recommendations:

D.5.b.i TENS is not recommended for acute back pain, subacute back pain, or acute radicular pain syndromes.

D.5.b.ii TENS is recommended for select use in chronic back pain or chronic radicular pain syndrome as an adjunct for more efficacious treatments.

TENS (single or dual channel) may be recommended as treatment for chronic back pain clear objective and functional goals are being achieved, which includes reductions in medication use. TENS is used as adjunctive treatment in chronic pain conditions to support graded aerobic exercise and strengthening exercises. In those not involved in a conditioning program, or who are non-compliant with graded increases in activity levels, this intervention is not recommended. There is no quality evidence that more complex TENS units beyond the single or dual channel models are more efficacious, thus, those models are not recommended.

- Frequency/Duration: TENS units should be tried prior to purchase to demonstrate efficacy and increase function. Two or three visits with a therapist may be necessary to instruct the patient in the application and use of the unit and to determine the most effective electrode placement and current parameters.

Discontinuation: Resolution, intolerance or non-compliance, including non-compliance with aerobic and strengthening exercises.

D.9 THERAPY: ACTIVE

D.9.a Therapeutic Exercise

Therapeutic Exercise (WCB) with or without mechanical assistance or resistance, may include isoinertial, isotonic, isometric and isokinetic types of exercises. Indications include the need for cardiovascular fitness, reduced edema, improved muscle strength, improved connective tissue strength and integrity, increased bone density, promotion of circulation to enhance soft tissue healing, improvement of muscle recruitment, improved proprioception and coordination, increased range of motion and are used to promote normal movement patterns. Therapeutic exercise can also include complementary/ alternative exercise movement therapy (with oversight of a physician or appropriate healthcare professional).

- Time to Produce Effect: 2 to 6 treatments.

- Frequency: 3 to 5 times per week.

-Optimum Duration: 4 to 8 weeks.

- Maximum Duration: 8 weeks.

D.10 THERAPY: PASSIVE

D.10.c Massage (Manual or Mechanical)

Massage (Manual or Mechanical) (WCB) consists of manipulation of soft tissue with broad-ranging relaxation and circulatory benefits. This may include stimulation of acupuncture points and acupuncture channels (acupressure), application of suction cups and techniques that include pressing, lifting, rubbing, pinching of soft tissues by or with the practitioner's hands. Indications include edema (peripheral or hard and non-pliable edema), muscle spasm, adhesions, the need to improve peripheral circulation and range of motion, or to increase muscle relaxation and flexibility prior to exercise.

As with all passive therapies, massage must be accompanied by exercise and patient education. Objective benefit (functional improvement along with symptom reduction) must be demonstrated in order for further treatment to continue.

D.10.c.i Massage is recommended for select use in subacute and chronic back pain as an adjunct to more efficacious treatments consisting primarily of a graded aerobic and strengthening exercise program.

-Time to Produce Effect: Immediate.

-Frequency: 1 to 2 times per week.

-Optimum Duration: 6 weeks.

Discontinuation: Resolution, intolerance, lack of benefit, or non-compliance with aerobic and strengthening exercises.

D.10.c.ii Massage is recommended as a treatment for acute back pain and chronic radicular syndromes in which back pain is a substantial symptom component.

-Time to Produce Effect: Immediate.

-Frequency: 1 to 2 times per week.

-Optimum Duration: 6 weeks.

-Discontinuation: Resolution, intolerance or lack of benefit.

D.10.c.iii Massage is recommended for patients with sub-acute and chronic back pain without underlying serious pathology, such as fracture, tumor, or infection.

-Time to Produce Effect: Immediate.

-Frequency: 1 to 2 times per week.

-Optimum Duration: 6 weeks.

-Discontinuation: Resolution, intolerance or lack of benefit.

D.10.c.iv Mechanical devices for administering massage are not recommended.

D.10.e Mobilization (Soft Tissue)

Mobilization of soft tissue (WCB) is the skilled application of muscle energy, strain/counter strain, myofascial release, manual trigger point release, and other manual therapy techniques designed to improve or normalize movement patterns through the reduction of soft tissue pain and restrictions. These can be interactive with the patient participating or can be with the patient relaxing and letting the practitioner move the body tissues. Indications include muscle spasm around a joint, trigger points, adhesions, and neural compression. Mobilization should be accompanied by active therapy.

- Time to Produce Effect: 4 to 9 treatments.

- Frequency: Up to 3 times per week.

- Optimum Duration: 4 to 6 weeks.

- Maximum Duration: 6 weeks.

D.10.f Superficial Heat and Cold

Superficial heat and cold (WCB) are thermal agents applied in various manners that lower or raise the body temperature for the reduction of pain, inflammation, and/or effusion resulting from injury or induced by exercise. It includes application of heat just above the surface of the skin at acupuncture points.

Recommendations:

D.10.f.i Recommended for acute pain, edema, and hemorrhage, need to increase the pain threshold, reduce muscle spasm, and promote stretching/flexibility. Cold and heat packs can be used at home as an extension of therapy in the clinic setting.

- Time to Produce Effect: Immediate.

- Frequency/Duration: Frequency: 2 to 5 times per week.

- Optimum Duration: 3 weeks as primary, or intermittently as an adjunct to other therapeutic procedures up to two months.

A GENERAL GUIDELINE PRINCIPLES

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A.11 ACTIVE THERAPEUTIC EXERCISE PROGRAM

Active therapeutic exercise program goals should incorporate patient strength, endurance, flexibility, range of motion, coordination, and education. This includes functional application in vocational or community settings.

KNEE Physical Therapy-

New York State Workers’ Compensation Board

Knee Injury Medical Treatment Guidelines

D SPECIFIC KNEE INJURY DIAGNOSES, TESTING, AND TREATMENT

E THERAPEUTIC PROCEDURES, NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer and insurer must consider these important issues in the care of the injured worker.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified, restricted, or full duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

In unusual cases where a patient is unable to attend an outpatient center, home therapy may be necessary. Home therapy may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone. Home therapy is usually of short duration.

E.7 THERAPY-ACTIVE

Most of the following active therapies have some evidence and are based on the philosophy that therapeutic exercise and/or activity are beneficial for restoring flexibility, strength, endurance, function, range of motion, and can alleviate discomfort. Active therapy requires an internal effort by the individual to complete a specific exercise or task. This form of therapy requires supervision from a therapist or medical provider such as verbal, visual and/or tactile instruction(s). At times, the provider may help stabilize the patient or guide the movement pattern but the energy required to complete the task is predominately executed by the patient.

Patients should be instructed to continue active therapies at home as an extension of the treatment process in order to maintain improvement levels. Home exercise can include exercise with or without mechanical assistance or resistance and functional activities with assistive devices.

E.7.e Therapeutic Exercise

Therapeutic Exercise, with or without mechanical assistance or resistance, may include isoinertial, isotonic, isometric and isokinetic types of exercises. Indications include the need for cardiovascular fitness, reduced edema, improved muscle strength, improved connective tissue strength and integrity, increased bone density, promotion of circulation to enhance soft tissue healing, improvement of muscle recruitment, increased range of motion and are used to promote normal movement patterns. Can also include complementary/ alternative exercise movement therapy.

- Time to produce effect: 2 to 6 treatments.

- Frequency: 3 to 5 times per week.

- Optimum duration: 4 to 8 weeks.

- Maximum duration: 8 weeks.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

A.11 ACTIVE INTERVENTIONS

Active therapeutic exercise program goals should incorporate patient strength, endurance, flexibility, range of motion, coordination, and education. This includes functional application in vocational or community settings.

**UPPER EX EMG NCV**

New York State Workers’ Compensation Board

Neck Injury Medical Treatment Guidelines

C DIAGNOSTIC STUDIES

The studies below are listed in frequency of use, not importance.

C.2 OTHER TESTS

The following diagnostic procedures are listed in alphabetical order, not by importance.

C.2.a Electrodiagnostic Testing (includes Needle EMG)

EDS include needle EMG (Electromyogram), peripheral nerve conduction studies (NCS) and motor and sensory evoked potentials. Needle EMG can substantiate the diagnosis of radiculopathy or spinal stenosis in patients with neck pain and/or radiculopathy problems. Needle EMG can help determine if radiculopathy is acute or chronic. NCS are done in addition to needle EMG to rule out other potential causes for the symptoms, (co-morbidity or alternate diagnosis involving peripheral nerves) and to confirm radiculopathy. It is recommended and preferred that EDS in the out-patient setting be performed and interpreted by physicians board-certified in Neurology or Physical Medicine and Rehabilitation. In general, electrodiagnostic studies are complementary to imaging procedures such as CT, MRI, and/or myelography. Whereas X-ray, CT and MRI reflect structural changes, electrodiagnostic studies reflect neurologic functional status. If significant radiating arm symptoms are present for greater than 4-6 weeks after the onset of injury and no obvious level of nerve root dysfunction is evident on examination, Electrodiagnostic studies may be indicated. Electrodiagnostic studies may also be useful to determine the extent of injury in patients with an established level of injury.

C.2.a.i Portable Automated Electrodiagnostic Device (also known as Surface EMG). Surface EMG is not appropriate for diagnostic evaluation of neck pain or neck injuries under any circumstances and is not recommended.

C.2.a.ii Somatosensory Evoked Potential (SSEP) Somatosensory Evoked Potential (SSEP) is useful for the evaluation of myelopathy and is increasingly used intraoperatively. It is not recommended to identify radiculopathy.

C.2.a.iii Current Perception Threshold Evaluation (CPT) Current Perception Threshold Evaluation (CPT) may be useful as a screening tool, but its diagnostic efficacy in the evaluation of cervical spine pain has not been determined. Therefore, CPT is not recommended as a diagnostic tool.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses.

Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

A.12 DIAGNOSTIC IMAGING AND TESTING PROCEDURES

Clinical information obtained by history taking and physical examination should be the basis for selection and interpretation of imaging procedure results. All diagnostic procedures have variable specificity and sensitivity for various diagnoses.

When a diagnostic procedure, in conjunction with clinical information, provides sufficient information to establish an accurate diagnosis, a second diagnostic procedure will be redundant if it is performed only for diagnostic purposes. At the same time, a subsequent diagnostic procedure (that may be a repeat of the same procedure, when the rehabilitation physician, radiologist or surgeon documents the study was of inadequate quality to make a diagnosis) can be a complementary diagnostic procedure if the first or preceding procedures, in conjunction with clinical information, cannot provide an accurate diagnosis.

It is recognized that repeat imaging and other tests may be warranted by the clinical course and to follow the progress of treatment in some cases. It may be of value to repeat diagnostic procedures (e.g. imaging studies) during the course of care to reassess or stage the pathology when there is progression of symptoms or findings, prior to surgical interventions and therapeutic injections when warranted, and post-operatively to follow the healing process. Regarding CT examinations, it must be recognized that repeat procedures result in an increase in cumulative radiation dose and associated risks.

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Chapter: Neck and Upper Back

Electromyography (EMG)

Recommended (needle, not surface) as an option in selected cases. The American Association of Electrodiagnostic Medicine conducted a review on electrodiagnosis in relation to cervical radiculopathy and concluded that the test was moderately sensitive (50%-71%) and highly specific (65%-85%). (AAEM, 1999) EMG findings may not be predictive of surgical outcome in cervical surgery, and patients may still benefit from surgery even in the absence of EMG findings of nerve root impingement. This is in stark contrast to the lumbar spine where EMG findings have been shown to be highly correlative with symptoms. (Negrin, 1991) (Alrawi, 2006) (Ashkan, 2002) (Nardin, 1999) (Tsao, 2007) (Surface EMG and F-wave tests are not very specific and therefore are not recommended.)

While cervical electrodiagnostic studies are not necessary to demonstrate a cervical radiculopathy, they have been suggested to confirm a brachial plexus abnormality or some problem other than a cervical radiculopathy, but these studies can result in unnecessary over treatment. (Plastaras, 2011) (Lo, 2011) (Fuglsang-Frederiksen, 2011)

Nerve conduction studies (NCS)

Not recommended. There is minimal justification for performing nerve conduction studies when a patient is presumed to have symptoms on the basis of radiculopathy. (Utah, 2006) While cervical electrodiagnostic studies are not necessary to demonstrate a cervical radiculopathy, they have been suggested to confirm a brachial plexus abnormality or some problem other than a cervical radiculopathy, but these studies can result in unnecessary over treatment. (Plastaras, 2011) (Lo, 2011) (Fuglsang-Frederiksen, 2011) Studies have not shown portable nerve conduction devices to be effective.

**LOWER EX EMG-NCV**

New York State Workers’ Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

C DIAGNOSTIC STUDIES

C.2 OTHER TESTS/PROCEDURES:

C.2.a Electrodiagnostic Studies (EDS)-includes Needle EMG’s (Electromyelogram)

EDS include needle EMG, peripheral nerve conduction studies (NCS) and motor and sensory evoked potentials. Needle EMG is usually what substantiates the diagnosis of radiculopathy or spinal stenosis in patients with back pain and/or radiculopathy problems. Needle EMG can help determine if radiculopathy is acute or chronic. NCS are done in addition to needle EMG to rule out other potential causes for the symptoms, (co-morbidity or alternate diagnosis involving peripheral nerves) and to confirm radiculopathy. It is recommended and preferred that EDS in the out-patient setting be performed and interpreted by physicians board-certified in Neurology or Physical Medicine and Rehabilitation.

Recommendations:

C.2.a.i EDS are not recommended for patients with acute, subacute, or chronic back pain who do not have significant leg pain or numbness.

C.2.a.ii EDS (must include needle EMG and NCS) are recommended where a CT or MRI is equivocal and there are ongoing complaints of pain, weakness, and/or numbness/parasthesias that raise questions about whether there may be a neurological compromise that may be identifiable. This means leg symptoms consistent with radiculopathy, spinal stenosis, peripheral neuropathy, etc.

Nerve conduction studies are done in addition to the needle EMG both to rule out other potential causes for the symptoms (co-morbidity or alternate diagnosis involving peripheral nerves, e.g. compression neuropathies) and to confirm radiculopathy, but the testing must include needle EMG.

C.2.a.iii EDS is recommended where there is failure of suspected radicular pain to resolve or plateau after waiting 4 to 6 weeks (to provide for sufficient time to develop EMG abnormalities as well as time for conservative treatment to resolve the problems), equivocal imaging findings, e.g. on CT or MRI studies, and suspicion by history and physical examination that a neurologic condition other than radiculopathy may be present instead of or in addition to radiculopathy.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

A.12 DIAGNOSTIC IMAGING AND TESTING PROCEDURES

Clinical information obtained by history taking and physical examination should be the basis for selection and interpretation of imaging procedure results. All diagnostic procedures have variable specificity and sensitivity for various diagnoses.

When a diagnostic procedure, in conjunction with clinical information, provides sufficient information to establish an accurate diagnosis, a second diagnostic procedure will be redundant if it is performed only for diagnostic purposes. At the same time, a subsequent diagnostic procedure (that may be a repeat of the same procedure, when the rehabilitation physician, radiologist or surgeon documents the study was of inadequate quality to make a diagnosis) can be a complementary diagnostic procedure if the first or preceding procedures, in conjunction with clinical information, cannot provide an accurate diagnosis.

It is recognized that repeat imaging studies and other tests may be warranted by the clinical course and to follow the progress of treatment in some cases. It may be of value to repeat diagnostic procedures (e.g. imaging studies) during the course of care to reassess or stage the pathology when there is progression of symptoms or findings, prior to surgical interventions and therapeutic injections when warranted, and post-operatively to follow the healing process. Regarding CT examinations, it must be recognized that repeat procedures result in an increase in cumulative radiation dose and associated risks.

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Chapter: Low Back - Lumbar & Thoracic

EMGs (electromyography)

Recommended as an option (needle, not surface). EMGs (electromyography) may be useful to obtain unequivocal evidence of radiculopathy, after 1-month conservative therapy, but EMG's are not necessary if radiculopathy is already clinically obvious. (Bigos, 1999) (Ortiz-Corredor, 2003) (Haig, 2005) No correlation was found between intraoperative EMG findings and immediate postoperative pain, but intraoperative spinal cord monitoring is becoming more common and there may be benefit in surgery with major corrective anatomic intervention like fracture or scoliosis or fusion where there is significant stenosis. (Dimopoulos, 2004) EMG’s may be required by the AMA Guides for an impairment rating of radiculopathy. (AMA, 2001) (Note: Needle EMG and H-reflex tests are recommended, but Surface EMG and F-wave tests are not very specific and therefore are not recommended)

Nerve conduction studies (NCS)

Not recommended. There is minimal justification for performing nerve conduction studies when a patient is presumed to have symptoms on the basis of radiculopathy. (Utah, 2006) Studies have not shown portable nerve conduction devices to be effective. EMGs (electromyography) are recommended as an option (needle, not surface) to obtain unequivocal evidence of radiculopathy, after 1-month conservative therapy, but EMG's are not necessary if radiculopathy is already clinically obvious.

Chapter: Pain

Electrodiagnostic testing (EMG/NCS)

Recommended EMG or NCS, depending on indications. Electromyography (EMG) and Nerve Conduction Studies (NCS) are generally accepted, well-established and widely used for localizing the source of the neurological symptoms and establishing the diagnosis of focal nerve entrapments, such as carpal tunnel syndrome or radiculopathy, which may contribute to or coexist with CRPS II (causalgia), when testing is performed by appropriately trained neurologists or physical medicine and rehabilitation physicians (improperly performed testing by other providers often gives inconclusive results). As CRPS II occurs after partial injury to a nerve, the diagnosis of the initial nerve injury can be made by electrodiagnostic studies. The later development of sympathetically mediated symptomatology however, has no pathognomonic pattern of abnormality on EMG/NCS. (Colorado, 2002) EMG and NCS are separate studies and should not necessarily be done together.

Minimum Standards for electrodiagnostic studies: The American Association of Neuromuscular & Electrodiagnostic Medicine (AANEM) recommends the following minimum standards:

(1) EDX testing should be medically indicated.

(2) Testing should be performed using EDX equipment that provides assessment of all parameters of the recorded signals. Studies performed with devices designed only for “screening purposes” rather than diagnosis are not acceptable.

(3) The number of tests performed should be the minimum needed to establish an accurate diagnosis.

(4) NCSs (Nerve conduction studies) should be either (a) performed directly by a physician or (b) performed by a trained individual under the direct supervision of a physician. Direct supervision means that the physician is in close physical proximity to the EDX laboratory while testing is underway, is immediately available to provide the trained individual with assistance and direction, and is responsible for selecting the appropriate NCSs to be performed.

(5) EMGs (Electromyography - needle not surface) must be performed by a physician specially trained in electrodiagnostic medicine, as these tests are simultaneously performed and interpreted.

(6) It is appropriate for only 1 attending physician to perform or supervise all of the components of the electrodiagnostic testing (e.g., history taking, physical evaluation, supervision and/or performance of the electrodiagnostic test, and interpretation) for a given patient and for all the testing to occur on the same date of service. The reporting of NCS and EMG study results should be integrated into a unifying diagnostic impression.

(7) In contrast, dissociation of NCS and EMG results into separate reports is inappropriate unless specifically explained by the physician. Performance and/or interpretation of NCSs separately from that of the needle EMG component of the test should clearly be the exception (e.g. when testing an acute nerve injury) rather than an established practice pattern for a given practitioner. (AANEM, 2009)

**NECK AND BACK MASSAGE**

New York State Worker's Compensation Board

Neck Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES: NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient's condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.11 THERAPY: PASSIVE

Therapy: Passive includes those treatment modalities that do not require energy expenditure on the part of the patient. They are principally effective during the early phases of treatment and are directed at controlling symptoms such as pain, inflammation and swelling. If employed, they should be used adjunctively with active therapies such as postural stabilization and exercise programs to help control swelling, pain, and inflammation during the active rehabilitation process. Passive therapies may be used intermittently as a therapist deems appropriate or regularly if there are specific goals with objectively measured functional improvements during treatment.

On occasion, specific diagnoses and post-surgical conditions may warrant durations of treatment beyond those listed as "maximum.” Factors such as exacerbation of symptoms, re-injury, interrupted continuity of care and co-morbidities may also extend durations of care. Specific goals with objectively measured functional improvement during treatment must be cited to justify extended durations of care. It is recommended that, if no functional gain is observed after the number of treatments under “time to produce effect” has been completed, alternative treatment interventions, further diagnostic studies or further consultations should be pursued.

D.11.g Massage (Manual or Mechanical)

Massage (Manual or Mechanical) consists of manipulation of soft tissue with broad-ranging relaxation and circulatory benefits. This may include stimulation of acupuncture points and acupuncture channels (acupressure), application of suction cups and techniques that include pressing, lifting, rubbing, pinching of soft tissues by or with the practitioner's hands. Indications include edema (peripheral or hard and non-pliable edema), muscle spasm, adhesions, the need to improve peripheral circulation and range of motion, or to increase muscle relaxation and flexibility prior to exercise.

As with all passive therapies, massage must be accompanied by exercise and patient education. Objective benefit (functional improvement along with symptom reduction) must be demonstrated in order for further treatment to continue.

D.11.g.i

Massage is recommended for select use in subacute and chronic neck pain as an adjunct to more efficacious treatments consisting primarily of a graded aerobic and strengthening exercise program.

- Time to Produce Effect: Immediate.

- Frequency: 1 to 2 times per week.

- Optimum Duration: 6 weeks.

- Maximum Duration: 2 months.

- Discontinuation: Resolution, intolerance, lack of benefit, or non-compliance with aerobic and strengthening exercises.

D.11.g.ii Massage is recommended as a treatment for acute neck pain and chronic radicular syndromes in which neck pain is a substantial symptom component

- Time to Produce Effect: Immediate.

- Frequency: 1 to 2 times per week.

- Optimum Duration: 6 weeks.

- Maximum Duration: 2 months.

- Discontinuation: Resolution, intolerance or lack of benefit.

D.11.g.iii Massage is recommended for patients with sub-acute and chronic neck pain without underlying serious pathology, such as fracture, tumor, or infection.

- Time to Produce Effect: Immediate.

- Frequency: 1 to 2 times per week.

- Optimum Duration: 6 weeks.

- Maximum Duration: 2 months.

- Discontinuation: Resolution, intolerance or lack of benefit.

D.11.g.iv Mechanical devices for administering massage are not recommended.

New York State Worker's Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES-NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.10 THERAPY: PASSIVE

D.10.c Massage (Manual or Mechanical)

Massage (Manual or Mechanical) (WCB) consists of manipulation of soft tissue with broad-ranging relaxation and circulatory benefits. This may include stimulation of acupuncture points and acupuncture channels (acupressure), application of suction cups and techniques that include pressing, lifting, rubbing, pinching of soft tissues by or with the practitioner's hands. Indications include edema (peripheral or hard and non-pliable edema), muscle spasm, adhesions, the need to improve peripheral circulation and range of motion, or to increase muscle relaxation and flexibility prior to exercise.

As with all passive therapies, massage must be accompanied by exercise and patient education. Objective benefit (functional improvement along with symptom reduction) must be demonstrated in order for further treatment to continue.

D.10.c.i Massage is recommended for select use in subacute and chronic back pain as an adjunct to more efficacious treatments consisting primarily of a graded aerobic and strengthening exercise program.

- Time to Produce Effect: Immediate.

- Frequency: 1 to 2 times per week.

- Optimum Duration: 6 weeks.

- Discontinuation: Resolution, intolerance, lack of benefit, or non-compliance with aerobic and strengthening exercises.

D.10.c.ii Massage is recommended as a treatment for acute back pain and chronic radicular syndromes in which back pain is a substantial symptom component.

- Time to Produce Effect: Immediate.

- Frequency: 1 to 2 times per week.

- Optimum Duration: 6 weeks.

- Discontinuation: Resolution, intolerance or lack of benefit.

D.10.c.iii Massage is recommended for patients with sub-acute and chronic back pain without underlying serious pathology, such as fracture, tumor, or infection.

- Time to Produce Effect: Immediate.

- Frequency: 1 to 2 times per week.

- Optimum Duration: 6 weeks.

- Discontinuation: Resolution, intolerance or lack of benefit.

D.10.c.iv Mechanical devices for administering massage are not recommended.

A. GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1. MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient's daily and work activities and return to work, while striving to restore the patient's health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

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Chapter: Neck and Upper Back

Massage

Recommended as an option as an adjunct to an exercise program, although there is conflicting evidence of efficacy. (Haraldsson, 2006) There is little information available from trials to support the use of many physical medicine modalities for mechanical neck pain, often employed based on anecdotal or case reports alone. In general, it would not be advisable to use these modalities beyond 2-3 weeks if signs of objective progress towards functional restoration are not demonstrated. (Gross-Cochrane, 2002) (Aker, 1999) (Philadelphia, 2001) (Haraldsson-Cochrane, 2004) (Haraldsson, 2006) The UK evidence report concluded that massage is effective in adults for chronic neck pain. (Bronfort, 2010) There is limited evidence for the effectiveness of massage as an add-on treatment to manual therapy; and manual therapy as an add-on treatment to exercises. (Verhagen, 2006) Mechanical massage devices are not recommended. See Manipulation for recommended frequency and duration of treatment.

Manipulation

ODG Chiropractic Guidelines –

Regional Neck Pain:

9 visits over 8 weeks

Cervical Strain (WAD):

Mild (grade I - Quebec Task Force grades): up to 6 visits over 2-3 weeks

Moderate (grade II): Trial of 6 visits over 2-3 weeks

Moderate (grade II): With evidence of objective functional improvement, total of up to 18 visits over 6-8 weeks, avoid chronicity

Severe (grade III & auto trauma): Trial of 10 visits over 4-6 weeks

Severe (grade III & auto trauma): With evidence of objective functional improvement, total of up to 25 visits over 6 months, avoid chronicity

For Whiplash grade III, see also Cervical Nerve Root Compression with Radiculopathy

Cervical Nerve Root Compression with Radiculopathy:

Patient selection based on previous chiropractic success --

Trial of 6 visits over 2-3 weeks

With evidence of objective functional improvement, total of up to 18 visits over 6-8 weeks, if acute, avoid chronicity and gradually fade the patient into active self-directed care

Post Laminectomy Syndrome:

14-16 visits over 12 weeks

Chapter: Low Back - Lumbar & Thoracic

Massage

Recommended as an option in conjunction with recommended exercise programs. Manual massage administered by professional providers has shown some proven efficacy in the treatment of acute low back symptoms, based on quality studies. Mechanical massage devices are not recommended. (Furlan-Cochrane, 2002) (Werners, 1999) (Cherkin, 2001) (Cherkin-Annals, 2003) (Sherman, 2004)

Recent research: Massage therapy may effectively reduce or relieve chronic back pain for 6 months or more, according to a high quality RCT that also compared relaxation massage with structural massage, which focuses on correcting soft-tissue abnormalities. The study found that patients receiving any massage compared to usual care were twice as likely to report significant improvements in both pain and function, and, after 10 weeks, about two-thirds of those receiving massage improved substantially, versus only about one-third in the usual care group, but no clinically meaningful difference between relaxation and structural massage was observed in terms of relieving disability or symptoms. (Cherkin, 2011)

ODG’s recommended frequency and duration of treatment for massage therapy are the same as Manipulation: Trial of 6 visits over 2 weeks, with evidence of objective functional improvement, total of up to 18 visits over 6-8 weeks.

**CERVICAL MRI**

New York State Workers’ Compensation Board

Neck Injury Medical Treatment Guidelines

B INTRODUCTION TO CERVICAL SPINE INJURY

B.2 IMAGING

Imaging of the cervical spine may be obtained as deemed clinically appropriate. Basic views are the anteroposterior (AP), lateral, right, and left obliques, swimmer’s, and odontoid. CT scans may be necessary to visualize C7 and odontoid in some patients. Lateral flexion and extension views are done to evaluate instability but may have a limited role in the acute setting. MRI or CT is indicated when spinal cord injury is suspected. The mechanism of injury and specific indications for the imaging should be listed on the request form to aid the radiologist and x-ray technician. Alert, non-intoxicated patients, who have isolated cervical complaints without palpable midline cervical tenderness, neurologic findings, or other acute or distracting injuries elsewhere in the body, may not require imaging. The following suggested indications are:

B.2.a.i History of significant trauma, especially high impact motor vehicle accident, rollover, ejection, bicycle, or recreational vehicle collision or fall from height greater than one meter.

B.2.a.ii Age over 65 years.

B.2.a.iii Suspicion of fracture, dislocation, instability, or neurologic deficit - Quebec Classification Grade III and IV.

B.2.a.iv Unexplained or persistent cervical pain for at least 6 weeks or pain that is worse with rest.

B.2.a.v Localized pain, fever, constitutional symptoms, suspected tumor, history of cancer, or suspected systemic illness such as a rheumatic/rheumatoid disorder or endocrinopathy.

B.4 FOLLOW-UP DIAGNOSTIC IMAGING AND TESTING

PROCEDURES

One diagnostic imaging procedure may provide the same or distinctive information as does another procedure. Therefore, prudent choice of a single diagnostic procedure, a complement of procedures, or a sequence of procedures will optimize diagnostic accuracy, and maximize cost effectiveness (by avoiding redundancy), and minimize potential adverse effects to patients.

All imaging procedures have a degree of specificity and sensitivity for various diagnoses. No isolated imaging can assure a correct diagnosis.

Clinical information obtained by history taking and physical examination should form the basis for selecting an imaging procedure and interpreting its results.

Magnetic resonance imaging (MRI), myelography, or computed axial tomography (CT) scanning following myelography may provide useful information for many spinal disorders.

When a diagnostic procedure, in conjunction with clinical information, provides sufficient information to establish an accurate diagnosis, a second diagnostic procedure will be redundant if it is performed only for diagnostic purposes. At the same time, a subsequent diagnostic procedure (that may be a repeat of the same procedure, when the rehabilitation physician, radiologist or surgeon documents the study was of inadequate quality to make a diagnosis) can be a complementary diagnostic procedure if the first or preceding procedures, in conjunction with clinical information, cannot provide an accurate diagnosis.

It is recognized that repeat imaging studies and other tests may be warranted by the clinical course and to follow the progress of treatment in some cases. It may be of value to repeat diagnostic procedures (e.g. imaging studies) during the course of care to reassess or stage the pathology when there is progression of symptoms or findings, prior to surgical interventions and therapeutic injections when warranted, and post-operatively to follow the healing process. Regarding CT examinations, it must be recognized that repeat procedures result in an increase in cumulative radiation dose and associated risks.In the absence of myelopathy or progressive neurological changes, imaging usually is not appropriate until conservative therapy has been tried and failed. Six to eight weeks of treatment are usually an adequate period of time before an imaging procedure is in order, but the clinician should use judgment in this regard. When the findings of the diagnostic imaging and testing procedures are not consistent with the clinical examination, clinical findings should be given greater weight. There is good evidence that in the over-40 asymptomatic population, the prevalence of disc degeneration is greater than 50%. Disc degeneration, seen as loss of signal intensity on MRI, may be due to age-related changes causing biochemical changes and structural changes separate and distinct from traumatic injury and may not have pathological significance. Disc bulging and posterior disc protrusion, while not rare, is more commonly symptomatic in the cervical spine than in the lumbar spine due to the smaller cervical spinal canal. Mild reduction in the cross-sectional area of the spinal cord may be seen without myelopathy in patients older than 40; therefore, clinical correlation is required.

C DIAGNOSTIC STUDIES

The studies below are listed in frequency of use, not importance.

C.1 IMAGING STUDIES

C.1.a Magnetic Resonance Imaging (MRI)

MRI is useful in suspected nerve root compression, in myelopathy to evaluate the spinal cord and/or differentiate or rule out masses, infections such as epidural abscesses or disc space infection, bone marrow involvement by metastatic disease, and/or suspected disc herniation or cord contusion following severe neck injury. MRI should be performed immediately if there is a question of infection or metastatic disease with cord compression. MRI is contraindicated in patients with certain implanted devices. In general, the high field, conventional, MRI provides better resolution. A lower field scan with lower magnetic intensity may be indicated when a patient cannot fit into a high field scanner or is too claustrophobic despite sedation.

Inadequate resolution on the first scan may require a second MRI using a different technique. A subsequent diagnostic MRI may be a repeat of the same procedure when the rehabilitation physician, radiologist or surgeon documents that the study was of inadequate quality to make a diagnosis. All questions in this regard should be discussed with the MRI center and/or radiologist.

Ferrous material/metallic objects present in the tissues is a contraindication for the performance of an MRI.

Specialized MRI Scans

C.1.a.i MRI with 3-dimensional reconstruction:

On rare occasions, MRI with 3-dimensional reconstruction views may be used as a pre-surgical diagnostic procedure to obtain accurate information of characteristics, location, and spatial relationships among soft tissue and bony structures.

C.1.a.ii Dynamic-kinetic MRI of the spine:

Dynamic-kinetic MRI of the spine uses an MRI unit configured with a top-front open design which enables upright, weight-bearing patient positioning in a variety of postures not obtainable with the recumbent images derived from conventional, closed unit MRI systems. Imaging can be obtained in flexion, extension, and rotation of the spine, as well as in erect positioning.

There is a theoretical advantage to imaging sequences obtained under more physiologic conditions than in the supine position. There is currently ongoing research to establish whether the theoretical advantages of positional and kinetic MRI result in improved sensitivity and specificity in detecting spine pathology. Currently it remains investigational, and is not recommended until the correlation with clinical syndromes is firmly established.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

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Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses.

Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

A.12 DIAGNOSTIC IMAGING AND TESTING PROCEDURES

Clinical information obtained by history taking and physical examination should be the basis for selection and interpretation of imaging procedure results. All diagnostic procedures have variable specificity and sensitivity for various diagnoses.

When a diagnostic procedure, in conjunction with clinical information, provides sufficient information to establish an accurate diagnosis, a second diagnostic procedure will be redundant if it is performed only for diagnostic purposes. At the same time, a subsequent diagnostic procedure (that may be a repeat of the same procedure, when the rehabilitation physician, radiologist or surgeon documents the study was of inadequate quality to make a diagnosis) can be a complementary diagnostic procedure if the first or preceding procedures, in conjunction with clinical information, cannot provide an accurate diagnosis.

It is recognized that repeat imaging and other tests may be warranted by the clinical course and to follow the progress of treatment in some cases. It may be of value to repeat diagnostic procedures (e.g. imaging studies) during the course of care to reassess or stage the pathology when there is progression of symptoms or findings, prior to surgical interventions and therapeutic injections when warranted, and post-operatively to follow the healing process. Regarding CT examinations, it must be recognized that repeat procedures result in an increase in cumulative radiation dose and associated risks.

**LUMBAR MRI**

New York State Workers’ Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

B INTRODUCTION

B.2 IMAGING/ANATOMICAL TESTS

Imaging studies should not be routinely performed without indications.

Physicians should be aware that “abnormal” findings on x-rays, magnetic resonance images, and other diagnostic tests are frequently seen by age 40 even in asymptomatic individuals. Bulging discs continue to increase after that point and by approximately age 60, will be encountered in a majority of patients. This requires that a careful history and physical examination be conducted by a physician in order to correlate historical, clinical, and imaging findings prior to diagnosing and attributing a patient’s complaints to the finding on imaging. The focus of treatment should be improving symptoms and function, and not the correction of abnormalities on imaging studies.

B.4 FOLLOW-UP DIAGNOSTIC IMAGING AND TESTING PROCEDURES

One diagnostic imaging procedure may provide the same or distinctive information as does another procedure. Therefore, prudent choice of a single diagnostic procedure, a complement of procedures, or a sequence of procedures will optimize diagnostic accuracy, and maximize cost effectiveness (by avoiding redundancy), and minimize potential adverse effects to patients.

All imaging procedures have a degree of specificity and sensitivity for various diagnoses. No isolated imaging test can assure a correct diagnosis. Clinical information obtained by history taking and physical examination should form the basis for selecting an imaging procedure and interpreting its results.

Magnetic resonance imaging (MRI), myelography, or computed axial tomography (CT) scanning following myelography may provide useful information for many spinal disorders. When a diagnostic procedure, in conjunction with clinical information, provides sufficient information to establish an accurate diagnosis, the second diagnostic procedure will be redundant if it is performed only for diagnostic purposes. At the same time, a subsequent diagnostic procedure (that may be a repeat of the same procedure, when the rehabilitation physician, radiologist or surgeon documents that the study was of inadequate quality to make a diagnosis) can be a complementary diagnostic procedure if the first or preceding procedures, in conjunction with clinical information, cannot provide an accurate diagnosis. Usually, preference of a procedure over others depends upon availability, a patient’s tolerance, and/or the treating practitioner’s familiarity with the procedure.

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C DIAGNOSTIC STUDIES

C.1 IMAGING STUDIES

C.1.b Magnetic Resonance Imaging (MRI)

MRI is considered the gold standard in diagnostic imaging for defining anatomy because it has the greatest resolution of any test currently available. While CT remains an important analytical tool especially for evaluating bony or calcified structures of the spine, due to the greater resolution of MRI, particularly with respect to soft tissue of the spine (nerve root compression, myelopathy to evaluate the spinal cord and/or differentiate/rule out masses), there is less need for using CT at the current time. Ferrous material/metallic objects in tissue is a contraindication for the performance of an MRI.

Inadequate resolution on the first scan may require a second MRI using a different technique. A subsequent diagnostic MRI may be a repeat of the same procedure when the rehabilitation physician, radiologist or surgeon documents that the study was of inadequate quality to make a diagnosis. All questions in this regard should be discussed with the MRI center and/or radiologist.

Recommendations:

C.1.b.i MRI is not recommended for acute back pain or acute radicular pain syndromes in the first 6 weeks, in the absence of red flags.

C.1.b.ii MRI is recommended for patients with acute back pain during the first 6 weeks if they have demonstrated progressive neurologic deficit, cauda equina syndrome, significant trauma with no improvement in atypical symptoms, a history of neoplasia (cancer), or atypical presentation (e.g., clinical picture suggests multiple nerve root involvement.

C.1.b.iii MRI is recommended for acute radicular pain syndromes in the first 6 weeks if the symptoms are severe and not trending towards improvement and both the patient and the physician are willing to consider prompt surgical treatment, assuming the MRI confirms ongoing nerve root compression.

- Frequency/Duration: Repeat MRI imaging without significant clinical deterioration in symptoms and/or signs is not recommended.

C.1.b.iv MRI is recommended for patients with subacute or chronic radicular pain syndromes lasting at least 6 weeks, in whom the symptoms are not trending towards improvement, if both the patient and surgeon are considering prompt surgical treatment, assuming the MRI confirms ongoing nerve root compression.

C.1.b.v In cases where an epidural glucocorticosteroid injection is being considered for temporary relief of acute or subacute radiculopathy, MRI at 3 to 4 weeks (before the epidural steroid injection) may be reasonable (see Injection Therapies, Epidural Steroid Injections).

C.1.b.vi MRI is recommended as an option for the evaluation of select chronic back pain patients in order to rule out concurrent pathology unrelated to injury. This should rarely be considered before 3 months and failure of several treatment modalities (including NSAIDs, aerobic exercise, other exercise, and considerations for manipulation, and/or acupuncture).

C.1.b.vii Standing or weight-bearing MRI is not indicated for any back or radicular pain syndrome or condition. In the absence of studies demonstrating improved patient outcomes, this technology is currently considered experimental.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

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Treatment Approaches

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**LUMBAR CT SCAN**

New York State Workers’ Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

B INTRODUCTION

B.2 IMAGING/ANATOMICAL TESTS

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C DIAGNOSTIC STUDIES

C.1 IMAGING STUDIES

C.1.c Computerized Tomography (CT)

Due to the far greater resolution of MRIs, particularly with respect to the soft tissue structures of the spine, there is much less need for CT at the current time. However, CT remains a good test to evaluate bony or calcified structures of the spine. CT is most useful to evaluate the spine in patients with contraindications for MRI (most typically an implanted metallic-ferrous device). CT is not invasive (minimally invasive when contrast is needed), has low potential adverse effects, but is costly and entails radiation exposure.

Recommendations:

C.1.c.i Routine CT is not recommended for acute, subacute, or chronic non-specific back pain or for radicular pain syndromes.

C.1.c.ii CT (or MRI) is recommended for those with acute or subacute radicular pain syndrome that has failed to improve within 4 to 6 weeks and there is consideration for an epidural glucocorticoid injection or surgical discectomy (see Injection Therapies, Epidural Steroid Injections).

C.1.c.iii CT is useful in patients with an indication for MRI who cannot undergo MRI examination due to contraindications such as implanted metallic-ferrous device or significant claustrophobia.

Frequency/Duration: Obtaining serial CT exams is not recommended, although if there has been a significant worsening in the patient’s history of examination, repeat imaging may be warranted.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

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Treatment Approaches

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**SHOULDER MRI**

New York State Workers’ Compensation Board

Shoulder Injury Medical Treatment Guidelines

C HISTORY TAKING AND PHYSICAL EXAMINATION

C.4 FOLLOW-UP DIAGNOSTIC IMAGING/TESTING

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D SPECIFIC DIAGNOSES, TESTING AND TREATMENT PROCEDURES

D.1 ACROMIOCLAVICULAR (AC) JOINT SPRAINS/DISLOCATIONS

D.1.d Testing Procedures (AC Joint Sprains/Dislocations)

Plain x-rays may include:

D.1.d.i AP view;

D.1.d.ii AP radiograph of the shoulder with the beam angled 10 cephalad (Zanca view)

D.1.d.iii Axillary lateral views; and

D.1.d.iv Stress view; side-to-side comparison with 10-15 lbs. of weight in each hand.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

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Treatment Approaches

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Official Disability Guidelines Treatment in Workers' Compensation, Online Edition

Chapter: Shoulder

Magnetic resonance imaging (MRI)

Recommended as indicated below. Magnetic resonance imaging (MRI) and arthrography have fairly similar diagnostic and therapeutic impact and comparable accuracy, although MRI is more sensitive and less specific. Magnetic resonance imaging may be the preferred investigation because of its better demonstration of soft tissue anatomy. (Banchard, 1999) Subtle tears that are full thickness are best imaged by MR arthrography, whereas larger tears and partial-thickness tears are best defined by MRI, or possibly arthrography, performed with admixed gadolinium, which if negative, is followed by MRI. (Oh, 1999) MRI is the most useful technique for evaluation of shoulder pain due to subacromial impingement and rotator cuff disease and can be used to diagnose bursal inflammatory change, structural causes of impingement and secondary tendinopathy, and partial- and full-thickness rotator cuff tears. However, The overall prevalence of tears of the rotator cuff on MRI is 34% among symptom-free patients of all age groups, being 15% for full-thickness tears and 20% for partial-thickness tears. The results of this study support the use of MRI of the shoulder before injection both to confirm the diagnosis and to triage affected patients to those likely to benefit (those without a cuff tear) and those not likely to benefit (those with a cuff tear). (Hambly, 2007) The preferred imaging modality for patients with suspected rotator cuff disorders is MRI. However, ultrasonography may emerge as a cost-effective alternative to MRI. (Burbank, 2008) Primary care physicians are making a significant amount of inappropriate referrals for CT and MRI, according to new research published in the Journal of the American College of Radiology. There were high rates of inappropriate examinations for shoulder MRIs (37%), shoulder MRI in patients with no histories of trauma and documented osteoarthritis on plain-film radiography. (Lehnert, 2010) See also MR arthrogram.

Indications for imaging -- Magnetic resonance imaging (MRI):

- Acute shoulder trauma, suspect rotator cuff tear/impingement; over age 40; normal plain radiographs

- Subacute shoulder pain, suspect instability/labral tear

- Repeat MRI is not routinely recommended, and should be reserved for a significant change in symptoms and/or findings suggestive of significant pathology. (Mays, 2008)

**CERVICAL CT SCAN**

New York State Workers’ Compensation Board

Neck Injury Medical Treatment Guidelines

C DIAGNOSTIC STUDIES

The studies below are listed in frequency of use, not importance.

C.1 IMAGING STUDIES

C.1.b Computed Axial Tomography (CT)

Computed Axial Tomography (CT) provides excellent visualization of bone and is used to further evaluate bony masses and suspected fractures not clearly identified on radiographic evaluation. It may sometimes be done as a complement to MRI scanning to better delineate bony osteophyte formation in the neural foramen. CT is usually utilized for suspected cervical spine fracture in a patient with negative plain films, or to further delineate a cervical fracture. CT scanning is also quite useful for congenital anomalies at the skull base and at the C1-2 levels. Plain CT scanning is poor for the C6-7 or C7-T1 levels because of shoulder artifact. Instrument-scatter reduction software provides better resolution when metallic artifact is of concern. When ferrous/ metallic materials are present in the tissues, CT should be ordered rather than an MRI. CT examinations, it should be remembered, deliver a considerable radiation dose and carry with them associated radiation-related risks.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

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**CERVICAL X-RAY**

New York State Workers’ Compensation Board

Neck Injury Medical Treatment Guidelines

B INTRODUCTION TO CERVICAL SPINE INJURY

B.2 IMAGING

Imaging of the cervical spine may be obtained as deemed clinically appropriate. Basic views are the anteroposterior (AP), lateral, right, and left obliques, swimmer’s, and odontoid. CT scans may be necessary to visualize C7 and odontoid in some patients. Lateral flexion and extension views are done to evaluate instability but may have a limited role in the acute setting. MRI or CT is indicated when spinal cord injury is suspected.

The mechanism of injury and specific indications for the imaging should be listed on the request form to aid the radiologist and x-ray technician. Alert, non-intoxicated patients, who have isolated cervical complaints without palpable midline cervical tenderness, neurologic findings, or other acute or distracting injuries elsewhere in the body, may not require imaging. The following suggested indications are:

B.2.a.i History of significant trauma, especially high impact motor vehicle accident, rollover, ejection, bicycle, or recreational vehicle collision or fall from height greater than one meter.

B.2.a.ii Age over 65 years.

B.2.a.iii Suspicion of fracture, dislocation, instability, or neurologic deficit - Quebec Classification Grade III and IV.

B.2.a.iv Unexplained or persistent cervical pain for at least 6 weeks or pain that is worse with rest.

B.2.a.v Localized pain, fever, constitutional symptoms, suspected tumor, history of cancer, or suspected systemic illness such as a rheumatic/rheumatoid disorder or endocrinopathy.

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**NECK ACUPUNCTURE**

New York State Workers’ Compensation Board

Neck Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES: NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

The following procedures are listed in alphabetical order:

D.1 ACUPUNCTURE

Acupuncture is a procedure used for the relief of pain and inflammation, and there is some scientific evidence to support its use. The exact mode of action is only partially understood. Western medicine studies suggest that acupuncture stimulates the nervous system at the level of the brain, promotes deep relaxation, and affects the release of neurotransmitters. Acupuncture is commonly used as an alternative or in addition to traditional Western pharmaceuticals. While it is commonly used when pain medication is reduced or not tolerated, it may be used as an adjunct to physical rehabilitation and/or surgical intervention to hasten the return of functional activity. Moxibustion and other complementary integrative medicine techniques are often combined with acupuncture, but have no demonstrated efficacy. No additional reimbursement should be provided for acupuncture combined with moxibustion or other similar adjunctive procedures. Acupuncture must be performed by a professional who is

authorized under the Workers’ Compensation Laws and duly certified in New York State to provide acupuncture services.

Acupuncture (With or Without Electrical Stimulation): is the insertion and removal of filiform needles to stimulate acupoints (acupuncture points), with or without the use of electrical current (micro-amperage or milli-amperage) on the needles at the acupuncture site. Needles may be inserted, manipulated and retained for a period of time. Acupuncture can be used to reduce pain, reduce inflammation, increase blood flow, increase range of motion, decrease the side effect of medication-induced nausea, promote relaxation in an anxious patient, and reduce muscle spasm. Indications include joint pain, joint stiffness, soft tissue pain and inflammation, paresthesia, post-surgical pain relief, muscle spasm, and scar tissue pain.

-Time to produce effect: 3 to 6 treatments.

-Frequency: 1 to 3 times per week.

-Optimum duration: 1 month.

-Maximum duration: 10 treatments.

Total Time Frames for Acupuncture and Acupuncture with Electrical Stimulation: Time frames are not meant to be applied to each of the above sections separately. The time frames are to be applied to all acupuncture treatments regardless of the type or combination of therapies being provided.

Acupuncture treatments may extend longer if objective functional gains can be documented or when symptomatic benefits facilitate progression in the patient’s treatment program. Treatment beyond 10 treatments must be documented with respect to need and ability to facilitate positive symptomatic or functional gains.

GENERAL GUIDELINE PRINCIPLES

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Official Disability Guidelines Treatment in Workers' Compensation, Online Edition

Chapter: Neck and Upper Back

Acupuncture

Under study for upper back, but not recommended for neck pain. Despite substantial increases in its popularity and use, the efficacy of acupuncture for chronic mechanical neck pain still remains unproven. Acupuncture reduces neck pain and produces a statistically, but not clinically, significant effect compared with placebo. The beneficial effects of acupuncture for pain may be due to both nonspecific and specific effects. (White, 2004) Acupuncture is superior to conventional massage, dry needling of local myofascial trigger points, and sham laser acupuncture, for improving active range of motion and pain in patients with chronic neck pain, especially in patients with myofascial pain syndrome. (Blossfeldt, 2004) (Konig, 2003) (Irnich, 2002) (Irnich, 2001) There is limited or conflicting evidence from clinical trials that acupuncture is superior to sham or active controls for relief of neck pain. There is moderate evidence that acupuncture is more effective than wait-list control for neck disorders with radicular symptoms. (Trinh, 2007) A recent study concluded that adequate acupuncture treatment may reduce chronic pain in the neck and shoulders and related headache, and the effect lasted for 3 years. (He, 2004) There is little information available from trials to support the use of many physical medicine modalities for mechanical neck pain, often employed based on anecdotal or case reports alone. In general, it would not be advisable to use these modalities beyond 2-3 weeks if signs of objective progress towards functional restoration are not demonstrated. (Kjellman, 1999) (Gross-Cochrane, 2002) (Aker, 1996) (Bigos, 1999) (Gross-Cochrane, 2004) (Birch, 2004)

ODG Acupuncture Guidelines:

Initial trial of 3-4 visits over 2 weeks

With evidence of objective functional improvement, total of up to 8-12 visits over 4-6 weeks (Note: The evidence is inconclusive for repeating this procedure beyond an initial short course of therapy.)

**LUMBAR ACUPUNCTURE**

New York State Worker's Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

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Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.1 ACUPUNTURE

Recommendations:

D.1.a.i Routine use of acupuncture is not recommended for acute, subacute back pain, radicular pain. Although it is not high cost and its use is not associated with high potential for patient harm, it is not recommended.

D.1.a.ii Acupuncture is recommended for select use in chronic back pain as an adjunct to more efficacious treatments.

D.1.a.iii Acupuncture may be recommended as treatment of chronic back pain as a limited course during which time there are clear objective and functional goals that are to be achieved.

Consideration for time-limited use in chronic back pain patients without underlying serious pathology is as an adjunct to a conditioning program that has both graded aerobic exercise and strengthening exercises. Acupuncture is only recommended to assist in increasing functional activity levels more rapidly and the primary attention should remain on the conditioning program.

This intervention is not recommended for patients not involved in a conditioning program, or who are non-compliant with graded increases in activity levels.

Frequency/Duration:

a. There are different patterns which are used in quality studies. These range from weekly for a month to 20 appointments over 6 months; however the norm is generally no more than 8 to 12 sessions.

b. An initial trial of 5 to 6 appointments would appear reasonable in combination with a conditioning program of aerobic and strengthening exercises.

c. Future appointments should be tied to improvements in objective measures and would justify an additional 6 sessions, for a total of 12 sessions.

Discontinuation: Resolution, intolerance, or non compliance, including non-compliance with aerobic and strengthening exercises.

A. GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1. MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient's daily and work activities and return to work, while striving to restore the patient's health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

Official Disability Guidelines-Treatment in Worker's Compensation, Online Edition

Chapter: Low Back - Lumbar & Thoracic

Acupuncture

Not recommended for acute low back pain. (Tulder-Cochrane, 2000) (Furlan-Cochrane, 2005) Recommended as an option for chronic low back pain using a short course of treatment in conjunction with other interventions. (See the Pain Chapter.) Acupuncture has been found to be more effective than no treatment for short-term pain relief in chronic low back pain, but the evidence for acute back pain does not support its use. (Furlan-Cochrane, 2005) (Manheimer, 2005) (van Tulder, 2005) (Thomas, 2005) (Ratcliffe, 2006) (Thomas, 2006) (Haake, 2007) (Santaguida, 2009) These authors have reported that acupuncture provides a greater effect than sham treatment, while others have reported non-significant differences between the two modalities. (Brinkhaus, 2006) In this latter case, both modalities were shown to be more effective than no treatment. (Haake, 2007) Acupuncture has not been found to be better than other treatment (either conventional or alternative) in terms of pain or function. Acupuncture has been shown to add to the treatment effect of conventional therapy (improving pain and function) when compared to conventional therapy alone. (van Tulder, 2005) (Manheimer, 2005) (Furlan-Cochrane, 2005) Overall outcomes from trials have been mixed, with some lower-quality trials producing positive results, but trials with higher validity scores tending to be negative or inconclusive. There is a tendency for patient expectations to influence the outcome independently of the treatment itself. (Tulder-Cochrane, 2000) (Cherkin, 2001) (van Tulder-Spine, 1999) (Smith, 2000) (Cherkin-Annals, 2003) (Giles-Spine, 2003) (Muller, 2005) (Airaksinen, 2006)

Initial trial of 3-4 visits over 2 weeks

With evidence of objective functional improvement, total of up to 8-12 visits over 4-6 weeks (Note: The evidence is inconclusive for repeating this procedure beyond an initial short course of therapy.)

**KNEE ORTHOVISC INJECTION**

New York State Workers’ Compensation Board

Knee Injury Medical Treatment Guidelines

D SPECIFIC KNEE INJURY DIAGNOSES, TESTING, AND TREATMENT

E THERAPEUTIC PROCEDURES, NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer and insurer must consider these important issues in the care of the injured worker.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified, restricted, or full duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

In unusual cases where a patient is unable to attend an outpatient center, home therapy may be necessary. Home therapy may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone. Home therapy is usually of short duration.

E.3 INJECTIONS-THERAPEUTIC

Description: Therapeutic injections involve the delivery of anesthetic and/or anti-inflammatory medications to the painful structure. Therapeutic injections have many potential benefits. Ideally, a therapeutic injection will: (a) reduce inflammation in a specific target area; (b) relieve secondary muscle spasm; (c) allow a break from pain; and (d) support therapy directed to functional recovery. Diagnostic and therapeutic injections should be used early and selectively to establish a diagnosis and support rehabilitation. If injections are overused or used outside the context of a monitored rehabilitation program, they may be of significantly less value.

Contraindications: General contraindications include local or systemic infection, bleeding disorders, allergy to medications used and patient refusal. Specific contraindications may apply to individual injections.

E.3.e Intra-Capsular Acid Salts

Intra-Capsular Acid Salts (also known as Viscosupplementation) is a form of treatment for osteoarthritis or degenerative changes in the knee joint. It is recommended that these injections be considered a therapeutic alternative in patients who have failed non-pharmacological and analgesic treatment, and particularly, if non-steroidal anti-inflammatory drug treatment is contraindicated or surgery is not an option. The utility of viscosupplementation in severe osteoarthritis and its efficacy beyond 6 months is not well known.

-Time to produce effect: One series of injections, per product instructions.

-Frequency: If the first use is associated with decreased symptoms and increased function, repeat use may be considered after 6 months if symptoms recur.

-Optimum/maximum duration: Varies. Efficacy beyond 6 months is not well known.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

**LUMBAR DECOMPRESSION TX/TRACTION**

New York State Workers’ Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES-NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.10 THERAPY: PASSIVE

D.10.n Traction

Traction is not recommended for treatment of acute, subacute, chronic back pain or radicular pain syndromes.

D.10.o Vertebral Axial Compression (VAX-D) and Other Decompressive Devices

Recommendations:

D.10.o.i Vax-D or other spinal decompressive devices is not recommended for acute, sub-acute, chronic or radicular pain syndromes.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

**CERVICAL TRACTION**

New York State Workers’ Compensation Board

Neck Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES: NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient's condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.11 THERAPY: PASSIVE

Therapy: Passive includes those treatment modalities that do not require energy expenditure on the part of the patient. They are principally effective during the early phases of treatment and are directed at controlling symptoms such as pain, inflammation and swelling. If employed, they should be used adjunctively with active therapies such as postural stabilization and exercise programs to help control swelling, pain, and inflammation during the active rehabilitation process. Passive therapies may be used intermittently as a therapist deems appropriate or regularly if there are specific goals with objectively measured functional improvements during treatment.

On occasion, specific diagnoses and post-surgical conditions may warrant durations of treatment beyond those listed as "maximum.” Factors such as exacerbation of symptoms, re-injury, interrupted continuity of care and co-morbidities may also extend durations of care. Specific goals with objectively measured functional improvement during treatment must be cited to justify extended durations of care. It is recommended that, if no functional gain is observed after the number of treatments under “time to produce effect” has been completed, alternative treatment interventions, further diagnostic studies or further consultations should be pursued.

D.11.l Traction

Manual traction is an integral part of manual manipulation or joint mobilization. Indications include decreased joint space, muscle spasm around joints, and the need for increased synovial nutrition and response. Manual traction is contraindicated in patients with tumor, infection, fracture, or fracture dislocation.

-Time to Produce Effect: 1 to 3 sessions.

-Frequency: 2 to 3 times per week.

-Optimum Duration: 30 days.

-Maximum Duration: 1 month.

D.11.m Traction: Mechanical

Mechanical traction is most commonly used for patients with radicular findings. It is sometimes used to treat symptoms from decreased joint space and muscle spasm around the joints. If successful it should be shifted to home traction. Traction modalities are contraindicated in patients with tumor, infections, fracture, or fracture dislocation. Non-oscillating inversion traction methods are contraindicated in patients with glaucoma or hypertension. A home cervical traction unit may be purchased if therapy proves effective.

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Time to Produce Effect: 1 to 3 sessions up to 30 minutes. If response is negative after 3 treatments, discontinue this modality.

-Frequency: 2 to 3 times per week. A home cervical traction unit may be purchased if therapy proves effective.

-Optimum Duration: 4 weeks.

-Maximum Duration: 4 weeks.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

Official Disability Guidelines Treatment in Workers' Compensation, Online Edition

Chapter: Neck and Upper Back

Traction

Recommend home cervical patient controlled traction (using a seated over-the-door device or a supine device, which may be preferred due to greater forces), for patients with radicular symptoms, in conjunction with a home exercise program. Not recommend institutionally based powered traction devices. Several studies have demonstrated that home cervical traction can provide symptomatic relief in over 80% of patients with mild to moderately severe (Grade 3) cervical spinal syndromes with radiculopathy. (Aetna, 2004) (Olivero, 2002) (Joghataei, 2004) (Shakoor, 2002) Patients receiving intermittent traction performed significantly better than those assigned to the no traction group in terms of pain, forward flexion, right rotation and left rotation. (Zylbergold, 1985) Other studies have concluded there is limited documentation of efficacy of cervical traction beyond short-term pain reduction. In general, it would not be advisable to use these modalities beyond 2-3 weeks if signs of objective progress towards functional restoration are not demonstrated. (Kjellman, 1999) (Gross-Cochrane, 2002) (Aker, 1999) (Bigos, 1999) (Browder, 2004) This Cochrane review found no evidence from RCTs with a low potential for bias that clearly supports or refutes the use of either continuous or intermittent traction for neck disorders. (Graham, 2008) The Pronex and Saunders home cervical traction devices are approved for marketing as a form of traction. Although the cost for Pronex or Saunders is more than an over-the-door unit, they are easier to use and less likely to cause aggravation to the TMJ. Therefore, these devices may be an option for home cervical traction. (Washington, 2002) For decades, cervical traction has been applied widely for pain relief of neck muscle spasm or nerve root compression. It is a technique in which a force is applied to a part of the body to reduce paravertebral muscle spasms by stretching soft tissues, and in certain circumstances separating facet joint surfaces or bony structures. Cervical traction is administered by various techniques ranging from supine mechanical motorized cervical traction to seated cervical traction using an over-the-door pulley support with attached weights. Duration of cervical traction can range from a few minutes to 30 min, once or twice weekly to several times per day. In general, over-the-door traction at home is limited to providing less than 20 pounds of traction.

Recent research: Recent studies have documented good results using traction to treat cervical radiculopathy with traction forces from 20 to 55 lbs (more than an over-the-door unit can provide). Cervical traction should be combined with exercise techniques to treat patients with neck pain and radiculopathy. (Raney, 2009) In comparing the intervertebral separation obtained with supine pneumatic traction (using the Saunders Cervical Traction Device) to seated traction (using an over-the-door home traction device), the supine device caused significantly greater separation vs. over-the-door traction. (Fater, 2008) In reviewing the current published evidence, this guideline concluded that cervical traction is recommended to treat cervical radiculopathy using greater than 20 lbs intermittent force. (Childs, 2008)

**KNEE MR ARTHROGRAM**

New York State Workers’ Compensation Board

Knee Injury Medical Treatment Guidelines

D SPECIFIC KNEE INJURY DIAGNOSES, TESTING, AND TREATMENT

C DIAGNOSTIC STUDIES

C.1 IMAGING STUDIES

C.1.a Magnetic Resonance Imaging (MRI)

Magnetic Resonance Imaging (MRI) provides a more definitive visualization of soft tissue structures, including ligaments, tendons, joint capsule, menisci and joint cartilage structures, than x-ray or Computed Axial Tomography in the evaluation of traumatic or degenerative injuries. The addition of intravenous or intra-articular contrast can enhance definition of selected pathologies.

In general, the high field, conventional, MRI provides better resolution. A lower field scan may be indicated when a patient cannot fit into a high field scanner or is too claustrophobic despite sedation. Inadequate resolution on the first scan may require a second MRI using a different technique. A subsequent diagnostic MRI may be a repeat of the same procedure, when the rehabilitation physician, radiologist or surgeon says the study was of inadequate quality to make a diagnosis. All questions in this regard should be discussed with the MRI center and/or radiologist.

Ferrous material/metallic objects present in the tissues is a contraindication for the performance of an MRI.

C.1.f Arthrograms

Arthograms may be useful in the evaluation of internal derangement of a joint, only when MRI or other tests are contraindicated or not available. Potential complications of this more invasive technique include pain, infection, and allergic reactions.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

A.12 DIAGNOSTIC IMAGING AND TESTING PROCEDURES

Clinical information obtained by history taking and physical examination should be the basis for selection and interpretation of imaging procedure results. All diagnostic procedures have variable specificity and sensitivity for various diagnoses.

When a diagnostic procedure, in conjunction with clinical information, provides sufficient information to establish an accurate diagnosis, a second diagnostic procedure will be redundant if it is performed only for diagnostic purposes. At the same time, a subsequent diagnostic procedure (that may be a repeat of the same procedure, when the rehabilitation physician, radiologist or surgeon documents the study was of inadequate quality to make a diagnosis) can be a complementary diagnostic procedure if the first or preceding procedures, in conjunction with clinical information, cannot provide an accurate diagnosis.

It is recognized that repeat imaging studies and other tests may be warranted by the clinical course and to follow the progress of treatment in some cases. It may be of value to repeat diagnostic procedures (e.g. imaging studies) during the course of care to reassess or stage the pathology when there is progression of symptoms or findings, prior to surgical interventions and therapeutic injections when warranted, and post-operatively to follow the healing process. Regarding CT examinations, it must be recognized that repeat procedures result in an increase in cumulative radiation dose and associated risks.

Official Disability Guidelines Treatment in Workers' Compensation, Online Edition

Chapter: Knee and Leg

Arthrogram

See MR arthrography.

MR arthrography

Recommended for meniscal repair and meniscal resection of more than 25%. All patients with meniscal repair required MR arthrography. All patients with meniscal resection of more than 25%, who did not have severe degenerative arthrosis, chondral injuries, or avascular necrosis required MR arthrography. Patients with less than 25% meniscal resection did not need MR arthrography. (Magee, 2003)

MRI’s (magnetic resonance imaging)

Recommended as indicated below. Soft-tissue injuries (meniscal, chondral surface injuries, and ligamentous disruption) are best evaluated by MRI. (ACR, 2001) Diagnostic performance of MR imaging of the menisci and cruciate ligaments of the knee is different according to lesion type and is influenced by various study design characteristics. Higher magnetic field strength modestly improves diagnostic performance, but a significant effect was demonstrated only for anterior cruciate ligament tears. (Pavlov, 2000) (Oei, 2003) A systematic review of prospective cohort studies comparing MRI and clinical examination to arthroscopy to diagnose meniscus tears concluded that MRI is useful, but should be reserved for situations in which further information is required for a diagnosis, and indications for arthroscopy should be therapeutic, not diagnostic in nature. (Ryzewicz, 2007) In this case series, in more than half of patients who had an MRI at the request of their referring physician, the MRI was not necessary. MRI was considered unnecessary if: X-rays alone could establish the diagnosis, patellofemoral pain with a normal ligamentous and meniscal exam, the knee pain resolved before seeing an orthopedic surgeon, or the MRI findings had no effect on treatment outcome. MRI studies were deemed necessary if they were indicated by history and/or physical examination to assess for meniscal, ligamentous, or osteochondral injury or osteonecrosis, or if the patient had an unexpected finding that affected treatment. (Khanuja, 2011)

Indications for imaging -- MRI (magnetic resonance imaging):

- Acute trauma to the knee, including significant trauma (e.g, motor vehicle accident), or if suspect posterior knee dislocation or ligament or cartilage disruption.

- Nontraumatic knee pain, child or adolescent: non-patellofemoral symptoms. Initial anteroposterior and lateral radiographs nondiagnostic (demonstrate normal findings or a joint effusion) next study if clinically indicated. If additional study is needed.

- Nontraumatic knee pain, child or adult. Patellofemoral (anterior) symptoms. Initial anteroposterior, lateral, and axial radiographs nondiagnostic (demonstrate normal findings or a joint effusion). If additional imaging is necessary, and if internal derangement is suspected.

- Nontraumatic knee pain, adult. Non-trauma, non-tumor, non-localized pain. Initial anteroposterior and lateral radiographs nondiagnostic (demonstrate normal findings or a joint effusion). If additional studies are indicated, and if internal derangement is suspected.

- Nontraumatic knee pain, adult – non-trauma, non-tumor, non-localized pain. Initial anteroposterior and lateral radiographs demonstrate evidence of internal derangement (e.g., Peligrini Stieda disease, joint compartment widening).

- Repeat MRIs: Post-surgical if need to assess knee cartilage repair tissue. (Ramappa, 2007)

**CAUDAL LYSIS/ LUMBAR ADHESIOLYSIS**  
New York State Workers’ Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

E THERAPEUTIC PROCEDURES: OPERATIVE

E.2 ADHESIOLYSIS

Recommendations:

E.2.a.i Adhesiolysis is not recommended for acute, subacute, or chronic back pain, spinal stenosis, or radicular pain syndromes.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

A.13 SURGICAL INTERVENTIONS

Contemplation of surgery should be within the context of expected functional outcome. The concept of "cure" with respect to surgical treatment by itself is generally a misnomer. All operative interventions must be based upon positive correlation of clinical findings, clinical course and imaging and other diagnostic tests. A comprehensive assimilation of these factors must lead to a specific diagnosis with positive identification of pathologic condition(s). For surgery to be performed to treat severe pain, there should be clear correlation between the pain symptoms and objective evidence of its cause

**KNEE CPM**

New York State Workers’ Compensation Board

Knee Injury Medical Treatment Guidelines

D SPECIFIC KNEE INJURY DIAGNOSES, TESTING, AND TREATMENT

E THERAPEUTIC PROCEDURES, NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer and insurer must consider these important issues in the care of the injured worker.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified, restricted, or full duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

In unusual cases where a patient is unable to attend an outpatient center, home therapy may be necessary. Home therapy may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone. Home therapy is usually of short duration.

E.8 THERAPY-PASSIVE

Therapy-Passive includes those treatment modalities that do not require energy expenditure on the part of the patient. They are principally effective during the early phases of treatment and are directed at controlling symptoms such as pain, inflammation and swelling. They should be use adjunctively with active therapies to help control swelling, pain and inflammation during the rehabilitation process. They may be used intermittently as deemed appropriate or regularly if there are specific goals with objectively measured functional improvements during treatment.

While protocols for specific diagnoses and post-surgical conditions may warrant durations of treatment beyond those listed as "maximum,” factors such as exacerbation of symptoms, re-injury, interrupted continuity of care, and co-morbidities may extend durations of care. Having specific goals with objectively measured functional improvement during treatment can support extended durations of care. It is recommended that if after 3 to 5 visits no treatment effect is observed, alternative treatment interventions, further diagnostic studies or further consultations should be pursued.

The following passive therapies and modalities are listed in alphabetical order.

E.8.a Continuous Passive Movement (CPM)

Continuous Passive Movement) is a form of passive motion using specialized machinery that acts to move a joint and may also pump blood and edema fluid away from the joint and periarticular tissues. CPM is effective in preventing the development of joint stiffness if applied immediately following surgery. It should be continued until the swelling that limits motion of the joint no longer develops. Range of motion for the joint begins at the level of patient tolerance and is increased twice a day as tolerated. Use of this equipment may require home visits.

-Time to produce effect: Immediate.

-Frequency: Up to 4 times a day

-Optimum duration: Up to 3 weeks post surgical.

-Maximum duration: 3 weeks.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

A.11 ACTIVE INTERVENTIONS

Active therapeutic exercise program goals should incorporate patient strength, endurance, flexibility, range of motion, coordination, and education. This includes functional application in vocational or community settings.

**KNEE CRYO**

New York State Workers’ Compensation Board

Knee Injury Medical Treatment Guidelines

D SPECIFIC KNEE INJURY DIAGNOSES, TESTING, AND TREATMENT

E THERAPEUTIC PROCEDURES, NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer and insurer must consider these important issues in the care of the injured worker.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified, restricted, or full duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

In unusual cases where a patient is unable to attend an outpatient center, home therapy may be necessary. Home therapy may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone. Home therapy is usually of short duration.

E.8 THERAPY-PASSIVE

Therapy-Passive includes those treatment modalities that do not require energy expenditure on the part of the patient. They are principally effective during the early phases of treatment and are directed at controlling symptoms such as pain, inflammation and swelling. They should be use adjunctively with active therapies to help control swelling, pain and inflammation during the rehabilitation process. They may be used intermittently as deemed appropriate or regularly if there are specific goals with objectively measured functional improvements during treatment.

While protocols for specific diagnoses and post-surgical conditions may warrant durations of treatment beyond those listed as "maximum,” factors such as exacerbation of symptoms, re-injury, interrupted continuity of care, and co-morbidities may extend durations of care. Having specific goals with objectively measured functional improvement during treatment can support extended durations of care. It is recommended that if after 3 to 5 visits no treatment effect is observed, alternative treatment interventions, further diagnostic studies or further consultations should be pursued.

The following passive therapies and modalities are listed in alphabetical order.

E.8.m Superficial Heat and Cold Therapy

Superficial heat and cold therapies are thermal agents applied in various manners that lower or raise the body tissue temperature for the reduction of pain, inflammation, and/or effusion resulting from injury or induced by exercise. It may be used acutely with compression and elevation. Indications include acute pain, edema and hemorrhage, need to increase pain threshold, reduce muscle spasm and promote stretching/flexibility. Includes portable cryotherapy units and application of heat just above the surface of the skin at acupuncture points. May be performed in conjunction with other active therapy, or may be self-administered by the patient.

-Time to produce effect: Immediate.

-Frequency: 2 to 5 times per week.

Optimum duration: 3 weeks as primary, or up to 2 months if used intermittently as an adjunct to other therapeutic procedures.

-Maximum duration: 2 months.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

A.11 ACTIVE INTERVENTIONS

Active therapeutic exercise program goals should incorporate patient strength, endurance, flexibility, range of motion, coordination, and education. This includes functional application in vocational or community settings.

**KNEE MRI**

New York State Workers’ Compensation Board

Knee Injury Medical Treatment Guidelines

C DIAGNOSTIC STUDIES

C.1 IMAGING STUDIES

C.1.a Magnetic Resonance Imaging (MRI)

Magnetic Resonance Imaging (MRI) provides a more definitive visualization of soft tissue structures, including ligaments, tendons, joint capsule, menisci and joint cartilage structures, than x-ray or Computed Axial Tomography in the evaluation of traumatic or degenerative injuries. The addition of intravenous or intra-articular contrast can enhance definition of selected pathologies.

In general, the high field, conventional, MRI provides better resolution. A lower field scan may be indicated when a patient cannot fit into a high field scanner or is too claustrophobic despite sedation. Inadequate resolution on the first scan may require a second MRI using a different technique. A subsequent diagnostic MRI may be a repeat of the same procedure, when the rehabilitation physician, radiologist or surgeon says the study was of inadequate quality to make a diagnosis. All questions in this regard should be discussed with the MRI center and/or radiologist.

Ferrous material/metallic objects present in the tissues is a contraindication for the performance of an MRI.

D SPECIFIC KNEE INJURY DIAGNOSES, TESTING, AND TREATMENT

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

A.12 DIAGNOSTIC IMAGING AND TESTING PROCEDURES

Clinical information obtained by history taking and physical examination should be the basis for selection and interpretation of imaging procedure results. All diagnostic procedures have variable specificity and sensitivity for various diagnoses.

When a diagnostic procedure, in conjunction with clinical information, provides sufficient information to establish an accurate diagnosis, a second diagnostic procedure will be redundant if it is performed only for diagnostic purposes. At the same time, a subsequent diagnostic procedure (that may be a repeat of the same procedure, when the rehabilitation physician, radiologist or surgeon documents the study was of inadequate quality to make a diagnosis) can be a complementary diagnostic procedure if the first or preceding procedures, in conjunction with clinical information, cannot provide an accurate diagnosis.

It is recognized that repeat imaging studies and other tests may be warranted by the clinical course and to follow the progress of treatment in some cases. It may be of value to repeat diagnostic procedures (e.g. imaging studies) during the course of care to reassess or stage the pathology when there is progression of symptoms or findings, prior to surgical interventions and therapeutic injections when warranted, and post-operatively to follow the healing process. Regarding CT examinations, it must be recognized that repeat procedures result in an increase in cumulative radiation dose and associated risks.

**KNEE-DOPPLER**

New York State Workers’ Compensation Board

Knee Injury Medical Treatment Guidelines

C.2 OTHER TESTS

The studies below are listed by frequency of use, not importance.

C.2.b Doppler Ultrasonography/Plethysmography

Doppler Ultrasonography/Plethysmography is useful in establishing the diagnosis of arterial and venous disease in the lower extremity and should be considered prior to the more invasive venogram or arteriogram study. Doppler is less sensitive in detecting deep-vein thrombosis in the calf muscle area. If the test is initially negative, an ultrasound should be repeated 7 days post initial symptoms to rule out popliteal thrombosis. It is also useful for the diagnosis of popliteal mass when MRI is not available or contraindicated.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

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**CERVICAL FUSION**

New York State Workers’ Compensation Board

Neck Injury Medical Treatment Guidelines

E THERAPEUTIC PROCEDURES: OPERATIVE

All operative interventions should be based on a positive correlation with clinical findings, the natural history of the disease, the clinical course, and diagnostic tests. A comprehensive assimilation of these factors should have led to a specific diagnosis with positive identification of the pathologic condition(s). It is imperative for the clinician to rule out non-physiologic modifiers of pain presentation, or non-operative conditions mimicking radiculopathy or instability (peripheral compressive neuropathy, chronic soft tissue injuries, and psychological conditions), prior to consideration of elective surgical intervention. Early intervention may be required in acute incapacitating pain or in the presence of progressive neurological deficits. Patients who are not candidates for or refuse surgical treatment should be treated with non-operative therapy as indicated.

If a non-operative treatment approach is initially recommended, surgery may be indicated after the failure of conservative management. The patient must continue to exhibit the designated objective findings, subjective symptoms and (where applicable) imaging findings.

Operative treatment is indicated when the natural history of surgically treated lesions is better than the natural history for non-operatively treated lesions. All patients being considered for surgical intervention should first undergo a comprehensive neuromusculoskeletal examination to identify mechanical pain generators that may respond to non-surgical techniques, or may be refractory to surgical intervention.

In situations requiring the possible need for re-surgery, a second opinion may be necessary. Psychological evaluation is strongly encouraged when surgery is being performed for isolated axial pain to determine if the patient will likely benefit from the treatment.

Interdisciplinary interventions should be strongly considered post-operatively in patients not making functional progress within expected time frames. Return to work activity restrictions should be specific. Most cervical non-fusion surgical patients can return to a limited level of duty between 3 to 6 weeks. Full activity is generally achieved between 6 weeks to 6 months, depending on the procedure and healing of the individual.

E.2 DISC HERNIATION AND OTHER CERVICAL CONDITIONS

Operative treatment is indicated only when the natural history of an operatively treatable problem is better than the natural history of the problem without operative treatment. All patients being considered for surgical intervention should undergo a comprehensive neuromuscular examination to identify pain generators that may respond to nonsurgical techniques or may be refractory to surgical intervention. Timely decision making for operative intervention is critical to avoid deconditioning, and increased disability of the cervical spine.

General Recommendations: There is some evidence to suggest that recovery from cervical radiculopathy in patients without clinical signs of spinal cord compression at one year is similar with one-level fusion, physical therapy, or rigid cervical collar use. For patients with whiplash injury (Quebec Classification Grade Levels I or II), there is no evidence of any beneficial effect of operative treatment.

If cervical fusion is being considered, it is recommended that the patient refrain from smoking for at least six weeks prior to surgery and during the time of healing. Because smokers have a higher risk of non-union and higher post-operative costs, it is recommended that insurers cover a smoking cessation program peri-operatively.

General Indications for Surgery: Operative intervention should be considered and a consultation obtained when improvement of symptoms has plateaued and the residual symptoms of pain and functional disability are unacceptable at the end of six weeks of treatment, or at the end of longer duration of non-operative intervention for debilitated patients with complex problems. Choice of hardware instrumentation is based on anatomy, the patient’s pathology, and surgeon’s experience and preference.

E.2.a Specific Indications

Specific Indications include:

E.2.a.i For Patients with Myelopathy immediate surgical evaluation and treatment is indicated.

E.2.a.ii For Patients with Cervical Radiculopathy.

Early intervention may be required for acute incapacitating pain or in the presence of progressive neurological deficits.

Persistent or recurrent arm pain with functional limitations, unresponsive to conservative treatment after six weeks; or Progressive functional neurological deficit; or Static neurological deficit associated with significant radicular pain; and confirmatory imaging studies consistent with clinical findings.

E.2.a.iii For Patients with persistent non-radicular cervical Pain: While cervical fusion is appropriate treatment for neck pain due to degeneration with radiculopathy, there is no evidence that cervical fusion for neck pain alone produces results superior to conservative care. In the absence of a radiculopathy, it is recommended that a decisive commitment to surgical or nonsurgical interventions not be made within 4 to 5 months following injury. The effectiveness of cervical vertebral fusion for non-radicular pain has not been established. Therefore, it should not be routinely recommended. In patients with non-radicular cervical pain for whom fusion is being considered, required pre-operative indications include all of the following:

In general, if the program of non-operative treatment fails, operative treatment is indicated when:

- Improvement of the symptoms has plateaued, and the residual symptoms of pain and functional disability are unacceptable at the end of 6 to 12 weeks of active treatment, or at the end of longer duration of non-operative programs for debilitated patients with complex problems; and/or

- Frequent recurrences of symptoms cause serious functional limitations even if a non-operative active treatment program provides satisfactory relief of symptoms, and restoration of function on each recurrence.

- Mere passage of time with poorly guided treatment is not considered an active treatment program.

- All pain generators are adequately defined and treated; and

- All physical medicine and manual therapy interventions are completed; and

- X-ray, MRI, or CT/discography demonstrating disc pathology or spinal instability; and

- Spine pathology limited to two levels; and

- Psychosocial evaluation for confounding issues addressed.

- For any potential surgery, it is recommended that the patient refrain from smoking for at least six weeks prior to surgery and during the period of healing. Because smokers have a higher risk of non-union and higher post-operative costs, it is recommended that insurers cover a smoking cessation program peri-operatively.

E.2.b Surgical Procedures

Surgical Procedures include:

E.2.b.i Cervical Discectomy with or without Fusion:

Description: Procedure to relieve pressure on one or more nerve roots or spinal cord. It may be performed with or without the use of a microscope.

Complications: May include strut graft dislodgment (multi-level decompression), infection, hemorrhage, CSF leak, hematoma, catastrophic spinal cord injury causing varying degrees of paralysis, pseudarthrosis, in-hospital mortality, non-union of fusion, donor site pain (autograft only). Anterior approach: permanent or transient dysphonia, permanent or transitory dysphagia, denervation, esophageal perforation, and airway obstruction.

Surgical Indications: Radiculopathy from ruptured disc or spondylosis, spinal instability, or patients with non-radicular neck pain meeting fusion criteria. There is no evidence that discectomy with fusion versus discectomy without fusion has superior long-term results. Discectomy alone is generally considered in patients with pure radicular symptoms from their herniated disc and who have sufficiently large foramena that disc space collapse is unlikely to further compromise the nerve root. Failure rates increase with disease at more than two levels.

Operative Treatment: Cervical plating may be used to prevent graft dislodgment especially for multi-level disease.

Post-Operative Therapy: Cervical bracing may be appropriate (usually 6 - 12 weeks with fusion). Home programs with instruction in ADLs, sitting, posture, and a daily walking program should be an early part of the rehabilitation process. Referral to a formal rehabilitation program, with emphasis on cervical, scapular, and thoracic strengthening and restoration of ROM is appropriate, once fusion is solid and without complication. New techniques in cervical fusion with instrumentation may permit more rapid referral to a rehabilitation program, and the decision regarding timing should be left to the surgeon. Active treatment, which patients should have had prior to surgery, will frequently require a repeat of the sessions previously ordered. The goals of the therapy program should include instruction in a long-term home-based exercise program.

E.2.b.iii Cervical Laminectomy with or without Foraminotomy or Fusion:

Description: Surgical removal of the posterior portion of a vertebra in order to gain access to the spinal cord or nerve roots.

Complications: May include perineural fibrosis, kyphosis in fractures without fusion or with failed fusion, nerve injury, post surgical instability (with foraminotomies), CSF leak, infection, non-union of fusion, donor site pain (autograft only).

Surgical Indications: Neural compression.

Operative Treatment: Laminotomy, partial discectomy, and nerve root decompression.

Post-Operative Therapy: Cervical bracing may be appropriate (usually 6 to 12 weeks with fusion), although newer surgical techniques may not require prolonged immobilization. Home programs with instruction in ADLs, sitting, posture, and a daily walking program should be an early part of the rehabilitation process. Referral to a formal rehabilitation program with emphasis on cervical, scapular, and thoracic strengthening and restoration of range of motion is appropriate for most patients once the cervical spine is deemed stable and without complication. Newer surgical techniques may permit earlier referral to a rehabilitation program, and the decision regarding timing should be left to the surgeon. The goals of the therapy program should include instruction in a long-term home-based exercise program.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

A.13 SURGICAL INTERVENTIONS

Contemplation of surgery should be within the context of expected functional outcome. The concept of "cure" with respect to surgical treatment by itself is generally a misnomer. All operative interventions must be based upon positive correlation of clinical findings, clinical course and imaging and other diagnostic tests. A comprehensive assimilation of these factors must lead to a specific diagnosis with positive identification of pathologic condition(s). For surgery to be performed to treat severe pain, there should be clear correlation between the pain symptoms and objective evidence of its cause.

**KNEE HYALURONIC INJECTIONS**

New York State Workers’ Compensation Board

Knee Injury Medical Treatment Guidelines

D SPECIFIC KNEE INJURY DIAGNOSES, TESTING, AND TREATMENT

E THERAPEUTIC PROCEDURES, NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer and insurer must consider these important issues in the care of the injured worker.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified, restricted, or full duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

In unusual cases where a patient is unable to attend an outpatient center, home therapy may be necessary. Home therapy may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone. Home therapy is usually of short duration.

E.3 INJECTIONS-THERAPEUTIC

Description: Therapeutic injections involve the delivery of anesthetic and/or anti-inflammatory medications to the painful structure. Therapeutic injections have many potential benefits. Ideally, a therapeutic injection will: (a) reduce inflammation in a specific target area; (b) relieve secondary muscle spasm; (c) allow a break from pain; and (d) support therapy directed to functional recovery. Diagnostic and therapeutic injections should be used early and selectively to establish a diagnosis and support rehabilitation. If injections are overused or used outside the context of a monitored rehabilitation program, they may be of significantly less value.

Contraindications: General contraindications include local or systemic infection, bleeding disorders, allergy to medications used and patient refusal. Specific contraindications may apply to individual injections.

E.3.e Intra-Capsular Acid Salts

Intra-Capsular Acid Salts (also known as Viscosupplementation) is a form of treatment for osteoarthritis or degenerative changes in the knee joint. It is recommended that these injections be considered a therapeutic alternative in patients who have failed non-pharmacological and analgesic treatment, and particularly, if non-steroidal anti-inflammatory drug treatment is contraindicated or surgery is not an option. The utility of viscosupplementation in severe osteoarthritis and its efficacy beyond 6 months is not well known.

- Time to produce effect: One series of injections, per product instructions.

- Frequency: If the first use is associated with decreased symptoms and increased function, repeat use may be considered after 6 months if symptoms recur.

- Optimum/maximum duration: Varies. Efficacy beyond 6 months is not well known.

A GENERAL GUIDELINE PRINCIPLES

The principles summarized in this section are key to the intended application of the New York State Medical Treatment Guidelines

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains

Official Disability Guidelines Treatment in Workers' Compensation, Online Edition

Chapter: Knee & Leg

Hyaluronic acid injections

Recommended as a possible option for severe osteoarthritis for patients who have not responded adequately to recommended conservative treatments (exercise, NSAIDs or acetaminophen), to potentially delay total knee replacement, but in recent quality studies the magnitude of improvement appears modest at best. See Recent research below. While osteoarthritis of the knee is a recommended indication, there is insufficient evidence for other conditions, including patellofemoral arthritis, chondromalacia patellae, osteochondritis dissecans, or patellofemoral syndrome (patellar knee pain). Hyaluronic acids are naturally occurring substances in the body's connective tissues that cushion and lubricate the joints. Intra-articular injection of hyaluronic acid can decrease symptoms of osteoarthritis of the knee; there are significant improvements in pain and functional outcomes with few adverse events. (Karlsson, 2002) (Leopold, 2003) (Day, 2004) (Wang, 2004) (Aggarwal, 2004) (Arrich, 2005) (Karatosun, 2005) (Blue Cross Blue Shield, 2005) (Petrella, 2005) Compared with lower-molecular-weight hyaluronic acid, this study concluded that the highest-molecular-weight hyaluronic acid may be more efficacious in treating knee OA. (Lo-JAMA, 2004) These more recent studies did not. (Reichenbach, 2007) (Jüni, 2007) The response to hyaluronan/hylan products appears more durable than intra-articular corticosteroids in treatment of knee osteoarthritis. (Bellamy-Cochrane, 2005) Viscosupplementation is an effective treatment for OA of the knee with beneficial effects: on pain, function and patient global assessment; and at different post injection periods but especially at the 5 to 13 week post injection period. Within the constraints of the trial designs employed no major safety issues were detected. (Bellamy-Cochrane2, 2005) (Bellamy, 2006) Intra-articular viscosupplementation was moderately effective in relieving knee pain in patients with osteoarthritis at 5 to 7 and 8 to 10 weeks after the last injection but not at 15 to 22 weeks. (Modawal, 2005) This study assessing the efficacy of intra-articular injections of hyaluronic acid (HA) compared to placebo in patients with osteoarthritis of the knee found that results were similar and were not statistically significant between treatment groups, but HA was somewhat superior to placebo in improving knee pain and function, with no difference between 3 or 6 consecutive injections. (Petrella, 2006) The combined use of hyaluronate injections with a home exercise program should be considered for management of moderate-to-severe pain in patients with knee osteoarthritis. (Stitik, 2007) On 02/26/09 the FDA granted marketing approval for Synvisc-One™ (hylan G-F 20), a product intended for the relief of pain associated of the knee. Synvisc-One is the only single-injection viscosupplement approved for the treatment of OA knee pain in the United States, from Genzyne Corp. (FDA, 2009) A meta-analysis of clinical trials concluded that, from baseline to week 4, intra-articular corticosteroids appear to be relatively more effective for pain than intra-articular hyaluronic acid, but by week 4, the 2 approaches have equal efficacy, and beyond week 8, hyaluronic acid has greater efficacy. (Bannuru, 2009) In patients who are candidates for TKR, the need for TKR can be delayed with hyaluronic acid injections. (Waddell, 2007)

Repeat series of injections: This systematic review on the efficacy and safety of repeat courses of hyaluronan therapy in patients with OA of the knee concluded that repeat courses of the hyaluronans are safe and effective in the treatment of pain associated with OA of the knee. (Pagnano, 2005) This study concluded that repeated cycles of intra-articular sodium hyaluronate treatment was efficacious during a 54-month follow-up period in continuing to delay time to TKR in patients with knee osteoarthritis. (Turajane, 2009) This RCT on effectiveness and safety of repeat courses of hylan G-F 20 in patients with knee osteoarthritis provided support for repeat treatments. (Raynauld, 2005) On the other hand, this lower quality study recommended no more than 3 series of injections over a 5-year period, because effectiveness may decline, this is not a cure for arthritis, but only provides comfort and functional improvement to temporarily avoid knee replacement. (Spitzer, 2008) Overall, the scientific evidence for use of these is weak, but there may be continued improvement in some cases that otherwise would have resulted in TKA. Considering the cost of TKA and risk of complications, it may make sense to repeat a series of injections. While it is hard to predict which patients will respond based upon imaging or clinical indicators, those who got relief and then had recurrence more than six months later are likely to do well again.

Brands of hyaluronic acid: There are several brands of viscosupplement on the market, but there is a lack of reliable evidence that any one brand is superior to other brands for medically necessary indications. Euflexxa may be recommended where there is allergy contraindication to ingredients in the others (eggs, feathers or poultry). The Euflexxa and Orthovisc brands may be less costly, and other brands, Hyalgan, Supartz, Synvisc (Hylan G-F 20), and Synvisc One, may be more costly, but this is dependent on specific fee schedules and purchasing techniques. Recommendations include a series of three to five intra-articular injections of Hyaluronic acid (Hyalgan or Supartz), or just three injections of Hylan or Euflexxa, or three to four injections Orthovisc, or one of Synvisc-One hylan, in the target knee with an interval of one week between injections. (FDA labeling) (Huskin, 2008) (Zietz, 2008) (Wobig, 1999) (Raman, 2008)

Criteria for Hyaluronic acid injections:

- Patients experience significantly symptomatic osteoarthritis but have not responded adequately to recommended conservative nonpharmacologic (e.g., exercise) and pharmacologic treatments or are intolerant of these therapies (e.g., gastrointestinal problems related to anti-inflammatory medications), after at least 3 months;

-Documented symptomatic severe osteoarthritis of the knee according to American College of Rheumatology (ACR) criteria, which requires knee pain and at least 5 of the following:

(1) Bony enlargement;

(2) Bony tenderness;

(3) Crepitus (noisy, grating sound) on active motion;

(4) Erythrocyte sedimentation rate (ESR) less than 40 mm/hr;

(5) Less than 30 minutes of morning stiffness;

(6) No palpable warmth of synovium;

(7) Over 50 years of age;

(8) Rheumatoid factor less than 1:40 titer (agglutination method);

(9) Synovial fluid signs (clear fluid of normal viscosity and WBC less than 2000/mm3);

-Pain interferes with functional activities (e.g., ambulation, prolonged standing) and not attributed to other forms of joint disease;

-Failure to adequately respond to aspiration and injection of intra-articular steroids;

-Generally performed without fluoroscopic or ultrasound guidance;

- Are not currently candidates for total knee replacement or who have failed previous knee surgery for their arthritis, unless younger patients wanting to delay total knee replacement. (Wen, 2000)

-Repeat series of injections: If documented significant improvement in symptoms for 6 months or more, and symptoms recur, may be reasonable to do another series. No maximum established by high quality scientific evidence; see Repeat series of injections above.

-Hyaluronic acid injections are not recommended for any other indications such as chondromalacia patellae, facet joint arthropathy, osteochondritis dissecans, or patellofemoral arthritis, patellofemoral syndrome (patellar knee pain), plantar nerve entrapment syndrome, or for use in joints other than the knee (e.g., ankle, carpo-metacarpal joint, elbow, hip, metatarso-phalangeal joint, shoulder, and temporomandibular joint) because the effectiveness of hyaluronic acid injections for these indications has not been established.

**SHOULDER HYALGAN INJECTIONS**

New York State Workers’ Compensation Board

Shoulder Injury Medical Treatment Guidelines

D. SPECIFIC DIAGNOSES, TESTING AND TREATMENT PROCEDURES

D.6 IMPINGEMENT SYNDROME

D.6.e Non-Operative Treatment Procedures (Impingement Syndrome)

Non-Operative Treatment Procedures may include:

D.6.e.i Medications, such as nonsteroidal anti-inflammatories and analgesics.

D.6.e.ii Subacromial space injection with steroids may be therapeutic if the patient responded positively to a diagnostic injection of an anesthetic. Steroid injections directly into the tendons are not recommended.

-Frequency: Not more than 2-3 times annually. Usually 1 or 2 injections adequate. A minimum of 3 weeks interval between injections is recommended.

-Time to produce effect: Immediate with local anesthetic, or within 3 days with corticosteroids.

-Maximum duration: Limited to 3 injections annually to the same site.

D.6.e.iii In order to have the most favorable outcome from a conservative approach, an aggressive attempt should be made to define the contributing factors which are driving the syndrome, such as shoulder stiffness, humeral head depressor weakness (rotator cuff fiber failure), and subacromial crowding or AC joint arthritis.

D.6.e.iv Non-Operative Treatment Procedures, such as relative rest, immobilization, thermal treatment, ultrasound, therapeutic exercise and physical medicine and rehabilitation should be considered.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

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Treatment Approaches

A.10 ACTIVE INTERVENTIONS

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Chapter: Shoulder

Hyaluronic acid injections

Recommended for glenohumeral joint osteoarthritis, but not recommended for rotator cuff tear or adhesive capsulitis. A recent RCT of sodium hyaluronate in 666 patients with persistent shoulder pain and limitation resulting from glenohumeral joint osteoarthritis, rotator cuff tear, and/or adhesive capsulitis, concluded that the primary end point of the study (improvement in terms of shoulder pain at thirteen weeks) was not achieved, but the overall findings, including secondary end points, indicated that sodium hyaluronate was effective and well tolerated for the treatment of osteoarthritis, but not rotator cuff tear or adhesive capsulitis. (Blaine, 2008) For treatment of chronic painful shoulder, hyaluronate injections are a safe and effective alternative to other conservative methods, according to a recent meta-analysis. In 10 trials with data on global pain intensity, the standardized mean difference between hyaluronate injection and placebo was 0.39. In terms of total function, four trials showed that hyaluronate treatment was significantly better than placebo, but seven trials indicated that viscosupplementation had no effect on range of motion. Hyaluronic acid was more effective than steroids. The primary adverse events were transient mild increases in local pain or swelling, but hyaluronic acid was as safe as placebo. The analysis suffered from low methodological reporting quality of the trials and from an absence of long-term efficacy data. The study concluded that there is compelling evidence that hyaluronate injections are a valuable alternative to other conservative methods for the treatment of chronic painful shoulder. (Saito, 2010)

**LUMBAR FACET INJ**

New York State Worker's Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

C DIAGNOSTIC STUDIES

C.2 OTHER TESTS/PROCEDURES

C.2.c Diagnostic Facet Blocks

See Injection Therapies, Diagnostic Facet Joint Injections

D THERAPEUTIC PROCEDURES-NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.6 INJECTION THERAPIES

D.6.e Diagnostic Facet Joint Injections (Intra-articular and Nerve Blocks)

Recommendations:

D.6.e.i One fluoroscopically guided (except in cases where radiation exposure is contraindicated and ultrasound evaluation of needle placement may be used) diagnostic facet joint injection, except in cases where radiation exposure is contraindicated (e.g. pregnancy) ultrasound evaluation of needle placement may be used, per side per level may be recommended for patients with chronic back pain that is significantly exacerbated by extension and rotation or associated with lumbar rigidity, and not alleviated with other conservative treatments (e.g., medication, aerobic exercise, other exercise, manipulation) in order to determine whether specific interventions targeting the facet joint are recommended. Repeated diagnostic injections in the same level(s) are not recommended.

Maximum Duration: One diagnostic facet joint injection per side per level, not to exceed two levels.

D.6.e.ii Diagnostic facet joint injections are not recommended for acute, subacute back pain, or sciatic pain.

D.6.f Therapeutic Facet Joint Injections

Recommendations:

D.6.f.i Fluoroscopically guided (except in cases where radiation exposure is contraindicated and ultrasound evaluation of needle placement may be used) therapeutic facet joint injections may be considered for a select group of patients with chronic low back pain (back pain) who have completed a full course of conservative management, including but not limited to medication, modalities, active exercises, and have chronic believed to be the result of facet dysfunction (see Diagnostic Facet Joint Injections D.6.e).

-Optimal Duration: 2-3 injections for each applicable joint per year depending upon patient response (improved function and pain reduction) not to exceed two levels.

-Maximum: 3 injections may be done in one year depending upon patient response (improved function and pain reduction).

A. GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

**YOGA**

New York State Worker's Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES-NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.9 THERAPY: ACTIVE

D.9.f Yoga

Recommendations:

D.9.f.i There is some evidence to support the effectiveness of yoga therapy in alleviating symptoms and decreasing medication use for patients with uncomplicated back pain.

-Frequency/Duration: 2 to 5 times per week.

-Time to Produce Effect: 2 to 6 treatments.

- Optimum Duration: 4 weeks.

-Maximum Duration: Reassess after 8 weeks

A. GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1. MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient's daily and work activities and return to work, while striving to restore the patient's health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

A.11 ACTIVE THERAPEUTIC EXERCISE PROGRAM

Active therapeutic exercise program goals should incorporate patient strength, endurance, flexibility, range of motion, coordination, and education. This includes functional application in vocational or community settings.

New York State Worker’s Compensation Board Low Back Injury Medical Treatment Guidelines does not specifically address the request for Gym memberships

.Official Disability Guidelines-Treatment in Worker's Compensation, Online Edition

Chapter: Low Back - Lumbar & Thoracic

Gym memberships

Not recommended as a medical prescription unless a documented home exercise program with periodic assessment and revision has not been effective and there is a need for equipment. Plus, treatment needs to be monitored and administered by medical professionals. While an individual exercise program is of course recommended, more elaborate personal care where outcomes are not monitored by a health professional, such as gym memberships or advanced home exercise equipment, may not be covered under this guideline, although temporary transitional exercise programs may be appropriate for patients who need more supervision. With unsupervised programs there is no information flow back to the provider, so he or she can make changes in the prescription, and there may be risk of further injury to the patient. Gym memberships, health clubs, swimming pools, athletic clubs, etc., would not generally be considered medical treatment, and are therefore not covered under these guidelines.

Yoga

Recommended as an option only for select, highly motivated patients. There is some evidence of efficacy for mind-body therapies such as yoga in the treatment of chronic low back pain. Also, the impact on depression and disability could be considered as important outcomes for further study. Since outcomes from this therapy are very dependent on the highly motivated patient, we recommend approval only when requested by such a patient, but not adoption for use by any patient. (Astin, 2003) (Galantino, 2004) (Graves, 2004) (Williams, 2005) Practicing yoga at the workplace teaches employees to use relaxation techniques to reduce stress and risks of injury on the job. (Gura, 2002) Two 2011 studies provide additional support for Yoga. In this RCT, stretching, regardless of whether it is achieved via yoga classes or conventional stretching exercises, helps improve low back pain. In a comparative effectiveness study, researchers found that yoga classes were more effective than a self-help book, but not more effective than PT stretching classes, in improving function and reducing symptoms resulting from low back pain, with benefits lasting at least several months. Finding similar effects for both approaches suggests that yoga's benefits were largely attributable to the physical benefits of stretching and strengthening the muscles, and not to its mental components. The results from this trial reinforce the evidence that exercise generally is safe and beneficial for low back pain. (Sherman, 2011) Another study provides more evidence that yoga can help patients who suffer from chronic low back pain. A 12-session, 3-month yoga program led to greater improvements in back function than usual care. Although there was no evidence of pain reduction at 12 months, confidence in performing normal activities despite pain improved more in the yoga group than usual care group.

(Tilbrook, 2011)

Reviewer comments:

Determination:

Based on the clinical information submitted for this review and using the evidence-based, peer-reviewed guidelines referenced above, this request for Is the request for 3 Months Gym Membership to include Yoga medically necessary? is

New York State Workers’ Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

C DIAGNOSTIC STUDIES

C.2 OTHER TESTS/PROCEDURES

C.2.d Lumbar Discography

Recommendation

Discography, whether performed as a solitary test or when paired with imaging (e.g., MRI), is not recommended for acute, subacute, chronic back pain or radicular pain syndromes. Improvement in surgical outcomes has not been shown to follow the use of discography, and there is evidence that performing discography on normal discs is associated with an enhanced risk of degenerative changes in those discs in later years.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

A.12 DIAGNOSTIC IMAGING AND TESTING PROCEDURES

Clinical information obtained by history taking and physical examination should be the basis for selection and interpretation of imaging procedure results. All diagnostic procedures have variable specificity and sensitivity for various diagnoses.

When a diagnostic procedure, in conjunction with clinical information, provides sufficient information to establish an accurate diagnosis, a second diagnostic procedure will be redundant if it is performed only for diagnostic purposes. At the same time, a subsequent diagnostic procedure (that may be a repeat of the same procedure, when the rehabilitation physician, radiologist or surgeon documents the study was of inadequate quality to make a diagnosis) can be a complementary diagnostic procedure if the first or preceding procedures, in conjunction with clinical information, cannot provide an accurate diagnosis.

It is recognized that repeat imaging studies and other tests may be warranted by the clinical course and to follow the progress of treatment in some cases. It may be of value to repeat diagnostic procedures (e.g. imaging studies) during the course of care to reassess or stage the pathology when there is progression of symptoms or findings, prior to surgical interventions and therapeutic injections when warranted, and post-operatively to follow the healing process. Regarding CT examinations, it must be recognized that repeat procedures result in an increase in cumulative radiation dose and associated risks.

Official Disability Guidelines Treatment in Workers' Compensation, Online Edition

Chapter: Low Back - Lumbar & Thoracic

Discography

Not recommended. In the past, discography has been used as part of the pre-operative evaluation of patients for consideration of surgical intervention for lower back pain. However, the conclusions of recent, high quality studies on discography have significantly questioned the use of discography results as a preoperative indication for either IDET or spinal fusion. These studies have suggested that reproduction of the patient’s specific back complaints on injection of one or more discs (concordance of symptoms) is of limited diagnostic value. (Pain production was found to be common in non-back pain patients, pain reproduction was found to be inaccurate in many patients with chronic back pain and abnormal psychosocial testing, and in this latter patient type, the test itself was sometimes found to produce significant symptoms in non-back pain controls more than a year after testing.) Also, the findings of discography have not been shown to consistently correlate well with the finding of a High Intensity Zone (HIZ) on MRI. Discography may be justified if the decision has already been made to do a spinal fusion, and a negative discogram could rule out the need for fusion on that disc (but a positive discogram in itself would not allow fusion). (Carragee-Spine, 2000) (Carragee2-Spine, 2000) (Carragee3-Spine, 2000) (Carragee4-Spine, 2000) (Bigos, 1999) (ACR, 2000) (Resnick, 2002) (Madan, 2002) (Carragee-Spine, 2004) (Carragee2, 2004) (Maghout-Juratli, 2006) (Pneumaticos, 2006) (Airaksinen, 2006) (Manchikanti, 2009) Discography may help distinguish asymptomatic discs among morphologically abnormal discs in patients without psychosocial issues. Precise prospective categorization of discographic diagnoses may predict outcomes from treatment, surgical or otherwise. (Derby, 2005) (Derby2, 2005) (Derby, 1999) Positive discography was not highly predictive in identifying outcomes from spinal fusion. A recent study found only a 27% success from spinal fusion in patients with low back pain and a positive single-level low-pressure provocative discogram, versus a 72% success in patients having a well-accepted single-level lumbar pathology of unstable spondylolisthesis. (Carragee, 2006)

Discography is Not Recommended in ODG.

Patient selection criteria for Discography if provider & payor agree to perform anyway:

-Back pain of at least 3 months duration

- Failure of recommended conservative treatment including active physical therapy

- An MRI demonstrating one or more degenerated discs as well as one or more normal appearing discs to allow for an internal control injection (injection of a normal disc to validate the procedure by a lack of a pain response to that injection)

o Satisfactory results from detailed psychosocial assessment (discography in subjects with emotional and chronic pain problems has been linked to reports of significant back pain for prolonged periods after injection, and therefore should be avoided)

-Intended as screening tool to assist surgical decision making, i.e., the surgeon feels that lumbar spine fusion is appropriate but is looking for this to determine if it is not indicated (although discography is not highly predictive) (Carragee, 2006) NOTE: In a situation where the selection criteria and other surgical indications for fusion are conditionally met, discography can be considered in preparation for the surgical procedure. However. all of the qualifying conditions must be met prior to proceeding to discography as discography should be viewed as a non-diagnostic but confirmatory study for selecting operative levels for the proposed surgical procedure. Discography should not be ordered for a patient who does not meet surgical criteria.

-Briefed on potential risks and benefits from discography and surgery

- Single level testing (with control) (Colorado, 2001)

- Due to high rates of positive discogram after surgery for lumbar disc herniation, this should be potential reason for non-certification

**LUMBAR SUPPORT**

New York State Workers’ Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES-NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.2 APPLIANCES

Include: shoe insoles, shoe lifts, kinesiotaping and taping, lumbar supports, magnets, mattresses and sleeping surfaces.

D.2.c Lumbar Supports

Recommendations:

D.2.c.i Lumbar supports may be useful for specific treatment of spondylolysis, documented instability, or post-operative treatment in the absence of significant leg length discrepancy.

D.2.c.ii Lumbar supports are not recommended for the prevention or treatment of other back pain conditions.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Official Disability Guidelines Treatment in Workers' Compensation, Online Edition

Chapter: Low Back - Lumbar & Thoracic

Lumbar supports

Not recommended for prevention. Recommended as an option for treatment. See below for indications.

Prevention: Not recommended for prevention. There is strong and consistent evidence that lumbar supports were not effective in preventing neck and back pain. (Jellema-Cochrane, 2001) (van Poppel, 1997) (Linton, 2001) (Assendelft-Cochrane, 2004) (van Poppel, 2004) (Resnick, 2005) Lumbar supports do not prevent LBP. (Kinkade, 2007) A systematic review on preventing episodes of back problems found strong, consistent evidence that exercise interventions are effective, and other interventions not effective, including stress management, shoe inserts, back supports, ergonomic/back education, and reduced lifting programs. (Bigos, 2009) This systematic review concluded that there is moderate evidence that lumbar supports are no more effective than doing nothing in preventing low-back pain. (van Duijvenbode, 2008)

Treatment: Recommended as an option for compression fractures and specific treatment of spondylolisthesis, documented instability, or post-operative treatment, and for treatment of nonspecific LBP. Among home care workers with previous low back pain, adding patient-directed use of lumbar supports to a short course on healthy working methods may reduce the number of days when low back pain occurs, but not overall work absenteeism. (Roelofs, 2007) Acute osteoporotic vertebral compression fracture management includes bracing, analgesics, and functional restoration. (Kim, 2006) An RCT to evaluate the effects of an elastic lumbar belt on functional capacity and pain intensity in low back pain treatment, found an improvement in physical restoration compared to control and decreased pharmacologic consumption. (Calmels, 2009) This RCT concluded that lumbar supports to treat workers with recurrent low back pain seems to be cost-effective, with on average 54 fewer days per year with LBP and 5 fewer days per year sick leave. (Roelofs, 2010) This systematic review concluded that lumbar supports may or may not be more effective than other interventions for the treatment of low-back pain. (van Duijvenbode, 2008)

**KNEE SYNVISC, HYALURONIC ACID INJECTION**

New York State Workers’ Compensation Board

Knee Injury Medical Treatment Guidelines

D SPECIFIC KNEE INJURY DIAGNOSES, TESTING, AND TREATMENT

E THERAPEUTIC PROCEDURES, NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer and insurer must consider these important issues in the care of the injured worker.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified, restricted, or full duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

In unusual cases where a patient is unable to attend an outpatient center, home therapy may be necessary. Home therapy may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone. Home therapy is usually of short duration.

E.3 INJECTIONS-THERAPEUTIC

Description: Therapeutic injections involve the delivery of anesthetic and/or anti-inflammatory medications to the painful structure. Therapeutic injections have many potential benefits. Ideally, a therapeutic injection will: (a) reduce inflammation in a specific target area; (b) relieve secondary muscle spasm; (c) allow a break from pain; and (d) support therapy directed to functional recovery. Diagnostic and therapeutic injections should be used early and selectively to establish a diagnosis and support rehabilitation. If injections are overused or used outside the context of a monitored rehabilitation program, they may be of significantly less value.

Contraindications: General contraindications include local or systemic infection, bleeding disorders, allergy to medications used and patient refusal. Specific contraindications may apply to individual injections.

E.3.e Intra-Capsular Acid Salts

Intra-Capsular Acid Salts (also known as Viscosupplementation) is a form of treatment for osteoarthritis or degenerative changes in the knee joint. It is recommended that these injections be considered a therapeutic alternative in patients who have failed non-pharmacological and analgesic treatment, and particularly, if non-steroidal anti-inflammatory drug treatment is contraindicated or surgery is not an option. The utility of viscosupplementation in severe osteoarthritis and its efficacy beyond 6 months is not well known.

-Time to produce effect: One series of injections, per product instructions.

-Frequency: If the first use is associated with decreased symptoms and increased function, repeat use may be considered after 6 months if symptoms recur.

-Optimum/maximum duration: Varies. Efficacy beyond 6 months is not well known.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

Official Disability Guidelines Treatment in Workers' Compensation, Online Edition

Chapter: Knee & Leg

Hyaluronic acid injections

Recommended as an option for osteoarthritis. While osteoarthritis of the knee is a recommended indication, there is insufficient evidence for other conditions, including patellofemoral arthritis, chondromalacia patellae, osteochondritis dissecans, or patellofemoral syndrome (patellar knee pain). Hyaluronic acids are naturally occurring substances in the body's connective tissues that cushion and lubricate the joints. Intra-articular injection of hyaluronic acid can decrease symptoms of osteoarthritis of the knee; there are significant improvements in pain and functional outcomes with few adverse events. (Karlsson, 2002) (Leopold, 2003) (Day, 2004) (Wang, 2004) (Aggarwal, 2004) (Arrich, 2005) (Karatosun, 2005) (Blue Cross Blue Shield, 2005) (Petrella, 2005) Compared with lower-molecular-weight hyaluronic acid, this study concluded that the highest-molecular-weight hyaluronic acid may be more efficacious in treating knee OA. (Lo-JAMA, 2004) AHRQ Comparative Effectiveness Research reported that, in people with osteoarthritis of the knee, published clinical trials comparing injections of viscosupplements with placebo have yielded inconsistent results. Higher quality and larger trials have generally found lower levels of clinical improvement in pain and function than small and poor quality trials. They conclude that any clinical improvement attributable to viscosupplementation is likely small and not clinically meaningful. They also conclude that evidence is insufficient to demonstrate clinical benefit for the higher molecular weight products. (AHRQ, 2011)

Recent research: According to a meta-analysis based on 89 randomized trials including 12,667 patients, hyaluronic acid injections produced minimal or nonexistent effects on pain and function in patients with knee osteoarthritis (OA), but did increase the risks for serious adverse events and local adverse reactions. They also identified unpublished trials, suggesting publication bias in favor of the treatment. The best they could say is that the use of this therapy depends on individual patient features and response to the treatment, while randomized controlled trials give only the mean value for therapy, which may not be generalizable to every patient. (Rutjes, 2012) The California Technology Assessment Forum (CTAF) concluded that treatment of knee OA with repeated injections of intra-articular HA does not meet CTAF criteria for safety, efficacy and improvement in health outcomes for progression to knee replacement or progression of disease. (CTAF, 2012)

Repeat series of injections: This systematic review on the efficacy and safety of repeat courses of hyaluronan therapy in patients with OA of the knee concluded that repeat courses of the hyaluronans are safe and effective in the treatment of pain associated with OA of the knee. (Pagnano, 2005) This study concluded that repeated cycles of intra-articular sodium hyaluronate treatment was efficacious during a 54-month follow-up period in continuing to delay time to TKR in patients with knee osteoarthritis. (Turajane, 2009) This RCT on effectiveness and safety of repeat courses of hylan G-F 20 in patients with knee osteoarthritis provided support for repeat treatments. (Raynauld, 2005) On the other hand, this lower quality study recommended no more than 3 series of injections over a 5-year period, because effectiveness may decline, this is not a cure for arthritis, but only provides comfort and functional improvement to temporarily avoid knee replacement. (Spitzer, 2008) Overall, the scientific evidence for use of these is weak, but there may be continued improvement in some cases that otherwise would have resulted in TKA. Considering the cost of TKA and risk of complications, it may make sense to repeat a series of injections. While it is hard to predict which patients will respond based upon imaging or clinical indicators, those who got relief and then had recurrence more than six months later are likely to do well again.

Criteria for Hyaluronic acid or Hylan:

A series of three to five intra-articular injections of Hyaluronic acid (or just three injections of Hylan, or one of Synvisc-One hylan) in the target knee with an interval of one week between injections. (Huskin, 2008) (Zietz, 2008) (Wobig, 1999) (Raman, 2008)

Indicated for patients who:

-Experience significantly symptomatic osteoarthritis but have not responded adequately to standard nonpharmacologic and pharmacologic treatments or are intolerant of these therapies (e.g., gastrointestinal problems related to anti-inflammatory medications).

- Are not candidates for total knee replacement or who have failed previous knee surgery for their arthritis, such as arthroscopic debridement.

- Younger patients wanting to delay total knee replacement. (Wen, 2000)

-Repeat series of injections: If documented significant improvement in symptoms for 6 months or more, and symptoms recur, may be reasonable to do another series. No maximum established by high quality scientific evidence; see Repeat series of injections above.

**LUMBAR BRACE**

New York State Worker's Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES-NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.2 APPLIANCES

Include: shoe insoles, shoe lifts, kinesiotaping and taping, lumbar supports, magnets, mattresses and sleeping surfaces.

D.2.c Lumbar Supports

Recommendations:

D.2.c.i Lumbar supports may be useful for specific treatment of spondylolisthesis, documented instability, or post-operative treatment.

D.2.c.ii Lumbar supports are not recommended for the prevention or treatment of other back pain conditions.

A GENERAL GUIDELINE PRINCIPLES

The principles summarized in this section are key to the intended application of the New York State Medical Treatment Guidelines.

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

New York State Workers’ Compensation Board

Neck Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES: NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.10 THERAPY: ACTIVE

The following active therapies are based on the philosophy that therapeutic exercise and/or activity are beneficial for restoring flexibility, strength, endurance, function, range of motion, and can alleviate discomfort. Active therapy requires an internal effort by the individual to complete a specific exercise or task. This form of therapy requires supervision from a therapist or medical provider such as verbal, visual, and/or tactile instruction(s). At times, the provider may help stabilize the patient or guide the movement pattern but the energy required to complete the task is predominately executed by the patient. Patients should be instructed to continue active therapies at home as an extension of the treatment process in order to maintain improvement levels. Follow-up visits to reinforce and monitor progress and proper technique are recommended. Home exercise can include exercise with or without mechanical assistance or resistance and functional activities with assistive devices.

D.10.g Therapeutic Exercise

Therapeutic Exercise with or without mechanical assistance or resistance, may include isoinertial, isotonic, isometric and isokinetic types of exercises. Indications include the need for cardiovascular fitness, reduced edema, improved muscle strength, improved connective tissue strength and integrity, increased bone density, promotion of circulation to enhance soft tissue healing, improvement of muscle recruitment, improved proprioception and coordination, increased range of motion and are used to promote normal movement patterns. Therapeutic exercise can also include complementary/ alternative exercise movement therapy (with oversight of a physician or appropriate healthcare professional).

-Time to Produce Effect: 2 to 6 treatments.

-Frequency: 3 to 5 times per week.

- Optimum Duration: 4 to 8 weeks.

-Maximum Duration: 8 weeks.

D.12 THERAPY: ONGOING MAINTENANCE CARE

A maintenance program of PT, OT or spinal manipulation (by a physician (MD/DO), chiropractor or physical therapist) may be indicated in certain situations, after the determination of MMI, when tied to maintenance of functional status.

- Although the current body of scientific evidence as reviewed does not support the routine use of this intervention, maintenance therapy modalities may be indicated in certain situations in order to maintain functional status, without which an objective deterioration of function has been previously observed and documented in the medical record.

- Specific objective goals should be identified and measured in order to support the need for ongoing maintenance care.

- Progressively longer trials of therapeutic withdrawal are to be attempted to ascertain whether therapeutic goals can be maintained in the absence of clinical interventions.

- Within a year and annually thereafter, a trial without maintenance treatment should be instituted.

- The care of chronic neck symptoms should include an ongoing patient self -management program performed by the patient regularly and a self -directed pain management program initiated as indicated:

-- An ongoing clinically appropriate self-management program, typically independent, home-based and self-directed, developed jointly by the provider and patient, should be implemented to encourage physical activity and/or work activities despite residual pain, with the goal of preserving function.

-- In addition to the self -management program, a selfdirected pain management plan should be developed which can be initiated by the patient in the event that symptoms worsen and function decreases.

- If deterioration of ability to maintain function is documented, reinstatement of ongoing maintenance may be acceptable.

Frequency: Maximum up to 10 visits/year, after the determination of MMI, according to objectively documented maintenance of functional status. No variance from the maximum frequency is permitted.

MID AND LOW BACK INJURY MEDICAL TREATMENT GUIDELINES

D THERAPEUTIC PROCEDURES-NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.9 THERAPY: ACTIVE

D.9.a Therapeutic Exercise

Therapeutic Exercise (WCB) with or without mechanical assistance or resistance, may include isoinertial, isotonic, isometric and isokinetic types of exercises. Indications include the need for cardiovascular fitness, reduced edema, improved muscle strength, improved connective tissue strength and integrity, increased bone density, promotion of circulation to enhance soft tissue healing, improvement of muscle recruitment, improved proprioception and coordination, increased range of motion and are used to promote normal movement patterns. Therapeutic exercise can also include complementary/ alternative exercise movement therapy (with oversight of a physician or appropriate healthcare professional).

-Time to Produce Effect: 2 to 6 treatments.

-Frequency: 3 to 5 times per week.

-Optimum Duration: 4 to 8 weeks.

-Maximum Duration: 8 weeks.

D.11 THERAPY: ONGOING MAINTENANCE CARE

A maintenance program of PT, OT or spinal manipulation (by a physician (MD/DO), chiropractor or physical therapist) may be indicated in certain situations, after the determination of MMI, when tied to maintenance of functional status.

- Although the current body of scientific evidence as reviewed does not support the routine use of this intervention, maintenance therapy modalities may be indicated in certain situations in order to maintain functional status, without which an objective deterioration of function has been previously observed and documented in the medical record.

- Specific objective goals should be identified and measured in order to support the need for ongoing maintenance care.

- Progressively longer trials of therapeutic withdrawal are to be attempted to ascertain whether therapeutic goals can be maintained in the absence of clinical interventions.

- Within a year and annually thereafter, a trial without maintenance treatment should be instituted.

- The care of chronic back symptoms should include an ongoing patient self -management program performed by the patient regularly and a self-directed pain management program initiated as indicated:

-- An ongoing clinically appropriate self-management program, typically independent, home-based and self-directed, developed jointly by the provider and patient, should be implemented to encourage physical activity and/or work activities despite residual pain, with the goal of preserving function.

-- In addition to the self-management program, a self-directed pain management plan should be developed which can be initiated by the patient in the event that symptoms worsen and function decreases.

- If deterioration of ability to maintain function is documented, reinstatement of ongoing maintenance may be acceptable.

Frequency: Maximum up to 10 visits/year, after the determination of MMI, according to objectively documented maintenance of functional status. No variance from the maximum frequency is permitted.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.4 RE-EVALUATE TREATMENT

If a given treatment or modality is not producing positive results, the provider should either modify or discontinue the treatment regime. The provider should evaluate the efficacy of the treatment or modality 2 to 3 weeks after the initial visit and 3 to 4 weeks thereafter. Reconsideration of diagnosis should also occur in the event of poor response to a rational intervention.

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses.

Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

A.11 ACTIVE THERAPEUTIC EXERCISE PROGRAM

Active therapeutic exercise program goals should incorporate patient strength, endurance, flexibility, range of motion, coordination, and education. This includes functional application in vocational or community settings.

Official Disability Guidelines-Treatment in Worker's Compensation, Online Edition

Chapters: Neck and Upper Back; Low Back - Lumbar & Thoracic

Physical Therapy

ODG Physical Therapy Guidelines -

Allow for fading of treatment frequency (from up to 3 or more visits per week to 1 or less), plus active self-directed home PT. Also see other general guidelines that apply to all conditions under Physical Therapy in the ODG Preface, including assessment after a "six-visit clinical trial".

ODG Preface

There are a number of overall physical therapy philosophies that may not be specifically mentioned within each guideline: (1) As time goes by, one should see an increase in the active regimen of care, a decrease in the passive regimen of care, and a fading of treatment frequency; (2) The exclusive use of "passive care" (e.g., palliative modalities) is not recommended; (3) Home programs should be initiated with the first therapy session and must include ongoing assessments of compliance as well as upgrades to the program; (4) Use of self-directed home therapy will facilitate the fading of treatment frequency, from several visits per week at the initiation of therapy to much less towards the end; (5) Patients should be formally assessed after a "six-visit clinical trial" to see if the patient is moving in a positive direction, no direction, or a negative direction (prior to continuing with the physical therapy); & (6) When treatment duration and/or number of visits exceeds the guideline, exceptional factors should be noted.

**LUMBAR ACUPUNCTURE**

New York State Worker's Compensation Board

Mid and Low Back Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES-NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient.

First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made. Formal psychological or psychosocial evaluation may be considered.

Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

D.1 ACUPUNTURE

Recommendations:

D.1.a.i Routine use of acupuncture is not recommended for acute, subacute back pain, radicular pain. Although it is not high cost and its use is not associated with high potential for patient harm, it is not recommended.

D.1.a.ii Acupuncture is recommended for select use in chronic back pain as an adjunct to more efficacious treatments.

D.1.a.iii Acupuncture may be recommended as treatment of chronic back pain as a limited course during which time there are clear objective and functional goals that are to be achieved.

Consideration for time-limited use in chronic back pain patients without underlying serious pathology is as an adjunct to a conditioning program that has both graded aerobic exercise and strengthening exercises. Acupuncture is only recommended to assist in increasing functional activity levels more rapidly and the primary attention should remain on the conditioning program.

This intervention is not recommended for patients not involved in a conditioning program, or who are non-compliant with graded increases in activity levels.

Frequency/Duration:

a. There are different patterns which are used in quality studies. These range from weekly for a month to 20 appointments over 6 months; however the norm is generally no more than 8 to 12 sessions.

b. An initial trial of 5 to 6 appointments would appear reasonable in combination with a conditioning program of aerobic and strengthening exercises.

c. Future appointments should be tied to improvements in objective measures and would justify an additional 6 sessions, for a total of 12 sessions.

Discontinuation: Resolution, intolerance, or non compliance, including non-compliance with aerobic and strengthening exercises.A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

Medical care and treatment required as a result of a work-related injury should be focused on restoring functional ability required to meet the patient’s daily and work activities and return to work, while striving to restore the patient’s health to its pre-injury status in so far as is feasible.

Treatment Approaches

A.4 RE-EVALUATE TREATMENT

If a given treatment or modality is not producing positive results, the provider should either modify or discontinue the treatment regime. The provider should evaluate the efficacy of the treatment or modality 2 to 3 weeks after the initial visit and 3 to 4 weeks thereafter. Reconsideration of diagnosis should also occur in the event of poor response to a rational intervention.

A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses.

Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

**CERVICAL ACUPUNCTURE**

New York State Workers’ Compensation Board

Neck Injury Medical Treatment Guidelines

D THERAPEUTIC PROCEDURES: NON-OPERATIVE

Before initiation of any therapeutic procedure, the authorized treating provider, employer, and insurer must consider these important issues in the care of the patient. First, patients undergoing therapeutic procedure(s) should be released or returned to modified or restricted duty during their rehabilitation at the earliest appropriate time.

Second, cessation and/or review of treatment modalities should be undertaken when no further significant subjective or objective improvement in the patient’s condition is noted. If patients are not responding within the recommended duration periods, alternative treatment interventions, further diagnostic studies or consultations should be pursued.

Third, providers should provide and document education to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms.

Lastly, for those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis should be made.

Formal psychological or psychosocial evaluation may be considered. Home therapy is an important component of therapy and may include active and passive therapeutic procedures as well as other modalities to assist in alleviating pain, swelling, and abnormal muscle tone.

The following procedures are listed in alphabetical order:

D.1 ACUPUNCTURE

Acupuncture is a procedure used for the relief of pain and inflammation, and there is some scientific evidence to support its use. The exact mode of action is only partially understood. Western medicine studies suggest that acupuncture stimulates the nervous system at the level of the brain, promotes deep relaxation, and affects the release of neurotransmitters. Acupuncture is commonly used as an alternative or in addition to traditional Western pharmaceuticals. While it is commonly used when pain medication is reduced or not tolerated, it may be used as an adjunct to physical rehabilitation and/or surgical intervention to hasten the return of functional activity. Moxibustion and other complementary integrative medicine techniques are often combined with acupuncture, but have no demonstrated efficacy. No additional reimbursement should be provided for acupuncture combined with moxibustion or other similar adjunctive procedures. Acupuncture must be performed by a professional who is authorized under the Workers’ Compensation Laws and duly certified in New York State to provide acupuncture services.

Acupuncture (With or Without Electrical Stimulation): is the insertion and removal of filiform needles to stimulate acupoints (acupuncture points), with or without the use of electrical current (micro-amperage or milliamperage) on the needles at the acupuncture site. Needles may be inserted, manipulated and retained for a period of time. Acupuncture can be used to reduce pain, reduce inflammation, increase blood flow, increase range of motion, decrease the side effect of medication-induced nausea, promote relaxation in an anxious patient, and reduce muscle spasm. Indications include joint pain, joint stiffness, soft tissue pain and inflammation, paresthesia, post-surgical pain relief, muscle spasm, and scar tissue pain.

Time to produce effect: 3 to 6 treatments.

Frequency: 1 to 3 times per week.

Optimum duration: 1 month.

Maximum duration: 10 treatments.

Total Time Frames for Acupuncture and Acupuncture with Electrical Stimulation: Time frames are not meant to be applied to each of the above sections separately. The time frames are to be applied to all acupuncture treatments regardless of the type or combination of therapies being provided.

Acupuncture treatments may extend longer if objective functional gains can be documented or when symptomatic benefits facilitate progression in the patient’s treatment program. Treatment beyond 10 treatments must be documented with respect to need and ability to facilitate positive symptomatic or functional gains.

A GENERAL GUIDELINE PRINCIPLES

Medical Care

A.1 MEDICAL CARE

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A.10 ACTIVE INTERVENTIONS

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses.

Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

Official Disability Guidelines Treatment in Workers' Compensation, Online Edition

Chapter: Neck and Upper Back

Acupuncture

Under study for upper back, but not recommended for neck pain. Despite substantial increases in its popularity and use, the efficacy of acupuncture for chronic mechanical neck pain still remains unproven. Acupuncture reduces neck pain and produces a statistically, but not clinically, significant effect compared with placebo. The beneficial effects of acupuncture for pain may be due to both nonspecific and specific effects. (White, 2004) Acupuncture is superior to conventional massage, dry needling of local myofascial trigger points, and sham laser acupuncture, for improving active range of motion and pain in patients with chronic neck pain, especially in patients with myofascial pain syndrome. (Blossfeldt, 2004) (Konig, 2003) (Irnich, 2002) (Irnich, 2001) There is limited or conflicting evidence from clinical trials that acupuncture is superior to sham or active controls for relief of neck pain. There is moderate evidence that acupuncture is more effective than wait-list control for neck disorders with radicular symptoms. (Trinh, 2007) A recent study concluded that adequate acupuncture treatment may reduce chronic pain in the neck and shoulders and related headache, and the effect lasted for 3 years. (He, 2004) There is little information available from trials to support the use of many physical medicine modalities for mechanical neck pain, often employed based on anecdotal or case reports alone. In general, it would not be advisable to use these modalities beyond 2-3 weeks if signs of objective progress towards functional restoration are not demonstrated. (Kjellman, 1999) (Gross-Cochrane, 2002) (Aker, 1996) (Bigos, 1999) (Gross-Cochrane, 2004) (Birch, 2004) Another recent trial found that acupuncture is more effective than TENS placebo treatment. (Vas, 2006) This passive intervention should be an adjunct to active rehab efforts.

ODG Acupuncture Guidelines:

Initial trial of 3-4 visits over 2 weeks

With evidence of objective functional improvement, total of up to 8-12 visits over 4-6 weeks (Note: The evidence is inconclusive for repeating this procedure beyond an initial short course of therapy.)