

COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF INDUSTRIAL ACCIDENTS

Knee Injury Conservative Treatment Guideline

REVISED DECEMBER 2, 2009

REVISED JUNE 2021

I. Introduction:

The attached clinical guideline has been created to consistently improve health care services for injured workers by outlining the appropriate gathering and decision making processes involved in the management of non-surgical treatment of knee injuries in adults that are determined to be work related. The guideline is a consensus document, and should be used as a tool to guide health care providers of different professional disciplines to provide quality care to injured workers. The guideline is not intended to substitute for appropriate medical judgement, and is, therefore, written to be broad enough to allow for a wide range of diagnostic and treatment modalities and to purposely allow for philosophical and practice differences between different professional disciplines of health care practitioners that provide care to injured workers with non-surgical knee injuries. In order to address varying clinical differences that may arise in the treatment of non-surgical knee injuries within this guideline, the following statement is included. It is expected that approximately (10%) of cases may fall outside of this guideline and may be reviewed and approved on a case by case basis. If objective clinical improvement is delayed or slower than expected, the treating provider must justify the necessity of continued care with a valid clinical rationale, with supporting, objective clinical findings.

II. Background:

Injuries to the knee may be multi-factorial, both work and non-work related. An injury may be the result of cumulative traumas to the knee in certain occupations that require repetitive squatting, kneeling, stooping and lifting, the result of a single traumatic event and/or workplace hazards.

III. History:

A. A detailed history should include:

1. history and mechanism of injury
 - a. relationship of injury to work
 - b. prior knee conditions and injuries
2. anatomic location and specific symptoms
 - a. inflammatory symptoms - stiffness, swelling, pain
 - b. history of locking, clicking, giving way, crepitation, popping, swelling
3. alleviating, exacerbating and aggravating factors
4. abilities to perform essential functions of the job and activities of daily living

IV. Physical Examination:

1. visual inspection
2. palpation-localized swelling, effusion, tenderness, deformity
3. range of motion and quality of motion
4. motor strength - straight leg raise, resistive testing
5. joint stability - Lachman, AP Drawer, varus/valgus stress, pivot shift
6. distal vascular, sensory and motor function
7. gait assessment
8. comparison with contralateral knee

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V. Diagnostic Tests:

- A. X-rays - up to 4 views, including standing views
- B. MRI/CT may be indicated at any time if:
 - 1. instability during any diagnostic maneuver during physical exam
 - 2. palpable and reproducible click during PE maneuver
 - 3. joint locking (intermittent or sustained)
 - 4. joint giving way
 - 5. acute trauma or fracture resulting in immediate effusion
 - 6. delayed recovery, i.e. recovery not meeting medical expectation by 4 weeks
- C. Arthrocentesis and joint fluid analysis of an effusion to assist in differential diagnosis (e.g. gout, rheumatoid arthritis, septic joint), may be indicated if there is a history of inflammatory disease or another clinical indicator

VI. Treatment and Therapeutic Procedures: If patients are treated by more than one discipline, similar services shall not be duplicated:

- A. The following office visits are allowable in the initial 6 weeks of treatment:
 - 1. Medical Office Visits - maximum 6 visits
 - 2. Physical Therapy - maximum 18 visits
 - 3. Chiropractic - maximum 18 visits
 - 4. Occupational Therapy - maximum 18 visits
- B. Office Visits allowed: Weeks 7 - 12:
 - 1. Medical Office Visits - up to 6 additional visits
 - 2. Physical Therapy - up to 12 additional visits
 - 3. Chiropractic - up to 12 additional visits
 - 4. Occupational Therapy - up to 12 additional visits
- C. Treatments:
 - 1. Analgesics and anti-inflammatories as indicated
 - 2. Splinting, strapping, taping and braces
 - 3. Assistive devices for ambulation (e.g. cane, crutches, walker)
 - 4. Joint aspiration
 - 5. Soft tissue mobilization
 - 6. Local and distal joint mobilization/manipulation as indicated
 - 7. Foot orthotics and/or referral to podiatrist when clinically indicated and related to the industrial injury
 - 8. Exercise therapy, aquatic therapy
 - 9. Corticosteroid injections

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- D. Physical Agents and Modalities; limit 2 physical modalities per treatment session for initial four weeks of treatment, and limited to 1 physical modality after initial 4 weeks of treatment. Application of physical modalities should be in conjunction with an active treatment plan:

1. Heat/cold
2. Electrical stimulation
3. Biofeedback
4. Iontophoresis/phonophoresis
5. Ultrasound/diathermy
6. Whirlpool/contrast baths
7. Infra red
8. Cold laser (Low Level Laser Light Therapy)

- E. Acupuncture:

Acupuncture 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 for pain relief when there is delayed recovery.

1. Requirements:

- a. Acupuncture may be authorized when it is ordered by a licensed MD, DC, DO, DO, PA, NP, or PT. The ordering practitioner cannot also be the provider of the service.
- b. Acupuncture must be performed by a health care practitioner licensed to perform acupuncture in the state where the service will be provided.
- c. Time to produce effect: eight (8) visits in first six (6) weeks.
- d. After eight (8) visits the ordering practitioner may request additional visits if functional clinical progress is documented. Maximum visits are not to exceed sixteen (16) visits in twelve (12) weeks.

VII. Patient Education:

- A. Including, but not limited to injury self-care, gait training, home exercise, activities of daily living/O.T.
- B. The following should be discussed with the patient at the initial health care practitioner visit and repeated thereafter as necessary:
1. Key points regarding postural body mechanic changes and safety precautions
 2. Causes of knee injuries
 3. Instruction and demonstration in the purpose and correct use of treatment modalities and medications
 4. How medications work and their potential adverse effects

VIII. Return to Work Expectations and Special Considerations:

- A. Ergonomic assessment may be indicated, and if done, should be provided by a qualified individual
- B. Hazards and risk factors in the workplace that can cause or contribute to knee injuries

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