

Designated Doctor Certification Course - Upper Extremity MMI and IR

Pre-Course Cases

Case 1

History of Injury

- 25-year-old male working as a painter lifted a five gallon bucket partially full of paint
- He heard a pop and experienced immediate right shoulder pain

Treatment History

- Saw PCP on date of injury and was diagnosed with shoulder strain
- Treated with ibuprofen and PT
- Initial 6 visits of PT over 3 weeks
 - Codman's and other passive ROM
 - Scapular stabilization/control exercises
 - Rotator cuff resistance exercises with minimal shoulder abduction

PCP follow-up 3 weeks post injury

- "Not better"
- Restricted painful shoulder ROM
- Shoulder flexion and abduction approximately 80°, IR/extension thumb to L5
- RTW with restrictions – restricted duty work unavailable
- Orthopedic surgeon referral

Orthopedic Surgeon 5 weeks post injury

- Active shoulder abduction and flexion approximately 90°
- Inability to actively resist abduction (4/5)
- Positive impingement signs
- X-rays negative for fracture, dislocation, but Type III acromion
- Ordered shoulder MR arthrogram of right shoulder

MR arthrogram 6 weeks post injury

- Partial thickness rotator cuff (supraspinatus) tear
- Type III acromion
- Subacromial effusion

Orthopedic surgeon 7 weeks post injury

- Symptoms, activity tolerance and PE unchanged
- Restricted duty work unavailable
- Inability to actively resist abduction (4/5)
- Subacromial corticosteroid and concurrent PT

PT 8-11 weeks post injury

- 6 additional visits
- Concurrent with 2 subacromial corticosteroid injections
- Progression of scapular and rotator cuff strengthening
- Shoulder flexion 120°, extension 30°, adduction 30°, abduction 100°, internal rotation 20°, external rotation 30° at discharge (12th visit of PT)
- Restricted duty work still unavailable

Orthopedic surgeon 12 weeks post injury

- Symptoms, activity tolerance are improved
- Shoulder abduction and flexion approximately 120°
- Mildly positive impingement signs
- Restricted duty work unavailable
- Recommended continued 6 visits of PT
- PT preauthorization denied, appealed
- Insurance carrier “accepts shoulder sprain, denies partial thickness rotator cuff tear”

DD Exam – 20 weeks post injury

Medical History

- States cannot use right arm well at all, especially above shoulder level
- Right arm “really weak”
- Right shoulder “stiff”
- PT and injections helped, but no PT in about 8 weeks
- Doing some exercises at home
- Wants to work “but my boss won’t let me”

DD Physical Exam –

- Shoulder flexion 110°, extension 30°, abduction 90°, adduction 20°, external rotation 20°, internal rotation 10°
- 4/5 strength right shoulder abduction, flexion and external rotation when performed at >45°-60° of abduction or flexion
- Upper Extremity DTRS and sensation normal

Case 1 Questions:

Based on medical records and physical exam, what is the compensable injury for certifying MI and IR?

- A. Right shoulder strain
- B. Partial thickness right rotator cuff (supraspinatus) tear complicated by pre-existing Type III acromion
- C. A and B
- D. None of the above

Has MMI been reached? If so, on what date?

- A. Yes, 11 weeks post injury, date of 12th PT visit
- B. Yes, 12 weeks post injury, date of ortho follow-up
- C. Yes, 20 weeks post injury, date of DD exam
- D. No, not at MMI

Case 1 – the Sequel

Medical History

- Arthroscopic rotator cuff repair with acromioplasty at 22 weeks post injury
- Completed 24 visits weeks 34-48 post injury following post-op immobilization
- RTW full time at new job 50 weeks post op with 50# lifting restriction, no lifting >25# above shoulder height
- PT discharge 48 weeks post injury

- 5/5 UE strength
- Progression of resisted rotator cuff/scapular strengthening exercises
- Shoulder ROM
 - Flexion 160°
 - Abduction 150°
 - Adduction/internal rotation thumb to T10

Ortho follow up 49 weeks post injury

- “Much better, finished with PT, doing home exercises”
- “Full ROM and strength”
- Follow up PRN

DD Physical Exam – 52 weeks post injury

Shoulder ROM

- Flexion 155°
- Extension 28°
- Abduction 150°
- Adduction 25°
- Internal rotation 40°
- External rotation 50°
- Intermittent AC joint crepitation with active right shoulder range of motion
- No significant scapulothoracic dyskinesia or crepitation
- 5/5 strength right shoulder with manual muscle testing
- Normal UE DTRs and sensation

Case 1 the Sequel Questions:

Based on medical records and physical exam, what is the compensable injury for certifying MI and IR?

- Right shoulder strain
- Partial rotator cuff tear, status post rotator cuff repair
- A and B

Has MMI been reached? If so, on what date?

- Yes, 48 weeks post injury, date of PT discharge
- Yes, 49 weeks post injury, date of ortho follow-up
- Yes, 50 weeks post injury, date began working with restrictions at new job
- Yes, 52 weeks post injury, date of DD exam
- No, not at MMI

On the MMI date, what is the whole person IR?

- 5%
- 8%
- 11%
- 18%

Case 2

History of injury

- 25-year-old male oil field worker sustained a crush injury to his left hand

Treatment history

- Seen in ER date of injury and underwent surgery date of injury
- Traumatic amputation of left index finger at metacarpal phalangeal joint
- Fractures of proximal phalanx of left thumb and proximal phalanx of middle finger treated with pin fixation
- 24 post op OT visits
- OT discharge 40 weeks post injury
 - Well healed index finger amputation
 - Index MP flexion 90 ° and extension + 20 °
 - Thumb ROM
 - IP flexion 35° and extension -15°
 - MP flexion 40° and extension -05°
 - Radial Abduction 40°
 - Adduction and opposition not measured
 - Middle finger ROM
 - DIP flexion 45° and extension -15°
 - PIP flexion 55° and extension -05°
 - MP flexion 60° and extension -10°
 - Sensation decreased over the palmar surface of the middle finger from the PIP joint distally.
- Treating doctor follow-up 40 weeks post injury
 - Healed thumb and finger fractures and index finger wound site
 - More time needed for spontaneous healing of digital nerve injury to middle finger
- Treating doctor follow-up 52 weeks post injury
 - Healed middle finger and thumb fractures and index finger wound site
 - Numbness of the middle finger unchanged over the last 3 months
 - Thumb and middle finger ROM “same as prior visit after completing OT”
 - Returned to work at new job
 - Continue gabapentin, follow-up 3 months
- DD Physical exam 60 weeks Post injury
 - Taking gabapentin
 - Working full time at new job
 - Continued numbness middle finger
 - Well healed scars, no redness/swelling

Left Thumb

- IP flexion 40°, extension -10°
- MP flexion 40°, MP extension 0°
- Abduction 35°
- Lack of adduction = 3 cm

- Able to oppose to 6 cm from the palm
- 6 mm of 2-point discrimination entire palmar aspect of the radial and ulnar side of the digit
- Left index finger amputation at MID-Proximal Phalanx
- Left middle finger
 - ROM
 - DIP flexion 50° and extension -20°
 - PIP flexion 60° and extension -10°
 - MP flexion 60° and extension -10°
- Sensation >15 mm 2 point discrimination entire palmar aspect of finger from PIP joint distally

Case 2 Questions:

Based on medical records and physical exam, what is the compensable injury for certifying MI and IR?

- A. Left hand crush injury
- B. Fracture of proximal phalanx of thumb
- C. Traumatic amputation of left index finger
- D. Fracture proximal phalanx of middle finger with digital nerve injury
- E. A, B, C, D

Has MMI been reached? If so, on what date?

- A. Yes, 40 weeks post injury, date of OT discharge and treating doctor follow-up
- B. Yes, 52 weeks post injury, date of treating doctor follow-up
- C. Yes, 60 weeks post injury, date of DD exam
- D. No, not at MMI

On the MMI date, what is the whole person IR?

- A. 38%
- B. 34%
- C. 20%
- D. 17%

Case 3

History of Injury

- 25-year-old male waiter tripped and fell at work landing on outstretched left arm
- Sustained fracture of left distal radius
- Underwent open reduction and internal fixation (ORIF) with plating by orthopedist
- Fracture is healed
- 12 visits of post-op PT with increased ROM and strength
- Subsequently complained of pain and loss of sensation in left hand
- Electrodiagnostic studies consistent with very severe median neuropathy
- Underwent nerve decompression 12 months post injury
- Reached clinical plateau with no reasonable anticipation of further material recovery or lasting improvement
- Say designated doctor for MMI and IR

DD Exam

DD Medical History

- Loss of sensation left thumb and index finger which interferes but does not prevent sleep, playing guitar and other ADLs
- RTW as waiter

DD Physical Exam

- Well healed surgical scar left wrist
- ROM left wrist
 - Flexion 24°
 - Extension 15°
 - Radial deviation 5°
 - Ulnar deviation 14°
- ROM left forearm
 - Pronation 25°
 - Supination 45°
- 5/5 strength of fingers, wrist and forearm muscles bilaterally
- 12 mm 2 point discrimination of palmar surface of radial and ulnar portions of left thumb and radial and ulnar side of index finger
- 6 mm 2 point discrimination over all other parts of left hand

Case 3 Questions:

Based on medical records and physical exam, what is the compensable injury for certifying MI and IR?

- A. Left distal radius fracture
- B. Traumatic median neuropathy
- C. A and B
- D. Any others?

For MMI - assume the date of the DD exam reflects the condition at MMI

On the MMI date, what is the whole person IR?

- A. 35%
- B. 22%
- C. 21%
- D. 15%