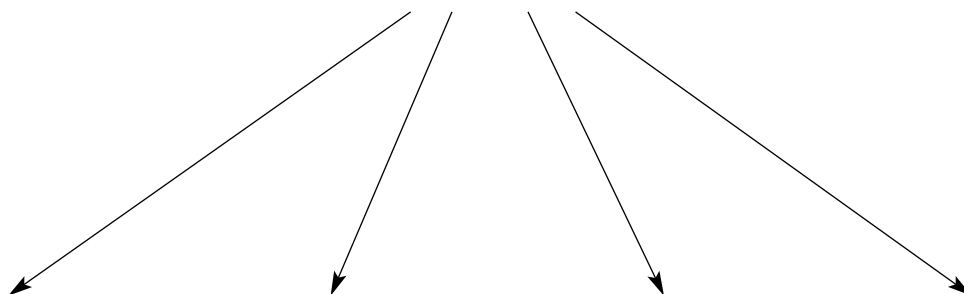
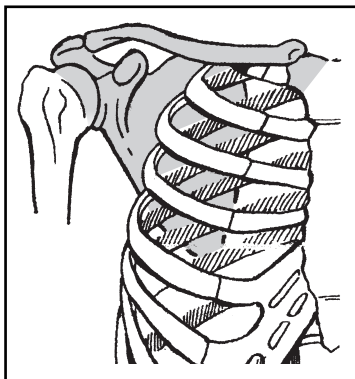


Practical suggestions for the application of the OTA dislocation classification system.

General principles.

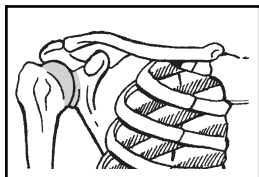
Although there are many different ways in which dislocations can be classified, the OTA dislocation classification system is based primarily upon the basic tenets of identification of the exact joint involved and the direction of the distal bone relative to the proximal bone. These two basic principles of classification are applicable throughout the skeletal system. The ligaments that are disrupted in each dislocation can be inferred from the classification but is not a specific component of the classification process. "Fracture-dislocations" are generally assigned 2 separate codes, 1 for the fracture (bone) and 1 for the dislocation (joint). In general, the first digit of the numerical code represents the body part and the second digit of the numerical code is 0 for dislocation. For example, 30 represents a hip dislocation with 3 indicating thigh and 0 dislocation of the hip (femoral-acetabular) joint. The third place (A,B,C,D and E) is utilized when there are more than 2 bones in the anatomic region and hence more than 1 joint. Each specific 2 bone joint is assigned a third place designation (eg, knee joint 40-A is tibiofemoral and 40-B is patellofemoral). In general, the dislocations are subclassified by the direction the distal bone is positioned relative to the proximal bone at the time of dislocation. In most instances, the subtypes are 1, 2, 3, 4 and 5: 1 = anterior, 2 = posterior, 3 = lateral, 4 = medial, and 5 = other. For example, 40 refers to dislocations about the knee with 40-A1 being an anterior dislocation of the knee joint (with the tibia anterior to the femur). The designation of "other" is used for various situations including spontaneous reduction of a presumed dislocation where the direction is not known (eg, a knee injury with disruption of the ACL and PCL but with the presentation radiographs demonstrating a reduced knee joint is 40-A5). This "other" or "5" category is also used when direction of the dislocation does not meet the standard 4 anatomic directions (eg, 10-A5 for inferior dislocation of the shoulder or "luxatio erecta"). Some dislocations were included in the long bone fracture classification (eg, forearm), and there is the potential for more than 1 code to be appropriate for a given injury.

DISLOCATION REGION: Shoulder (10)

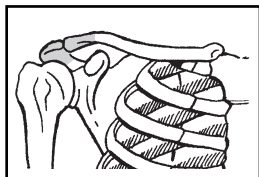


Types by joint involved:

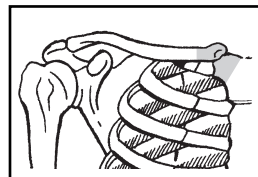
A. Glenohumeral (10-A)



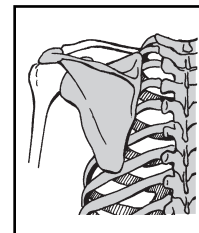
B. Acromioclavicular (10-B)



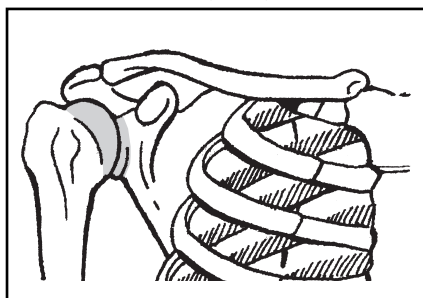
C. Sternoclavicular (10-C)



D. Scapulothoracic (10-D)

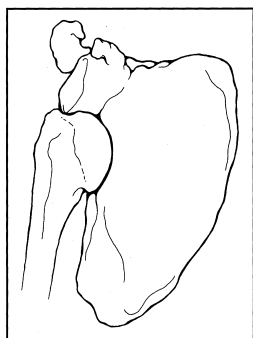


A. Glenohumeral (10-A)

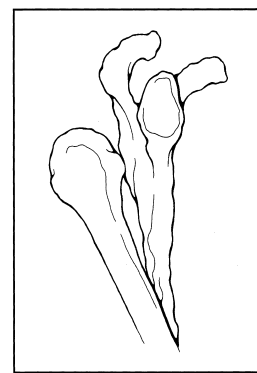
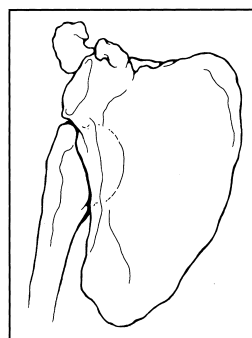
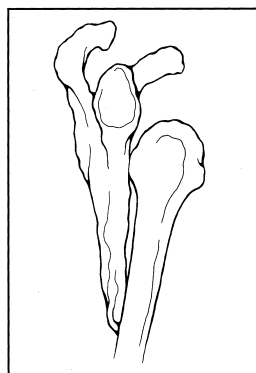


Groups by direction:

1. Anterior (10-A1)



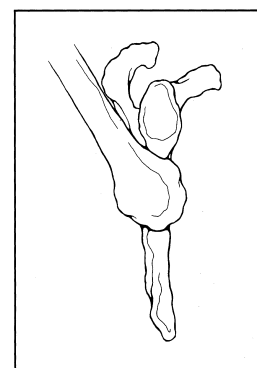
2. Posterior (10-A2)

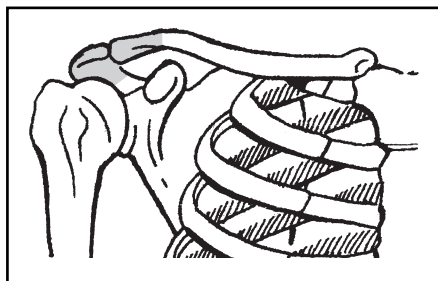
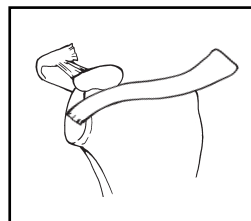
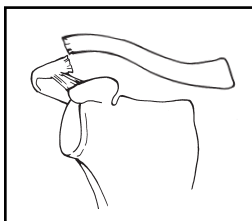
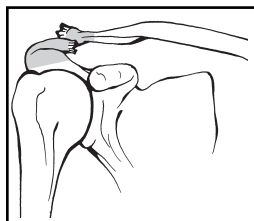
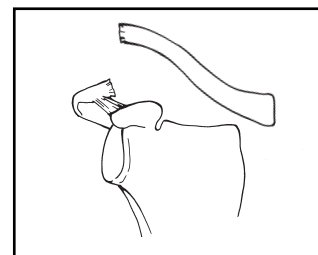
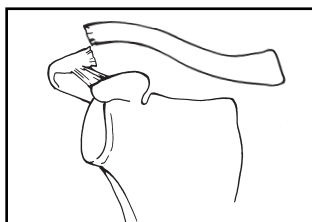
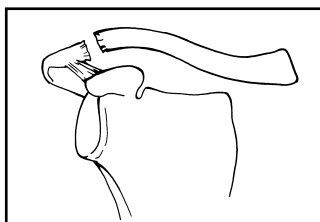
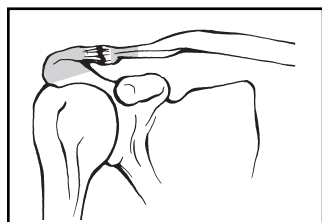


3. Lateral (theoretical) (10-A3)

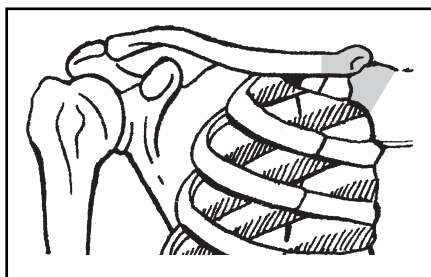
4. Medial (theoretical) (10-A4)

5. Other (inferior-luxatio erecta) (10-A5)



B. Acromioclavicular (10-B)**Groups by direction:****1. Anterior (theoretical) (10-B1)****2. Posterior (10-B2)****3. Superior (10-B3)****4. Inferior (10-B4)****5. Other (10-B5)****Subgroups of 10-B3 by severity of displacement:****1. Grade 1 sprain (10-B3.1)****2. Grade 2, partial displacement (10-B3.2)****3. Grade 3, $\geq 100\%$ displacement (10-B3.3)****4. Grade 4, grade 3 plus deltoid origin detached from clavicle (10-B3.4)**

C. Sternoclavicular (10-C)



Groups by direction:

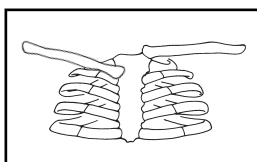
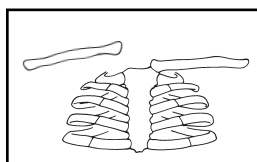
1. Anterior (10-C1)

2. Posterior (10-C2)

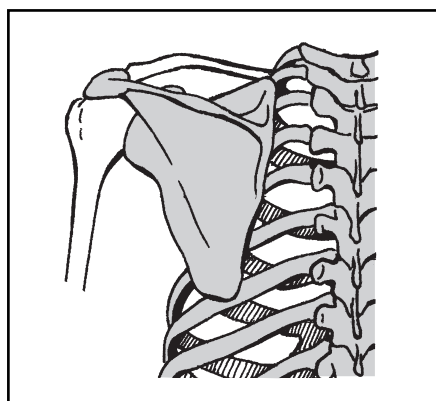
3. Lateral (theoretical) (10-C3)

4. Medial (theoretical) (10-C4)

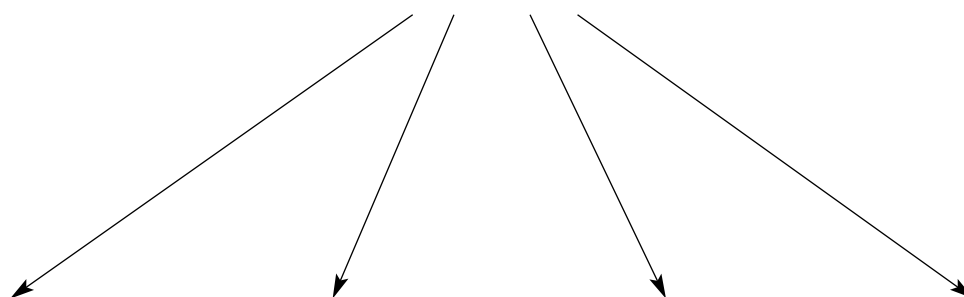
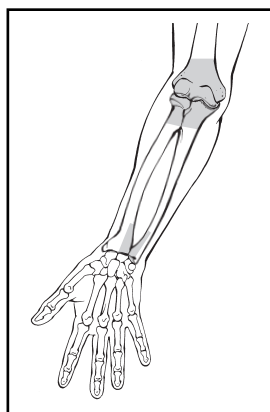
5. Other (10-C5)



D. Scapulothoracic (10-D)



DISLOCATION REGION: Elbow (20):



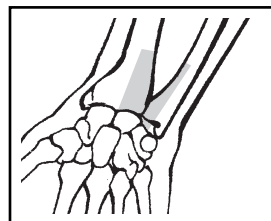
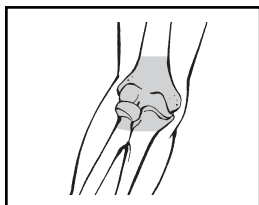
Types by joint involved:

A. Ulnohumeral with radiohumeral* (20-A)

B. Isolated radiohumeral (20-B)

C. Distal radioulnar dislocation (20-C)

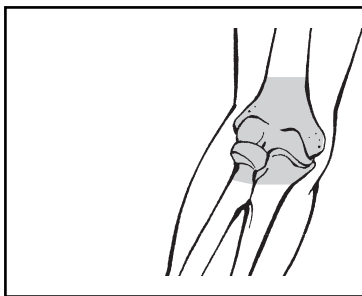
D. Other (20-D)



Notes for classification of elbow dislocations:

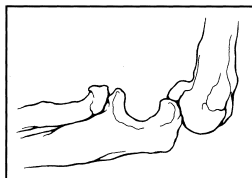
- * For the purposes of elbow dislocation the radiohumeral joint is presumed to be dislocated as well as the ulnohumeral joint with the radius going in the same direction as the ulna for types 20-A1—20-A4 and in different directions in 20-A5.
- 20-B is reserved for radiohumeral dislocations in which the ulnohumeral articulation is not dislocated.
- Monteggia “fracture dislocations” should be coded as 20-B plus 22-A1, B1 or C1 (ulna shaft).
- Galeazzi “fracture dislocations” should be coded as 20-C plus 22-A2, B2 or C2 (radial shaft).
- 20-C (distal radioulnar dislocations) used here rather than 70 to remain consistent with the lower extremity where 40-C and 40-D are used for proximal and distal tibiofibular dislocations.
- Isolated proximal radioulnar dislocations (20-C) probably do not occur but 20-D could be used.
- The long bone classification system also identifies alternative codes for some “fracture dislocations” in this anatomic region and the codes 22-A3, 22-B3 and 22-C3 represent an alternative way to classify these injuries. With the 2007 version of the classification system we generally recommend that fractures and dislocations be separately coded.

A. Ulnohumeral (20-A)

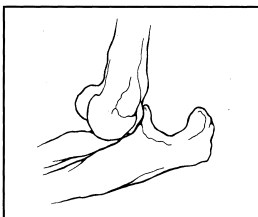


Groups by direction:

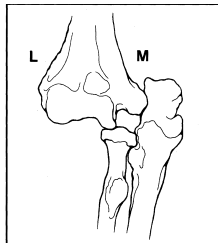
1. Anterior (20-A1)



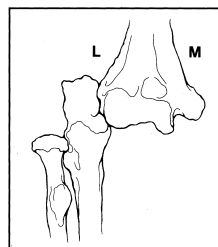
2. Posterior (20-A2)



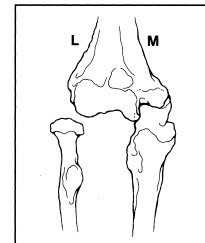
3. Medial (20-A3)



4. Lateral (20-A4)



5. Divergent (20-A5)

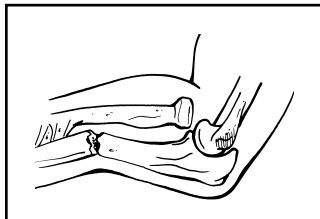


B. Radiohumeral (20-B)

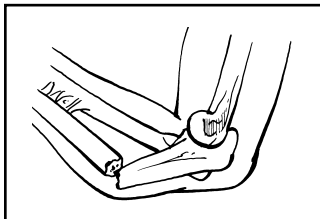


Groups by direction:

1. Anterior (20-B1)



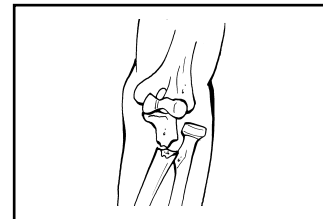
2. Posterior (20-B2)



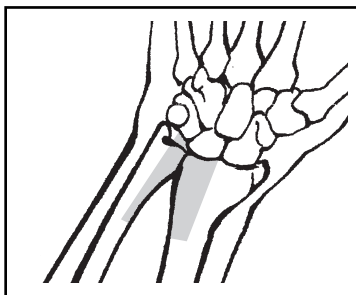
3. Medial (20-B3)



4. Lateral (20-B4)

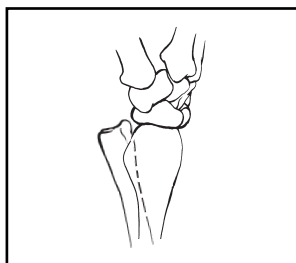


C. Distal radioulnar dislocations (20-C)

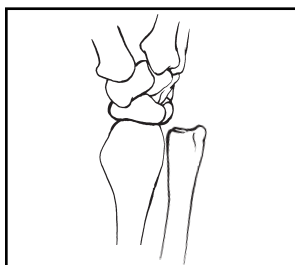


Groups by direction:

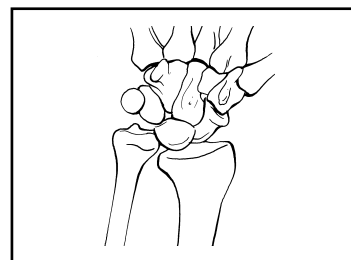
1. Anterior (volar) (20-C1)



2. Posterior (dorsal) (20-C2)



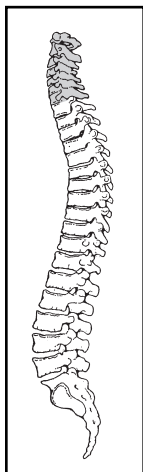
3. Other (20-C3)



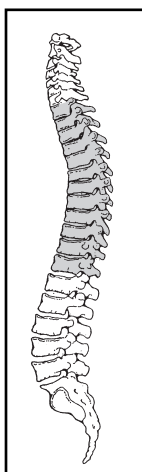
DISLOCATION REGION: Spine dislocation (50)

Types by area of spine:

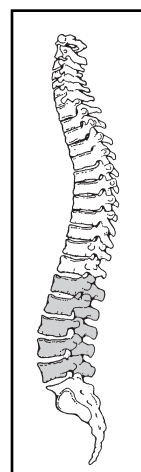
A. Cervical (50-A)



B. Thoracic (50-B)



C. Lumbar (50-C)



Groups: Name the levels starting at Occiput-C1

Occiput-C1 dislocation (50-A1)

C1-C2 (50-A2)

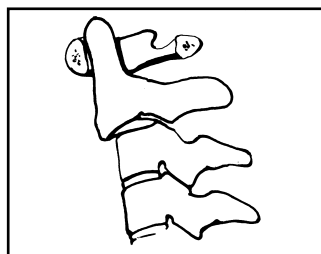
C2-3 (50-A3)

C3-4 (50-A4)

C4-5 (50-A5)

C5-6 (50-A6)

C6-7 (50-A7)



C7-T1 dislocation (50-B1)

T1-2 (50-B2)

T2-3 (50-B3)

T3-4 (50-B4)

T4-5 (50-B5)

T5-6 (50-B6)

T6-7 (50-B7)

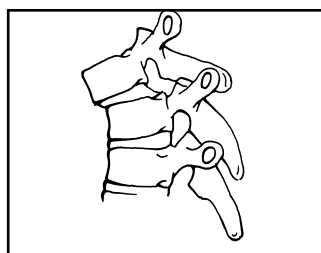
T7-8 (50-B8)

T8-9 (50-B9)

T9-10 (50-B10)

T10-11 (50-B11)

T11-12 (50-B12)



T12-L1 dislocation (50-C1)

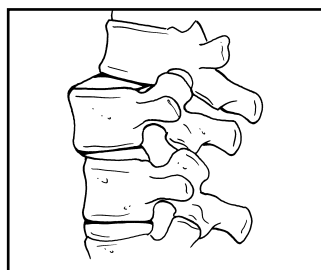
L1-2 (50-C2)

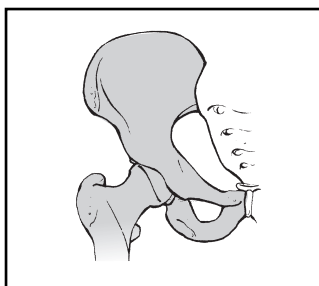
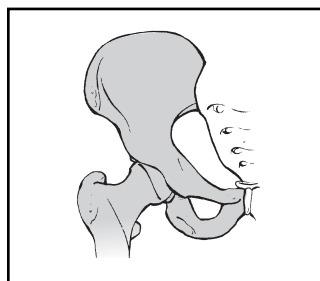
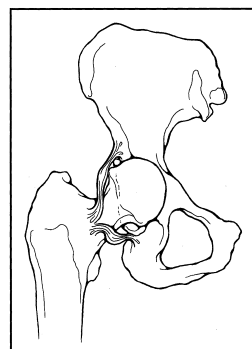
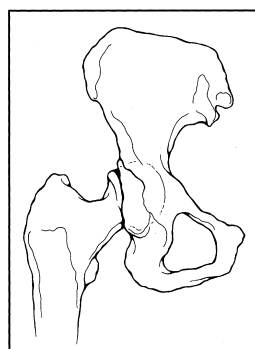
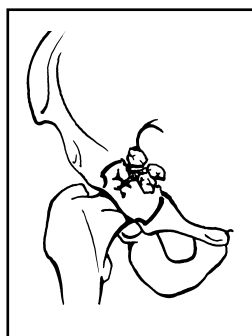
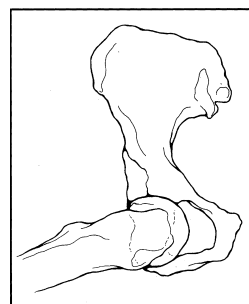
L2-3 (50-C3)

L3-4 (50-C4)

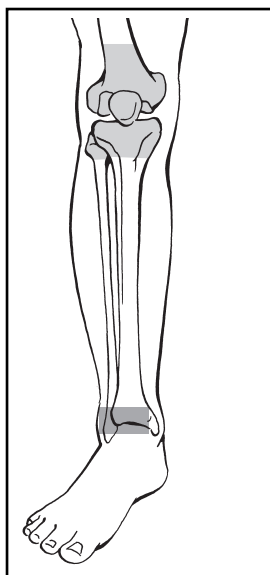
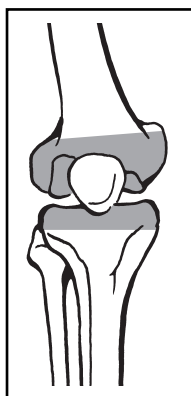
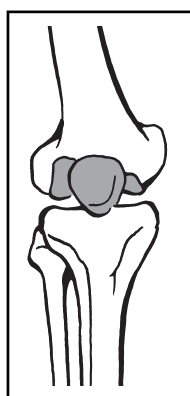
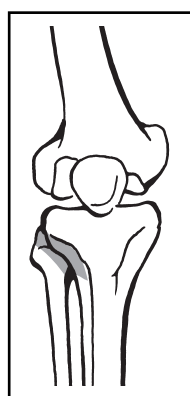
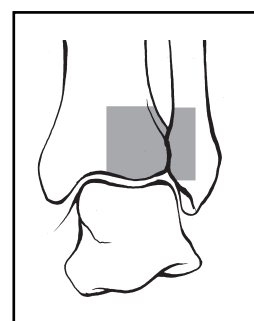
L4-5 (50-C5)

L5-S1 dislocation (50-C6)



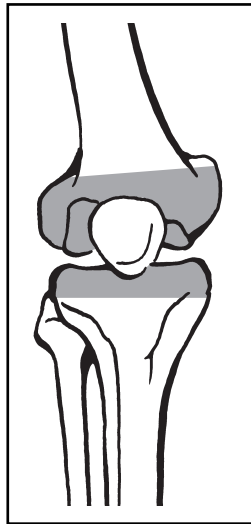
DISLOCATION REGION: Hip (30):**Types by joint involved:****Hip joint (30-A)****Groups by direction:****1. Anterior (30-A1)****2. Posterior (30-A2)****3. Medial or central (30-A3)****4. Obturator (30-A4)****5. Other (30-A5)****Notes for classification of hip dislocations:**

- A dislocation associated with an acetabular wall fracture should be coded with a fracture code (62) AND a dislocation code 30-A.
- It is left to the discretion of the coder to decide what constitutes a 30-A3 which is necessarily associated with a displaced fracture of the central acetabulum. Although commonly referred to as a medial or central dislocation of the hip, the 30-A3 injury is a particular pattern of fracture displacement rather than a true dislocation. It is left to the discretion of the coder to decide when, if ever, to utilize 30-A3 in addition to the fracture code (62).
- There are no current injury patterns appropriate for 30-B designation.

DISLOCATION REGION: Knee (40)**Types by joint involved:****A. Tibiofemoral (40-A)****B. Patellofemoral (40-B)****C. Tibiofibular (proximal) (40-C)****D. Tibiofibular (distal) (40-D)****Notes for classification of knee dislocations:**

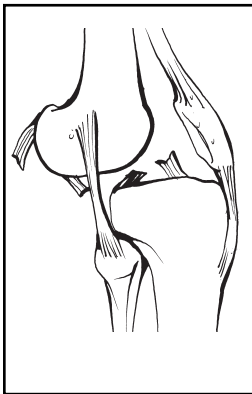
- The classification committee recognizes that distal tibiofibular dislocations are NOT knee dislocations but they fit well here and ARE dislocations associated with the leg bone segment 4. Distal tibiofibular dislocations (as well as DRUJ) could reasonably be moved to 80 foot and ankle dislocations (and DRUJ to 70 wrist and hand dislocations). However, those segments already have many codes because there are so many joints in these body parts with small bones. Therefore for practical and consistency reasons distal tibiofibular dislocations are assigned to the 40 section.
- Knee dislocations in which the direction is unknown, for example bicruciate ligament tears, should be coded as 40-A5 (other)
- Quadriceps and patellar tendon tears can be coded as patellofemoral dislocations 40-B1 and 40-B2.
- The patella is considered the more distal bone for 40-B.
- The fibula is considered the more distal bone for tibiofibular dislocations.

A. Tibiofemoral (40-A)



Groups by direction:

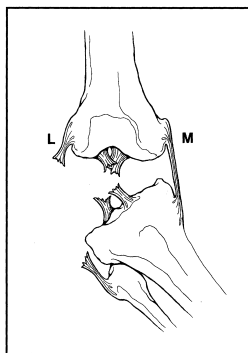
1. Anterior (40-A1)



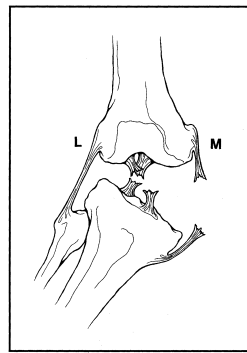
2. Posterior (40-A2)



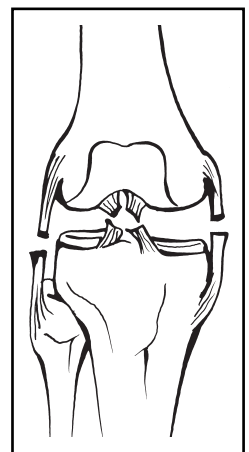
3. Medial (40-A3)



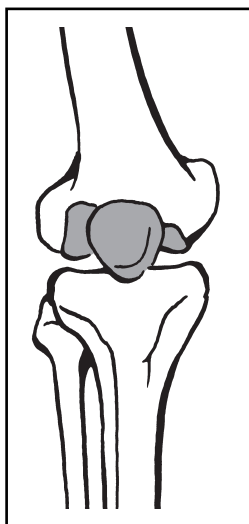
4. Lateral (40-A4)



5. Other (40-A5)

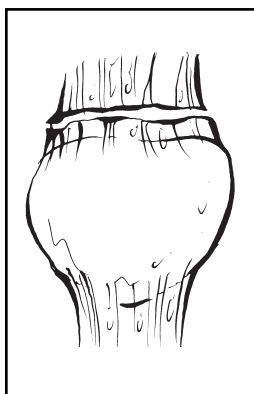


B. Patellofemoral (40-B)

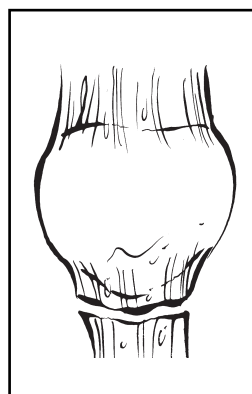


Groups by direction of the patella:

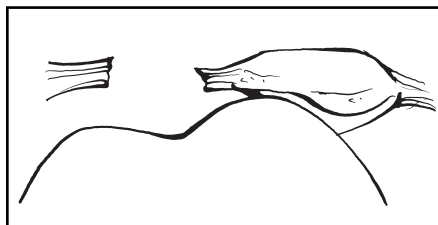
1. Distal (quadriceps tendon disruption) (40-B1)



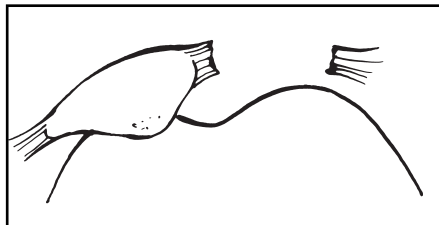
2. Proximal (patellar tendon disruption) (40-B2)



3. Medial patellofemoral dislocation (40-B3)

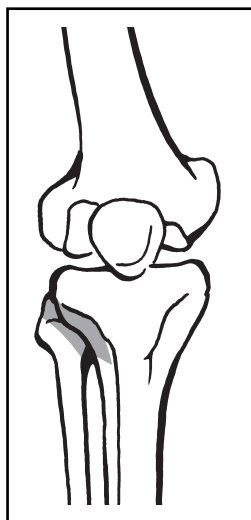


4. Lateral patellofemoral dislocation (40-B4)



5. Other (40-B5)

C. Proximal tibiofibular dislocation (40-C)



Groups by direction:

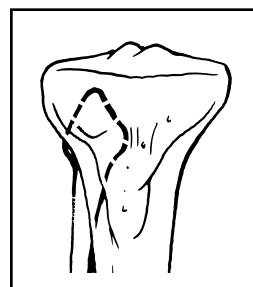
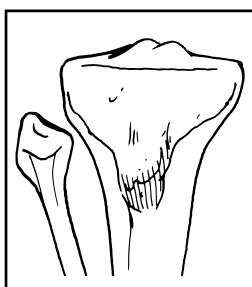
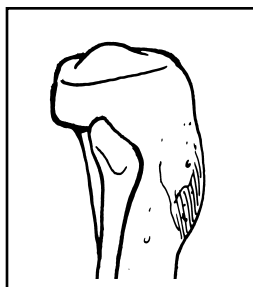
1. Anterior (40-C1)

2. Posterior (40-C2)

3. Lateral (40-C3)

4. Medial (40-C4)

5. Other (40-C5)

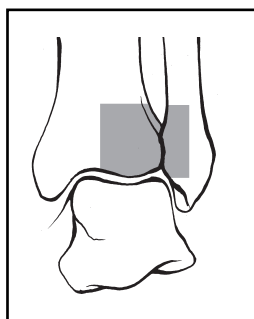


Subgroups of 40-C5:

1. Superior (40-C5.1)

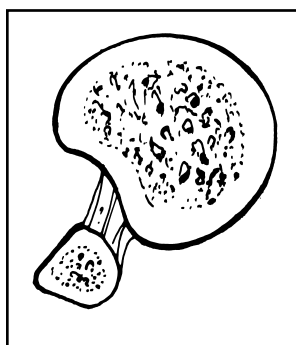
2. Inferior (40-C5.2)

D. Distal tibiofibular dislocation (40-D)

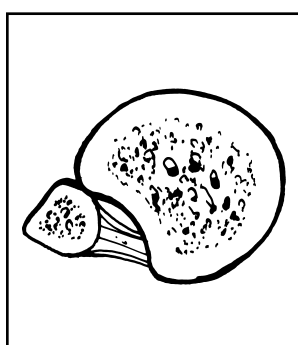


Groups by the direction of the fibula:

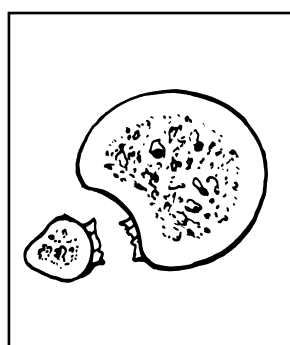
1. Anterior (40-D1)



2. Posterior (40-D2)



3. Lateral (40-D3)

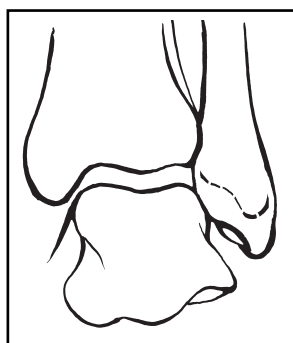


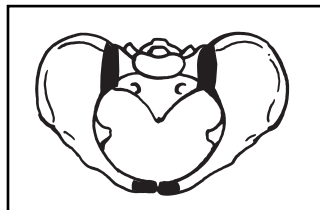
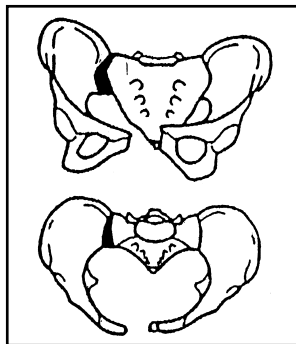
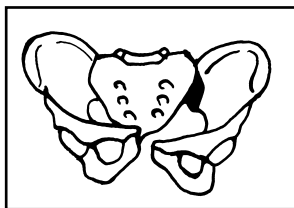
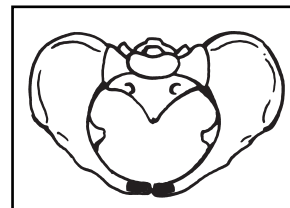
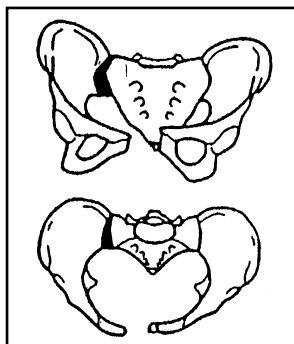
4. Other (40-D5)

Subgroups of 40-D5:

1. Superior (40-D5.1)

2. Inferior (40-D5.2)



DISLOCATION REGION: Pelvic dislocation (60)**Types by joint involved:****A. Sacroiliac right (60-A)****B. Sacroiliac left (60-B)****C. Symphysis pubis (60-C)****Groups by direction:****A. Sacroiliac right (60-A)****1. Anterior (60-A1)****2. Posterior (60-A2)****3. Lateral (60-A3)****4. Other (eg proximal) (60-A4)****Notes for classification of pelvic dislocations:**

- Because pubic diastasis and sacroiliac (SI) joint dislocations and fracture dislocations are such an integral component of “pelvic ring disruption,” pelvic fracture codes (61), the 60 codes are restricted to “pure dislocations” without fracture. 61 codes are to be used for fracture dislocations or pelvic ring injuries that include fractures AND SI or symphysis disruptions. Therefore the following:
- 60 codes are for pure dislocations. Pelvic ring disruptions with fractures (with or without SI and symphysis joint injuries) should be classified by the 61 codes.
- Each joint should be coded separately. Thus a single patient with pure dislocations (no fractures) of both SI joints and the pubic symphysis would be coded 60-B2 (left SI posterior dislocation), 60-A1 (right SI dislocation with ilium anteriorly displaced) and 60-C3 (pubic symphysis dislocation with the right side displaced proximal to the left).

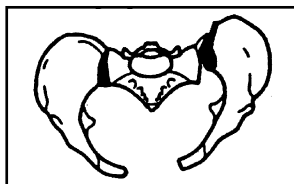
B. Sacroiliac left (60-B)

1. Anterior (60-B1)

2. Posterior (60-B2)

3. Lateral (60-B3)

4. Other (eg proximal)
(60-B4)

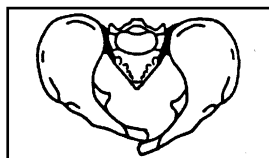
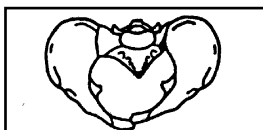


C. Symphysis pubis (60-C)

1. Right side anterior (60-C1)

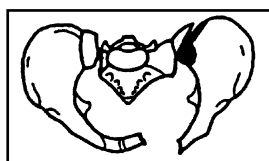
2. Right side posterior (60-C2)

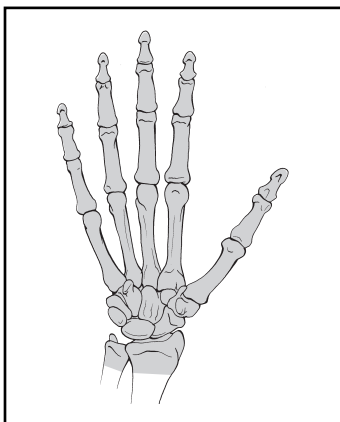
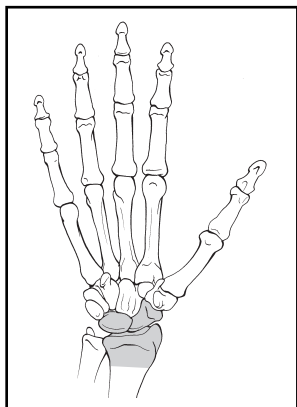
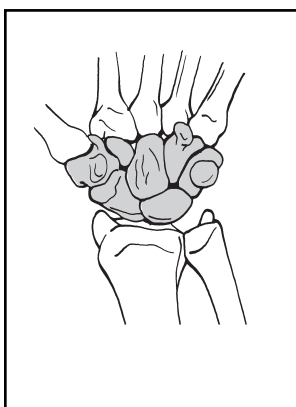
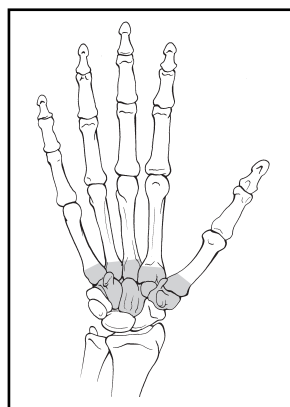
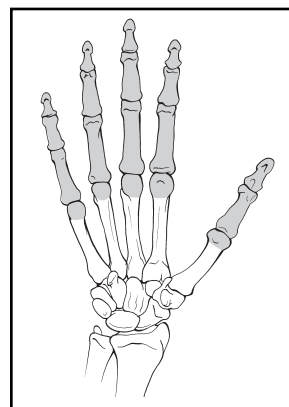
3. Right side proximal (60-C3)



4. Right side distal (60-C4)

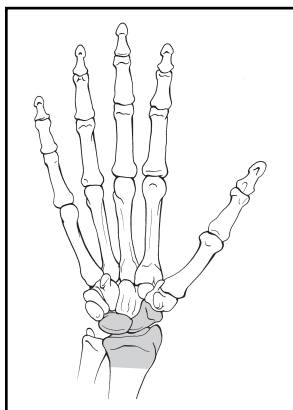
5. Open or wide (60-C5)



DISLOCATION REGION: Hand and Wrist (70)**Types by area or joints involved:****A. Radiocarpal
(70-A)****B. Intercarpal
(70-B)****C. Carpal-metacarpal
(70-C)****D. Phalanx (70-D)****Notes for classification of wrist and hand dislocations:**

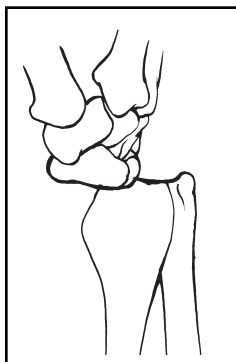
- Distal radioulnar dislocations are classified under section 20-D.
- The classification is designed to be as consistent as possible between hand and foot.
- The designation of "9" in the fourth digit is available to code "multiple injuries" to the small bones and joints of the foot, hand and wrist and are available to coders desiring a more general level of specificity. If more specific designation is desired, then individual codes can be applied to each specific dislocation.
- There are no subgroups of 70-B.
- If there is associated fracture, use fracture code in addition to dislocation code.

A. Radiocarpal (wrist joint) (70-A)



Groups by direction of the distal fragment:

1. Anterior (volar)
(70-A1)



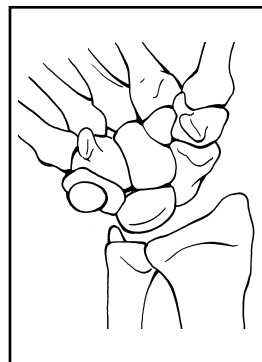
2. Posterior (dorsal)
(70-A2)



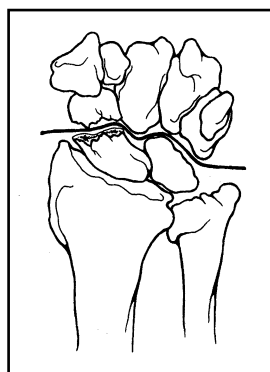
3. Radial (70-A3)

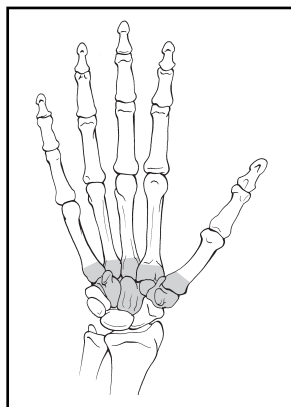
4. Ulnar (70-A4)

5. Other (70-A5)



B. Intercarpal dislocations (70-B)



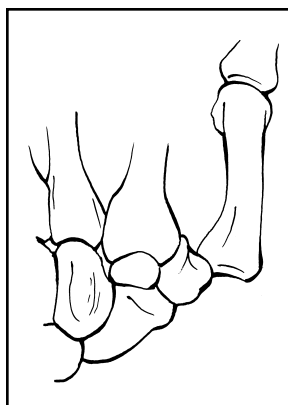
C. Carpal-metacarpal joints (70-C)

Groups by joint involved radial to ulnar:

1. 1st metacarpal-trapezial dislocation (70-C1)

2. 2nd metacarpal-trapezium dislocation (70-C2)

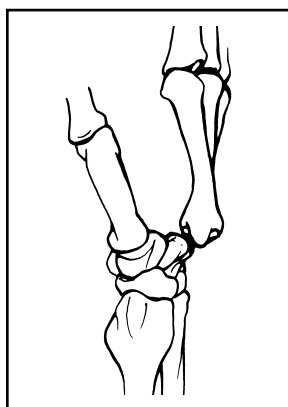
3. 3rd metacarpal capitate dislocation (70-C3)



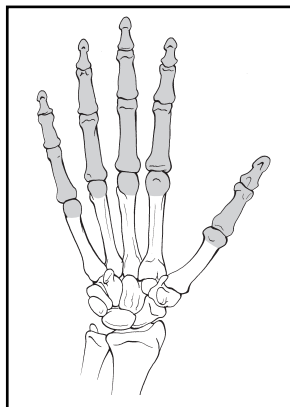
4. 4th metacarpal hamate dislocation (70-C4)

5. 5th metacarpal triquetrum dislocation (70-C5)

6. Multiple carpal-metacarpal dislocations (70-C9)

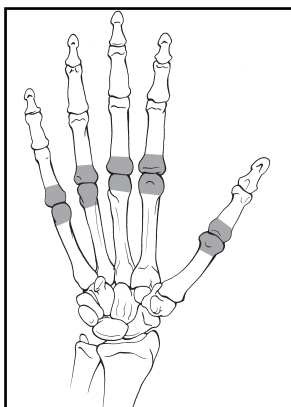


D. Phalangeal dislocations (70-D)

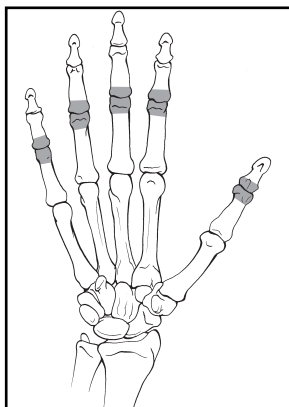


Groups by level involved:

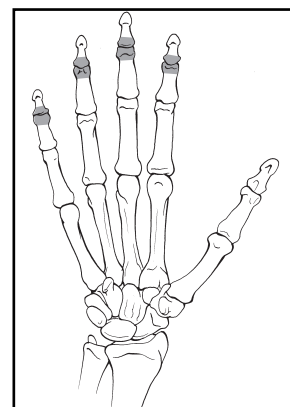
**1. Metacarpal phalangeal
(70-D1)**



**2. Proximal interphalangeal
(70-D2)**



**3. Distal interphalangeal
(70-D3)**

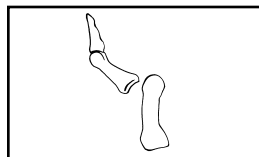
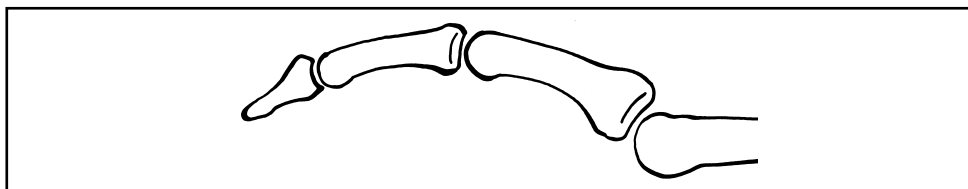


4. Sesamoid dislocation (70-D4)

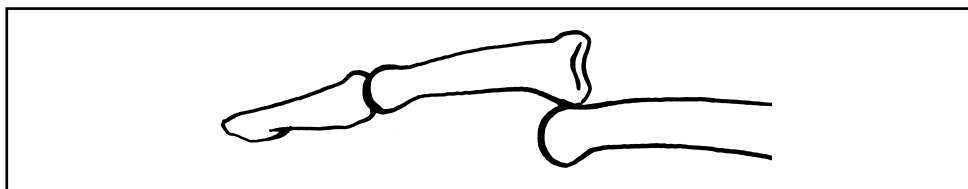
5. Multiple finger dislocations (70-D9)

1. Metacarpal phalangeal joint (70-D1)

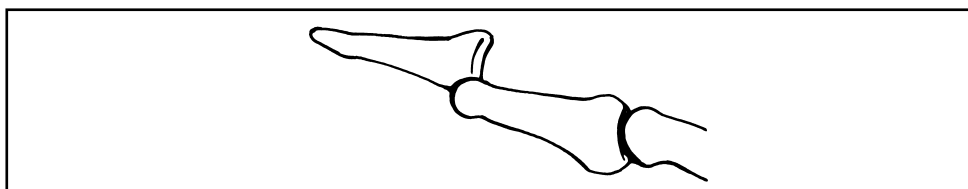
Subgroups by joint involved radial to ulnar:

1. 1st metacarpal phalangeal joint (70-D1.1)**2. 2nd metacarpal phalangeal joint (70-D1.2)****3. 3rd metacarpal phalangeal joint (70-D1.3)****4. 4th metacarpal phalangeal joint (70-D1.4)****5. 5th metacarpal phalangeal joint (70-D1.5)****2. Proximal interphalangeal joint (70-D2)**

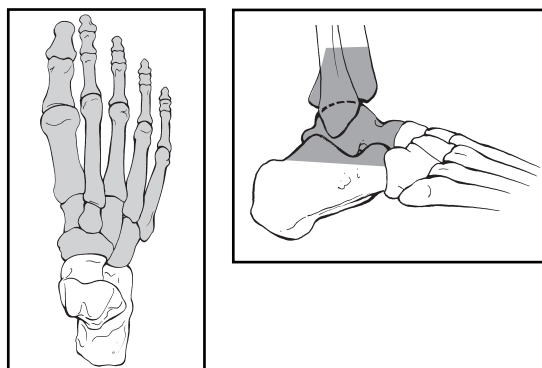
Subgroups by joint involved radial to ulnar:

1. Thumb (1st) (70-D2.1)**2. Index (2nd) (70-D2.2)****3. Long (3rd) (70-D2.3)****4. Ring (4th) (70-D2.4)****5. Small (5th) (70-D2.5)****3. Distal interphalangeal joint (70-D3)**

Subgroups by joint involved radial to ulnar:

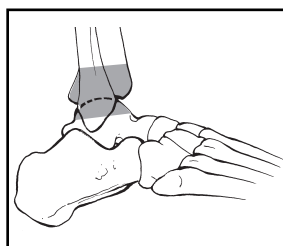
1. None**2. Index (2nd) (70-D3.2)****3. Long (3rd) (70-D3.3)****4. Ring (4th) (70-D3.4)****5. Small (5th) (70-D3.5)**

DISLOCATION REGION: Foot and Ankle (80)

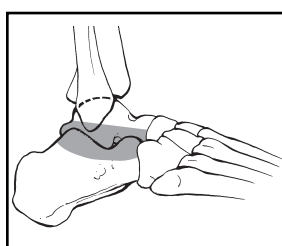


Types by area or joint involved:

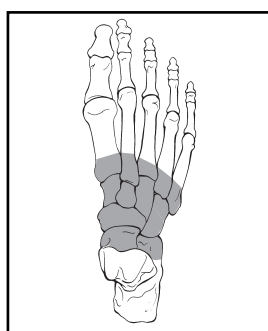
A. Ankle (talotibial) (80-A)



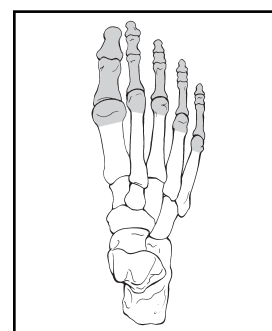
B. Hindfoot (subtalar) (80-B)



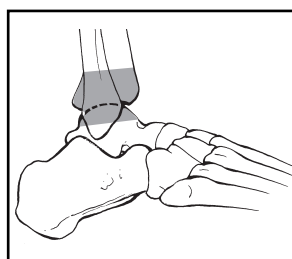
C. Midfoot (80-C)



D. Forefoot (80-D)

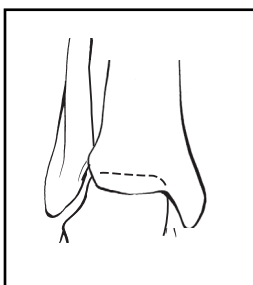


A. Ankle (80-A)



Groups by direction:

1. Anterior (80-A1)



2. Posterior (80-A2)



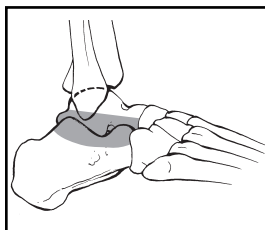
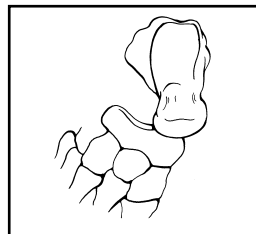
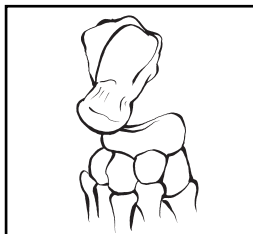
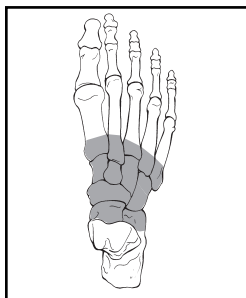
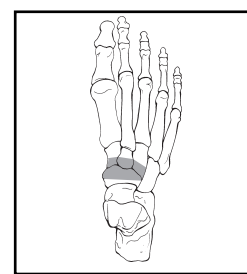
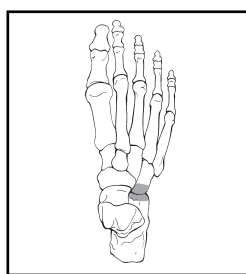
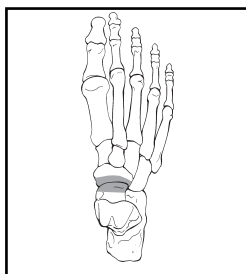
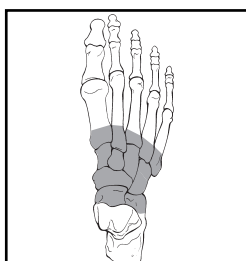
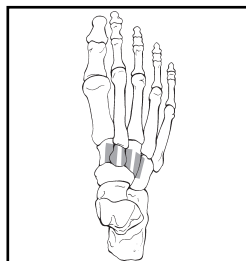
3. Medial (80-A3)

4. Lateral (80-A4)

5. Other (80-A5)

Notes for classification of foot and ankle dislocations:

- Distal tibiofibula dislocations are classified under section 40-D.
- Talar neck fracture classification is intimately related to associated dislocations and therefore are included in the fracture codes for talus (81).

B. Subtalar (80-B)**Groups by direction:****1. Anterior (80-B1)****2. Posterior (80-B2)****3. Medial (80-B3)****4. Lateral (80-B4)****5. Other (80-B5)****C. Midfoot (80-C)****Groups by joint involved:****1. Talonavicular (80-C1)****2. Calcaneocuboid (80-C2)****3. Navicular-cuneiform dislocation (80-C3)****4. Intercuneiform dislocation (80-C4)****5. Tarsal-metatarsal dislocation (80-C5)****6. Multiple midfoot dislocations (80-C9)**

Tarsal-metatarsal dislocation (80-C5)

Subgroups by joint involved medial to lateral:

1st metatarsal medial cuneiform dislocation (80-C5.1)

2nd metatarsal second cuneiform dislocation (80-C5.2)

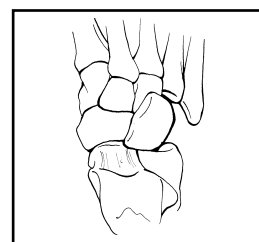
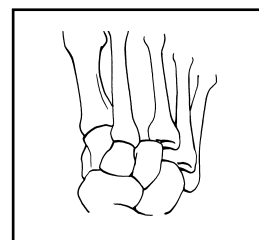
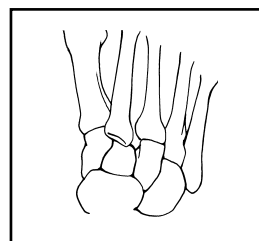
3rd metatarsal lateral cuneiform dislocation (80-C5.3)

4th metatarsal cuboid dislocation (80-C5.4)

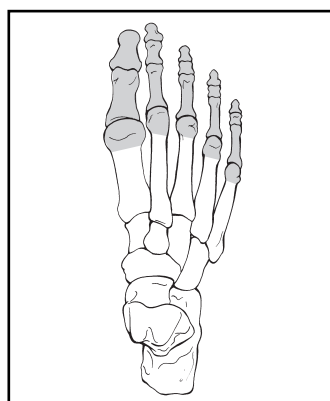
5th metatarsal cuboid dislocation (80-C5.5)

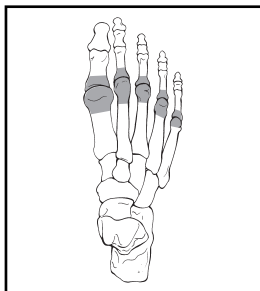
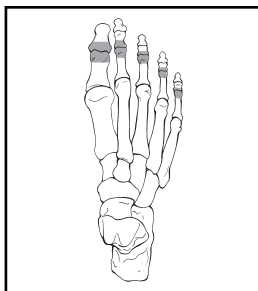
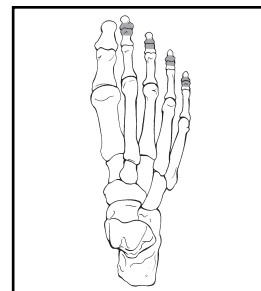
6. multiple metatarsal-tarsal dislocations (80-C5.9)

Note. Subclassification by direction is not given specific codes.

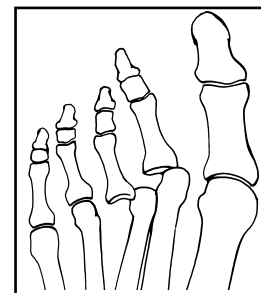
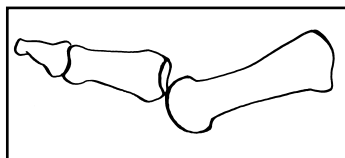


D. Forefoot (80-D)

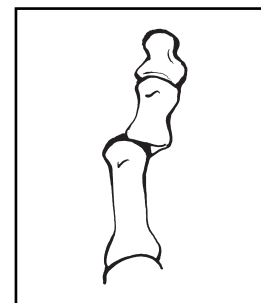
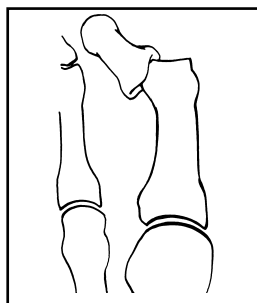


Groups by level involved:**1. Metatarsal-phalangeal (80-D1)****2. Proximal interphalangeal (80-D2)****3. Distal interphalangeal (80-D3)****4. Sesamoid dislocation (any) (80-D4)****5. Multiple forefoot dislocations (80-D9)****1. Metatarsal-phalangeal joint (80-D1)****Subgroups by joint medial to lateral:**

1. 1st metatarsal phalangeal joint (80-D1.1)
2. 2nd metatarsal phalangeal joint (80-D1.2)
3. 3rd metatarsal phalangeal joint (80-D1.3)
4. 4th metatarsal phalangeal joint (80-D1.4)
5. 5th metatarsal phalangeal joint (80-D1.5)

**2. Proximal interphalangeal joint (80-D2)****Subgroups by joint medial to lateral:**

1. 1st toe (IP joint as there is no PIP in big toe) (80-D2.1)
2. 2nd toe (80-D2.2)
3. 3rd toe (80-D2.3)
4. 4th toe (80-D2.4)
5. 5th toe (80-D2.5)

**3. Distal interphalangeal joint (80-D3)****Subgroups by joint medial to lateral:**

1. No code as there is no DIP in big toe
2. 2nd toe (80-D3.2)
3. 3rd toe (80-D3.3)
4. 4th toe (80-D3.4)
5. 5th toe (80-D3.5)

