Attachments WCLA MCLE 9-8-11

Spine (Cervical)

Table 17-2 Cervical Spine Regional Grid: Spine Impairments (pg.564)

Table 17-6 Functional History Adjustment: Spine (pg.575)

Table 17-7 Physical Examination Adjustment: Spine (pg.576)

Table 17-9 Clinical Studies Adjustment: Spine (pg.581)

Table 17-2 Cervical Spine Regional Grid: Spine Impairments Adjusted (pg.564)

Leg (Knee)

Table 16-3 Knee Regional Grid (pg.510)

Table 16-6 Functional History Adjustment-Lower Extremities (pg.516)

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Tables 16-23 & 16-25 Range of Motion (pgs.549-550)

Table 16-8 Clinical Studies Adjustment-Lower Extremities (pg.519)

Table 16-3 Knee Regional Grid Adjusted (pg.510)

Arm (Elbow)

Table 15-4 Elbow Regional Grid: Upper Extremity Impairments (pg.399)

Table 15-7 Functional History Adjustment: Upper Extremities (pg.406)

Table 15-8 Physical Examination Adjustment: Upper Extremities (pg.408)

Table 15-9 Clinical Studies Adjustment: Upper Extremities (pg.410)

Table 15-4 Elbow Regional Grid: Upper Extremity Impairments Adjusted (pg.399)

Questionnaires

Pain Disability Questionnaire (Spine)

AAOS Lower Limb Outcomes Questionnaire (Leg Knee)

QuickDASH (Arm Elbow)

TABLE 17-2 Cervical Spine Regional Grid: Spine Impairments

Cervical Spine Regional Grid

CLASS	CLASS 0	CLASS 1	CLASS 2	CLASS 3	CLASS 4
IMPAIRMENT RATING (WPI %)	0	1%–8%	9%–14%	15%–24%	25%–30%
SOFT TISSUE AND NON- SPECIFIC CONDITIONS					
Non-specific chronic, or chronic recurrent neck pain (also known as chronic sprain/strain, symptomatic degenerative disc disease, facet joint pain, chronic whiplash, etc)	0 Documented history of sprain/strain-type injury, now **resolved, or occasional complaints of neck pain with no objective findings** on examination	1 1 2 3 3 Documented history of sprain/strain-type injury with continued complaints of **axial and/or nonverifiable radicular complaints; similar findings documented on multiple occasions** (see Section 17.2 General Considerations)			
MOTION SEGMENT LESIONS					
Intervertebral disc herniation and/or AOMSI[a] *Note:* AOMSI includes instability (specifically as defined in the *Guides*), arthrodesis, failed arthrodesis, dynamic stabilization or arthroplasty, or combinations of those in multiple-level conditions	0 Imaging findings of intervertebral disk herniation without a history of clinically correlating radicular symptoms	4 5 6 7 8 Intervertebral disk herniation(s) or documented AOMSI at a **single level or multiple levels** with medically documented findings; with or without surgery ***and*** for disk herniation(s) with documented **resolved radiculopathy or nonverifiable radicular complaints** at the clinically appropriate level(s) present at the time of examination[b]	9 10 11 12 14 Intervertebral disk herniation and/or AOMSI at a **single level** with medically documented findings; with or without surgery ***and*** with documented **residual radiculopathy at the clinically appropriate level** present at the time of examination *(see Table 17-7 to grade radiculopathy)*	15 17 19 21 23 Intervertebral disk herniations or AOMSI at **multiple levels,** with medically documented findings; with or without surgery ***and*** with documented signs of **residual radiculopathy at a single clinically appropriate level** present at the time of examination *(see Table 17-7 to grade radiculopathy)*	25 27 28 29 30 Intervertebral disk herniation(s) or AOMSI, with medically documented findings; with or without surgery ***and*** with documented signs of **residual bilateral or multiple-level radiculopathy at the clinically appropriate levels** present at the time of examination *(see Table 17-7 to grade radiculopathy)*
Pseudarthrosis *Note:* Only applies after spinal surgery intended for fusion with resultant documented motion (not necessarily AOMSI by definition provided in footnote) with consistent radiographic findings or hardware failure; with or without surgery to repair	0	4 5 6 7 8 Pseudarthrosis (post surgery) at a **single level or multiple levels** with medically documented findings ***and*** with documented **resolved radiculopathy or nonverifiable radicular** complaints at the clinically appropriate level present at the time of examination	9 10 11 12 14 Pseudarthrosis (post surgery) at a **single level** with medically documented findings ***and*** with documented **radiculopathy at the clinically appropriate level** present at the time of examination *(see Table 17-7 to grade radiculopathy)*	15 17 19 21 23 Pseudarthrosis (post surgery) at a **multiple levels** with medically documented findings ***and*** with documented **radiculopathy at a single clinically appropriate level** present at the time of examination *(see Table 17-7 to grade radiculopathy)*	25 27 28 29 30 Pseudarthrosis (post surgery) at a **multiple levels** with medically documented findings ***and*** with documented signs of **bilateral or multiple-level radiculopathy at the clinically appropriate levels** present at the time of examination *(see Table 17-7 to grade radiculopathy)*

[a] See footnote * on page 571.

[b] Or AOMSI in the absence of radiculopathy, or with documented resolved radiculopathy or nonverifiable radicular complaints at the clinically appropriate levels present at the time of examination.

TABLE 17-6

Functional History Adjustment: Spine

Functional History Factor	Grade Modifier 0	Grade Modifier 1	Grade Modifier 2	Grade Modifier 3	Grade Modifier 4
Activity	Asymptomatic; problem resolved; inconsistent symptoms	Pain; symptoms with strenuous/ vigorous activity	Pain; symptoms with normal activity	Pain; symptoms with less-than-normal activity (minimal activity)	Pain; symptoms at rest, limited to sedentary activity
PDQ or alternative validated functional assessment, scaled appropriately	No disability PDQ 0	Mild disability PDQ 0–70	Moderate disability PDQ 71–100	Severe disability PDQ 101–130	Extreme disability PDQ 131–150

Note: PDQ indicates Pain Disability Questionnaire.

TABLE 17-7

Physical Examination Adjustment: Spine

Physical Examination Factor	Grade Modifier 0	Grade Modifier 1	Grade Modifier 2	Grade Modifier 3	Grade Modifier 4
Lumbar Neural Tension Signs	Negative straight leg raising test for radicular pain or invalid examination		Positive straight leg raising test, with reproducible radicular pain at 35°–70°		
Cervical Compression/ Foraminal Compression	Negative cervical compression/ foraminal compression		Positive cervical compression/foraminal compression (Spurling's test) with reproducible radicular pain		
Reflexes	Normal and symmetrical		New and asymmetrical abnormality consistent with other radicular findings (ie, differentiate between old and new changes)		
Atrophy UE LE	 <1 cm <1 cm	 1.0–1.9 cm 1.0–1.9 cm	 2.0–2.9 cm 2.0–2.9 cm	 3.0–3.5 cm 3.0–3.5 cm	 >3.5 cm >3.5 cm
Sensory Deficit	No loss of sensibility, abnormal sensation, or pain	Diminished light touch (with or without minimal abnormal sensations or pain) in a clinically appropriate distribution, that is forgotten during activity	Diminished light touch (with some abnormal sensa tions or slight pain) in a clini cally appropriate distribution, that interferes with some activities	Decreased protective sensibility (with abnormal sensations or moderate pain in a clinically appropriate distribution) that may prevent some activities	Absent superficial pain and tactile sensibility or absent protective sensibility (abnormal sensations, or severe pain) that prevents all activity
Motor Strength	Normal Active movement against gravity with full resistance (5/5)	Active movement against gravity and some resistance (4/5)	Active movement against gravity only, without resistance (3/5)	Active movement with gravity eliminated (2/5)	Slight contraction and no movement or no contraction (0–1/5)

TABLE 17-9

Clinical Studies Adjustment: Spine

Clinical Studies Factor	Grade Modifier 0	Grade Modifier 1	Grade Modifier 2	Grade Modifier 3	Grade Modifier 4
Imaging studies: Radiographs, bone scan, MRI	Imaging findings do not support symptoms or structural diagnosis within normal limits *or* normal age-related changes *or* clinically insignificant degenerative changes, or findings on the side opposite clinical presentation		CT/MRI/other imaging findings consistent with clinical presentation, including evidence of AOMSI with segmental instability, fusion, or motion preservation device defined by region (see row below)		Imaging evidence of major surgical complications, including infection or major deformity
Electrodiagnostic testing	Normal		EMG evidence consistent with single nerve root radiculopathy		EMG evidence consistent with multiple nerve root radiculopathy

Note: CT indicates computed tomography; MRI, magnetic resonance imaging; AOMSI, alteration of motion segment integrity; and EMG, electromyographic.

TABLE 17-2 Cervical Spine Regional Grid: Spine Impairments

Cervical Spine Regional Grid

CLASS	CLASS 0	CLASS 1	CLASS 2	CLASS 3	CLASS 4
IMPAIRMENT RATING (WPI %)	0	1%–8%	9%–14%	15%–24%	25%–30%
SOFT TISSUE AND NON- SPECIFIC CONDITIONS					
Non-specific chronic, or chronic recurrent neck pain (also known as chronic sprain/strain, symptomatic degenerative disc disease, facet joint pain, chronic whiplash, etc)	0 Documented history of sprain/strain-type injury, now **resolved, or occasional complaints of neck pain with no objective findings** on examination	1 1 2 3 3 Documented history of sprain/strain-type injury with continued complaints of **axial and/or nonverifiable radicular complaints; similar findings documented on multiple occasions** (see Section 17.2 General Considerations)			
MOTION SEGMENT LESIONS					
Intervertebral disc herniation and/or AOMSI[a] *Note:* AOMSI includes instability (specifically as defined in the *Guides*), arthrodesis, failed arthrodesis, dynamic stabilization or arthroplasty, or combinations of those in multiple-level conditions	0 Imaging findings of intervertebral disk herniation without a history of clinically correlating radicular symptoms	4 5 6 7 8 Intervertebral disk herniation(s) or documented AOMSI at a **single level or multiple levels** with medically documented findings; with or without surgery ***and*** for disk herniation(s) with documented **resolved radiculopathy or nonverifiable radicular complaints** at the clinically appropriate level(s) present at the time of examination[b]	9 10 11 12 14 Intervertebral disk herniation and/or AOMSI at a **single level** with medically documented findings; with or without surgery ***and*** with documented **residual radiculopathy at the clinically appropriate level** present at the time of examination *(see Table 17-7 to grade radiculopathy)*	15 17 19 21 23 Intervertebral disk herniations or AOMSI **at multiple levels**, with medically documented findings; with or without surgery ***and*** with documented signs of **residual radiculopathy at a single clinically appropriate level** present at the time of examination *(see Table 17-7 to grade radiculopathy)*	25 27 28 29 30 Intervertebral disk herniation(s) or AOMSI, with medically documented findings; with or without surgery ***and*** with documented signs of **residual bilateral or multiple-level radiculopathy at the clinically appropriate levels** present at the time of examination *(see Table 17-7 to grade radiculopathy)*
Pseudarthrosis *Note:* Only applies after spinal surgery intended for fusion with resultant documented motion (not necessarily AOMSI by definition provided in footnote) with consistent radiographic findings or hardware failure; with or without surgery to repair	0	4 5 6 7 8 Pseudarthrosis (post surgery) at a **single level or multiple levels** with medically documented findings ***and*** with documented **resolved radiculopathy or nonverifiable radicular** complaints at the clinically appropriate level present at the time of examination	9 10 11 12 14 Pseudarthrosis (post surgery) at a **single level** with medically documented findings ***and*** with documented **radiculopathy at the clinically appropriate level** present at the time of examination *(see Table 17-7 to grade radiculopathy)*	15 17 19 21 23 Pseudarthrosis (post surgery) at a **multiple levels** with medically documented findings ***and*** with documented **radiculopathy at a single clinically appropriate level** present at the time of examination *(see Table 17-7 to grade radiculopathy)*	25 27 28 29 30 Pseudarthrosis (post surgery) at a **multiple levels** with medically documented findings ***and*** with documented signs of **bilateral or multiple-level radiculopathy at the clinically appropriate levels** present at the time of examination *(see Table 17-7 to grade radiculopathy)*

[a] See footnote [a] on page 571.

[b] Or AOMSI in the absence of radiculopathy, or with documented resolved radiculopathy or nonverifiable radicular complaints at the clinically appropriate levels present at the time of examination.

TABLE 16-3 (CONTINUED) Knee Regional Grid – Lower Extremity Impairments

DIAGNOSTIC CRITERIA (KEY FACTOR)	CLASS 0	CLASS 1	CLASS 2	CLASS 3	CLASS 4
CLASS DEFINITIONS	No problem	Mild problem	Moderate problem	Severe problem	Very severe problem
IMPAIRMENT RANGES	0% LE	1%–13% LE	14%–25% LE	26%–49% LE	50%–100% LE
GRADE		A B C D E	A B C D E	A B C D E	A B C D E
LIGAMENT / BONE / JOINT		**Do not use with PE stability**	**Do not use with PE stability**		
Cruciate or collateral ligament injury; Surgery not rating factor	0 No instability	7 8 10 12 13 Mild laxity	14 15 16 17 18 Moderate laxity		
Cruciate and collateral ligament injury; Surgery not rating factor	0 No instability	7 8 10 12 13 Mild laxity	19 20 22 24 25 Moderate laxity	31 34 37 40 43 Severe laxity	
Patellar Lesion		**Do not use with PE stability**	**Do not use with PE stability**		
Patellar subluxation or dislocation	0 No instability	5 6 7 8 9 Mild instability	14 15 16 17 18 Moderate instability 19 20 22 24 25 Severe instability		
Patellectomy		5 6 7 8 9 Partial	19 20 22 24 25 Total		
Fracture		**Do not use with CS x ray alignment**	**Do not use with CS x ray alignment**	**Do not use with CS x ray alignment**	
Femoral shaft fracture	0 Non-displaced, with no significant objective abnormal findings at MMI	5 6 7 8 9 Abnormal examination findings and <10° angulation	14 15 16 17 18 10°–19° angulation	31 34 37 40 43 20°+ angulation	52 56 60 64 68 Non-union and/or infected
Supracondylar or intercondylar fracture	0 Non-displaced, with no significant objective abnormal findings at MMI	3 4 5 6 7 Non-displaced with abnormal examination findings 7 8 10 12 13 5°–9° angulation	19 20 22 24 25 10°–19° angulation	31 34 37 40 43 20°+ angulation or > 2 mm articular surface step off	52 56 60 64 68 Non-union and/or infected
Patellar fracture	0 Non-displaced, with no significant objective abnormal findings at MMI	5 6 7 8 9 Non-displaced with abnormal examination findings 7 8 10 12 13 Articular surface displaced 3 mm or less	14 15 16 17 18 Displaced with nonunion		
Tibial plateau fracture	0 Non-displaced, with no significant objective abnormal findings at MMI	3 4 5 6 7 Non-displaced with abnormal examination findings 7 8 10 12 13 < 9° angulation	19 20 22 24 25 10°–19° angulation or ≤2 mm articular surface step off	31 34 37 40 43 20°+ angulation or > 2 mm articular surface step off	52 56 60 64 68 Non-union and/or infected, or severe comminuted, displaced

TABLE 16-6

Functional History Adjustment – Lower Extremities

	Grade Modifier 0	Grade Modifier 1	Grade Modifier 2	Grade Modifier 3	Grade Modifier 4
CLASS DEFINITIONS	**No problem**	**Mild problem**	**Moderate problem**	**Severe problem**	**Very severe problem**
GAIT DERANGEMENT	None	Antalgic limp with asymmetric shortened stance, corrects with footwear modifications and/or orthotics	Antalgic limp (in the presence of objectively defined significant pathology) with asymmetric shortened stance; stable with use of external orthotic device (eg, ankle-foot orthosis), routine use of single gait aid (cane or crutch), or positive Trendelenburg test	Antalgic/unstable transfers and ambulation requires routine use of gait aids (2 canes or crutches) or KAFO brace[a]	Nonambulatory
AAOS LOWER LIMB INSTRUMENT (OR OTHER INVENTORY)	Normal	Mild deficit	Moderate deficit	Severe deficit	Near-total to total deficit

[a] KAFO indicates knee, ankle, foot orthosis; AAOS, American Academy of Orthopaedic Surgeons.

Not Used - Invalid

TABLE 16-7

Physical Examination Adjustment – Lower Extremities

	Grade Modifier 0	Grade Modifier 1	Grade Modifier 2	Grade Modifier 3	Grade Modifier 4
CLASS DEFINITIONS	**No problem**	**Mild problem**	**Moderate problem**	**Severe problem**	**Very severe problem**
OBSERVED AND PALPATORY FINDINGS (tenderness, swelling, mass, or crepitance)	No consistent findings	Minimal palpatory findings, consistently documented, without observed abnormalities	Moderate palpatory findings, consistently documented, and supported by observed abnormalities	Severe palpatory findings, consistently documented, and supported by observed moderate or greater abnormalities	Very severe palpatory findings, consistently documented, and supported by observed severe abnormalities
STABILITY	Stable	Grade 1 (slight) instability	Grade 2 (moderate) instability	Grade 3 (serious) instability	Gross instability
KNEE		Grade 1 Lachman's test; slight laxity patellar mechanism	Grade 2 Lachman's test; moderate laxity patellar mechanism	Grade 3 Lachman's test; severe laxity patellar mechanism	Multi-directional instability
ALIGNMENT/ DEFORMITY	Normal for individual with symmetry to opposite side	Mild	Moderate	Severe	Very severe
RANGE OF MOTION (reference Section 16.7)	None	Mild or arthrodesis in position of function	Moderate	Severe	Very severe
MUSCLE ATROPHY (asymmetry compared to opposite normal)	<1 cm	1.0–1.9 cm	2.0–2.9 cm	3.0–3.9cm+	4.0 cm+
LIMB LENGTH DISCREPANCY	<1.9 cm	2.0–2.9 cm	3–4.9 cm	5.0–5.9 cm+	6.0 cm+

TABLE 16-18

Lesser Toe Impairments

Note: The maximum LEI of 2 or more lesser toes is 6% LEI.

Severity	Mild	Moderate	Severe
Impairment	2% LEI		
Motion			
Metatarsophalangeal, extension	0°–10°		

TABLE 16-19

Greater Toe Impairments

Severity	Mild	Moderate	Severe
Impairment	2% LEI	5% LEI	
Motion			
Metatarsophalangeal, extension	15°–30°	0°–9°	
Interphalangeal, flexion	< 20°		

TABLE 16-20

Hindfoot Motion Impairments

Severity	Mild	Moderate	Severe
Impairment	2% LEI	5% LEI	
Motion			
Inversion	10°–20°	0°–9°	
Eversion	0°–10°		

TABLE 16-21

Ankle or Hindfoot Deformity Impairments

Severity	Mild	Moderate	Severe
Impairment	12% LEI	25% LEI	50% LEI
Motion			
Varus	10°–14°	15°–24°	> 24°
Valgus	10°–20°		

TABLE 16-22

Ankle Motion Impairments

Severity	Mild	Moderate	Severe
Impairment	7% LEI	15% LEI	30% LEI
Motion			
Plantar flexion capability	11°–20°	1°–10°	None
Flexion Contracture (Equinus deformity)		10°–19°	> 19°
Extension (Dorsiflexion)	10°–0° (neutral)		

TABLE 16-23

Knee Motion Impairments

Note: If multiple deficits of motion the values are added. Varus/valgus Deformity measured by femoral-tibial angle; 3° to 10° valgus is considered normal.

Severity	Mild	Moderate	Severe
Impairment	10% LEI	20% LEI	35% LEI
Motion			
Flexion	80°–109°	60°–79°	< 60°
Flexion Contracture	5°–9°	10°–19°	> 19°

TABLE 16-24

Hip Motion Impairments – Lower Extremity Impairment

Severity	Mild	Moderate	Severe
Impairment	5% LEI	10% LEI	20% LEI
Motion			
Flexion	80°–100°	50°–79°	< 50°
Extension	10°–19° flexion contracture	20–19° flexion contracture	≥ 30° flexion contracture
Internal rotation	10°–20°	0°–9°	
External rotation	20°–30°	0°–19°	
Abduction	15°–25°	5°–14°	< 5°
Adduction	0°–15°		
Abduction Contracture	0°–5°	6°–10°	11°–20°

TABLE 16-25 Range of Motion ICF Classification

Range of Motion ICF Classification

DIAGNOSTIC CRITERIA (KEY FACTOR)	CLASS 0	CLASS 1	CLASS 2	CLASS 3	CLASS 4
LOWER EXTREMITY SEVERITY	Normal	Mild	Moderate	Severe	Very Severe or Complete
IMPAIRMENT RANGES	0% LE	1%–13% LE	14%–25% LE	26%–49% LE	50%–100% LE

TABLE 16-8

Clinical Studies Adjustment – Lower Extremities[a]

	Grade Modifier 0	Grade Modifier 1	Grade Modifier 2	Grade Modifier 3	Grade Modifier 4
CLASS DEFINITIONS	**No problem**	**Mild problem**	**Moderate problem**	**Severe problem**	**Very severe problem**
IMAGING STUDIES	No available clinical studies or relevant findings	Clinical studies confirm diagnosis; mild pathology	Clinical studies confirm diagnosis; moderate pathology	Clinical studies confirm diagnosis; severe pathology	Clinical studies confirm diagnosis; very severe pathology
X RAYS					
ARTHRITIS *Note:* Do not use when X-ray cartilage interval is used in diagnostic impairment definition		Cartilage interval normal or less than 25% loss compared to opposite uninjured side; cystic changes on 1 side of joint; loose body <5 mm	Cartilage interval present; however, 25% to 50% loss compared to opposite uninjured side; cystic changes on both sides of joint; loose body 5 mm or greater or multiple loose bodies; radiographic evidence of mild posttraumatic arthrosis or avascular necrosis	Cartilage interval present; however, >50% lost compared to opposite uninjured side; radiographic evidence of moderate posttraumatic arthrosis or avascular necrosis	No cartilage interval; radiographic evidence of severe posttraumatic arthrosis or avascular necrosis
STABILITY Foot/Ankle *Note:* Do not use when X-ray stress opening is used in diagnostic impairment definition		AP stress radiograph: 2- to 3-mm excess opening or 5°–9° varus opening compared to normal opposite side	AP stress radiograph: 4- to 6-mm excess translation or 10–15° varus opening compared to normal opposite side Lateral stress radiograph: anterior drawer 4- to 6-mm excess translation compared to normal side	AP stress radiographs: >6-mm excess translation or >15° varus opening compared to normal opposite side Lateral stress radiograph: anterior drawer >6-mm excess translation compared to normal side	
ALIGNMENT Foot/Ankle *Note:* Do not use when X-ray angulation is used in diagnostic impairment definition		Syndesmosis normal; healed angulation or rotational deformity <5° in any plane	Syndesmosis laxity with separation demonstrated on foot external rotation AP ankle radiograph compared to opposite normal ankle Healed, angular or rotational deformity 5°–15° in any plane	Healed, angular or rotational deformity >15° in any plane	Severe multiplanar deformity
KNEE *Note:* Do not use when X-ray angulation is used in diagnostic impairment		<10° angulation/ rotational deformity single plane	10°–20° angulation/ rotational deformity single plane	>20° angulation/ rotational deformity 1–2 planes	Severe multiplanar deformity

TABLE 16-3 (CONTINUED) Knee Regional Grid – Lower Extremity Impairments

DIAGNOSTIC CRITERIA (KEY FACTOR)	CLASS 0	CLASS 1	CLASS 2	CLASS 3	CLASS 4
CLASS DEFINITIONS	No problem	Mild problem	Moderate problem	Severe problem	Very severe problem
IMPAIRMENT RANGES	0% LE	1%–13% LE	14%–25% LE	26%–49% LE	50%–100% LE
GRADE		A B C D E	A B C D E	A B C D E	A B C D E
LIGAMENT / BONE / JOINT		**Do not use with PE stability**	**Do not use with PE stability**		
Cruciate or collateral ligament injury; Surgery not rating factor	0 No instability	7 8 10 12 13 Mild laxity	14 15 16 17 18 Moderate laxity		
Cruciate and collateral ligament injury; Surgery not rating factor	0 No instability	7 8 10 12 13 Mild laxity	19 20 22 24 25 Moderate laxity	31 34 37 40 43 Severe laxity	
Patellar Lesion		**Do not use with PE stability**	**Do not use with PE stability**		
Patellar subluxation or dislocation	0 No instability	5 6 7 8 9 Mild instability	14 15 16 17 18 Moderate instability 19 20 22 24 25 Severe instability		
Patellectomy		5 6 7 8 9 Partial	19 20 22 24 25 Total		
Fracture		**Do not use with CS x ray alignment**	**Do not use with CS x ray alignment**	**Do not use with CS x ray alignment**	
Femoral shaft fracture	0 Non-displaced, with no significant objective abnormal findings at MMI	5 6 7 8 9 Abnormal examination findings and <10° angulation	14 15 16 17 18 10°–19° angulation	31 34 37 40 43 20°+ angulation	52 56 60 64 68 Non-union and/or infected
Supracondylar or intercondylar fracture	0 Non-displaced, with no significant objective abnormal findings at MMI	3 4 5 6 7 Non-displaced with abnormal examination findings 7 8 10 12 13 5°–9° angulation	19 20 22 24 25 10°–19° angulation	31 34 37 40 43 20°+ angulation or > 2 mm articular surface step off	52 56 60 64 68 Non-union and/or infected
Patellar fracture	0 Non-displaced, with no significant objective abnormal findings at MMI	5 6 7 8 9 Non-displaced with abnormal examination findings 7 8 10 12 13 Articular surface displaced 3 mm or less	14 15 16 17 18 Displaced with nonunion		
Tibial plateau fracture	0 Non-displaced, with no signif-	3 4 5 6 7 Non-displaced with abnormal examina-	19 20 22 24 25 10°–19° angulation or ≤2 mm articu-	31 34 37 40 43 20°+ angulation or > 2 mm articu-	52 56 60 64 68 Non-union and/or infected, or severe comminuted.

TABLE 15-4 Elbow Regional Grid: Upper Extremity Impairments

IMPAIRMENT CLASS	CLASS 0	CLASS 1	CLASS 2	CLASS 3	CLASS 4
IMPAIRMENT RANGES (upper extremity %)	0	1%–13% UE	14%–25% UE	26%–49% UE	50%–100% UE
GRADE		A B C D E	A B C D E	A B C D E	A B C D E
MUSCLE/TENDON*					
Epicondylitis: Lateral or medial*	0 No significant objective abnormal findings at MMI	0 1 1 2 2 History of painful injury, residual symptoms without consistent objective findings (this impairment can only be given once in an individual's lifetime) 3 4 5 6 7 s/p surgical release of flexor or extensor origins with residual symptoms			
Distal biceps tendon rupture*	0 No residual findings: +/– surgical treatment	3 4 5 6 7 Residual loss of strength, functional with normal motion			
LIGAMENT/BONE/JOINT*					
Collateral ligament injury: medial, ulnar or lateral*	0 No residual findings: +/– surgical treatment	3 4 5 6 7 Recurrent instability: occasional 8 9 10 11 12 Recurrent instability: frequent; resulting in functional limitation			
Persistent elbow subluxation or dislocation*	0 No residual findings: +/– surgical treatment	8 9 10 11 12 Mild: can be completely reduced manually	16 18 20 22 24 Moderate: cannot be completely reduced manually	34 37 40 43 46 Severe: cannot be reduced	
Fracture*	0 No residual findings: +/– surgical treatment	1 2 3 4 5 Residual symptoms, consistent objective findings and/or functional loss, with normal motion			
Loose bodies or osteochondral lesions*	0 No residual findings: +/– surgical treatment	3 4 5 6 7 Residual loss, functional with normal motion			

(continued)

TABLE 15-7

Functional History Adjustment: Upper Extremities

	Grade Modifier 0	Grade Modifier 1	Grade Modifier 2	Grade Modifier 3	Grade Modifier 4
Class Definitions	No problem	Mild problem	Moderate problem	Severe problem	Very severe problem
	Asymptomatic	Pain/symptoms with strenuous/vigorous activity; +/– medication to control symptoms	Pain/ symptoms with normal activity; +/– medications to control symptoms	Pain/symptoms with less than normal activity (minimal); +/– medications to control symptoms	Pain/symptoms at rest; +/– medications to control symptoms
		AND able to perform self-care activities independently	AND able to perform self-care activities with modification but unassisted	AND requires assistance to perform self-care activities	AND unable to perform self-care activities
***Quick*DASH Score**	0–20	21–40	41–60	61–80	81–100

TABLE 15-8

Physical Examination Adjustment: Upper Extremities

	Grade Modifier 0	Grade Modifier 1	Grade Modifier 2	Grade Modifier 3	Grade Modifier 4
Class Definitions	No problem	Mild problem	Moderate problem	Severe problem	Very severe problem
Observed and Palpatory Findings (tenderness, swelling, mass, or crepitance)	No consistent findings	Minimal palpatory findings, consistently documented, without observed abnormalities	Moderate palpatory findings, consistently documented, and supported by observed abnormalities	Severe palpatory findings, consistently documented, and supported by observed moderate or greater abnormalities	Very severe palpatory findings, consistently documented, and supported by observed severe abnormalities
Stability	Stable	Grade 1 (slight) instability	Grade 2 (moderate) instability	Grade 3 (serious) instability	Gross instability
Hand/finger/thumb		Pain with stressing of ligament, but no opening of joint with stress	Pain and slight opening	Pain and >5 mm of joint opening with stress	Severe instability
Wrist		Clicking or clunking by history, but not reproducible	Clicking or clunking by history, and reproducible on physical examination		
Wrist excessive passive/active mediolateral joint deviation degrees compared to normal		<10° passive <20° active	10°–20° passive 20°–30° active	>20° passive >30° active	
Shoulder		Grade 1 (slight) instability; subluxable	Grade 2 (moderate) instability; easily subluxable	Grade 3 (serious) instability; dislocatable with anesthesia or sedation	
Alignment/ Deformity	Normal for individual with symmetry to opposite side	Mild	Moderate	Severe	Very severe
Range of Motion (reference Section 15.7)	None	Mild decrease from normal or uninjured opposite side For digit impairments only, this reflects a total digit impairment <20% digit impairment. For wrist, elbow, and shoulder this reflects a total joint impairment of <12% upper extremity impairment.	Moderate decrease from normal or uninjured opposite side For digit impairments only, this reflects a total digit impairment of 20% to 39% digit impairment. For wrist, elbow, and shoulder this reflects a total joint impairment of 12% to 23% upper extremity impairment.	Severe decrease from normal or uninjured opposite side For digit impairments only, this reflects a total digit impairment of 40% to 70% digit impairment. For wrist, elbow, and shoulder this reflects a total joint impairment of 24% to 42% upper extremity impairment.	Very severe decrease from normal or uninjured opposite side For digit impairments only, this reflects a total digit impairment >70% digit impairment. For wrist, elbow, and shoulder this reflects a total joint impairment >42% upper extremity impairment.
Muscle Atrophy (asymmetry compared to opposite normal)	<1 cm	1.0–1.9 cm	2.0–2.9 cm	3.0 cm–3.9 cm	4.0 cm +

Note: ROM indicates range of motion; GH indicates Glenohumeral.

TABLE 15-9

Clinical Studies Adjustment: Upper Extremities

	Grade Modifier 0	Grade Modifier 1	Grade Modifier 2	Grade Modifier 3	Grade Modifier 4
Class Definitions	No problem	Mild problem	Moderate problem	Severe problem	Very severe problem
Imaging Studies	No available clinical studies or relevant findings	Clinical studies confirm diagnosis, mild pathology	Clinical studies confirm diagnosis, moderate pathology	Clinical studies confirm diagnosis, severe pathology	Clinical studies confirm diagnosis, very severe pathology
Shoulder			Clinical studies confirm one of the following symptomatic diagnoses: rotator cuff tear, SLAP or other labral lesion, biceps tendon pathology		Clinical studies confirm more than one of the following symptomatic diagnoses: rotator cuff tear, SLAP or other labral lesion, biceps tendon pathology. The most significant diagnosis is the only one rated.
X rays					
Arthritis		Cartilage interval normal or mild joint space narrowing and/or osteophytes	Cartilage interval: moderate joint space narrowing with cystic changes on 1 or both sides of joint and/or osteophytes; radiographic evidence of mild posttraumatic arthrosis; avascular necrosis without collapse	Cartilage interval severe joint space narrowing with cystic changes on both sides of joint and/or osteophytes; or avascular necrosis with bony collapse/ fragmentation	No cartilage interval; radiographic evidence of severe posttraumatic arthrosis
Stability					
Joint laxity (based on stress testing)		<10° Instability	10°–20° Instability	20°–30° Instability	>30° Instability
Wrist (see text for explanation)		Radiolunate angle 11°–20° Scapholunate angle 61°–70° Scapholunate gap 3–5 mm Triquetrolunate stepoff >1 mm Ulnar translation mild	Radiolunate angle 21°–30° Scapholunate angle 71°–80° Scapholunate gap 6–8 mm Triquetrolunate stepoff >2 mm Ulnar translation moderate	Radiolunate angle >30° Scapholunate angle >80° Scapholunate gap >8 mm Triquetrolunate stepoff >3 mm Ulnar translation severe	
Nerve Conduction Testing	Normal	Conduction delay (sensory and/or motor)	Motor conduction block	Partial axonal loss	Total axonal loss/denervation

Not Used : Used in CDX

TABLE 15-4 Elbow Regional Grid: Upper Extremity Impairments

IMPAIRMENT CLASS	CLASS 0	CLASS 1	CLASS 2	CLASS 3	CLASS 4
IMPAIRMENT RANGES (upper extremity %)	0	1%–13% UE	14%–25% UE	26%–49% UE	50%–100% UE
GRADE		A B C D E	A B C D E	A B C D E	A B C D E
MUSCLE/TENDON*					
Epicondylitis: Lateral or medial*	0 No significant objective abnormal findings at MMI	0 1 1 2 2 History of painful injury, residual symptoms without consistent objective findings (this impairment can only be given once in an individual's lifetime) 3 4 5 6 7 s/p surgical release of flexor or extensor origins with residual symptoms			
Distal biceps tendon rupture*	0 No residual findings: +/– surgical treatment	3 4 5 6 7 Residual loss of strength, functional with normal motion			
LIGAMENT/BONE/JOINT*					
Collateral ligament injury: medial, ulnar or lateral*	0 No residual findings: +/– surgical treatment	3 4 5 6 7 Recurrent instability: occasional 8 9 10 11 12 Recurrent instability: frequent; resulting in functional limitation			
Persistent elbow subluxation or dislocation*	0 No residual findings: +/– surgical treatment	8 9 10 11 12 Mild: can be completely reduced manually	16 18 20 22 24 Moderate: cannot be completely reduced manually	34 37 40 43 46 Severe: cannot be reduced	
Fracture*	0 No residual findings: +/– surgical treatment	1 2 3 4 5 Residual symptoms, consistent objective findings and/or functional loss, with normal motion			
Loose bodies or osteochondral lesions*	0 No residual findings: +/– surgical treatment	3 4 5 6 7 Residual loss, functional with normal motion			

(continued)

PAIN DISABILITY QUESTIONNAIRE

Patient Name _____ Date _____

Instructions: These questions ask your views about how your pain now affects how you function in everyday activities. Please answer every question and mark the ONE number on EACH scale that best describes how you feel.

1. Does your pain interfere with your normal work inside and outside the home?
Work normally — Unable to work at all
0 -------- 1 -------- 2 -------- 3 -------- 4 -------- 5 -------- 6 -------- 7 -------- 8 -------- 9 -------- 10

2. Does your pain interfere with personal care (such as washing, dressing, etc.)?
Take care of myself completely — Need help with all my personal care
0 -------- 1 -------- 2 -------- 3 -------- 4 -------- 5 -------- 6 -------- 7 -------- 8 -------- 9 -------- 10

3. Does your pain interfere with your traveling?
Travel anywhere I like — Only travel to see doctors
0 -------- 1 -------- 2 -------- 3 -------- 4 -------- 5 -------- 6 -------- 7 -------- 8 -------- 9 -------- 10

4. Does your pain affect your ability to sit or stand?
No problems — Can not sit/stand at all
0 -------- 1 -------- 2 -------- 3 -------- 4 -------- 5 -------- 6 -------- 7 -------- 8 -------- 9 -------- 10

5. Does your pain affect your ability to lift overhead, grasp objects, or reach for things?
No problems — Can not do at all
0 -------- 1 -------- 2 -------- 3 -------- 4 -------- 5 -------- 6 -------- 7 -------- 8 -------- 9 -------- 10

6. Does your pain affect your ability to lift objects off the floor, bend, stoop, or squat?
No problems — Can not do at all
0 -------- 1 -------- 2 -------- 3 -------- 4 -------- 5 -------- 6 -------- 7 -------- 8 -------- 9 -------- 10

7. Does your pain affect your ability to walk or run?
No problems — Can not walk/run at all
0 -------- 1 -------- 2 -------- 3 -------- 4 -------- 5 -------- 6 -------- 7 -------- 8 -------- 9 -------- 10

8. Has your income declined since your pain began?
No decline — Lost all income
0 -------- 1 -------- 2 -------- 3 -------- 4 -------- 5 -------- 6 -------- 7 -------- 8 -------- 9 -------- 10

9. Do you have to take pain medication every day to control your pain?
No medication needed — On pain medication throughout the day
0 -------- 1 -------- 2 -------- 3 -------- 4 -------- 5 -------- 6 -------- 7 -------- 8 -------- 9 -------- 10

10. Does your pain force your to see doctors much more often than before your pain began?
Never see doctors — See doctors weekly
0 -------- 1 -------- 2 -------- 3 -------- 4 -------- 5 -------- 6 -------- 7 -------- 8 -------- 9 -------- 10

11. Does your pain interfere with your ability to see the people who are important to you as much as you would like?
No problem — Never see them
0 -------- 1 -------- 2 -------- 3 -------- 4 -------- 5 -------- 6 -------- 7 -------- 8 -------- 9 -------- 10

12. Does your pain interfere with recreational activities and hobbies that are important to you?
No interference — Total interference
0 -------- 1 -------- 2 -------- 3 -------- 4 -------- 5 -------- 6 -------- 7 -------- 8 -------- 9 -------- 10

13. Do you need the help of your family and friends to complete everyday tasks (including both work outside the home and housework) because of your pain?
Never need help — Need help all the time
0 -------- 1 -------- 2 -------- 3 -------- 4 -------- 5 -------- 6 -------- 7 -------- 8 -------- 9 -------- 10

14. Do you now feel more depressed, tense, or anxious than before your pain began?
No depression/tension — Severe depression/tension
0 -------- 1 -------- 2 -------- 3 -------- 4 -------- 5 -------- 6 -------- 7 -------- 8 -------- 9 -------- 10

15. Are there emotional problems caused by your pain that interfere with your family, social and or work activities?
No problems — Severe problems
0 -------- 1 -------- 2 -------- 3 -------- 4 -------- 5 -------- 6 -------- 7 -------- 8 -------- 9 -------- 10

_____
Examiner

OTHER COMMENTS:

_____

With Permission from: Anagnostis C et al: The Pain Disability Questionnaire: A New Psychometrically Sound Measure for Chronic Musculoskeletal Disorders. *Spine* 2004; 29 (20): 2290-2302.

Lower Limb

Outcomes Questionnaire

Developed by:

American Academy of Orthopaedic Surgeons®

American Association of Hip and Knee Surgeons

American Orthopaedic Society for Sports Medicine

Hip Society

Knee Society

Orthopaedic Rehabilitation Association

Orthopaedic Trauma Association

Arthroscopy Association of North America

American Orthopaedic Foot and Ankle Society

Musculoskeletal Tumor Society

Based on the Version 2.0 Lower Limb Outcomes Intrument

Revised, renumbered, reformatted August 2005

Lower Limb Questionnaire

FOR OFFICE USE ONLY

Clinic ID _____ First six letter of patient's last name _____

Physician ID _____ Office Chart # _____

	Diagnosis & ICD-9 Code*	Procedure & CPT Code	CPT Date	Side of body procedure was performed on:
Primary DX	DX _____ ICD-9	Tx _____ ICD-9		☐ Right ☐ Left ☐ Both ☐ N/A
Secondary DX	DX _____ ICD-9	Tx _____ ICD-9		☐ Right ☐ Left ☐ Both ☐ N/A
Secondary DX	DX _____ ICD-9	Tx _____ ICD-9		☐ Right ☐ Left ☐ Both ☐ N/A
Secondary DX	DX _____ ICD-9	Tx _____ ICD-9		☐ Right ☐ Left ☐ Both ☐ N/A
Secondary DX	DX _____ ICD-9	Tx _____ ICD-9		☐ Right ☐ Left ☐ Both ☐ N/A

Lower Limb Questionnaire

Today's Date / /

Thank you for completing this questionnaire!

This questionnaire will help us to better understand your general health and any problems related to bone and muscle conditions.

Your completion of this questionnaire is completely voluntary and your responses will be held in the strictest confidence.

Please answer every question. Some questions may look like others, but each one is different.

There are no right or wrong answers. If you are not sure how to answer a question, just give the best answer you can. You can make comments in the margin. We do read all your comments, so feel free to make as many as you wish.

Your Birth Date / /

Your Social Security Number _____

Lower Limb Questionnaire

Instructions

Please answer the following questions for the lower limb being treated or followed up. If it is BOTH lower limbs, please answer the questions for your **worse** side. All questions are about how you have felt, on average, during the **past week.** If you are being treated for an injury that happened less than one week ago, please answer for the period since your injury.

1. During the **past week**, how **stiff** was your lower limb? (Circle one response.)

1 Not at all 2 Mildly 3 Moderately 4 Very 5 Extremely

2. During the **past week**, how **swollen** was your lower limb? (Circle one response.)

1 Not at all 2 Mildly 3 Moderately 4 Very 5 Extremely

During the **past week**, please tell us about how painful your lower limb was during the following activities. (Circle ONE response on each line that best describes your average ability.)

	Not painful	Mildly painful	Moderately painful	Very painful	Extremely painful	Could not do because of lower limb pain	Could not do for other reasons
3. Walking on **flat** surfaces?	1	2	3	4	5	6	7
4. Going up or down stairs?	1	2	3	4	5	6	7
5. Lying in bed at night?	1	2	3	4	5	6	7

6. Which of the following statements **best** describes your ability to get around most of the time during the **past week**? (Circle one response.)

1 I did not need support or assistance at all.
2 I mostly walked without support or assistance.
3 I mostly used one cane or crutch to help me get around
4 I mostly used two canes, two crutches or a walker to help me get around.
5 I used a wheelchair.
6 I mostly used other supports or someone else had to help me get around.
7 I was unable to get around at all.

7. How difficult was it for you to put on or take off socks/stockings during the **past week**? (Circle one response.)

1 Not at all difficult 2 A little bit difficult 3 Moderately difficult 4 Very difficult 5 Extremely difficult 6 Cannot do it at all

THE QuickDASH OUTCOME MEASURE

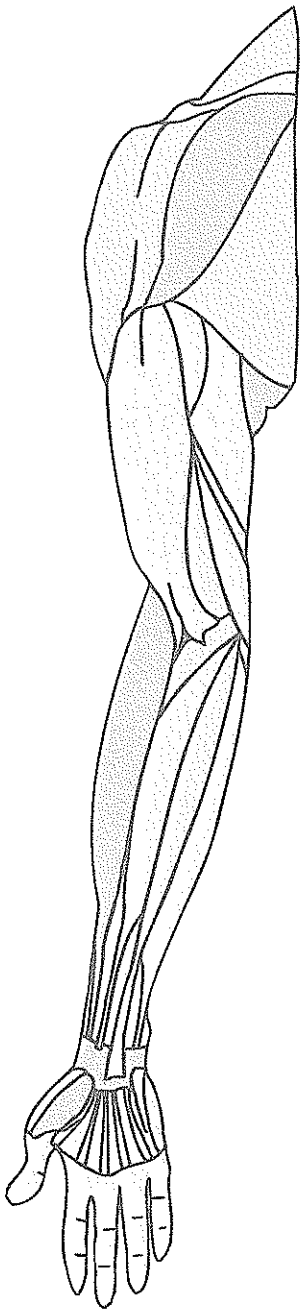
INSTRUCTIONS

This questionnaire asks about your symptoms as well as your ability to perform certain activities.

Please answer *every question*, based on your condition in the last week, by circling the appropriate number.

If you did not have the opportunity to perform an activity in the past week, please make your *best estimate* of which response would be the most accurate.

It doesn't matter which hand or arm you use to perform the activity; please answer based on your ability regardless of how you perform the task.



*Quick*DASH

Please rate your ability to do the following activities in the last week by circling the number below the appropriate response.

	NO DIFFICULTY	MILD DIFFICULTY	MODERATE DIFFICULTY	SEVERE DIFFICULTY	UNABLE
1. Open a tight or new jar.	1	2	3	4	5
2. Do heavy household chores (e.g., wash walls, floors).	1	2	3	4	5
3. Carry a shopping bag or briefcase.	1	2	3	4	5
4. Wash your back.	1	2	3	4	5
5. Use a knife to cut food.	1	2	3	4	5
6. Recreational activities in which you take some force or impact through your arm, shoulder or hand (e.g., golf, hammering, tennis, etc.).	1	2	3	4	5

	NOT AT ALL	SLIGHTLY	MODERATELY	QUITE A BIT	EXTREMELY
7. During the past week, *to what extent* has your arm, shoulder or hand problem interfered with your normal social activities with family, friends, neighbours or groups?	1	2	3	4	5

	NOT LIMITED AT ALL	SLIGHTLY LIMITED	MODERATELY LIMITED	VERY LIMITED	UNABLE
8. During the past week, were you limited in your work or other regular daily activities as a result of your arm, shoulder or hand problem?	1	2	3	4	5

Please rate the severity of the following symptoms in the last week. *(circle number)*	NONE	MILD	MODERATE	SEVERE	EXTREME
9. Arm, shoulder or hand pain.	1	2	3	4	5
10. Tingling (pins and needles) in your arm, shoulder or hand.	1	2	3	4	5

	NO DIFFICULTY	MILD DIFFICULTY	MODERATE DIFFICULTY	SEVERE DIFFICULTY	SO MUCH DIFFICULTY THAT I CAN'T SLEEP
11. During the past week, how much difficulty have you had sleeping because of the pain in your arm, shoulder or hand? *(circle number)*	1	2	3	4	5

*Quick*DASH DISABILITY/SYMPTOM SCORE = $\left(\left[\frac{\text{sum of n responses}}{n}\right] - 1\right) \times 25$, where n is equal to the number of completed responses.

A *Quick*DASH score may <u>not</u> be calculated if there is greater than 1 missing item.

WORK MODULE (OPTIONAL)

The following questions ask about the impact of your arm, shoulder or hand problem on your ability to work (including homemaking if that is your main work role).

Please indicate what your job/work is:_____

❒ I do not work. (You may skip this section.)

Please circle the number that best describes your physical ability in the past week.

Did you have any difficulty:	NO DIFFICULTY	MILD DIFFICULTY	MODERATE DIFFICULTY	SEVERE DIFFICULTY	UNABLE
1. using your usual technique for your work?	1	2	3	4	5
2. doing your usual work because of arm, shoulder or hand pain?	1	2	3	4	5
3. doing your work as well as you would like?	1	2	3	4	5
4. spending your usual amount of time doing your work?	1	2	3	4	5

SPORTS/PERFORMING ARTS MODULE (OPTIONAL)

The following questions relate to the impact of your arm, shoulder or hand problem on playing *your musical instrument or sport or both*. If you play more than one sport or instrument (or play both), please answer with respect to that activity which is most important to you.

Please indicate the sport or instrument which is most important to you:_____

❑ I do not play a sport or an instrument. (You may skip this section.)

Please circle the number that best describes your physical ability in the past week.

Did you have any difficulty:	NO DIFFICULTY	MILD DIFFICULTY	MODERATE DIFFICULTY	SEVERE DIFFICULTY	UNABLE
1. using your usual technique for playing your instrument or sport?	1	2	3	4	5
2. playing your musical instrument or sport because of arm, shoulder or hand pain?	1	2	3	4	5
3. playing your musical instrument or sport as well as you would like?	1	2	3	4	5
4. spending your usual amount of time practising or playing your instrument or sport?	1	2	3	4	5

SCORING THE OPTIONAL MODULES: Add up assigned values for each response; divide by 4 (number of items); subtract 1; multiply by 25.

An optional module score may not be calculated if there are any missing items.

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