

THE UPPER EXTREMITIES CHAPTER 16

Pages 433-521

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The 10 sections of the upper extremity (UE) chapter:

- 16.1 Principles of Assessment (p. 434-441)
- 16.2 Amputations (p. 441-445)
- 16.3 Sensory Impairment Due to Digital Nerve Lesions (p. 445-450)
- 16.4 Evaluating Abnormal Motion (p. 450-497)
- 16.5 Impairment of the Upper Extremities Due to Peripheral Nerve Disorders (p. 480-497)
- 16.6 Impairment of the Upper Extremities Due to Vascular Disorders (p. 498-507)
- 16.7 Impairment of the Upper Extremities Due to Other Disorders (p. 498-507)
- 16.8 Strength Evaluation (p. 507-511)
- 16.9 Summary of Steps for Evaluating Impairment of the Upper Extremity (p. 511-512)
- 16.10 Clinical Examples (p. 512-518)



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Conversion Digit Values to Hand Value

Thumb	40%
Index	20%
Middle	20%
Ring	10%
Little	<u>10%</u>
Hand	100%



Conversion Table 16-1 digit to hand (p.438).



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Conversion



- 100% UE = 60% WPI
- 100% Hand = 90% UE = 54% WPI
- 100% Thumb = 40% Hand = 36% UE = 22% WPI
- 100% Index/Middle = 20% Hand = 18% UE = 11% WPI
- 100% Ring/Little = 10% Hand = 9% UE = 5% WPI



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Wrong!

“If three or more values are to be combined, the two lowest values are first selected and their combined value is found. The combined value and the third value are then combined to give the total value.”

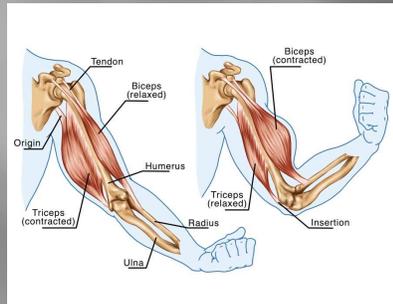
Guides page 438.



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Upper Extremity Values vs. WPI



Upper Extremity Values

Hand to UE:90% of Arm
Table 16-2:Hand to UE .9 modifier (p. 439)

UE to WPI:60% of Body
Table 16-3: UE to WPI .6 modifier (p. 439)



2005 PDRS

Per the 2005 PDRS multiple impairments such as those involving a single part of an extremity, are combined at the upper extremity level, then converted to whole person impairment and adjusted before being combined with other parts of the same extremity (p. 1-11).



Calculation Tools-Figure 16-1a and 16-1b (pp. 436-437)

Figure 16-1a Upper Extremity Impairment Evaluation Record-Part I (Hand) Side: R L

Name: _____ Age: _____ Sex: M F Dominant hand: R L Date: _____

Occupation: _____ Diagnosis: _____

Abnormal Motion	Ankylosis	Sensory Loss	Other Disorders	Hand Impairment %
Wrist	Flexion Extension Ankylosis Imp %			
Elbow	Flexion Extension Ankylosis Imp %			
	Abduction Adduction Imp %			
Shoulder	Flexion Extension Ankylosis Imp %			
	Abduction Adduction Imp %			
DIP	Flexion Extension Ankylosis Imp %			
	Abduction Adduction Imp %			
PIP	Flexion Extension Ankylosis Imp %			
	Abduction Adduction Imp %			
MCP	Flexion Extension Ankylosis Imp %			
	Abduction Adduction Imp %			

Total hand impairment: Add hand impairment % for thumb + index + middle + ring + little finger = _____ %
 Convert total hand impairment to upper extremity impairment* (if thumb resected/bract, enter on Part 2, line 8) = _____ %
 Mark level for upper extremity impairment (imp. 0) = _____ % + hand upper extremity imp. = _____ %
 If hand digit impairment is early impairment, convert upper extremity impairment to whole person impairment = _____ %

Figure 16-1b Upper Extremity Impairment Evaluation Record-Part II (Wrist, Elbow, and Shoulder) Side: R L

Name: _____ Age: _____ Sex: M F Dominant hand: R L Date: _____

Occupation: _____ Diagnosis: _____

Abnormal Motion	Other Disorders	Regional Impairment %	Amputation
Wrist	Flexion Extension Ankylosis Imp %		
Elbow	Flexion Extension Ankylosis Imp %		
	Abduction Adduction Imp %		
Shoulder	Flexion Extension Ankylosis Imp %		
	Abduction Adduction Imp %		

Amputation impairment (other than digits) = _____ %

I. Regional impairment of upper extremity
 *(Combine hand _____ % + wrist _____ % + elbow _____ % + shoulder _____ %) = _____ %

II. Peripheral nerve system impairment = _____ %

III. Peripheral vascular system impairment = _____ %

V. Other disorders (not included in regional impairment) = _____ %

Total upper extremity impairment (= Combine I, II, III, IV, and V) = _____ %

Impairment of the whole person (Use Table 16-3) = _____ %

* Combined Values Chart 6, 654.
 † Each limb, as needed, calculate the whole person impairment for each on a separate chart and combine the percent (Combined Values Chart).

Seven Methods

- ❑ Amputations
- ❑ Digital nerve lesions
- ❑ ROM/ankylosis
- ❑ Peripheral Nerve Disorders
- ❑ Peripheral Vascular Disease
- ❑ Strength
- ❑ "Other" Disorders



Amputation

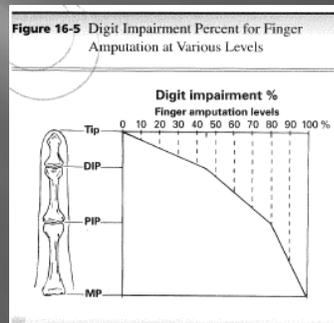
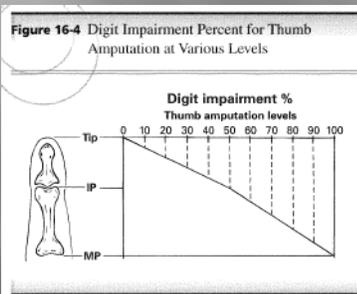
pp. 441-445



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Assess Level of Amputation

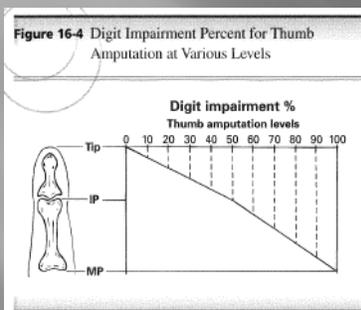
- ▣ Thumb (Figure 16-4, p. 443)
- ▣ Fingers (Figure 16-5, p. 443)



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Thumb amputation at MP joint = ?



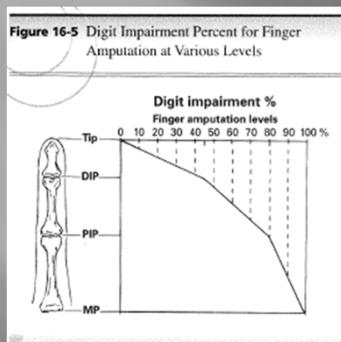
- = 100% thumb
- = 40% hand (p.438)
- = 36% UE (p. 439)
- = 22% WPI (p. 439)



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Amputation of little finger at PIP joint?



- = % little finger ?
- = 80% digit (Fig. 16-5, p.443)
- = 8% hand (p. 438)
- = 7% UE (p. 439)
- = 4% WPI (p. 439)



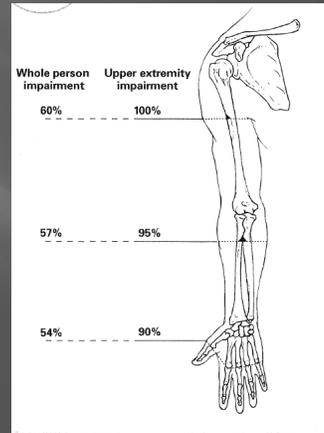
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Figure 16-2 (p. 441)

Impairment estimates for Upper Extremity Amputation at Various Levels

- ▣ Amputations through humerus at Proximal to deltoid tubercle level (axillary fold) = 100%UE or 60% WPI.
- ▣ Amputation at Scapulothoracic level (forequarter) = 70% WPI.
- ▣ Amputations between specified level = extrapolate



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Table 16-4 (p. 440)

Impairment estimates for Upper Limb Amputation at Various Levels

Amputation Levels	Impairment % of			
	Digit	Hand	Upper Extremity	Whole Person
Scapulothoracic (forequarter)	—	—	—	70
Shoulder disarticulation	—	—	100	60
Arm: deltoid insertion and proximally	—	—	100	60
Arm/forearm: from distal to deltoid insertion to bicipital insertion	—	—	95	57
Forearm/hand: from distal to bicipital insertion to transmetacarpophalangeal loss of all digits	—	—	94-90	56-54
Hand: all digits at MP joints	—	100	90	54
Hand: all fingers at MP joints except thumb	—	60	54	32
Thumb ray at/or near:				
CMC joint	—	—	38	23
Distal third of 1st metacarpal	—	—	37	22
Thumb at:				
MP joint	100	40	36	22
IP joint	50	20	18	11
Index or middle finger at:				
MP joint	100	20	18	11
PIP joint	80	16	14	8
DIP joint	45	9	8	5
Ring or little finger at:				
MP joint	100	10	9	5
PIP joint	80	8	7	4
DIP joint	45	5	5	3



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Comparing with Amputation Value

AMA Guides (p.434):

The most practical and useful approach to evaluating impairment of a digit is to compare the current loss of function with the loss resulting from amputation.

2005 PDRS (p. 1-11):

The composite rating for an extremity (after adjustments) may not exceed the amputation value of the extremity adjusted for earning capacity, occupation and age.



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Digital Nerve Lesions



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Digital Nerve Lesions

- ❑ Section 16.3 is for digital nerve loss due to lesions.
- ❑ Not to be used for peripheral nerve disorders or CRPS.
- ❑ Sensibility defects on the dorsal surfaces of the digits are not considered impairing.



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Sensory Quality

AMA Guides directs (p. 446):

The sensory quality is based on the results of the two-point discrimination test carried out over the distal palmar area of the digit, or on the most distal part of the stump in the presence of a partial amputation.



Table 16-5 Sensory Quality Impairment Classification

Two-Point Discrimination	Sensory Loss	Sensory Quality Impairment (%)
≤ 6 mm	None	0%
7-15 mm	Partial	50%
> 15 mm	Total	100%



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Required Information

The doctor must provide three pieces of information to properly determine impairment due to Digital Nerve Lesion –

- (1) sensory loss [two-point discrimination]
- (2) percentage of digit length affected
- (3) digital nerve involvement [longitudinal – ulnar or radial or transverse - both]. The information is then used with Table 16-6 (p. 448) [thumb and little finger] or Table 16-7 (p. 448) [index, middle, and ring fingers] to determine impairment.



Transverse & Longitudinal Sensory Loss in Thumb & Little Finger (Table 16-6,p. 448) and Finger (Table 16-7,p. 448)

Table 16-6 thumb & little finger

Percent of Digit Length	Percent of Digit Impairment					
	Transverse Loss		Longitudinal Loss			
	Both Digital Nerves		Ulnar Digital Nerve		Radial Digital Nerve	
	Total	Partial	Total	Partial	Total	Partial
100	50	25	30	15	20	10
90	45	23	27	14	18	9
80	40	20	24	12	16	8
70	35	18	21	11	14	7
60	30	15	18	9	12	6
50	25	13	15	8	10	5
40	20	10	12	6	8	4
30	15	8	9	5	6	3
20	10	5	6	3	4	2
10	5	3	3	2	2	1

Table 16-7 index, middle & ring

Percent of Digit Length	Percent of Digit Impairment					
	Transverse Loss		Longitudinal Loss			
	Both Digital Nerves		Ulnar Digital Nerve		Radial Digital Nerve	
	Total	Partial	Total	Partial	Total	Partial
100	50	25	20	10	30	15
90	45	23	18	9	27	14
80	40	20	16	8	24	12
70	35	18	14	7	21	11
60	30	15	12	6	18	9
50	25	13	10	5	15	8
40	20	10	8	4	12	6
30	15	8	6	3	9	5
20	10	5	4	2	6	3
10	5	3	2	1	3	2



Facts

- Thumb injury
- Total Transverse loss of IP joint



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Impairments?

IP joint = % length?
= 50% digit length

What is Figure 16-6 (p. 447) value?
= 25% digit

Table 16-6 (p. 448) value?
= 25% digit



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Total Transverse sensory loss @MP joint middle finger =?

- = % digit?
- = 50% digit (Fig. 16-7, p. 447)
- = 10% hand (p. 438)
- = 9% UE (p. 439)
- = 5% WPI (p. 439)



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Abnormal Motion pp. 450-479



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Definitions

- ❑ Neutral position: 0 degrees="full extension" (not 180 degrees)
- ❑ Flexion = F
- ❑ Extension =E "Motion opposite to flexion"
- ❑ Extension lag: "Incomplete extension from a flexed position to the neutral starting point"
- ❑ Hyperextension: Extension exceeding the zero starting position
- ❑ Ankylosis: complete loss of motion of a joint =F + E
- ❑ Plus sign= + Joint hyperextension
- ❑ Minus Sign = - Extension lag



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Definitions (continued)

- ❑ Arc of motion: degrees traced between the two extreme positions of movement in a specific plane (F to E)
- ❑ Unit of Motion: joint has more than one plane of movement, each is referred to as a *unit of motion*
- ❑ Functional position: the least impairing angle for fusion



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Measurement Hints

“Both extremities should be compared” (p. 451)

- ▣ If uninvolved “normal” contralateral joint has less than normal ROM, subtract its ROM from impaired joint
- ▣ If uninvolved has greater than normal ROM, may correct up to 2% of max. regional impairment rating.



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Motion Pie Charts pp. 456-479

- | | |
|--|---|
| ▣ Thumb IP joint
Figure 16-12, p. 456 | ▣ Wrist(ulnar/rad dev.)
Figure 16-31, p. 469 |
| ▣ Thumb MP joint
Figure 16-15, p. 457 | ▣ Elbow(flex/ext.)
Figure 16-34, p. 472 |
| ▣ Finger DIP joint
Figure 16-21, p. 461 | ▣ Elbow(pronation/supination)
Figure 16-37, p. 474 |
| ▣ Finger PIP joint
Figure 16-23, p. 463 | ▣ Shoulder (flex/ext.)
Figure 16-40, p. 476 |
| ▣ Finger MP joint
Figure 16-25, p. 464 | ▣ Shoulder (abd./add)
Figure 16-43, p. 477 |
| ▣ Wrist(flex/ext)
Figure 16-28, p. 467 | ▣ Shoulder (int./ext. rotation)
Figure 16-46, p. 479 |



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Motion Impairment Calculation

- ❑ Motion impairment pie charts are used for motion calculation of a specific joint.
- ❑ The impairment values derived for each are added together to obtain the total motion impairment of a specific joint.
- ❑ Thumb ray has three articular units: IP, MP and CMC. Add the impairment values contributed by each motion unit (p.460).
- ❑ Fingers have three functional units: DIP, PIP and MP each calculate as specific joint.
Combine the finger impairments from each joint.



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Calculations Continued:

- ❑ IF two or more digits are involved, calculate separately the total digit impairment for each.
- ❑ Use Table 16-1 convert each digit to hand impairment.
- ❑ Add hand impairment values from each digit to obtain total hand impairment.
- ❑ If thumb amputation is proximal to MP joint (CMC joint) the other digits are converted to UE, then added to the UE value for the thumb ray.



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Peripheral Nerve Disorders (pp. 480-497)



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Evaluates

- ❑ Impairments related to disorders of the spinal nerves (C5 to C8 and T1).
- ❑ Brachial Plexus
- ❑ Major peripheral nerves of the upper extremities.
- ❑ Entrapment/compression neuropathy
- ❑ Complex regional pain syndrome (CRPS)



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Underlying Causes

- ❑ Diabetes mellitus
- ❑ Chronic alcohol abuse
- ❑ Systemic neurological disorders
- ❑ Hypothyroidism and other systemic disease

Apportionment!



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Evaluation Principles (p. 480)

- ❑ Sensory deficits in the digits strictly due to lesions of digital nerves are evaluated by Section 16.3
- ❑ Impairments relating to the spinal cord and central nervous system are considered in Chapters 13 and 15 of the Guides.
- ❑ Impairment due to chronic pain is discussed in Chapter 18.
- ❑ When an impairment results strictly from a peripheral nerve lesion, in the absence of CRPS, the motion values derived from Section 16.4 are not applied to this section to avoid duplication or unwarranted increase in the impairment estimation.



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Evaluation Methods

Upper extremity impairment is calculated by multiplying the grade of severity of the sensory deficit (Table 16-10, p. 482) or motor deficit (Table 16-2, p. 482) by the maximum value of the nerve involved using the appropriate table (Table 16-13, p. 489; Table 16-14, p. 490 and Table 16-15, p. 492).

1. ID nerve involved (doctor's job)
2. Grade sensory loss with Table 16-10 (doctor's job)
3. Grade motor loss (doctor's job)
4. ID max sensory value (you can do)
5. ID max motor value (you can do)
6. Multiply sensory grade by max sensory value
7. Multiply motor grade by max motor value
8. Combine sensory with motor
9. Convert: UE to WPI



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RED FLAGS



Watch out for additional values based on

- ✓ Decreased pinch strength
- ✓ Decreased grip strength
- ✓ Sensory deficits due to digital nerve lesions

“ In compression neuropathies, additional impairment values are not given for decreased grip strength. In the absence of CRPS, additional impairment values are not given for decreased motion.” (p. 494)



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Sensory

Table 16-10 Determining Impairment of the Upper Extremity Due to Sensory Deficits or Pain Resulting From Peripheral Nerve Disorders

a. Classification		
Grade	Description of Sensory Deficit or Pain	% Sensory Deficit
5	No loss of sensibility, abnormal sensation, or pain	0
4	Distorted superficial tactile sensibility (diminished light touch), with or without minimal abnormal sensations or pain, that is forgotten during activity	1-25
3	Distorted superficial tactile sensibility (diminished light touch and two-point discrimination), with some abnormal sensations or slight pain, that interferes with some activities	26-60
2	Decreased superficial cutaneous pain and tactile sensibility (decreased protective sensibility), with abnormal sensations or moderate pain, that may prevent some activities	61-80
1	Deep cutaneous pain sensibility present; absent superficial pain and tactile sensibility (absent protective sensibility), with abnormal sensations or severe pain, that prevents most activity	81-99
0	Absent sensibility, abnormal sensations, or severe pain that prevents all activity	100

TABLE 16-10, P. 482

“This table is to be used for pain that is due to *nerve injury* or disease that has been documented with objective physical findings or electrodiagnostic abnormalities. *It is not to be used for pain in the distribution of a nerve that has not been injured* except in diagnosed cases of complex regional pain syndrome.”

“The maximum value for each grade is not applied automatically.”



Motor

Table 16-11 Determining Impairment of the Upper Extremity Due to Motor and Loss-of-Power Deficits Resulting From Peripheral Nerve Disorders Based on Individual Muscle Rating

a. Classification		
Grade	Description of Muscle Function	% Motor Deficit
5	Complete active range of motion against gravity with full resistance	0
4	Complete active range of motion against gravity with some resistance	1- 25
3	Complete active range of motion against gravity only, without resistance	26- 50
2	Complete active range of motion with gravity eliminated	51- 75
1	Evidence of slight contractility; no joint movement	76- 99
0	No evidence of contractility	100

Table 16-11,p.484

“Weakness may be due to many causes, including pain... Table 16-11 is not to be used for rating weakness that is not due to a diagnosed injury of a specific nerve or nerves.”

“If there is doubt about the presence of a nerve injury, electromyographic studies may be necessary in order to confirm the diagnosis.”



Most typical?

- ❑ Entrapment at the median nerve at the wrist, leading to Carpal Tunnel Syndrome.
- ❑ Ulnar nerve at the elbow leading to Cubital Tunnel Syndrome.

Table 16-15, p. 492

- ❑ Median (below midforearm): Maximum
Sensory 39 Motor 10
- ❑ Ulnar (above midforearm): Maximum
Sensory 7 Motor 46



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Carpal Tunnel Syndrome Post-Operative (p.495):

Carpal Tunnel Syndrome post-operative (p.495):

1. Positive clinical findings of median nerve dysfunction and electrical conduction delay(s). (See Tables)
2. Normal sensibility/strength with abnormal sensory and/or motor latencies or abnormal EMG testing = rating not to exceed 5% UE (3% WPL.)
3. Normal sensibility, opposition strength, nerve conduction studies = 0% UE



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Rating of Entrapment/Compression Neuropathies

Diagnosis of entrapment/compression neuropathy requires:

- The diagnosis of entrapment/compression neuropathy is based on (1) the history and symptoms; (2) objective clinical signs and findings on detailed examination; and (3) documentation by electroneuromyographic studies.
(page 492)

Positive clinical findings and loss of function are required for a permanent impairment rating:

- Only individuals with an objectively verifiable diagnosis should qualify for a permanent impairment rating. The diagnosis is made not only on believable symptoms but, more important, on the presence of *positive clinical findings and loss of function*.
(p. 493)



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Impairment Rating of Entrapment/Compression Neuropathies

- The diagnosis should be documented by electromyography as well as sensory and motor nerve conduction studies. However, it is critical to understand that there is *no correlation* between the severity of the conduction delay on nerve conduction velocity testing and the severity of either symptoms or, more important, impairment rating."

p.493



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Complex Regional Pain Syndrome (CRPS) pp. 495-498

- ❑ Reflex Sympathetic Dystrophy (CRPS I)
- ❑ Causalgia (CRPS II)
- ❑ Burning pain without stimulation or movement



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Complex Regional Pain Syndrome (CRPS) pp. 495-498

- ❑ “The diagnosis of the syndromes should be conservative and based on objective findings” (p. 496).
- ❑ At least eight of the findings must be present concurrently for a diagnosis of CRPS (p. 496).

Table 16-16 Objective Diagnostic Criteria for CRPS (RSD and causalgia)	
Local clinical signs	
Vasomotor changes:	
<ul style="list-style-type: none"> • Skin color: mottled or cyanotic • Skin temperature: cool • Edema 	
Sudomotor changes:	
<ul style="list-style-type: none"> • Skin dry or overly moist 	
Trophic changes:	
<ul style="list-style-type: none"> • Skin texture: smooth, nonelastic • Soft tissue atrophy: especially in fingertips • Joint stiffness and decreased passive motion • Nail changes: blemished, curved, talonlike • Hair growth changes: fall out, longer, finer 	
Radiographic signs	
<ul style="list-style-type: none"> • Radiographs: trophic bone changes, osteoporosis • Bone scan: findings consistent with CRPS 	
Interpretation:	
≥ 8	Probable CRPS
< 8	No CRPS



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Peripheral Vascular Disorders

PVD impairment usually involves diseases of

- ▣ Arteries
- ▣ Veins
- ▣ Lymphatic disorders



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Vascular Disorders

- ▣ Reduced blood flow leads to...
- ▣ Intermittent claudication
- ▣ Pain at rest
- ▣ Ulcers
- ▣ Gangrene
- ▣ Extremity loss
- ▣ Raynaud's phenomenon



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Rating Vascular Disease

- Physical signs of vascular damage must be present and are the primary determinants in placing the examinee into one of these categories.



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UE Strength Evaluation

(pp. 507-510)

- Grip & Pinch Strength
- Manual Muscle Testing

The AMA Guides directs (p. 507): Because strength measurements are functional tests influenced by subjective factors that are difficult to control and the Guides for the most part is based on anatomic impairment, the Guides does not assign a large role to such measurements.



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Principles

- ❑ Strength impairment is only provided in the “rare case” (p. 508).
- ❑ Strength loss can be combined with other impairments “only if based on unrelated etiologic or pathomechanical causes.” (p. 508);
- ❑ Decreased strength cannot be rated in the presence of decreased motion, painful conditions, deformities, or absence of parts (eg, thumb amputation) that prevent effective application of maximal force in the region being evaluated.



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Principles

- ❑ “Motor weakness associated with disorders of the peripheral nerve system and various degenerative neuromuscular conditions are evaluated according to guidelines described in Section 16.5...” (p. 508)
- ❑ “Strength can only be applied as a measure when a year or more has passed since the time of injury or surgery.” (p. 508)
- ❑ “Manual muscle testing of major groups is used for testing strength about the elbow and shoulder.” (p. 508)



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Principles

- If there is more than 20% variation in the readings, one may assume the individual is not exerting full effort.” (p. 508)
- Results of strength testing should be reproducible on different occasions or by two or more trained observers.” (p. 509)



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The Guides provides instructions for the use of Table 16-35 (p. 510):

- The severity of strength deficits is classified and rated on the same principles used for evaluation of the peripheral nerves (Table 16-11).
- In the absence of peripheral nerve involvement, most weaknesses usually fall in the grade 4 category... Few injuries result in a more profound weakness, such as a grade 3 category...
- Table 16-35 requires complete range of motion (see footnote).



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Tendinitis

This impairment is not normally provided (p. 507):

“Several syndromes involving the upper extremities are variously attributed to tendinitis, fasciitis, or epicondylitis. The most common of these are the stubborn conditions of the origins of the flexor and extensor muscle of the forearm where they attach to the medial and lateral epicondyles of the humerus. Although these conditions may be persistent for some time, they are not given a permanent impairment rating unless there is some other factor that must be considered.”



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Tendinitis

Under specific circumstances, grip loss can be considered:

- If an individual has had tendon rupture or has undergone surgical release of the flexor or extensor origins or medial or lateral epicondylitis, or has had excision of the epicondyle, there may be some permanent weakness of grip as a result of the tendon rupture or the surgery. In this case, impairment can be given on the basis of weakness of grip strength according to Section 16.8b. (page 507)



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Other Disorders (p. 498-507)

The purpose of the 'Other Disorders' section of the AMA Guides is frequently overlooked. This section is only to be used when other criteria have not adequately encompassed the impairment. In other words, this is an additional impairment (page 499, italics in original):

- Impairments from the disorders considered in this section under the category of "other disorders" are usually estimated by using other impairment evaluation criteria. *The criteria described in this section should be used only when the other criteria have not adequately encompassed the extent of the impairments.*

As such, the application of this impairment is a medical decision and requires additional supporting documentation.



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Requires Additional Calculation

- The severity of impairment due to these disorders is rated separately according to Tables 16-19 through 16-30 and then multiplied by the relative maximum value of the unit involved as specified in Table 16-18. (page 498)



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Section 16.7a Bone and Joint Deformities

Joint Swelling Due to Synovial Hypertrophy.

Synovial hypertrophy cannot be combined with other methods:

- ▣ If synovial hypertrophy is the only finding, the joint impairment is rated according to Table 16-19 and multiplied by the relative maximum value of the joint involved (Table 16-18). It cannot be combined with impairment due to decreased joint motion or other findings. (page 500)



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Shoulder Instability

Shoulder instability must be thoroughly documented:

- ▣ Shoulder instability, recurrent subluxation, or dislocation must be adequately documented through a complete medical history, physical examination, and radiographic findings. Magnetic resonance imaging (MRI), arthroscopy, and examination under anesthesia may be useful components of the evaluation. An individual's complaint of feeling or fearing that a joint is "popping" or "going out of place" without adequate clinical findings is not a basis for permanent impairment rating. (page 504)



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Shoulder Instability

Impairment noted in Table 16-26 has already been multiplied by the value of the shoulder:

- ▣ The shoulder representing 60% of the upper extremity (Table 16-18), the patterns of occult (10%), sublaxating (20%), and dislocating (40%) instabilities represent upper extremity impairments of 6%, 12%, and 24%, respectively. (page 504)

Shoulder instability impairment can only be combined with decreased motion impairment:

- ▣ *This value may be combined only with impairments due to decreased motion (Section 16.4). Pain and decreased muscle strength are not rated separately.* (page 504)



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