

Red Flags for Potential Serious Conditions in Patients with Elbow, Wrist, or Hand Problems

Red Flags for the Elbow, Wrist, and Hand Region		
Condition	Red Flag Data obtained during Interview/History	Red Flag Data obtained during Physical Exam
Compartment Syndrome ^{1,2}	History of trauma, surgery or extreme unaccustomed activity Persistent forearm pain and “tightness” Tingling, burning, or numbness	Palpable tenderness and tension of involved compartment Pain intensified with stretch to involved muscles Paresthesia, paresis, and sensory deficits Diminished pulse and prolonged capillary refill
Space Infection of the Hand ³	Recent cut, scrap, or puncture wound, such as a human or animal bite Typical symptoms of infection and inflammation	Kanavel cardinal signs: 1) flexed posture of the digit, 2) uniform swelling of the digit, 3) tenderness over the length of the involved tendon sheath, and 4) severe pain on attempted hyperextension of the digit
Long Flexor Tendon Rupture ⁴	Laceration in area of tendon Forceful flexor contraction	Loss of isolated DIP or PIP active flexion Possible palpable defect in involved muscle
Lunate Fracture or Dislocation ⁴	History or fall on hand or strain Generalized wrist pain	Pain at end ranges of wrist extension Decreased grip strength/pain with grasping objects
Scaphoid Fracture ^{5,6}	History of fall on outstretched hand Prevalent in males aged 15-30 and females with osteoporosis	Swelling, bruising around wrist Tenderness over anatomical snuff box/scaphoid tubercle Increased pain with gripping
Distal Radius (Colles’) Fracture	Fall onto outstretched arm with forceful wrist extension Young male or older female	Wrist swelling Wrist held in neutral resting position Movements into wrist extension are painful
Radial Head Fracture ⁷	History of fall on outstretched hand	Elbow joint effusion - arm held in loose packed position Restricted/painful supination & pronation AROM Tenderness over radial head
Raynaud’s Phenomenon ⁸	Positive family history Women on estrogen therapy Cold exposure/frostbite injury Underlying collagen vascular disease	<i>in pallor, cyanosis, and/or hyperemic erythema of the fingers</i> Taking medication promoting vasoconstriction such as B-blockers, amphetamines, decongestants, and caffeine
Complex Regional Pain Syndrome (Reflex Sympathetic Dystrophy) ^{9,10}	History of trauma or surgery Severe burning/boring/aching pain out of proportion to the inciting event Pain not responsive to typical analgesics Secondary hyperalgesia/hypersensitivity	Area swollen (pitting edema), warm, and erythematous Temperature difference between involved and uninvolved extremity, hot or cold
Melanoma ¹¹	History of cancer Female < 40 years of age Male >40 years of age Fair skin, history of sunburns	Asymmetric or irregular shape lesion Borders are notched, scalloped or vaguely defined Color uneven distributed or defined Diameter >6mm

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