Sports Injuries
Weightlifter’s Shoulder

- RCT
- Overhead and flexion
- Impingement
Slot Machine Tendinitis

• Tenderness of the shoulder from playing slot machines.
• Tender over biceps in bicipital groove
• Rx – win early
Little Leaguer’s Shoulder

- Overuse fatigue
- Proximal humeral physis
- Salter Harris 1
- Widened and irregular physis
- Compare with contra
Blocker’s or Tackler’s Exostosis

- Anterolateral humerus
- Distal to shoulder pads
- Heterotopic ossification
- Myositis ossificans
- Periosteal damage
- Grows by accretion
Golf Arm

• Shoulder and elbow pain after too many rounds of golf.
Tennis King Kong Arm

- Overdevelopment of dominant arm
- Depressed scapula
- Protracted shoulder posture
- Large forearm
Tennis Elbow

• Coined in the 1880’s
• 10-50% of players
• Backhand stroke
• Rare in double handers
• Epicondylitis (no it is)
  – Angiofibroblastic tendinosis
• Common extensor origin
  – ECRB tendinosis
  – ED communis also common
Tennis Elbow

• Risk factors
  – >30 years
  – Improper grip size
  – Metal racket
  – >2hrs per day
  – Tight strings
  – Snapping wrist backhand

• XS motion, vibration, string tension

• Fatigue
Tennis Elbow

• DDX
  – Radiohumeral osteochondral injury
  – Recurrent radial nerve entrapment
    • Supinator syndrome
  – Epicondylar apophysitis in adolescents
  – C6 root injury or stinger

• Radiographic findings
  – STS
  – Calcification 20-30%
Hooker’s Elbow

• Painful elbow swelling suffered by fishermen repeatedly jerking upwards on a fishing line.

• Lateral epicondylitis
Resistant Tennis Elbow

- Radial tunnel syndrome
- Posterior interosseous branch of radial n
- Arcade of Frosche
  - Fibrous arch of supinator
- Distally through supinator
- Ulnar to insertion of ERCB
Baseball Pitcher’s Elbow

- A disorder of the elbow in baseball pitchers due to a piece of cartilage or bone torn from the head of the radius.
Medial Tennis Elbow

- Medial tennis elbow
  - Lateral:Medial 7:1
  - From acceleration during serving
Golf Elbow

• Medial epicondylitis
  – Medial tennis elbow
  – Pitcher’s elbow
  – Javelin, Racquetball, Squash,
• Overuse of FCR/pronator mass
• Valgus stress at top of back impact
• Ass. Ulnar neuropathy
• Medial laxity
Little Leaguer’s Elbow

- Purists
  - 9-12Y
  - Thowers
  - Medial traction apophysitis/epicondylitis
  - Valgus stress
  - Hypertrophy of medial epicondyle
  - Microtearing of flexor/pronator group
  - Fragmentation of medial epicondylar apophysis
Little Leaguer’s Elbow

- Panners disease
- 5-10Y Boys
- Osteochondrosis of the capitulum
- Trauma history
- Fissuring and increased density
- Decreased size, fragmentation, resorption
- Younger than OCD
Dog Walker’s Elbow

• Pain caused by constant tension and tugs from a dog leash.
• Medial or lateral epicondylitis depending on dog.

Climber’s Elbow

• Brachialis tendinitis
Tennis Wrist

- Tenovaginitis of the tendons of the wrist in tennis players.
Weightlifter’s Wrist

- Dorsal wrist pain
- Entrapment of dorsal capsule
- Hyperextension of wrist at bench press
Boxer’s Knuckle

- Longitudinal tear of ED communis at MC heads
- 3\textsuperscript{rd} MCPJ
Boxer’s Fracture

• Saturday night Fx
• 5\textsuperscript{th} MC neck Fx
• Watch for associated base of 4\textsuperscript{th} MC Fx
Jersey finger

- Avulsion of FDP
- Jersey grabbing tackle
- Ring > Middle
Climber’s Finger

• Partial or complete rupture of A2 pulley
• Crimp or pocket grip
• 2\textsuperscript{nd} or 3\textsuperscript{rd} digit
• May extend to A3 and A4 pulleys
• Localized fluid
• Increased distance between tendon and phalanx
Wellie Thrower’s Finger

- Injury to finger joints sustained in wellie throwing contests.
- Volar plate Fx
Baseball Finger

- Mallet finger
- Ball or other object striking the end or back of the finger
- Resulting in rupture of the attachment of the extensor tendon.
- Bony or tendon
Skier’s Thumb

- Gamekeeper’s thumb
- Thumb abduction
- MCP-UCL proper sprain/tear
- Accessory UCL, volar plate and dorsal capsule add stability
- X-ray prior to stress
- Stress in 20-30 degrees of flexion
- 10-20 degrees laxity worse than contra
- 30-35 degrees of absolute laxity
Skier’s Thumb

• Stener lesion
• Adductor aponeurosis interposed
• >2-4 mm displaced avulsion
• MRI or US to see
• Need operative repair
Pin Pong Fracture

- Depressed skull fracture usually seen in young children, resembling the indentation that can be produced with the finger in a ping-pong ball; when elevated it resumes and retains its normal position.
Spear Tackler’s Spine

- Vertical compression
- Axial loading with mild flexion
- >50% of quadriplegia in AF
- Defensive backs
Spear Tackler’s Spine

• a clinical entity that constitutes an absolute contraindication to participation in tackle football and other collision activities that expose the cervical spine to axial energy inputs.

• A subset of football players were identified who demonstrated:
  • 1) developmental narrowing (stenosis) of the cervical canal
  • 2) persistent straightening or reversal of the normal cervical lordotic curve on erect lateral roentgenograms obtained in the neutral position
  • 3) concomitant preexisting posttraumatic roentgenographic abnormalities of the cervical spine
  • 4) documentation of having employed spear tackling techniques
Rebounder’s rib

- 1st rib Fx
- Muscular exertion
- Scalenes pull up
- Intercostals pull down
Weightlifter’s Back

• Muscular or tendinous tear in the lower back
Poker back  Poker spine

• Not related to the game of poker
• Rather a stiff fire-poker
• Sign of ankylosing spondylitis
Rugger Jersey Spine

- Renal osteodystrophy
- Osteomalacia
- Secondary hyperparathyroidism
Sprinter’s Fracture

- Fracture of the anterior superior or of the anterior inferior spine of the ilium, a fragment of the bone being pulled off by muscular violence, as at the start of a sprint.
Hurdler’s Fracture

- Forced flexion from hyperextension
- Also common in soccer, water skiing
Dancer’s hip
Jazz Ballet Bottom

• Painful abscesses suffered by dancers who frequently spin on their bottoms.

• Usually in natal cleft
Rider’s Leg

• Strain of the adductor muscles of the thigh in horseback riders.
Horse Rider’s Bone

• AKA Cavalry bone
• Localized ossification of the inner aspect of the lower end of the tendon of the adductor muscle of the thigh (adductor tubercle), sometimes seen in horseback riders
Quick-Draw Leg

- Bullet wound in leg from practicing fast draw from gun in belt holster
Cricket Thigh

- Rupture of some of the fibers of the rectus femoris, which may occur in playing cricket or football; sometimes the tendon of the quadriceps or that of the patella is also ruptured.
Breaststroker’s Knee

- Valgus strain in whip kick
- MCL stress
- PF dysfunction
- Medial synovial plica syndrome

Musher’s Knee

- Iliotibial band syndrome
- Sharp backward kicking of the leg to spur the team
Football Knee

• “A swollen, relaxed, somewhat tender condition of the knee seen in football players”

• Patellar tendinosis

• AKA jumper’s knee

• An insertional tendinopathy

• patellar tendon into the patella (65%)

• attachment of the quadriceps tendon to the patella (25%)

• attachment of the patellar tendon to the tibial tuberosity (10%).
Jumper’s Knee

• Patellar tendinosis
• Pain and tenderness over the lower pole of the patella
• Similar to that occurring in Sindig-Larsen-Johansson disease, without radiographic changes
• So called because of its occurrence in athletes
Rugby Knee

- Osgood-Schlatter disease
Genu Amoris
Lover’s knee

• Swelling and pain in the knee from making love in an unusual position.
Tennis Leg

• Previously plantaris tendon rupture
• Medial head of gastrocnemius sudden rupture at MTJ
• Forced dorsiflexion
• Older persons participating in tennis and other sports.
Gastrocnemius, medial head

Gastrocnemius, lateral head

Plantaris muscle

Plantaris tendon

Soleus

Gastrocnemius

Achilles tendon
Toddler’s Fracture

• Spiral fracture of distal tibia
• Often occult
Paratrooper Fracture

• Fracture of the posterior articular margin of the tibia and/or of the internal or external malleolus.
Snowboarder’s Ankle
Snowboarder’s Fracture

- Lateral process of talus Fx
- Dorsiflexion and hindfoot inversion
- Unrecognized causes subtalar OA
- CT may be required to see
  - Type 1. Chip off anterior inferior
  - Type 2a. Involves talofibular
  - Type 2b. Involves talocalcaneal
  - Type 3. Comminuted Fx
Aviator’s Astragalus

• Forefoot hyperextension
• Rudder bar into instep
• Tight achilles
• Fracture of talar neck
• +/-
  – Anterior tibia injury
  – Subtalar dislocation
  – Posterior talar body dislocation
Dancer’s Tendinitis

- FHL
- Within fibro-osseous tunnel
- Ass. Trigger toe
  - Hallux saltan
- Can go on to rupture

Dancer’s Heel

- Posterior ankle impingement
- Medial and lateral tubercles
- FHL between them
- Lateral tubercle non-union 10%
- Bilateral 50%
- Plantar-flexion or en point
- Large posterior process or os trigonum
- Causes fibrosis
- Posterolateral pain
Basketball Foot

- Medial subtalar dislocation
- Talocalcaneal and talonavicular
- Inversion and varus stress on landing
March Fracture

- Metatarsal stress fracture
- Also seen in Ballet
- Middle and distal shafts 2\textsuperscript{nd} and 3\textsuperscript{rd} Periostitis
- 1\textsuperscript{st} base, less periostitis
Dancer’s Fracture

- Spiral fracture of 5th metatarsal neck which is common in ballet dancers
- Mechanism: inversion injury resulting from mis-steps & falls off the demi-pointe position
- Peroneal weakness and simple fatigue may be contributory factors
- Fracture is frequently displaced, and occasionally mildly comminuted
- Radiographs: take care to order AP, lateral and oblique views since often one view shows significantly more displacement than the others
- Mildly displaced fracture: heal w/ 6 to 8 weeks w/ short leg cast
- Displaced fractures (3-5 mm) may require ORIF; - often these fractures will have a long oblique fracture pattern which makes them amenable to fixation,
Turf Toe

- Football and Soccer
- Sprain of plantar capsular ligament complex
  1st MTPJ
- Articular cartilage damage
- Hyperextension injury
- Push off injury
- Secondary hallux rigidus
- Artificial turf
Sand Toe

- Beach volleyball
- Plantarflexion injury at 1\textsuperscript{st} MTPJ