- Blunt chest trauma -> normal CVP -> give IVF (target PCWP 15-20) -> + **inotropes** to increase cardiac output
- Blunt chest trauma -> tachypnic + tachy + JVD + tracheal dev -> tension pneumothorax -> **needle thoracostomy**
- Blunt chest trauma -> persistent JVD + tachy + hypoTN -> **tamponade**
- Blunt chest trauma -> dec. breath sounds + dullness + contralateral tracheal deviation + shock -> **ipsi hemothorax**
- Severe deceleration injury -> must rule out **aortic disruption** (HTN in upper extremities, hoarse voice, etc.)
- Blunt bladder injury -> **bladder dome** (intraperitoneal) -> peritonitis
- HypoTN, tachy, flat neck veins, cold limbs -> **hypovolemic shock**
- Blunt trauma upper abdomen -> pancreatic injury (missed by CT in first six hours) -> later becomes abscess/pseudocyst
- **Aortic rupture** usually -> death, if contained -> wide mediastinum + hemothorax
- Multiple contiguous rib fractures -> **flail chest** -> positive pressure mechanical ventilation
- Atraumatic massive hemoptysis -> **bronch**
- Burn victims with airway thermal injury -> **endotrach**
- **Biliary colic** -> gallbladder ctx against gallstones in cystic duct -> viscous distension
- **Transfusion rxn** -> preformed Ab -> immediately after transfusion -> fever/rigors
- Perf in pt on Coumadin -> reverse with **FFP** before laparotomy
- Aortoiliac occlusion (Leriche syndrome) -> hip/thigh claudication + impotence + symmetric atrophy of LE
- Periop **beta-blockers** lower MI in high risk pt after noncardiac surgery
- Suspected PAD -> **ABI** first
- **RQ** ~ 1 for pure carbs, 0.8 protein, 0.7 fats
- **Arterial embolism** -> sudden onset severe pain, asymmetric pulselessness
- Pain after forceful abduction/external rotation at shoulder -> **anterior dislocation** -> **injury axillary nerve/artery**
- Compartment syndrome – "pain out of proportion" -> pressure over 30 -> compartment syndrome -> fasciotomy (ischemia – **reperfusion injury** -> soft tissue swelling)
- Volume **resuscitation** before mechanical ventilation
- DVT -> **heparin** acutely -> Coumadin for several months
- Burn pt -> oliguria + tachy 3 d later -> **bacterial infn** (SIRS – systemic inflammatory response syndrome)
- Burn pt M&M -> #1 hypovolemic shock; #2 sepsis (SIRS)
- Solitary pulmonary nodule (<3cm) on CXR -> **high-res CT chest**
- Parotid surgery -> **facial nerve palsy** -> facial droop
- Abd pain to groin + N/V -> urinary calculi -> **non-contrast CT**
- Acute bacterial parotitis (S. aureus) -> preventable with **fluids + oral hygiene**

- Complete SBO -> N/V, bloating, dilated bowel (MCC **post-op adhesions**)
- Drop arm sign suggests **rotator cuff** injury.
- **Splenectomy** -> vaccines for S. pneumonia, N. meningitides, H. influenza
- Intermittent bloody nipple discharge -> **intraductal papilloma** (masses not appreciated, benign)
- Acute pain/swelling sacrococcygeal skin in young males -> **pilonidal cyst**
- **Varicocele** -> dull, aching testicular pain (MC left side) -> swelling of pampiniform plexus ("bag of worms")
- High speed accident -> patchy irregular alveolar infiltrate -> **lung contusion**
- Tachypnic + hypoTN despite fluids -> **flail chest** (contused lung)
- Blunt deceleration trauma -> r/o **aortic trauma** -> CXR -> mediastinal widening
- Constant visceral pain radiating to back -> jaundice -> wt loss + anorexia -> **pancreatic cancer**
- Dyspnea, tachypnea, CP, hypoxemia worse with fluids, patchy infiltrates -> **pulmonary contusion**
- Oliguria/anuria, azotemia, BUN/Cr > 20 -> prerenal failure -> **IV fluid challenge**
- Moving from supine to **sitting** can increase FRC by 20-35% (reduce risk of atelectasis)
- Post-operative **ileus** is compounded by morphine and other opiates.
- Atelectasis from shallow breathing + weak cough 2/2 pain. POD # 2-3.
- Epidural hematoma -> uncal herniation -> oculomotor nerve deficits
- Whiplash injury -> post-traumatic **syringomyelia** years later -> MRI for diagnosis -> impaired strength/pain/temp in UE
- **Gastric outlet obstruction** -> clinical dx -> early satiety, nausea, non-bilious vomiting, wt loss. Acid ingestion -> **pyloric stenosis**
- **Acute cholecystitis** -> tx with obs + support initially -> elective chole
- At least 3 tetanus vaccinations, toxoid only. No tetanus Ig (even if greater than 10 yrs since last vaccination).
- Blunt abd trauma -> hemodynam unstable -> fluids first -> U/S exam (**FAST**)
- Anatomical snuffbox pain -> assume **scaphoid fracture** -> place in spica cast -> reimage (XR) in 2-3 wks
- **Esophageal perf** -> contrast study -> if +, primary closure + drainage of mediastinum
- Postgastrectomy -> **dumping syndrome** -> cramps, weakness, sweating, light-headedness -> dietary modification -> octreotide if resistant
- Wind, water, walking, wound, wonder-drugs: Pt develops fever POD #6, think **indwelling catheter infn** (femoral >> subclavian)
- **+ Trendelenburg sign** = contralateral hemipelvis drooping when standing on one foot (weakness of gluteus medius/minimus, innervated by superior gluteal nerve)
- S/p rhinoplasty -> whistling noise during respiration -> **septal perf**
- **Acalculous cholecystitis** (chronically ill ICU pt) -> GB distension, wall thickening, pericholecystic fluid -> emergent percutaneous cholecystostomy

- Air under diaphragm -> **emergent surgical eval** -> ex-lap
- **Marjolin ulcer –** SCC from burn wound (bx to confirm)
- Uncontrolled HTN + arrhythmia -> embolus -> **bowel infarction**
- First, **gentle traction** to align fragments of a fractured long bone -> prevent further neurovascular damage -> operative reduction later
- **Inflammatory breast cancer** -> erythema + edema -> axillary LAD -> bx for histology and tx based on findings (25% pt already have mets)
- **Uric acid stones** (needle) are radiolucent -> must CT or IVP (ureterolithiasis causes ileus)
- **Splenic trauma** related to HDS -> unstable but improves with fluids, then CT abdomen. Unstable and nonresponsive to fluids, emergent ex-lap
- **Tension pneumothorax** -> tachy, tachypnic, hypoTN, +JVD -> needle thorac.
- **Blunt abd trauma** w/ peritonitis or hemodyn instability -> ex-lap (if stable -> FAST)
- Traumatic decal injury -> veg state -> blurring grey-white interface on CT -> **diffuse axonal injury**
- **Tension pneumothorax** -> immediate needle of tube thorac.
- Hyperextension injuries of c-spine -> **central cord syndrome** -> UE > LE weakness
- Fever, dysphagia, drooling -> infn of 2nd or 3rd mandibular molar -> **Ludwig's angina** -> swollen mouth -> Abx + remove infected tooth (MCC death: asphyxiation)
- **SBO** -> IVF + NPO + NG tube gastric decompression
- **Torus palatinus** -> growth from hard palate in young pt -> reassurance
- **Spinal cord ischemia** with lower spastic paraplegia is a rare complication of AAA. Presents like anterior spinal artery deficiency (dorsal columns in tact)
- MC location of **stress fracture** is the tibia (jumping sports, gymnasts, etc)
- **Appendiceal rupture** -> tender pelvic abscess (fever, inc. WBC, malaise, lower abd pain, palpable on DRE)
- MCC frank hematochezia in elderly is **diverticulosis**.
- Non-displaced **scaphoid fracture –** cast immobilization; open reduction if XR shows displacement or angulation
- WBC >2000 (>75% PMNs), <25 glucose (low), + culture = **septic joint** -> must be surgically washed out
- Peritoneal irritation shortly after onset of abd pain -> think **ruptured peptic ulcer**.
- Always do **pregnancy test** before XR. Then XR -> CT if UPT - (U/S if +)
- Traumatic event + "crunching noise" -> **fracture of metatarsal**
- Trauma to neck -> angio to r/o carotid injury -> **intimal flap** of carotid -> surgery recommended (stenting alternative)
- Left subscapular, lower rib injury -> hematuria + retroperitoneal extravasation -> **CT with contrast** (best for solid organ dmg in stable pt)
- Breast trauma or surgery -> **fat necrosis** (mimic cancer) -> bx mass shows fat + foamy histiocytes -> regular breast exam + f/u mammorgram

- Long bone fracture -> dyspnea, confusion, petechiae -> **fat embolism** -> prompt respiratory support
- Uncomplicated diverticulitis -> complicated by **pelvic abscess** -> CT guided percutaneous drainage + abx
- **Mammogram** in all pt > 35 y/o with palpable lump (impt if FHx of breast ca)
- Ulcer under head of first metatarsal -> **DM neuropathy** – "diabetic foot"
- Elevated left diaphragm on XR -> think **diaphragmatic hernia** (also respiratory distress + mediastinal deviation)
- Seat belt sign -> **blunt abd trauma** -> IVF -> FAST -> if FAST not definitive then DPL -> if + hemoperitoneum, then laparotomy
- **Ruptured AAA** -> hypoTN + abd pain + CT evidence if stable (U/S if unstable) -> immediate surgery
- Wound pain + fever + tachy, cloudy-gray discharge, decreased sensitivity on edges, hx of DM -> **necrotizing surgical infn** -> surgical exploration
- **Posterior urethral injury** -> blood at meatus, pelvic fracture, scrotal hematoma, high riding prostate, inability to void despite urge, distended bladder -> retrograde urethrogram
- Knee "pop" -> **meniscal tear** -> gradual swelling (ligament tear has rapid swelling), + McMurray's test -> MRI definitive dx
- Biconcex hematoma -> **acute epidural** -> unconscious -> lucid interval -> gradual decline in consciousness
- Fall on outstretched arm or direct shoulder injury -> **clavicular fracture** -> shoulder displaced inferior and posterior -> audible bruit -> angiogram -> r/o brachial plexus injury too
- **Mild/moderate head injury** -> d/c if CT normal with precautions for return
- **Nonbleeding ulcers** managed with beta-blockers. Encephalopathy -> lactulose, ascites -> oral diuretics, PUD -> PPI
- 4 y/o unilateral hip/knee discomfort -> **Legg Calve Perthes dz** -> avascular necrosis of femoral head -> progressive antalgic gait + thigh atrophy
- **Slipped capital femoral epiphysis** -> obese adolescent males
- **Paget's dz of bone** - > inc. bone alk phos -> possible hearing loss 2/2 nerve impingement -> fractures or bone deformity
- Esophagitis (KCl, Candida infn) -> **esophageal perf** -> acute substernal pain -> gastrografin contrast esophagogram
- Hematochezia in elderly -> c-scope negative -> bleeding restarts -> **labeled erythrocyte scintigraphy**
- Blunt abd/pelvic trauma -> r/o intraperitoneal bleeding (FAST and DPL) -> if -, r/o retroperitoneal bleeding with pelvic angiogram
- Subluxation of radial head (**Nursemaid's elbow**) -> closed reduction by flexion and supination of forearm
- First changes in **hypovolemic shock** -> tachycardia and peripheral vasoconstriction

- **Bowel ischemia** 7% post-op aortoiliac vessel procedures -> dull pain + hematochezia
- Edema, stasis dermatitis, and venous ulcerations result from LE venous insufficiency 2/2 valve incompetence -> **venous HTN**
- Hyperventilation -> cerebral vasoconstriction -> **decrease ICP**
- **Developmental dysplasia of hip** -> abnl femur – acetabulum -> U/S of < 4 mo old, radiographs if > 4 mo
- **Polytrauma (abd + head)** -> tachypneic, tachy, hypoTN -> failed IVF response -> emergent ex-lap (continued bleeding)
- **Midshaft humeral fracture** -> injure radial nerve -> numbness + limited wrist extension
- Burst fracture of vertebra -> **anterior cord syndrome** -> loss of motor/pain below lesion bilaterally -> MRI for dx
- Always r/o **injury to spine** (even before CT head)
- Circumferential full-thickness burns of limbs/chest -> **escharotomy** to prevent vascular compromise/respiratory difficulty
- Colicky pain + episodic hyperactive BS typical of **complete SBO** -> laparotomy (especially if signs of strangulation)
- Give **tetanus toxoid** to a fully vaccinated pt if they have a severe injury and its been >5 yr since last booster
- Fat malabsorption or Crohn's dz -> inc. **oxalate** absorption -> inc. renal stone risk
- MCC LE edema -> **venous insufficiency** -> worsens throughout day
- **Penile fracture** -> retrograde urethrogram (r/o urethral injury) -> emergent surgery
- Popping sound + severe pain -> locking of knee joint during extension -> medial **meniscus tear**
- HDS and needs for transfusion determine surg vs. non-surg mgmt. of **splenic trauma**
- SLE pt (or anyone on chronic steroids) -> surgical procedure -> acute N/V, pain, hypoTN, hypoglycemia -> **adrenal insufficiency**
- Absent BS -> gaseous distention of bowels -> **paralytic ileus** -> often follows surgery or retroperitoneal hemorrhage associated with vertebral fracture
- EBV strongly related to **nasopharyngeal cancer**.
- Elderly pt with displaced femoral neck fracture -> **primary arthroplasty**
- **Volkmann's ischemic contracture** -> final stage of compartment syndrome -> dead muscle replaced with fibrous tissue
- **Intraabdominal abscess** -> CT scan -> osteo/abscess from hematogeneous spread of another site (skin, like a furuncle)
- Pulsatile abdominal mass + hypoTN = **ruptured AAA** until proven otherwise -> immediate laparotomy
- **Femoral nerve** innervates anterior thigh compartment (knee extensors + hip flexion)
- **Femoral shaft fracture** -> closed intramedullary fixation of fracture

- **Orotracheal intubation** and **surgical cricothyroidectomy** preferred way to create an upper airway in apneic pt with head injury.
- Acute **blood loss of 1500 mL** usually requires transfusion.
- MCC **peripheral artery aneurysms** – popliteal and femoral -> pulsatile mass -> compresses adjacent structures (nerve/vein) -> thrombosis/ischemia
- CXR required after placing **central line** to assess positioning.
- Bowel ischemia and infarction are possible early complications after **operating** on **abdominal aorta**.
- Classic presentation of **appendicitis** should be operated on immediately to prevent perf.
- Severe pain (especially with passive motion), paresthesias, pallor, and paresis -> **compartment syndrome** -> go back to O.R. for fasciotomy
- EtOH user -> protracted vomiting (resisting urge to vomit) -> **esophageal rupture** -> pneumomediastinum
- **Slipped capital femoral epiphysis** -> obese early adolescent males -> emergency -> external fixation of hip to prevent avascular necrosis of femoral head
- **Mastitis** -> Abx, analgesics, continue breast feeding
- MCC knee ligament injury = **MCL** -> MRI to detect complete and partial tears
- Cystic pancreatic lesion on CT in the setting of acute pancreatitis -> must consider **pancreatic abscess** -> drained (if no system toxicity, assume pseudocyst and manage expectantly)
- Suspected **child abuse** in burn pt -> never send patient home, and never confront directly -> inform that abuse is suspected -> admit pt and do skeletal survey
- **Perf peptic ulcer** -> sudden onset epigastric pain -> spreads to whole abdomen 2/2 chemical peritonitis -> upright XR free air under diaphragm
- Hypoventilation after abdominal hernia repair -> uses respiratory exercises to prevent **atelectasis** + pneumonia.
- **Trochanteric bursitis** -> middle-aged pt, superficial, unilateral hip pain when pressure is applied or external rotation
- Isolated **duodenal hematoma** in MC in children after blunt trauma -> treat with NG suction + parenteral nutrition
- **Rib fracture** -> pain relief -> prevents atelectasis and pneumonia
- >5 days of **appendicitis** symptoms w/ localized RLQ findings -> IV hydration + cefotetan (gram – and anaerobe coverage)
- **Duodenal rupture** -> retroperitoneal free air on XR -> CT with oral contrast for better characterization
- **Meniscal injury** -> days/weeks pass -> “locking” w/ extension of knee (mechanical symptom) -> arthroscopy or MRI -> surgery to correct
- Blunt trauma -> continued air leak (pneumomediastinum + subQ emphysema) in spite of chest tube placement -> **bronchial rupture**
- All hemodynamically unstable pt with **penetrating abdominal trauma** (ie, GSW to RUQ) -> emergent lap (r/o perf viscus to prevent sepsis)

- In **amputation injury** -> wrap amputated parts in saline-moistened gauze -> place in plastic bag -> place on ice -> bring to ER with pt
- **Carbon monoxide poisoning** (burning building) tx with 100% oxygen via facemask -> early symptoms: agitation, confusion, somnolence
- Blunt trauma -> deviated mediastinum + mass in left lower chest -> **diaphragmatic perf** -> barium swallow -> operative repair
- Post tonic-clonic seizure -> **posterior shoulder dislocation** -> arm adducted and internally rotated
- Stress (hairline) metatarsal fracture -> rest + analgesia first -> second, plaster casting
- **Osteosarcoma** -> MC primary malignancy of bone -> typically metaphyses of long bones -> bone pain but no systemic sx
- All **GSW to abdomen** (anything before nipple or 4th intercostal space) -> ex-lap
- Acute pancreatitis with secondary ileus -> think choledocholithiasis -> RUQ U/S -> supportive tx (NPO, IVF, analgesia)
- Surgery in mediastinum -> widened mediastinum post-op + S/sx infn (fever, CP, leukocytosis) -> **acute mediastinitis** -> drainage, debridement, Abx
- Evidence of **spinal injury** (anterior cord syndrome) -> stabilize pt -> high dose methylprednisolone within eight hours of injury
- Abd wall ecchymosis + distended abd + dec. BS -> **blunt abd trauma** -> if hemodynamically unstable, first fluid resuscitate -> then U/S -> if blood, then laparotomy
- Infant with cystic and transilluminated scrotal mass -> **hydrocele** -> reassurance + observation (most regress by 12 months old)
- **Fibrocystic breast** dz (benign) -> age 30-50 -> FNA -> non-bloody aspirate + disappears after aspiration -> observe for recurrence
- Bee sting -> **anaphylactic shock** (type I hypersensitivity) -> pruritis, flushing, urticarial common -> tx w/ subQ epi