

Orthopaedics Revision

<p>Osteoarthritis (OA)</p>	<ul style="list-style-type: none"> - due to: trauma, gradual wear & tear, avascular necrosis, haemochromatosis/haemophilia (⇒bleeding into joint ⇒inflammatory process ⇒cartilage destruction) & hyperparathyroidism (⇒↑osteoclast activity ⇒↓bone density & ↑Ca in blood) - hand joints affected: DIP (⇒Heberden's nodes), PIP (⇒Bouchard's nodes), 1st carpometacarpal (sublux/squaring of thumb base) - large joints affected: hips, knees & lumbar/cervical spine - X-ray findings (4 to remember): 1. joint space narrowing = ↓cartilage ⇒↓chondrocytes ⇒cartilage fissures ⇒microfractures in bone ⇒ 2. bony cysts, followed by bone repair ⇒ 3. subchondral sclerosis & 4. osteophytes - symptoms: joint pain (during activity, relieved by rest, worst at end of day), stiffness/gelling following inactivity, asymmetric joint involvement, locking due to loose bodies, crepitus, ↓range of movement - tests: bloods (show normal inflammatory markers = WCC, CRP & ESR) & synovial fluid are usually normal, check for haemochromatosis (↑Fe) & hyperparathyroid (↑PTH) - treatment: analgesia, ↓weight, exercise/physio, surgery (e.g. joint replacement) & occupational health support <p>N.B. when assessing joint pain remember these causes: monoarthritis (=septic arthritis, gout, pseudogout, OA) & polyarthritis (=reactive arthritis, RA)</p>
<p>Septic arthritis</p>	<ul style="list-style-type: none"> - identify route of infection: remote site spread, local spread (osteomyelitis, skin, soft tissue), iatrogenic spread (from needle therapies or diagnostics performed recently) or trauma - this condition is a surgical emergency - diagnosis: bloods (infection screen, inc. blood cultures if patient has a temp >38°), aspirate joint (send sample to microbiology), X-ray, further imaging (MRI or ultra sound) - treatment: antibiotics, immobilize +/- surgical washout - N.B. before starting antibiotics it is best to get the microbiology samples first
<p>Osteoporosis</p>	<ul style="list-style-type: none"> - ↓ bone matrix components ⇒ fractures with little/no trauma - common fractures: distal radius (Colles), neck of femur & wedge fracture of spinal vertebrae (in thoracic region ⇒ ↓height & kyphosis/dowager's hump) - primary causes = postmenopausal oestrogen deficiency, ↓intake of Ca/vitamin D, ↑alcohol & ↓exercise - can be secondary to: thyrotoxicosis, Cushing's disease, hyperparathyroid & steroid therapy - X-ray findings: narrow "pencil" of bones outer layer - bone densitometry is used to calculate bone density - treatment: stop smoking, ↓alcohol/caffeine, Ca & vitamin D supplements, bisphosphonates (inhibit bone reabsorption ⇒ ↓bone turnover), exercise, hormone replacement therapy (in post menopausal women) & prevent fractures
<p>Osteomyelitis</p>	<p>bone infection</p> <ul style="list-style-type: none"> - can be due to local spread (e.g. open fracture) or from a remote site of infection - presents with bone pain + fever - diagnose with: bloods + blood cultures, imaging (X-ray +/- CT), bone biopsy, & radionuclide scan (will show ↑bone activity in region of infection) - treatment: long term antibiotics +/- surgical removal of infected bone