

# Osteoarthritis

The background is a solid teal color. Faint, semi-transparent illustrations of human hands and arms are visible, showing the joints and bones. One hand is positioned in the lower left, and another is in the upper right, with their fingers pointing towards each other. The overall aesthetic is clean and medical.

- Most common type of arthritis (prevalence 66-100%); leading cause of disability in elderly
- **OA is an effect of biological and mechanical factors which cause the imbalance in synthesis and degradation of the cartilage and subchondral bony plate**
- OA leads to a joint failure – all structures of the joint undergo pathologic changes

### Location:

- OA affects cervical and lumbosacral spine, knee, hip, first metatarsal phalangeal joint, distal and proximal interphalangeal joints
- Ankle, wrist, elbow – are usually spared

### Structural changes:

- Cartilage loss, sclerosis of subchondral bony plate and osteophytes
- Stretching of the articular capsule, mild synovitis, weakness of muscle surrounding the joint

## Clinical symptoms:

- joint pain related to physical activity
- limitation of motion
- morning stiffness – shorter than in RA (< 30’)
- crackles
- secondary inflammation of the joint (exudative fluid),
- buckling
- not accompanied by the systemic symptoms!

## Risk factors:

- joint vulnerability

intrinsic factors: damage, muscle weakness, limb malalignment – varus knee (bowlegged) and valgus knee (knock-kneed) → increase stress on the focal area of cartilage

extrinsic factors: **age** (most potent), female gender, ethnic factors, genetic and nutritional factors)

- joint loading: obesity and injurious physical activities (sportsmen - footballer) – repetitive joint use for years – occupational (farmers, miners, carrying heavy loads)

## Diagnosis:

- Clinical symptoms accompanied with the typical X-ray signs (hand and hip pain)
  - radiographic findings poorly correlate with the severity of pain!
  - in early disease radiographs may reveal nothing
- None laboratory test are needed to establish OA

**Bouchard's nodules**



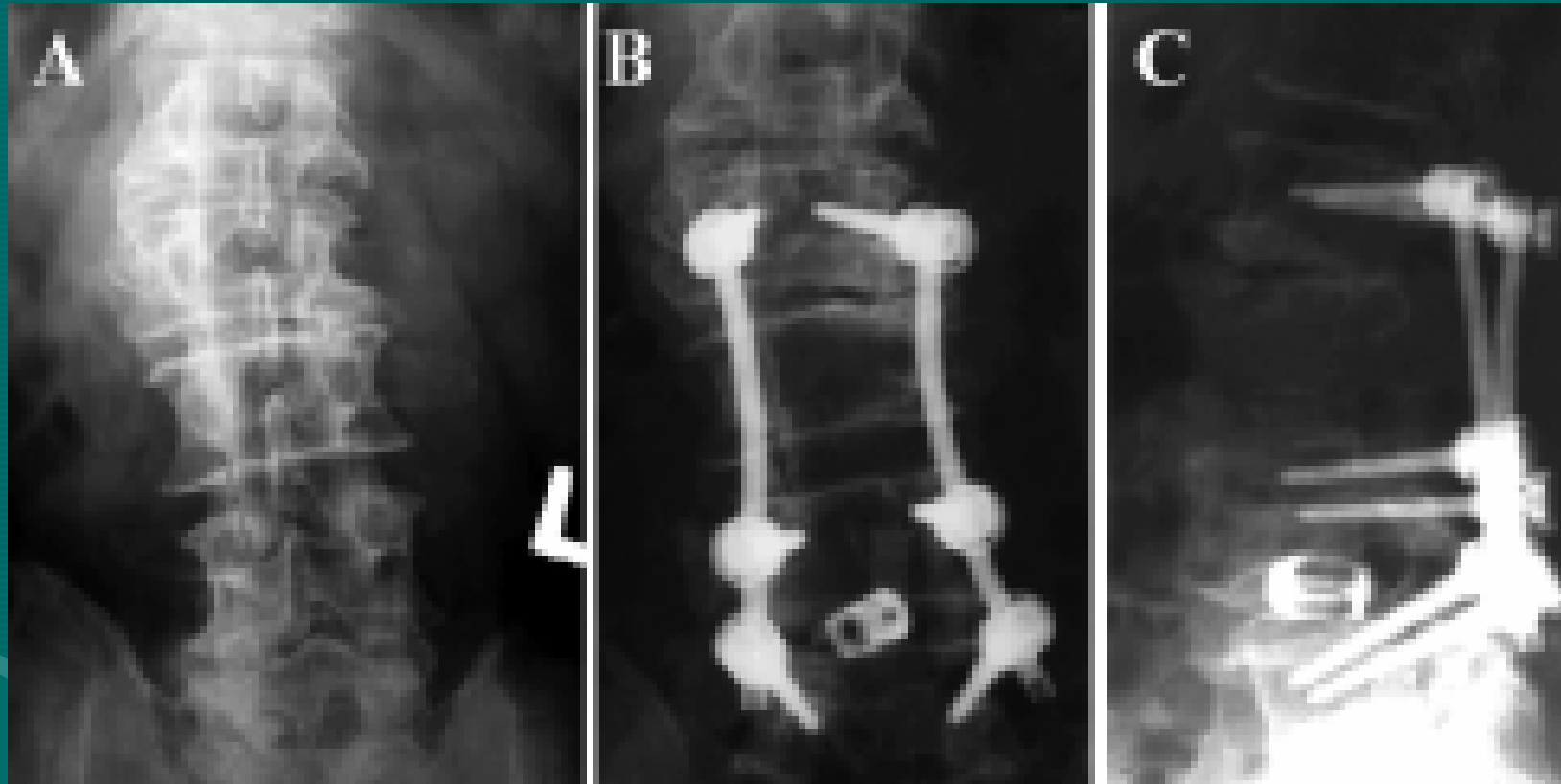
**Heberden's nodules**

**Cervical spondylosis: loss of cervical lordosis, lowered intervertebral discs, osteophytes**





# Lumbosacral spondylosis; neurosurgical stabilisation of discopathy



# Coxarthrosis



# Gonarthrosis



# Gonarthrosis



**Cartilage loss**

**Osteophytes**

**Sclerosis of  
subchondral bony plate**

## Treatment:

### Nonpharmacologic:

- avoid activities that overload the joint
- improve the strength of muscles – long term, systematic exercises
- unloading the joint, redistribution the load – using splint, cane, crutch

### Pharmacotherapy:

- Acetaminophen (paracetamol) – initial drug
- NSAIDs (ibuprofen, nabumetone are relatively safe)
- Opiates
- Intraarticular injections (hyaluronians, steroids)

### Surgery:

- Arthroscopic debridement and lavage
- Total hip or knee arthroplasty



