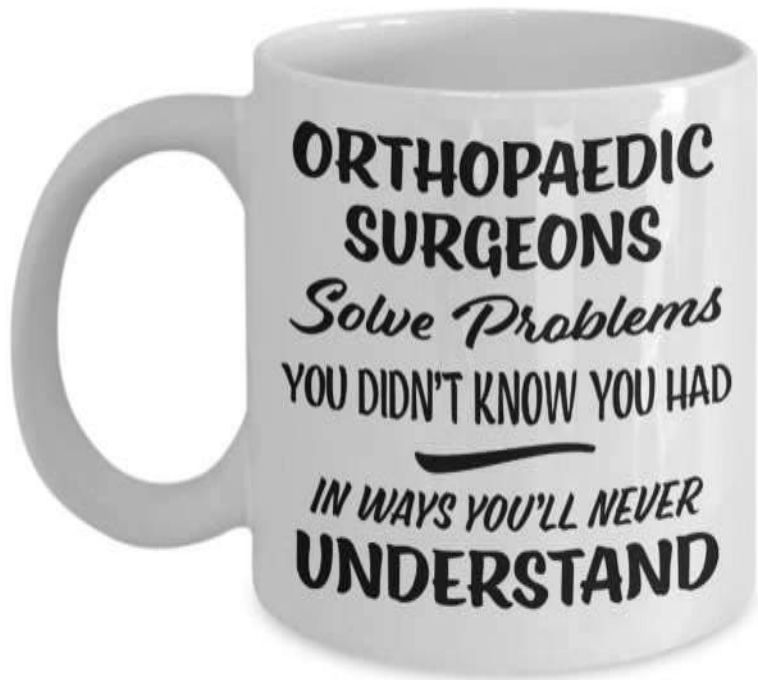


Arthritis and Arthroplasty

Mr Avadhoot Kantak
Consultant Orthopaedic surgeon
East Surrey Hospital.



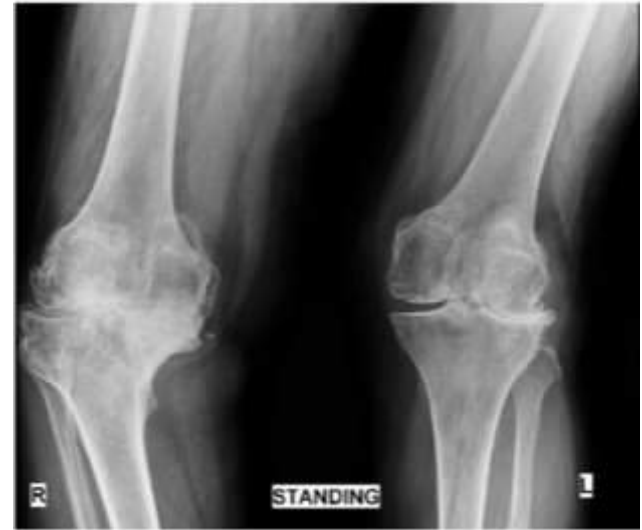


What is arthritis

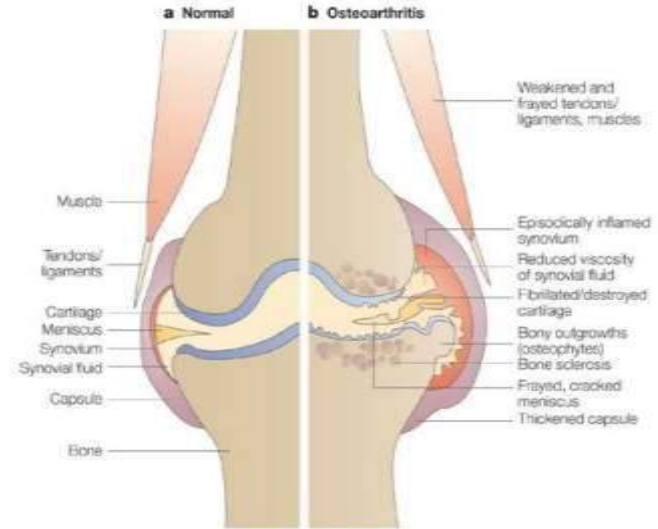
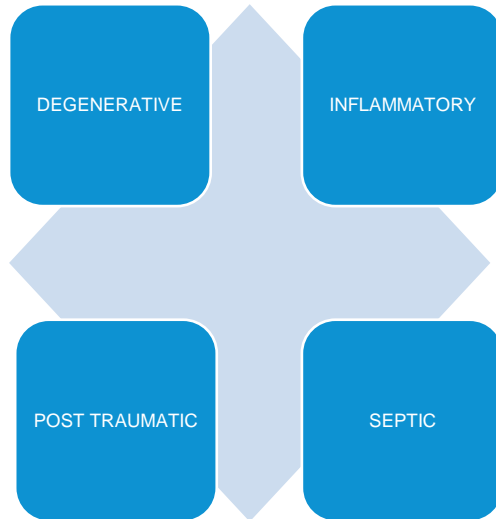
- A progressive condition affecting the cartilage of joints; causing destruction of structure and physiology of the hyaline cartilage, leading to pain, stiffness, deformity and loss of function.



Business Use



Aetiology of arthritis



Tribology

The word **“Tribology”** was first introduced in 1964 by *Dr H. Peter Jost*.

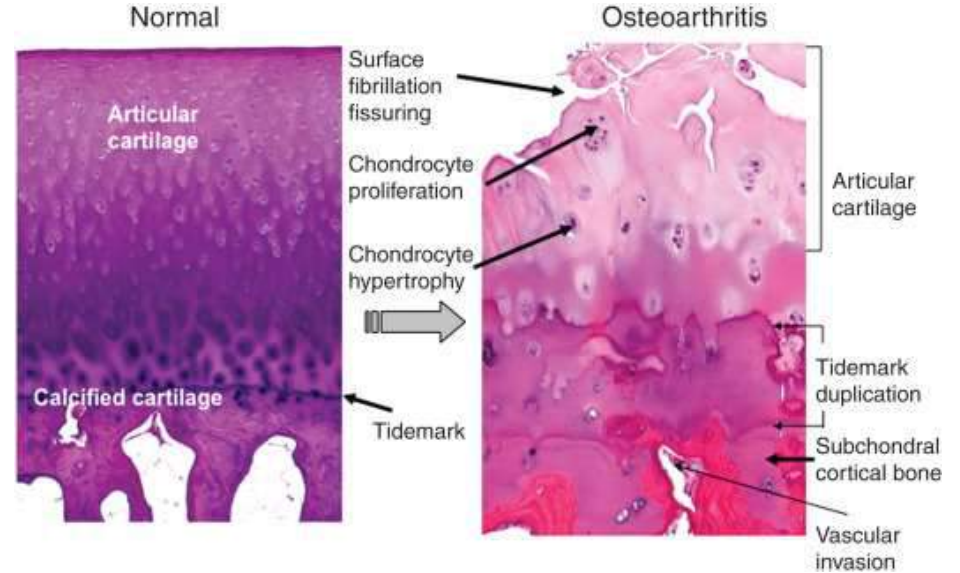
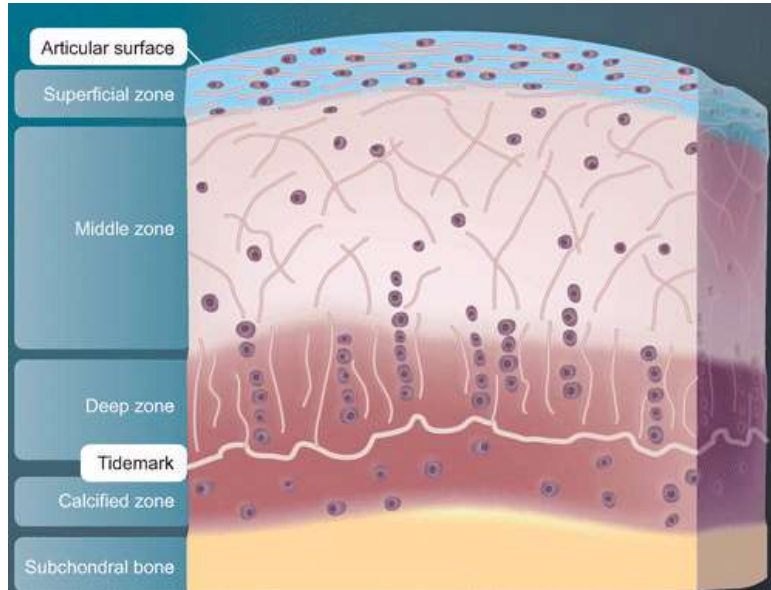


Tribology Triangle

Definition:

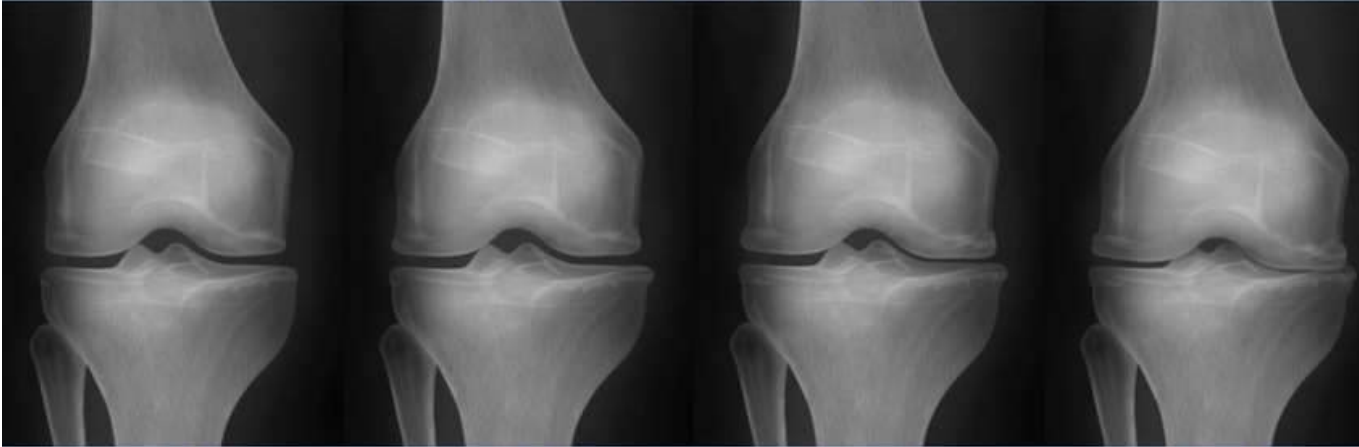
Tribology is an interfacial phenomenon that is affected by physical and mechanical properties of the two interacting surfaces as well as operational conditions.

Histology of Arthritis



Grading of arthritis

Kellgren-Lawrence (KL) grading scale



	Grade 1	Grade 2	Grade 3	Grade 4	
CLASSIFICATION	Normal	Doubtful	Mild	Moderate	Severe
DESCRIPTION	No features of OA	Minute osteophyte: doubtful significance	Definite osteophyte: normal joint space	Moderate joint space reduction	Joint space greatly reduced: subchondral sclerosis

Symptoms of arthritis



- Pain
- Stiffness
- Swelling
- Deformity
- Loss of mobility
- Loss of function
- Muscle loss

Treatment options

- Lifestyle changes
- Physiotherapy
- Supplements (Glucosamine, chondroitin, collagen, Omega 3/6 rich oils, vit D etc)
- Analgesia, NSAIDs
- Joint injections (Steroid, Hyaluronic acid??, PRP??, Lipogems??)
- Arthroscopy (????)
- Realignment Osteotomy
- Partial compartment replacement/ Resurfacing
- Total joint replacement

Joint replacement options

KNEE REPLACEMENT

- Fixed / Mobile bearing
- Unconstrained: Cruciate retaining/
Posterior stabilized.
- Constrained: Hinged
- Cemented/Uncemented
- With bone augmentation (For revision).
- Unicompartmental : Medial, Lateral
PFJ.
- Focal replacement: Hemicap

HIP REPLACEMENT

1. Cemented/uncemented.
2. Dual mobility/ constrained.
3. Ceramic/metal articulation.
4. Resurfacing.
5. Revision prosthesis with longer fixation,
bone augments, etc.



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THANK YOU

