

General Practitioner's Section

Selection of Knee Implant According to Stage of Arthritis

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Patients with knee arthritis present to treating surgeon at various stages joint involvement. This article will familiarize you with these stages and appropriate knee implant for each stage of arthritis to get maximum function after the surgery

Stages of knee arthritis

For varus knees



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Grade I

Decreased medial joint space

Minimal pain, mainly on medial side of the joint

More on activities, relieved with rest

Treatment usually non operative

If the patient does not respond, Uni compartmental knee replacement is ideal choice.



Grade II

Total loss of medial joint space

Pain even at rest

Non operative treatment usually not very successful.

If lateral and patello femoral compartments still normal, unicondylar replacement may suffice.

If other compartments also show arthritic changes, total replacement is better choice.

Unicondylar knee replacement

Ideal for uni compartmental disease

Suitable for Grade I or II arthritis

Small approach

Early and Full functional recovery



Sitting on floor after knee replacement

Grade III

Medial condylar defect

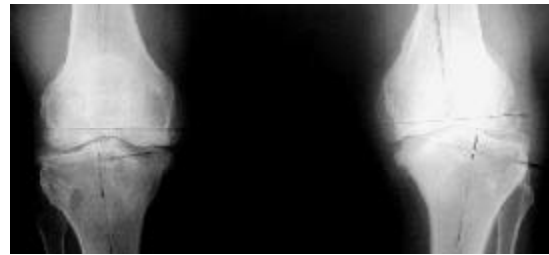
More axis deviation

Early subluxation of tibia laterally

NO ROLE of non operative treatment

Total knee replacement is ideal choice

Full function can still be achieved with good surgical technique



Modular implants



Most commonly used implant

Suitable for Grade II and III arthritic knees
Can be used for majority of knee arthritis cases

Gives flexion upto approximately 100 degrees

Hiflex rotating platform implant



Allows almost full knee bending
Suitable for Grade II and III arthritic knees
Sitting on floor is possible with this implant

Gender Specific Hiflex knee

Allows almost full knee bending
Suitable for Grade II and III arthritic knees
Specially designed for Female patients
Is light in weight, has features which allow better patellar gliding and hence better function

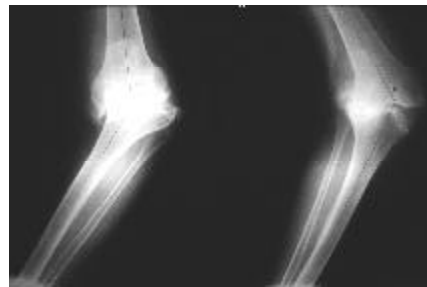


Knee deformity corrected after surgery

Grade IV

Gross deformity
Tibial subluxation
Total knee replacement
May require specialized revision implants which is Suitable for Grade IV arthritic knees.
Useful when there is bone loss and weak bones.

Many features like long rods, wedges, augments which bail out in difficult situations.



Revision Implants





X-ray after surgery with revision implants

Constrained

Rotating Hinge implant



Specially designed for situation where the ligament support is totally lost.

Conclusion

The current implants have longevity up to 20 years, hence even young arthritics can be operated giving them pain free function in their productive years. With advanced arthritis leading to bony defects and ligament instability, the surgery gets more complicated and results get compromised, hence it is important to guide the patients to undergo early surgery.