

## STANDARD TREATMENT WORKFLOW (STW)

# OSTEOARTHRITIS OF KNEE JOINT

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### Standard Treatment Workflow (STW) OSTEOARTHRITIS OF KNEE JOINT ICD-10-M19. 9



SYMPTOMS	SIGNS
<ul style="list-style-type: none"><li>· Pain that increases with activity &amp; relieves with rest</li><li>· Joint stiffness especially in the morning or after a period of rest for short duration</li><li>· Decrease in Range of Motion (ROM) of the knee, making it difficult to stand from sitting position, get in and out of chair or car, stair climbing, or walk</li><li>· Creaking, crackling sounds on movement of knee</li><li>· Swelling and feeling of warmth in the joint may be present</li></ul>	<ul style="list-style-type: none"><li>· Joint line tenderness</li><li>· Patello-femoral crepitus</li><li>· Decreased ROM</li><li>· Deformity (commonly flexion and varus)</li><li>· Joint effusion and synovial thickening may be present</li></ul>
	INVESTIGATION
	<ul style="list-style-type: none"><li>· X-rays</li><li>· Bilateral Knee - AP (standing) and lateral views</li></ul>

MANAGEMENT



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**MANAGEMENT**

**KELLGREN AND LAWRENCE (RADIOLOGICAL) CLASSIFICATION OSTEOARTHRTIS OF KNEE**

**Classification**

- **Grade 0:** No radiographic features of OA are present
- **Grade 1:** Doubtful Joint Space Narrowing (JSN) and possible osteophytic lipping
- **Grade 2:** Definite osteophytes and possible JSN on anteroposterior weight-bearing radiograph
- **Grade 3:** Multiple osteophytes, definite JSN, sclerosis, possible bony deformity
- **Grade 4:** Large osteophytes, marked JSN, severe sclerosis and definite bony deformity

• High tibial osteotomy may be considered in younger patients with significant varus deformity

**Indications of surgery for total knee replacement**

Patients with osteoarthritis Kellgren and Lawrence grade 4 with following features may require surgery after appropriate conservative treatment has failed

- Severe knee pain or stiffness that limits activities of daily living including walking, climbing stairs, and getting in and out of chairs
- Patient unable to walk short distances (due to significant knee pain) and requires use of a cane/walker
- Regular analgesic requirement over a long period
- Moderate or severe knee pain while on rest either day or night
- Severe deformity

**CONSERVATIVE TREATMENT**

- Topical NSAIDs
- Oral Acetaminophen
- Oral NSAIDs (If not contraindicated) as and when required

- Quadriceps strengthening and Hamstring stretching exercises
- Lifestyle modifications such as avoid cross legged sitting and squatting and stair climbing wherever possible
- Weight loss

**CONTRAINDICATIONS FOR KNEE REPLACEMENT**

- Recent or current knee sepsis
- Remote source of ongoing infection
- Extensor mechanism discontinuity or severe dysfunction
- Recurvatum deformity secondary to neuromuscular weakness
- Presence of a painless, well-functioning knee arthrodesis

Grade 0 No OA	Grade 1 Doubtful OA	Grade 2 Mild OA	Grade 3 Moderate OA	Grade 4 Severe OA
				
No Osteophytes	Possible Osteophytes	Definite Osteophytes	Moderate Osteophytes	Large osteophytes
No JSN	Doubtful JSN	Possible JSN	Definite JSN	Great JSN

**ABBREVIATIONS**

**AP:** Antero-posterior

**NSAIDs:** Non-steroidal Anti-inflammatory Drugs

**OA:** Osteoarthritis

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**KEEP A HIGH THRESHOLD FOR INVASIVE PROCEDURES**

This STW has been prepared by national experts of India with feasibility considerations for various levels of healthcare system in the country. These broad guidelines are advisory, and are based on expert opinions and available scientific evidence. There may be variations in the management of an individual patient based on his/her specific condition, as decided by the treating physician. There will be no indemnity for direct or indirect consequences. Kindly visit the website of ICMR for more information; ([icmr.gov.in](http://icmr.gov.in)) for more information. ©Indian Council of Medical Research, Ministry of Health & Family Welfare, Government of India.