

# STANDARD TREATMENT WORKFLOW (STW)

## HIP OSTEOARTHRITIS

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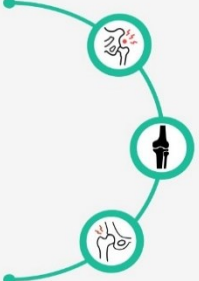
The infographic is titled "Standard Treatment Workflow (STW) HIP OSTEOARTHRITIS ICD-10-M16.9". It features logos for the Department of Health Research, Ministry of Health and Family Welfare, Government of India, and the Indian Council of Medical Research (ICMR). On the left, a vertical flow diagram shows three icons: a hand holding a hip, a person walking, and a hand holding a hip. The main content is organized into several colored boxes:

- SYMPTOMS & SIGNS** (Orange box):
  - Pain
    - During or after movement
    - Joint stiffness
    - Tenderness
    - Loss of flexibility & restricted range of hip movement
    - Grating sensation
    - Deformity
- PRIMARY** (Yellow box):
  - Very rare
- SECONDARY** (Green box):
  - Developmental dysplasia of hip
  - Osteonecrosis
  - Failed reconstruction
  - Post-traumatic
  - Tuberculosis
  - Coxa plana (Legg-Calvé-Perthes disease)
  - Slipped capital femoral epiphysis
  - Paget's disease
  - Hemophilia
- MANAGEMENT** (Green box):
  - CONSERVATIVE MEASURES** (Orange box):
    - Weight loss
    - Non-opioid analgesics (as per need)
  - KELLOGREN (1963) DESCRIBED 4 GRADES OF HIP OA** (Green box):
    - Grade 1 (doubtful OA), Possible narrowing of the joint space medially and possible osteophytes around femoral head



Department of Health Research  
Ministry of Health and Family Welfare, Government of India

**Standard Treatment Workflow (STW)**  
**HIP OSTEOARTHRITIS**  
**ICD-10-M16. 9**



SYMPTOMS & SIGNS	PRIMARY
<b>Pain</b> <ul style="list-style-type: none"> <li>• During or after movement</li> <li>• Joint stiffness</li> <li>• Tenderness</li> <li>• Loss of flexibility &amp; restricted range of hip movement</li> <li>• Grating sensation</li> <li>• Deformity</li> </ul>	<ul style="list-style-type: none"> <li>• Very rare</li> </ul>
	<b>SECONDARY</b> <ul style="list-style-type: none"> <li>• Developmental dysplasia of hip</li> <li>• Osteonecrosis</li> <li>• Failed reconstruction</li> <li>• Post-traumatic</li> <li>• Tuberculosis</li> <li>• Coxa plana (Legg-Calvé-Perthes disease)</li> <li>• Slipped capital femoral epiphysis</li> <li>• Paget's disease</li> <li>• Hemophilia</li> </ul>

MANAGEMENT

CONSERVATIVE MEASURES

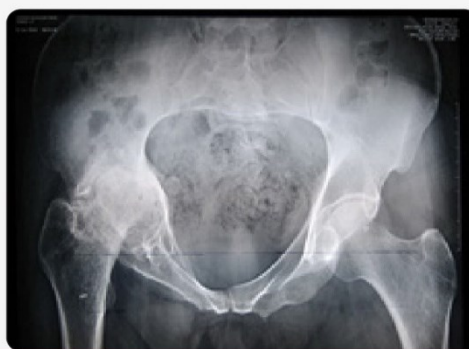

- Weight loss
- Non-opioid analgesics (as per need)
- Reasonable activity modification
- Avoid standing for long hours, climbing stairs, squatting, sitting cross legged
- Hip abductor and extensor muscle strengthening exercises and quadriceps exercises
- Ambulatory aids like walking stick

KELLOGREN (1963) DESCRIBED 4 GRADES OF HIP OA

- **Grade 1 (doubtful OA)**, Possible narrowing of the joint space medially and possible osteophytes around femoral head
- **Grade 2 (mild OA)**, Definite narrowing of the joint space inferiorly, definite osteophytes and slight sclerosis
- **Grade 3 (moderate OA)**, Marked narrowing of the joint space, slight osteophytes, some sclerosis and cyst formation, and deformity of the femoral head and acetabulum
- **Grade 4 (severe OA)**, Gross loss of joint space with sclerosis and cysts, marked deformity of the femoral head and acetabulum, and large osteophytes

INDICATIONS OF TOTAL HIP REPLACEMENT (THR)

- Patients with osteoarthritis of hip, Kellgren & Lawrence Grade-IV with following clinical features may require surgery after appropriate conservative treatment has failed
- Deformity & pain that significantly limits the activities of daily living
- Disabling hip pains that continues even at rest
- Daily requirements of analgesic
- Bilateral ankylosis of hip joints

ABBREVIATIONS

**OA:** Osteoarthritis

**THR:** Total Hip Replacement

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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.