Examination of the Hip

This document is based on the handout from the “Surgery for Finals” course. The notes provided here summarise key aspects, focusing on areas that are popular in clinical examinations. They will complement more detailed descriptions and are not intended to be comprehensive.

Follow the scheme: inspection, palpation, movement, measurement.

• Introduce yourself & ask permission
• Patient supine, with one pillow and legs exposed
• Check position of pelvis- your left elbow over right asis, hand over patient’s left asis
• Look for fixed adduction deformity, with tilted pelvis and apparent shortening of that leg

**Fixed Adduction Deformity of Left Hip**

Compensation by developing a scoliosis leading to:

- Elevation of left anterior superior iliac spine
- Pelvic outlet points towards affected side
- Apparent leg shortening due to elevation of pelvis and hip joint

**Inspect**

• Look for bony abnormalities: position of spine, knees, ankles and feet
• Look for soft tissue abnormalities eg gluteal or quads wasting
• Look for scars (eg previous hip replacement)
• Look for sinuses (eg after infected THR; sometimes treated by Girdlestone excision arthroplasty)
Palpation

- Skin temperature
- Check just under mid-inguinal point (joint line)
- But remember hip joint deep and unusual to find localising tenderness
- Check for tenderness over trochanters (trochanteric bursitis)

Thomas’ Test

Fixed flexion deformity of right hip - compensated for by increased lumbar lordosis. Allows bottom of pelvis to tilt backwards: legs can then be flat on couch or vertical when standing.

- Increased lumbar lordosis

Flexion of normal hip to eliminate lumbar lordosis results in flexion of abnormal hip

- Angle of fixed flexion deformity

Movements

- Flexion - 130°
- Thomas’ test- flex opposite side to eliminate lumbar lordosis; affected side lifts up to reveal fixed flexion which had been hidden by compensatory pelvic tilt
- Abduction: stabilise asis; normal to 45°
- Adduction: 30°

Hip rotation

- With legs extended, look at movement of knees and feet
- With hips flexed and knees flexed to 90°
- Note foot moving **out** = **internal** rotation
- Rotation often affected early in OA
- Normal rotation is 45° each way
Ask the patient to stand
- Extent of lordosis (sometimes exaggerated to compensate for fixed flexion of hip)
- ? Scoliosis with pelvic tilt compensating for fixed adduction deformity; leads to apparent shortening on that side
- Gait: painful hip causes antalgic gait with body leaning towards affected side and reduced duration of weight bearing

Trendelenberg test
- Sit on chair facing patient who rests his hands on your shoulders
- Ask patient to stand on one leg
- Hip on opposite side (ie side of lifted leg) should rise as the hip abductors on standing side contract to stabilise pelvis
- Weak hip abductors or disturbance of the hip pivot leads to opposite hip falling

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**Trendelenberg’s Test**

Patient stands on one leg - to test the hip abductors of the weight bearing side

Pelvis normally rises slightly on lifted side

Positive test - pelvis falls on lifted side

Trunk tilts to affected side to maintain centre of gravity

weak abductors or disturbed hip pivot

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Measure!
- Inspection
- Palpation
- Movement
- Measurement
Only make measurements if relevant or if asked. There is rarely time to do this in the examination, but you might say “I would go on to measure true and apparent leg length”. The diagram below explains the underlying principles.

**Fixed Adduction Deformity of Left Hip**

- Elevation of left anterior superior iliac spine

Measure distance from umbilicus to medial malleoli: difference between sides is apparent shortening

True leg length is normal unless other problems (measured from asis to malleolus with legs at same angle)