

Hip, Buttock, Thigh & Knee Exam

Hip Range-of-Motion

<u>Plane of Motion</u>	<u>Normal Range</u>	<u>AROM</u>		<u>PROM</u>		<u>Symptom provocation</u>	<u>End-Feel:</u>
		<u>Left</u>	<u>Right</u>	<u>Left</u>	<u>Right</u>		
							<i>All: bony → DJD (abnormal)</i>
Flexion	150						Normal: soft-tissue approximation <i>Empty → “sign of buttock” lesion</i>
Extension	30						Normal: soft-tissue stretch
Internal rotation	40						Normal: soft-tissue approximation
External rotation	50						Normal: soft-tissue stretch
Abduction	40						Normal: soft-tissue stretch
Adduction	20						Normal: soft-tissue approximation and stretch

Capsular pattern:

- Marked limitation of flexion and internal rotation
- Some limitation of abduction and extension
- Little or no limitation of adduction and external rotation

Knee Range-of-Motion

<u>Plane of Motion</u>	<u>Normal Range</u>	<u>AROM</u>		<u>PROM</u>		<u>Symptom provocation</u>	<u>End-Feel</u>
		<u>Left</u>	<u>Right</u>	<u>Left</u>	<u>Right</u>		
Flexion	150						<i>Hard → DJD</i> <i>Full → popliteal swelling</i>
Extension	up to -5 in adults, more in children						<i>Rubbery bounce → meniscus</i> <i>Mushy → cruciate sprain</i>
External rotation	(not measured)						<i>Mushy → medial coronary ligament, MCL sprain</i>

Internal rotation	(not measured)							<i>Mushy → lateral coronary ligament sprain</i>
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Capsular pattern: suggests traumatic, degenerative or seropositive arthritis, avascular necrosis

- Gross limitation flexion
- Slight limitation of extension
- Limitation rotation only on end-stage arthritis

Knee Joint Stability/End-feel Tests. Note:

1. Hypermobility < laxity < gross instability
2. End-feel.
3. Symptom provocation.

<u>Joint/Direction</u>	<u>Left</u>	<u>Right</u>
Anterior drawer		
Posterior sag/drawer		
Medial/valgus stress		
Lateral/varus stress		
Medial rotation stress		
Lateral rotation stress		
Lateral shear		
Superior tib-fib posterior stress		

Manual Strength Testing. Scale:

0 = no strength

1 = palpable/visible contraction that fails to move joint even with gravity eliminated

2 = motion with gravity eliminated

3 = full AROM against gravity but not against resistance

4 = partial AROM against resistance

5 = full pain-free strength against resistance

Note also:

- Initial strength followed by early fatigue, cog-wheeling painful give-way, vs.
- Delayed initiation and smooth painless weakness

<u>Muscle</u>	<u>Left</u>	<u>Right</u>
Gluteus maximus		
Gluteus medius		
Gluteus minimus		
Piriformis + 5 external rotators		
Tensor fascia lata		
Iliopsoas		
Thigh adductors		
Rectus femoris		
Sartorius		
Medial hamstrings		
Lateral hamstrings		
Medial quadriceps		
Lateral quadriceps		