

## Total Knee Arthroplasty Rehabilitation Protocol

<b>Phase 1</b>		<b>Days 1 to 3</b>	
Rehabilitation Goals		<ul style="list-style-type: none"> <li>To protect the integrity and healing of the incision and arthrotomy</li> </ul>	
Suggested Therapeutic Exercise/Treatment		<ul style="list-style-type: none"> <li>Limit passive knee flexion to 90° until first post-op visit (approximately 2 weeks)</li> <li>No aggressive active knee extension</li> <li>May initiate active knee flexion in a controlled fashion</li> <li>WBAT with walker</li> <li>CPM 0-90°</li> <li>ROM 0-70°</li> <li>Cryotherapy</li> <li>Exercises: Foot pumps, quad sets, SLR, knee extension 0-30°, hamstring stretches, passive knee extension</li> </ul>	

		<b>Day 4 to 14</b>	
Rehabilitation Goals		<ul style="list-style-type: none"> <li>Continue to protect the integrity and healing of incision with limitations listed above</li> </ul>	
Suggested Therapeutic Exercise/Treatment		<ul style="list-style-type: none"> <li>WBAT as tolerated</li> <li>CPM 0-90°</li> <li>ROM 0-90°</li> <li>Gait training – instruct in transfers and stairs</li> <li>Foot pumps</li> <li>Quad sets</li> <li>SLR</li> <li>Knee extension 0-90°</li> <li>Hamstring stretches, passive knee extension: concentrate on full extension</li> <li>Hip Abduction / Adduction</li> </ul>	

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Phase 2	Weeks 2 to 4
Rehabilitation Goals	<ul style="list-style-type: none"> <li>• Improve muscular strength, advance ROM, decrease inflammation, and swelling</li> <li>• Knee flexion:               <ul style="list-style-type: none"> <li>○ Week 2 – 100 - 105°</li> <li>○ Week 3 – 110 - 115°</li> <li>○ Week 4 - 125°+</li> </ul> </li> </ul>
Suggested Therapeutic Exercise/Treatment	<ul style="list-style-type: none"> <li>• Foot pumps</li> <li>• Quad sets</li> <li>• SLRs,</li> <li>• Knee extension 0-90°</li> <li>• Hamstring stretches</li> <li>• Passive knee extension: concentrate on full extension</li> <li>• Hip Abduction / Adduction</li> <li>• Hamstring curls</li> <li>• Quarter squats</li> <li>• Bike for ROM: low resistance, easy pace</li> <li>• NOTE: Before beginning next phase of rehabilitation, patient should be able to do SLR on their own, active ROM 0-90°, have controlled swelling, and be able to ambulate independently</li> </ul>

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<b>Phase 3</b>	<b>Weeks 5 to 12</b>
Rehabilitation Goals	<ul style="list-style-type: none"> <li>• Improve muscular strength</li> <li>• Increase functional activity</li> <li>• Greater control of leg for daily activity</li> </ul>
Criteria to enter Phase 3	<ul style="list-style-type: none"> <li>• Range of motion 0-115 degrees</li> <li>• Voluntary quadriceps muscle control</li> <li>• Independent ambulation</li> <li>• Minimal pain/inflammation</li> </ul>
Suggested Therapeutic Exercise/Treatment	<ul style="list-style-type: none"> <li>• WBAT with assistive device as needed</li> <li>• Continue all exercises listed above</li> <li>• Slowly begin walking program</li> <li>• Closed kinetic chain strengthening program: emphasizing eccentric and concentric strengthening</li> </ul>

<b>Phase 4</b>	<b>Weeks 12-24</b>
Rehabilitation Goals	<ul style="list-style-type: none"> <li>• Allow patients to return to advanced level of function (recreational activities)</li> <li>• Maintain/improve strength and endurance of lower extremity</li> <li>• Return to normal lifestyle</li> </ul>
Criteria to enter Phase 4	<ul style="list-style-type: none"> <li>• Full, non-painful ROM 0-120 degrees</li> <li>• Minimal to no pain and swelling</li> <li>• Satisfactory clinical examination</li> </ul>
Suggested Therapeutic Exercise/Treatment	<ul style="list-style-type: none"> <li>• Instruct on maintenance home exercise program <ul style="list-style-type: none"> <li>○ Bike for ROM stimulus and endurance</li> <li>○ Strengthening</li> <li>○ Stretching <ul style="list-style-type: none"> <li>▪ Knee extension to 0 degrees</li> <li>▪ Knee flexion to 105 degrees</li> </ul> </li> </ul> </li> <li>• Initiate gradual golf tennis, swimming, bicycle, walking program</li> </ul>