



**Kevin B. Freedman, M.D.**

Sports Medicine  
 825 Old Lancaster Rd, Suite 200  
 Bryn Mawr, PA 19010-3470  
 Phone: (800) 321-9999  
 Fax: (267) 479-1321

## ACL RECONSTRUCTION (PATELLA TENDON GRAFT)\* WITH AUTOLOGOUS CHONDROCYTE IMPLANTATION (FEMORAL CONDYLE) REHABILITATION PROTOCOL

	<b>WEIGHT BEARING</b>	<b>BRACE</b>	<b>ROM</b>	<b>THERAPEUTIC EXERCISES</b>
<b>PHASE I 0 - 12 weeks</b>	<p><b>0-2 weeks:</b> non-weight bearing</p> <p><b>2-4 weeks:</b> partial weight bearing (30 - 40 lbs) with crutches</p> <p><b>4-6 weeks:</b> progress to one crutch</p> <p><b>6-12 weeks:</b> progress to full weight bearing without crutches</p>	<p><b>0-2 weeks:</b> locked in full extension (removed for CPM and exercise)</p> <p><b>2-6 weeks:</b> gradually open 20° at a time as patient gains quad control - discontinue use of brace when patient has good quad control, but no sooner than 6 weeks</p>	<p><b>0-4 weeks:</b> CPM: use in 2 hour increments for 6 - 8 hours per day, begin at 0-30°, 1 cycle/minute - after week 3, increase flexion by 5-10° daily</p>	<p><b>1-2 weeks:</b> active/passive ROM, active knee extension 90-60°, quad/hamstring sets, SLR, begin active hamstring strengthening</p> <p><b>2-6 weeks:</b> progress exercises in phase I, add resistance above the knee, begin closed chain exercises keeping weight bearing restrictions in mind</p> <p><b>6-10 weeks:</b> weight shifting activities, progress closed chain and hamstring strengthening, forward/backward treadmill walking, begin Stairmaster</p> <p><b>10-12 weeks:</b> progress closed chain activities using resistance less than patient's body weight, open chain knee extension 90-30°, continue hamstring strengthening, balance activities</p>
<b>PHASE II 12 weeks - 6 months</b>	Full with a normalized gait pattern	None	Maintain full active/passive range	Advance closed chain exercises, begin full ROM active knee extension*, progress treadmill - initiate light jog
<b>PHASE III 6 - 12 months</b>	Full with a normalized gait pattern	None	Full and pain-free	Initiate slight incline with treadmill jog, emphasize single leg loading, begin progressive running and agility program- including sport-specific activities

\*Monitor for signs of patella femoral irritation