

NON-OPERATIVE TREATMENT OF ACUTE GRADE III MEDIAL KNEE INJURIES

Goals for all Phases	<ul style="list-style-type: none"> • Early, pain-free full range of motion of the knee. • Minimal loss of quadriceps strength. • Healing of injured ligament complex with little to no residual instability.
Phase 1: 1 to 2 weeks	<p>Ice:</p> <ul style="list-style-type: none"> • Ice knee as tolerated and as needed based on symptoms. <p>Weight bearing:</p> <ul style="list-style-type: none"> • Use crutches and apply touchdown to partial weight bearing and progress as tolerated. • Progress to 1 crutch (on opposite side), then discontinue crutches only when normal gait is possible. <p>Brace:</p> <ul style="list-style-type: none"> • Hinged knee brace set from 0° to 90° of knee flexion. <p>Range of motion:</p> <ul style="list-style-type: none"> • Emphasise full extension. • Progress flexion as tolerated. <p>Therapeutic exercises:</p> <ul style="list-style-type: none"> • Quadriceps sets: 30 repetitions, 10 times a day. • Straight leg raises. No weights. The knee must be held in full extension (no sag). If not, exercise is performed with brace locked in full extension. • Range-of-motion exercises as tolerated. • Sitting hip flexion, 10 sets of 10 repetitions daily. • Side lying hip abduction, 10 sets of 10 repetitions daily. • Standing hip extension, 10 sets of 10 repetitions daily. • Standing hamstring curls, as tolerated; if painful, discontinue. • Bike, as comfortable, 10 to 20 minutes, low resistance, start as soon as possible. • No limits on upper extremity workouts that do not affect the injured knee.
Phase 2: 3 to 4 weeks	<p>Weight bearing:</p> <ul style="list-style-type: none"> • As tolerated with hinged brace. <p>Range of motion:</p> <ul style="list-style-type: none"> • Full extension. • Progressive flexion as tolerated. <p>Therapeutic exercises:</p> <ul style="list-style-type: none"> • Progress above exercises as tolerated to 2 to 4 kgs. • Progress to 20 minutes of exercise biking daily; increase resistance as tolerated. • This is the key exercise to promote healing, rebuild strength, and maintain aerobic conditioning. • Progress to weight-room exercises. • Limit the injured knee's range of motion to between 0° and 90° of knee flexion when lifting weights (in the brace).



	<ul style="list-style-type: none"> • Hamstring curls. • Leg presses: double-leg press and single-leg press on injured side. • Progress isokinetics. • Step-ups. <p>Precaution:</p> <ul style="list-style-type: none"> • Examination by Dr Barrow is necessary at approximately 3 weeks to verify ligament healing.
Phase 3: 5 weeks	<p>Weight bearing:</p> <ul style="list-style-type: none"> • Gait in hinged knee brace through 6 weeks, as comfortable. <p>Brace:</p> <ul style="list-style-type: none"> • Gradually open full per quadriceps control. • Discontinue use when ambulating with full weight bearing and no gait deviation. <p>Range of motion:</p> <ul style="list-style-type: none"> • Full, symmetrical. <p>Therapeutic exercises:</p> <ul style="list-style-type: none"> • Continue at least 20 minutes of daily exercise bike program. • Resistance should be progressively increased at each session. • Progress to weight-room exercises. • Limit motion to 30° to 90° of knee flexion while performing leg presses, squats. • Hamstring curls. • Leg presses: double-leg press and single-leg press. • Progress isokinetics. • Step-ups. • Progress walk-to-run, as tolerated, once cleared by Dr Barrow. • Progress agilities from balanced to unilateral exercises (single-leg hop-scotch jumps). <p>Precautions:</p> <ul style="list-style-type: none"> • Verify healing by Dr Barrow at 5 to 6 weeks to progress to next level. • Verify with stress radiographs as needed.
Phase 4: 6 weeks	<p>Brace:</p> <ul style="list-style-type: none"> • Discontinue brace with gait, wear for contact sport for at least 3 months. • Protective use when out of home, hinged brace open per quadriceps control. <p>Range of motion:</p> <ul style="list-style-type: none"> • Full, symmetrical. <p>Therapeutic exercises:</p> <ul style="list-style-type: none"> • Continue daily exercise bike use through 12 weeks after injury (at least 20 minutes per day). • Progress sport-specific exercises. <p>Precaution:</p> <ul style="list-style-type: none"> • Return to competition once full motion and strength return and the patient passes a sport functional test and is cleared by the Physiotherapist.

