

REHABILITATION PROTOCOL FOR OSTEOCHONDRAL GRAFTING (OATS)

- *Weight bearing status:*
 - ◇ Non weight bearing using two crutches
 - *Range of Motion and stretching exercises:*
 - ◇ Passive knee flexion and knee extension range of motion
 - ◇ Wall slides or heel slides to increase knee flexion range of motion
 - ◇ Gels slides and passive knee extension with heel supported to increase extension range of motion
 - ◇ Stationary bicycle with minimum resistance, if range of motion allows
 - *Mobilization:*
 - ◇ Patellar mobilization as needed
 - *Stretching exercises:*
 - ◇ Hamstring, iliotibial band, and calf stretches as needed
 - *Strengthening Exercises:*
 - ◇ Isometric quadriceps sets
 - ◇ Isometric hamstring sets at 70-90 degrees of knee flexion
 - ◇ Straight leg raises
 - ◇ Hip adduction
 - ◇ Ankle plantar flexion with rubbing resistance
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- *Weight bearing status:*
 - ◇ Partial weight bearing:
 - 2-3 weeks-25% body weight
 - 3-4 weeks-50% body weight
 - *Range of motion exercises:*
 - ◇ Continue knee extension range of motion exercises as needed
 - ◇ Discontinue wall slides at 115-120 degrees flexion, progressing to heel slides
 - *Strengthening Exercises:*
 - ◇ Progress with strengthening exercises as above
 - ◇ Active knee extension
 - ◇ Hamstring curls
 - ◇ Seated toe raises with resistance
 - ◇ Pool exercises, if available
 - ◇ Gradually increase resistance on stationary bicycle

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- *Weight bearing status:*
 - ◇ Partial weight bearing:
 - 4-5 weeks-75% body weight
 - 5-6 weeks-100% body weight
 - *Range of motion and stretching exercises:*
 - ◇ Continue above exercises as needed
 - ◇ Full knee flexion and extension range of motion by 4-6 weeks post-surgery
 - *Strengthening Exercises:*
 - ◇ Progress with strengthening exercises as above
 - ◇ Hip abduction, added during the 4th – 5th week if fair quadriceps contraction is present

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- *Weight bearing status:*
 - ◇ Progress to full weight bearing without assistive device by six weeks post-surgery
 - *Strengthening Exercises*
 - ◇ Closed kinetic chain:
 - ⇒ Standing toe raises
 - ⇒ Partial squats
 - ⇒ Leg press exercise
 - ⇒ Step exercises: step down, step up, lateral stepping
 - ◇ *Open kinetic chain:*
 - ⇒ Isokinetic training: 200 plus speed
 - *Functional Exercises:*
 - ◇ Treadmill walking, progressing to an uphill grade of 2-3%
 - ◇ Stepper machine (e.g. Stairmaster, Climamax)
 - *Strengthening/Functional Exercises:*
 - ◇ Mini trampoline jogging as tolerated