

Guide to Knee Rehabilitation – Low Demand

Welcome to our Knee Rehabilitation-Low Demand video series. The goals of this video are to help maximize your recovery following knee injury and/or surgery. *These videos should not be used as a substitute for regular physical therapy visits and guidance from your physician.*

Please remember the following as you use these videos:

- This program is designed for patients returning to sedentary/light work and recreational activity after injury or surgery.
- Only progress from one phase to the next based on recommendation from your physician. Most therapy regimens, particularly after surgery, are based on a healing timeline. Progressing too quickly, even though it may feel okay at first, may put you at risk for injury.
- Perform all exercises on both legs – this will help prevent imbalance between the rehab and non-rehab knee.
- Exercises to avoid include deep squats or lunges and knee extension machine exercises.
- If you develop any questions or concerns regarding your condition while using these videos, contact your physician.

Best of luck in your recovery.

PHASE I – PREVENT DECONDITIONING AND STIFFNESS

GOALS: Activate the muscles; restore range of motion

KEY POINTS:

- Ice and elevate the leg to minimize pain and swelling after injury or surgery.
 - Ice for 15 minutes three times daily for first 3 days.
 - Elevate the leg above the level of your heart when sedentary.
- Regain full extension [straightening] of the knee ASAP – see exercise 2 below. Do as often as possible until full motion is achieved.
- Balance exercises help regain postural stability – start with eyes open; progress to eyes closed.
- Perform exercises two times daily; do 1-2 sets of 12-15 repetitions for each exercise.

PHASE I EXERCISES:

1. HEEL PROPS
2. QUAD SETS
3. ANKLE PUMPS
4. HEEL SLIDES
5. PATELLAR MOBILIZATIONS
6. STRAIGHT LEG RAISES

7. FLEXION HANGS
8. HIP ABDUCTION
9. HIP ADDUCTION
10. BALANCE EXERCISES – FRONT & BACK
11. BALANCE EXERCISES – SIDE TO SIDE

See video at <http://www.matthewboesmd.com/knee-rehabilitation-low-demand/> to view the exercises.

PHASE 2 – EARLY STRENGTHENING

GOALS: Begin muscle re-conditioning.

KEY POINTS:

- Exercises may need to be modified if painful.
- Conduct strengthening exercises every day or every other day to prevent irritation.
 - Perform 1-2 sets of 12-15 repetitions each.
- Ice for 10-15 minutes following exercise to limit inflammation.
- Start stationary bike with light resistance as soon as flexion is adequate to complete pedal rotation.
- Typically this phase would be done during weeks 2-6 following knee arthroscopy.

PHASE 2 EXERCISES:

1. STRETCHING – STANDING QUADRICEPS
2. STRETCHING – STANDING HAMSTRING
3. STRETCHING – STANDING CALF
4. LONG ARC EXTENSION – 90 TO 40 DEG
5. STRAIGHT LEG RAISES
6. HIP ABDUCTION
7. HIP ADDUCTION
8. HALF SQUATS
9. CALF RAISES
10. STATIONARY BIKE
11. START LIGHT TREADMILL OR GROUND WALKING

See video at <http://www.matthewboesmd.com/knee-rehabilitation-low-demand/> to view the exercises.

PHASE 3 – ADVANCED STRENGTHENING

GOAL: Strengthen hip, quad, hamstring and calf muscles to restore functional stability to the knee.

KEY POINTS:

- Conduct exercises 3-4 times per week with increasing intensity.
- Exercises may be performed in the gym on machines.
- Stretching exercises are important to alleviate excessive strain on the knee, which can cause pain.

- Avoid knee extension machine.
- Cross-train to avoid irritation (e.g., bike, elliptical, treadmill, walking on alternate days).
- Typically, this phase is performed week 6 and beyond following knee arthroscopy.

PHASE 3 EXERCISES:

1. STRETCHING – STANDING QUADRICEPS
2. STRETCHING – STANDING HAMSTRING
3. STRETCHING – STANDING CALF
4. KNEE EXTENSION – NO RESISTANCE
5. LEG PRESS
6. HAMSTRING CURLS
7. CALF RAISES
8. HIP ABDUCTION
9. HIP ADDUCTION
10. HALF SQUATS - DUMBBELLS
11. FRONT STEP UPS
12. LATERAL STEP UPS
13. STATIONARY BIKE
14. ELLIPTICAL MACHINE

See video at <http://www.matthewboesmd.com/knee-rehabilitation-low-demand/> to view the exercises.

PHASE 4 – RETURN TO FULL ACTIVITY

GOAL: Maximize functional recovery; prevent future knee problems; return to full activity.

KEY POINTS:

- Continue all Phase 3 exercises 3-4 times per week indefinitely to maximize functional recovery and prevent future knee problems.
- Perform stretching exercises before and after strengthening. Hold each stretch for 30 seconds, then relax for 15 seconds; repeat 5 times.
- Perform each strengthening exercise in two sets for 12 repetitions each set.
- Knee arthritis can cause pain and swelling in the knee for 8-10 weeks after injury or surgery. Let pain be your guide in progressing your activity level.
- Continue icing after exercise/activity.
- NSAIDs and occasionally a cortisone injection can be effective in alleviating persistent inflammation if it occurs.

See video at <http://www.matthewboesmd.com/knee-rehabilitation-low-demand/> to view the exercises.

For more information, visit www.MatthewBoesMD.com