

Guide to Knee Rehabilitation – High Demand

Welcome to our Knee Rehabilitation-High 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 wanting to get back to high-demand work, sports and recreational activity.
- 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.
- The program is designed to involve no special equipment. The majority of the exercises can easily be conducted at home or in the gym. A jump mat or yoga mat may be helpful as well as some light dumbbells as you progress with strengthening. In addition, a stop watch or timer may be used for many exercises.
- It is important do perform all exercises on both legs – this will help prevent imbalance between the rehab and non-rehab knee.
- Icing is very important after each therapy session – place an ice pack or cooling pad on the affected area for 10 minutes to help limit any irritation from exercise.
- If you develop any questions or concerns regarding your condition while using this video, 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:

- Minimize pain and swelling after injury or surgery by icing and elevating the leg.
 - 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 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 1 EXERCISES:

1. CRYOTHERAPY AND ELEVATION

2. HEEL PROPS
3. QUAD SETS
4. ANKLE PUMPS
5. STRAIGHT LEG RAISES
6. HEEL SLIDES
7. HIP ABDUCTION
8. SEATED KNEE FLEXION HANGS
9. BALANCE EXERCISES – FRONT & BACK
10. BALANCE EXERCISES – SIDE TO SIDE

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

PHASE 2 – EARLY STRENGTHENING

GOALS: Begin muscle re-conditioning.

KEY POINTS:

- Continue exercises twice daily.
- Stretching exercises: Hold for 30 seconds, relax for 15 seconds; do 5 reps of each stretch.
- Strengthening exercises: Perform 1-2 sets of 12-15 repetitions.
- Ice for 10 minutes after exercise to prevent inflammation.
- Typically this phase is done during weeks 2-4 after knee arthroscopy.

PHASE 2 EXERCISES:

1. STRETCHING – QUADRICEPS
2. STRETCHING – HAMSTRING
3. STRETCHING – CALF
4. LONG ARC KNEE EXTENSION
5. STRAIGHT LEG RAISES
6. HIP ABDUCTION
7. HIP EXTENSION
8. HIP ADDUCTION
9. MINI SQUATS
10. SQUAT & ROCK
11. FRONT STEP UPS
12. SIDE STEP UPS
13. STATIONARY BIKE

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

PHASE 3 – ADVANCED STRENGTHENING

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

KEY POINTS:

- Conduct 3-4 times per week with increasing intensity.

- Exercises may be conducted in gym on machines.
- Perform 2 sets of 15 repetitions each exercise.
- Avoid knee extension machine.
- Running program – start with walk/run intervals and progress to full running.
- Cross-train to avoid irritation (e.g.,: bike, elliptical, treadmill on alternate days)
- Typically this phase is done weeks 4-6 following knee arthroscopy.

PHASE 3 EXERCISES:

1. STRETCHING - QUADRICEPS
2. STRETCHING – HAMSTRING
3. STRETCHING – CALF
4. LEG PRESS
5. DUMBBELL SUMO SQUATS
6. HAMSTRING CURLS
7. CALF RAISES
8. FRONT LUNGES
9. LATERAL LUNGES
10. STATIONARY BIKE
11. ADD STAIRMASTER OR ELLIPICAL
12. START LIGHT INTERVAL RUNNING

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

PHASE 4 – PLYOMETRICS AND AGILITY

GOAL: Return to sports and high-level activity.

KEY POINTS:

- Continue Phase 3 exercises.
- Conduct agility drills on jump mat / yoga mat or place two parallel 8-foot long strips of tape on floor three feet apart to define boundary for exercises.
- Advance cardiovascular training as tolerated.
- Add these exercises to Phase 3 program as tolerated as strength improves. They will help maximize and expedite return to full sports activity.
- Start with 30 second duration per exercise; advance to 60 seconds per exercise – do as many repetitions as possible in allotted time.

PHASE 4 EXERCISES:

1. PLYOMETRICS – IN/IN, OUT/OUTS
2. PLYOMETRICS – POWER JUMPS – FRONT/BACK
3. PLYOMETRICS – POWER JUMPS – SIDE/SIDE
4. PLYOMETRICS – SINGLE LEG LEAP AND LUNGE
5. AGILITY – FIGURE 8 FORWARD
6. AGILITY – FIGURE 8 FACE-FORWARD
7. AGILITY – FIGURE 8 CARIOCAS
8. AGILITY – FIGURE 8 HIGH KNEE / SIDE SHUFFLE

9. AGILITY - FRONT RUN, BACK RUN, SHUFFLE, AND CARIOCAS
10. AGILITY – BOX DRILL #1: SPRINT, SIDE-SHUFFLE, BACKPEDAL, SIDE SHUFFLE
11. AGILITY – BOX DRILL #2: SPRINT, CARIOCA, BACKPEDAL, CARIOCA
12. AGILITY – T DRILL

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

For more information, visit www.MatthewBoesMD.com