

Guide to Knee Arthritis Conditioning

Welcome to our Knee Arthritis Conditioning video series. The goal of these videos is to reduce stress on the knee and maximize pain-free function. *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 targets thigh muscles, hamstrings, hip muscles and calf muscles to improve support and reduce stress on the knee.
- The program comprises three components:
 - STRETCHING to reduce tension and irritation in the knee
 - STRENGTHENING to improve stability and function
 - CARDIOVASCULAR EXERCISE to increase endurance
- Perform program 3-4 times per week
- Start with 5-10 minutes of low impact exercise such as walking, walking in place or stationary bike to get muscles warm and reduce chance of irritation or injury.
- Perform all exercises on both legs – this will help prevent imbalance between the rehab and non-rehab knee.
- Pain-relief modalities are essential throughout this program to help limit discomfort and allow you to progress with the exercises. These include:
 - Anti-inflammatory medications [NSAIDs]
 - Topical NSAIDs or analgesic ointments
 - Moist heat prior to exercise to loosen up stiffness
 - Icing for 5-10 minutes after exercise to limit inflammation
 - Knee compression sleeves
- If you develop any questions or concerns regarding your condition while using this video, contact your physician.

Best of luck in your recovery.

STRETCHING

GOALS: Improve knee motion and reduce tension in the joint

KEY POINTS:

- Perform STRETCHING exercises prior to doing STRENGTHENING exercises. Repeat stretching at the end of the session.
- Hold stretch in each position 30 seconds; then relax for 15 seconds; and repeat
- Do 5 repetitions for each stretch

STRETCHING EXERCISES:

1. STANDING CALF STRETCH
2. STANDING QUAD STRETCH
3. STANDING HAMSTRING STRETCH

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

EARLY STRENGTHENING

GOAL: Build strength and stability in the knee

KEY POINTS:

- Let pain be your guide; if you find a certain exercise too painful to complete, then reduce the intensity of the exercise or abandon it altogether
- Start with no weight and progress to light dumbbells or ankle weights to increase resistance
- Perform 1-2 sets for 12-15 repetitions each exercise
- When performing leg extension, keep resistance light to avoid irritation

EARLY STRENGTHENING EXERCISES:

1. HALF SQUATS
2. STANDING HAMSTRING CURLS
3. CALF RAISES
4. LEG EXTENSIONS
5. STRAIGHT LEG RAISES
6. PRONE HIP EXTENSIONS
7. HIP ABDUCTION
8. HIP ADDUCTION

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ADVANCED STRENGTH & CONDITIONING

GOALS: Advance muscle strength, coordination and endurance for long-term pain relief

KEY POINTS:

- Continue EARLY STRENGTHENING exercises.
- As strength and flexibility improve, add these exercises to improve knee stability and pain-free function
- Cross-training exercises limit repetitive stress on certain body parts and reduce overuse injuries
- All exercises are low impact; start with a single exercise for 10-15 minutes and progress as tolerated
- Perform 1-2 sets of strengthening exercises for 12-15 repetitions

ADVANCED STRENGTH & CONDITIONING EXERCISES:

1. LEG PRESS – MACHINE
2. DUMBBELL SQUATS
3. CROSS TRAINING – STATIONARY BIKE
4. CROSS TRAINING – ELLIPTICAL MACHINE
5. CROSS TRAINING – WALKING
6. CROSS TRAINING – INCLINE WALKING

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

For more information, visit www.MatthewBoesMD.com