Foot and Ankle Conditioning Program

Studies show, an exercise conditioning program will help you return to daily activities and enjoy a more active, healthy lifestyle. A program of this nature, focused on the foot and ankle, may be effective in raising your tolerance of in-shoe foot orthotics. Strengthening weak muscles and increasing foot and ankle range of motion will allow your body to adapt more fully to the new positions an in-shoe orthoses places you as well as tolerate the increase in activity as you heal. Following a well-structured, foot and ankle conditioning program will also help you return to activities of daily living, sports and other recreational activities.

**Strength:** Strengthening the muscles that support your lower leg, foot, and ankle will help keep your ankle joint stable. Keeping these muscles strong can relieve foot and ankle pain and prevent further injury.

**Flexibility:** Flexibility is important for restoring and maintaining range of motion and preventing injury. Gentle stretching exercises can help reduce muscle soreness and keep your muscles lengthened and flexible.

**Target Muscles:** The muscle groups of the lower leg are addressed individually in this conditioning program, as well as the tendons and ligaments that control movement in your feet. These include:

- Gastrocnemius-soleus complex (calf)
- Anterior tibialis (shin)
- Posterior tibialis (center of calf)
- Peroneus longus (outside of lower calf)
- Peroneus brevis (outside of lower calf)
- Soleus (calf)
- Dorsiflexors (ankle)
- Plantar flexors (ankle)
- Invertors (ankle)
- Evertors (ankle)
- Flexor/Extensor Digitorum (Foot)

**Length of program:** This foot and ankle conditioning program should be continued for 4 to 6 weeks, unless otherwise specified by your doctor or physical therapist. After your recovery, these exercises can be continued as a maintenance program for lifelong protection and health of your feet and lower legs. Performing the exercises three to five days a week will maintain strength and range of motion in your foot and ankle.

**Getting Started**

**Warm up:** Before doing the following exercises, warm up with 5 to 10 minutes of low impact activity, like walking or riding a stationary bicycle.
Stretch: After the warm-up, do the stretching exercises shown on Page 1 before moving on to the strengthening exercises. When you have completed the strengthening exercises, repeat the stretching exercises to end the program. **Do not ignore pain:** You should not feel pain during an exercise. Talk to your doctor or physical therapist if you have any pain while exercising.

Ask questions: If you are not sure how to do an exercise, or how often to do it, contact your doctor or physical therapist.

1. **Heel Cord**

   **Repetitions** 2 sets of 10  
   **Days per week** 6 to 7

   **Main muscles worked:** Gastrocnemius-soleus complex  
   *You should feel this stretch in your calf and into your heel*

   **Equipment needed:** None

   - Stand facing a wall with your non-stretching leg forward with a slight bend at the knee. Your stretching leg is straight and behind you, with the heel flat and the toes pointed in slightly.  
   - Keep both heels flat on the floor and press your hips forward toward the wall.  
   - Hold this stretch for 30 seconds and then relax for 30 seconds. Repeat.

   **Tip** Do not arch your back.

2. **Heel Cord Stretch with Bent Knee**

   **Repetitions** 2 sets of 10  
   **Days per week** 6 to 7

   **Main muscles worked:** Soleus  
   *You should feel this stretch in your calf, the sides of your ankle, and into your heel*

   **Equipment needed:** None

   - Stand facing a wall with your non-stretching leg forward with a slight bend at the knee. Your stretching leg is behind you, with the knee bent and the toes pointed in slightly.  
   - Keep both heels flat on the floor and press your hips forward toward the wall.  
   - Hold the stretch for 30 seconds and then relax for 30 seconds. Repeat.

   **Tip** Keep your hips centered over both feet.
3. Tennis Ball/Golf Ball Roll

Repetitions 1
Days per week Daily

Main muscles worked: Plantar fascia ligament
You should feel this exercise along the bottom of your foot

Equipment needed: Tennis Ball/Golf Ball

- Sit on a stable chair with both feet planted on the floor.
- Roll a golf ball under the arch of your affected foot for 2 minutes.

Tip Sit up tall and keep your foot toward your chair.

4. Towel Stretch

Repetitions 2 sets of 10
Days per week 6 to 7

Main muscles worked: Gastrocnemius-soleus complex
You should feel this stretch in your calf and into your heel

Equipment needed: Hand towel

- Sit on the floor with both legs out in front of you.
- Loop a towel around the ball of your stretching foot and grasp the ends of the towel in your hands.
- Keep your stretching leg straight and pull the towel toward you.
- Hold for 30 seconds and then relax for 30 seconds. Repeat 3 times.
5. Calf Raises

Repetitions: 2 sets of 10
Days per week: 6 to 7

Main muscles worked: Gastrocnemius-soleus complex
You should feel this exercise in your calf

Equipment needed: Chair for support

- Stand with your weight evenly distributed over both feet. Hold onto the back of a chair or a wall for balance.
- Lift your non-target foot off of the floor so that all of your weight is placed on your target foot.
- Raise the heel of your target foot as high as you can, then lower.
- Repeat 10 times. Tip: Do not bend the knee of your working leg.

6. Ankle Range of Motion

Repetitions: 2 sets
Days per week: Daily

Main muscles worked: Dorsiflexors, plantar flexors, invertors, evertors
You should feel this exercise at the top of your foot and throughout your ankle

Equipment needed: None

- Sit down so that your feet do not touch the floor.
- Use your foot to write each letter of the alphabet in the air. Lead with your big toe.

Tip: Keep the movements small, using just your foot and ankle.

7. Bottle-cap Pickup

Repetitions: 20
Days per week: Daily

Main muscles worked: Plantar flexors
You should feel this exercise at the top of your foot and toes

Tip: Sit up tall and keep your legs straight.
Equipment needed: 1-20 bottle-cap

- Sit with both feet flat and place 1-20 bottle-caps on the floor in front of you.
- Use your toes to pick up one bottle-cap at a time and place into a bowl.
- Repeat until you have picked up all the bottle-caps.

Tip Do not place the bottle-caps too far out in front or to the side.

8. Towel Curls

Repetitions 5

Days per week Daily

Main muscles worked: Plantar flexors
You should feel this exercise at the top of your foot and your toes

Equipment needed: Hand towel

- Sit with both feet flat and place a small towel on the floor in front of you.
- Grab the center of the towel with your toes and curl the towel toward you.
- Relax and repeat.

Tip You can make this exercise more challenging by placing a weight on the edge of the towel.

9. Ankle Dorsiflexion/Plantar Flexion

Repetitions 3 sets of 10

Days per week 3

Main muscles worked: Anterior tibialis, gastrocnemius-soleus complex
You should feel this exercise at your calf, shin, the back of your heel, and the top of your foot

J. Patrick Caulfield, M.D. ● Edward J. Bieber, M.D. ● Ira D. Fisch, M.D. ● Kurt C. Schluntz, M.D. ● Andre R. Gazdag, M.D. ● Christopher J. Cannova, M.D.

Mahidhar M. Durbhakula, M.D. ● Sridhar M. Durbhakula, M.D. ● Navin Sethi, M.D. ● Craig A. Miller, M.D. ● Timothy Bhattacharyya, M.D. ● Robert R. Buber, M.D.
Equipment needed: Use an elastic stretch band of comfortable resistance

- Sit on the floor with your legs straight out in front of you.
- For dorsiflexion, anchor the elastic band on a chair or table leg, then wrap it around your foot.
- Pull your toes toward you and slowly return to the start position. Repeat 10 times.
- For plantar flexion, wrap the elastic band around your foot and hold the ends in your hand.
- Gently point your toes and slowly return to the start position. Repeat 10 times.