



Get active again after ankle ligament injuries

## Malleo TriStep

ottobock.

## Three phases, one orthosis

### Applying the Malleo TriStep

The healing process is different for each ankle injury. The phases described are for the purpose of orientation only and reflect experience frequently made with these types of injuries. The durations may vary. Your doctor will tell you which phase of healing you are in and how you should adjust the orthosis.

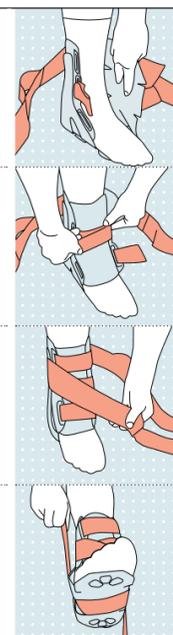
### Inflammation phase

#### up to day 3 (max. up to day 14)



- Tips:**
  - The injury should be treated according to the so-called RICE rule: **R** (rest), **I** (ice), **C** (compression) **E** (elevation).
  - Wear the Malleo TriStep with the stabilisation strap and foot shell for controlled immobilisation of the foot during the first phase.
  - Wear the orthosis in a shoe during the day.
- Goal:**
  - Less pain
  - Reduce foot swelling

- Open all hook and loop closures.
- Position your foot at a right angle.
- Fasten the middle hook and loop closure, then the lower, and then the upper closure.
- Now apply the stabilisation strap. Hold the end of the strap hanging on the outer side of your body and cross it over the top of your foot, then under the foot shell back to the outer side.
- Fasten the strap at the upper end of the orthosis.
- Repeat this step in the opposite direction with the other end of the stabilisation strap.



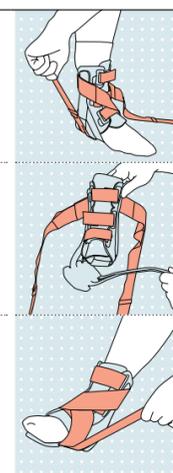
### New tissue formation phase

#### day 4 to 28



- Tips:**
  - Wear the orthosis with the stabilisation strap during the day.
  - At night, use the foot shell as well. This is to prevent the foot from falling into an interior rotation position at night, especially when lying on your back or side. This position puts significant strain on the tissue structures on the outside of the ankle that are in the process of healing. There is a risk that the ligaments may tear again during the night.
- Goal:**
  - Mobilisation
  - Stabilisation

- Unfasten the stabilisation strap to remove the foot shell.
- Remove the foot shell from the orthosis during the day.
- Position your foot and fasten the hook and loop closures as in phase I.
- Apply the stabilisation strap as described in phase I.
- Continue to use the foot shell at night.



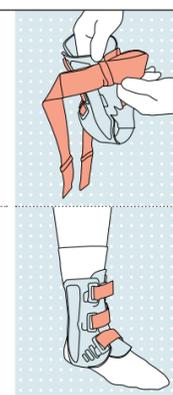
### Tissue maturation phase

#### after day 29



- Tips:**
  - Wear the orthosis without the stabilisation strap and foot shell.
  - Depending on the severity of the injury, you can continue to use the stabilisation strap as needed.
  - After the end of phase III, you can continue to wear the orthosis to prevent re-injuring your ankle ligaments.
- Goal:**
  - Improve stability and mobility
  - Increase coordination and balance

- Remove the stabilisation strap before applying the orthosis.
- Position your foot and fasten the hook and loop closures of the Malleo TriStep as in phase I.
- The Malleo TriStep is worn without the stabilisation strap and foot shell in this last phase.
- Depending on the degree of severity of the injury, the stabilisation strap may be used (e.g. during sports) and the foot shell may be worn at night.



## Ankle ligament injuries and their consequences

Have you suffered an ankle ligament injury as the result of falling or twisting your ankle?

Ankle injuries are among the most frequent of all injuries and can have long-term consequences:

- Approximately half of these accidents occur while participating in sports; most of the rest occur at home or at work.
- Following a ligament injury, the risk of suffering another ankle injury increases two to fivefold. Around 30% of all patients are injured again within three years. Among active athletes, this figure is as high as 73%.
- Half the patients still feel pain while walking and running 6 to 18 months after an acute ankle injury. For 33% of the patients, this is still true 7 to 8 years after the original injury.

### The modern concept

#### Three phases, one orthosis

Surgery was once considered the only option following ankle injuries. This was followed by several weeks of joint immobilisation in a plaster cast. In contrast, modern therapy calls for orthoses, as they allow as much freedom of movement as possible while providing only as much protection as necessary.

The Malleo TriStep multifunction orthosis can be adapted to three phases of the healing process. Your ankle is specifically stabilised following an acute injury. Later, you can gradually accustom your foot to movements. You can adapt the orthosis to the respective healing phase in just a few steps. In consultation with the doctor, this therapy approach is supported by the proven Malleo Move exercise programme (see reverse).

### Your benefits at a glance

- The orthosis can be adapted to three phases of healing
- The foot shell also prevents unwanted foot movement toward the sole
- Individually adjustable for a high level of wearer comfort
- Easy handling and quick application of the orthosis
- The Malleo Move training programme (see reverse) supports the healing process

# Malleo Move

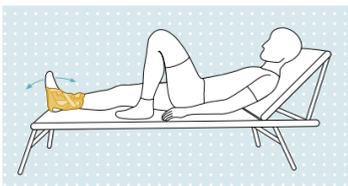
## Exercise programme

Please be sure to consult your doctor before beginning these exercises. Make sure you know what phase of healing you are in and ask how much you can exercise your foot.

### Phase I: Immobilisation up to day 3 (max. to day 14)

#### 1. Flexing and extending the toes

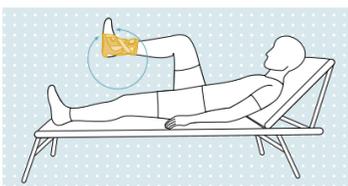
- Starting position**
  - Lie on your back on a comfortable surface
  - The foot is in the neutral position (90° angle)



- Exercise**
  - Pull your toes towards your body
  - Now flex your toes as far as the orthosis allows
  - Complete this exercise slowly (2 seconds each direction)
  - Important:** Foot and toe movements should always be pain free!
- Implementation**
  - Repeat 8–10 times throughout the day (e.g. hourly)
  - Take sufficient time to rest, especially during the first few days, and avoid overexerting yourself

#### 2. Air cycling

- Starting position**
  - Lie on your back on a comfortable surface
  - The foot is in the neutral position (90° angle)



- Exercise**
  - Make a pedalling motion in the air with the affected leg
  - Complete this exercise evenly, rhythmically and slowly (3 seconds each direction)
  - Important:** Foot and toe movements should always be pain free!
- Implementation**
  - 15 seconds in one direction, 10-second pause, change direction
  - Repeat 5–10 times throughout the day (e.g. hourly)
  - Take sufficient time to rest, especially during the first few days, and avoid overexerting yourself

#### Important information:

- In all stabilisation exercises (phase II), it is crucial to maintain a focused upright position of the upper body. Look straight ahead, not at the affected foot. Avoid compensating movements with the torso or arms and reduce the difficulty of the exercise if you are unable to keep your balance.
- The recommended times constitute general guidelines and deviations are possible on a case-by-case basis.
- If you experience any discomfort during or after an exercise, stop training immediately and consult your doctor or therapist.
- Please observe the corresponding descriptions for each exercise.
- Avoid overtaxing yourself in order to prevent injury.
- If you feel unsure about an exercise, it is better to skip it and perhaps try it again at a later time.
- Work with your doctor or therapist to adapt the exercises to your weaknesses and progress.

We do not assume any liability for errors that may arise while doing the exercises of the Malleo Move exercise programme. Please be sure to consult your doctor or therapist before starting the exercises.

### Phase II: Stabilisation day 4 to 28

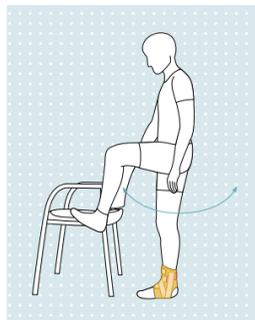
#### 3. Flexion and extension in the upper ankle

- Starting position**
  - Stand with your feet hip-width apart
  - At the beginning of phase II, shift most of your weight to the sound leg
  - For safety: hold onto a chair with one hand at the start
- Exercise**
  - Slowly lower your body's centre of gravity towards the floor (3 seconds per direction)
  - Straighten up again
  - During the exercise, keep your lower legs parallel and knees apart. Avoid an X-shaped leg position.
- Implementation**
  - 3x 10 repetitions, twice daily



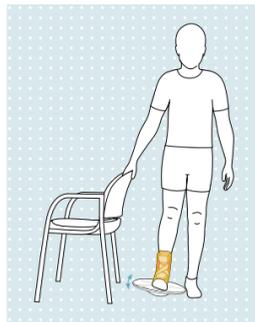
#### 4. One-legged stance, swinging the sound leg back and forth

- Starting position**
  - Stand on the injured leg
  - For safety reasons, remain close to a stable support
- Exercise**
  - Raise the sound leg off the floor and bend it at the knee
  - Swing the leg back and forth slowly (4 seconds each direction)
  - Keep your body and supporting leg straight
  - Try to gradually disengage yourself from the stable support
- Implementation**
  - 20 seconds, twice daily



#### 5. Balance board\*\* for strength training

- Starting position**
  - Stand with your injured leg on the balance board
  - Stand slightly on tiptoe with the sound leg
- Exercise**
  - Start by balancing in the neutral position (90° angle)
  - Try to lower the inside edge of the balance board in a controlled manner and then return it to the neutral position
- Implementation**
  - 30–60 seconds, several times daily



#### 6. Balance board\*\* one-legged knee stance I

- Starting position**
  - Stand with your injured leg on the balance board
  - With the sound leg, kneel on a towel folded several times
- Exercise**
  - Balance in the neutral position without allowing the balance board to tilt
  - Try to lower the inside edge of the balance board in a controlled manner and then return it to the neutral position
- Implementation**
  - 15–60 seconds, two to three times daily



### Phase III: Remodulation after day 29

#### 7. Balance board\*\* one-legged knee stance II

- Starting position**
  - Position the injured foot on the balance board
  - With the sound leg, kneel on a towel folded several times
- Exercise**
  - Balance in the neutral position without allowing the balance board to tilt
  - Try to lower the inside edge of the balance board in a controlled manner using only your ankle and then return it to the neutral position
  - Keep your knee straight during the exercise
- Implementation**
  - 10–30 seconds, e.g. hourly



#### 8. Knee bends on an unstable surface

- Starting position**
  - Stand with your injured leg on a towel folded several times
  - Make sure you are training on a non-slip surface
  - Perform a lunge
  - If possible, shift your body weight to the injured leg
- Exercise**
  - Now do slow knee bends (4 seconds each direction of movement)
  - You can also turn your head alternately to either side as part of the exercise
  - Avoid compensating movements
- Variations**
  - You can increase the distance between your legs in order to increase the load
  - Do the exercise while standing on tiptoe
- Implementation**
  - 5–10 repetitions with 5-second breaks, three times daily



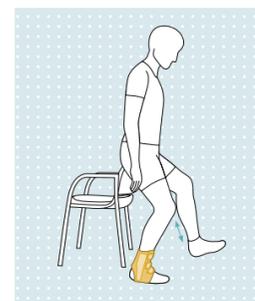
#### 9. Foot coordination in one-legged stance

- Starting position**
  - Place a towel on the floor in front of you
  - Stand only on your sound leg
- Exercise**
  - Grab the towel with your toes and bend your leg
  - Move your leg up and down
  - You can also turn your head alternately to either side as part of the exercise
  - Avoid compensating movements
  - Switch supporting legs
- Implementation**
  - 15 repetitions, several times daily



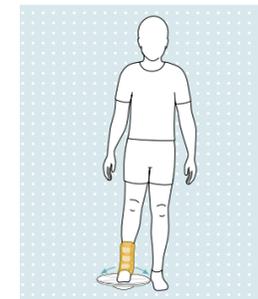
#### 10. Knee bend in one-legged stance

- Starting position**
  - Stand only on your injured leg
  - Most of the weight is on the ball of the foot and the big toe has good floor contact
  - The other toes must not be curled
  - The knee must be kept straight
- Exercise**
  - Slowly flex and extend the knee (at least 4 seconds each direction)
  - You can also turn your head alternately to either side as part of the exercise
  - Avoid compensating movements
  - Attention:** Since this exercise is associated with an increased risk of injury, be careful when performing it!
- Implementation**
  - 5–10 repetitions, two to three times daily



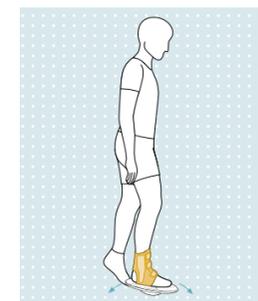
#### 11. Tilting sideways on the balance board\*\*

- Starting position**
  - Stand with your injured leg on the balance board
  - Stand on tiptoe with the sound leg
  - Balance the balance board in the neutral position
- Exercise**
  - Lower the outside edge until it touches the floor, and then slowly return your foot to the neutral position
- Variations**
  - Lower the inside edge until it touches the floor, then slowly return your foot to the neutral position
  - Stand on one leg and balance on the 3. balance board
- Implementation**
  - 30–60 seconds, rest 5 seconds between exercises



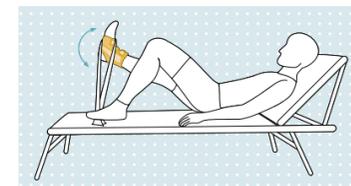
#### 12. Balance board variations\*\*

- Starting position**
  - Stand with your injured leg on the balance board
  - Stand on tiptoe with the sound leg
  - Balance the balance board in the neutral position
- Exercise**
  - Lower the front edge until it touches the floor, then slowly return your foot to the neutral position
- Variations**
  - Lower the back edge until it touches the floor, then slowly return your foot to the neutral position
  - Stand on one leg and balance on the balance board
- Implementation**
  - 30–60 seconds, rest 5 seconds between exercises

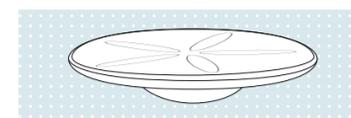


#### 13. Ankle strengthening exercise

- Starting position**
  - Lie on your back on a comfortable surface
  - Wrap an elastic band (e.g. Thera-band) over the middle of your foot and hold it with the sound foot
- Exercise**
  - Move the injured foot slightly outwards
  - Bend your foot inwards at the ankle in a controlled manner, then extend your foot back to the starting position
  - Avoid movements in the hip joint during the exercise
- Implementation**
  - 5x 10 repetitions with 5-second breaks, two to three times daily



#### \*\* Balance board



- The following applies to all balance board exercises:**
  - Be sure to train on a non-slip surface
  - Place a book or a stack of paper under the outside edge initially
  - Keep in mind that your sound leg bears half your body weight
  - Avoid placing your full weight on the injured foot
- The balance board supports the exercise programme for the Malleo TriStep and can be ordered at [www.rehband.de](http://www.rehband.de)