

LATERAL ANKLE SPRAIN NONOPERATIVE PROTOCOL

Ankle sprains (stretching of the lateral ankle ligaments) are one of the most common injuries to occur in the lower extremity. Of all ankle sprains, approximately 85% are inversion (roll in) sprains and are commonly graded based on the severity of ligament damage either to the anterior talofibular ligament (ATFL) or calcaneofibular ligament (CFL).

<i>Ankle Sprain Classification</i>	<i>Symptoms</i>	<i>Treatment</i>	<i>Approximate Time to Return to Full Activity</i>
Grade I (stretching of ligament)	Mild pain with minimal swelling and loss of function	Crutches PRN Taping but no bracing	1-2 Weeks
Grade II (complete tear ATFL)	Moderate pain, swelling and loss of function	Crutches until normal gait Ankle stabilizing orthosis (ASO) + taping	2-4 Weeks
Grade III (complete tear ATFL/CFL)	Severe pain, swelling and loss of function	Crutches + CAM 4-6 Wks	9-10 Weeks
Grade IV (“High ankle”)	Moderate to severe pain Loss of function but only mild to moderate swelling	Crutches + CAM 4-6 Wks	12-16 Weeks

Our goal is to restore your normal function to the ankle and surrounding tissue. When nonoperative management fails, surgical intervention may be required in 15-20% of patients.

Phase I – Protect Soft Tissue & Healing (0 to 4 Weeks)

GOALS:

- Restore normal function to the ankle and surrounding tissues.
- Decrease effusion and pain with stretching, immobilization, and anti-inflammatories
- Protect from further injury
- Allow protected gait as tolerated
- Goals for physical therapy include decreasing pain and discomfort while returning active and passive range of motion (ROM) to pre-injury status without increasing ankle ligament laxity. Once this has been achieved, treatment is to focus on increasing strength and improving proprioceptive/kinesthetic awareness.

TREATMENT:

- Elevation, ice, and medication to control pain and swelling
- Modalities as indicated for pain and edema control
- Protect ligaments from further injury
- ROM to tolerance within a pain-free range: (1) Start with DF/PF, (2) Added inversion/eversion as pain/tenderness allows
 - o Stretch gastroc/soleus (NWB then to WB positions), (3) Toe curls, (4) Ankle ABCs, (5) Stationary bike
- Gait: (1) WBAT, (2) Patient may need assistive device to normalize pain free gait, (3) Static balance training as weightbearing status improves

Phase II - Intermediate Rehabilitation Phase (Weeks 4-8)

GOALS:

- Decrease/eliminate pain and swelling
- Restore normal ROM
- Increase muscular strength and endurance

TREATMENT:

- Pain and swelling management
- Stretching (Achilles, gastroc, soleus)
- Joint mobilization (Talocrural and subtalar joints)
- Continue/progress ROM exercises from previous phase
- Strengthening/Proprioceptive Training
 - o Progress from active to resistive exercises as pain and ROM allows

Developed in conjunction with the physicians at South Bend Orthopaedics

- Begin higher level balance training: (1) Progress from sitting to standing, bilateral to unilateral, eyes open to eyes closed, level ground to uneven surfaces, (2) Wobble board, (3) BAPS, (4) Foam pad/rolls, (5) Pillow, (6) Excursion/Balance activities
- Progress to dynamic balance training
- Return to running program
- Strength Exercises: Focus on both open and closed kinetic chain strengthening activities
 - Isokinetic and concentric/eccentric strengthening concentrating on plantarflexion/dorsiflexion/inversion/eversion
- Proprioceptive/Kinesthetic Awareness Exercise
 - Stable base of support progressing to unstable base of support
 - Single plane progressing to multiple planes
 - Single activity progressing to multiple activities

Phase III - Late Rehabilitation/Functional Phase:

GOALS:

- Regain strength
- Increase endurance and neuromuscular performance.
- Functional Testing as appropriate
- Return to sports/work as determined by MD

TREATMENT:

- Progressive strengthening + Agility/plyometric training (Lunges, Jumping/Hopping, Step exercises, Cutting exercises, Figure 8's, zig-zags, Jump rope, stairmaster, treadmill, exercises biking)
- Functional Testing (Y-Balance Test, Single leg hop, Triple hop, Crossover hop)
- High level dynamic stabilization exercises (Plyometrics, Sport-specific and/or functional training activities)

Return to sport is determined by MD and is when patient has full ankle ROM, normal ankle strength, no pain and is able to perform sport-specific activities

There is no guarantee on outcome. All conservative management options have risk of worsening pain, progressive irreversible deformity, and failing to provide substantial pain relief. All surgical management options have risk of infection, skin or bone healing issues, and/or worsening pain. Our promise is that we will not stop working with you until we maximize your return to function, gainful work, and minimize pain.

It is not uncommon for your pain level to slightly increase during the first week of exercising. Continue the program for a minimum of 4 weeks. At the end of 4 weeks, if you do not notice improvement in your condition consult your physician or therapist. If your pain is diminishing, continue the program for 2 - 3 weeks after your symptoms have ceased to ensure the condition does not return.

Consult with your physical therapist or doctor if you experience an increase in your symptoms with recommended exercises, or if you develop new symptoms of numbness, tingling or a spread of the pain. This information is not intended to diagnose or to take the place of medical advice or care you receive from your physician or other health care professional. If you have persistent health problems, or if you have additional questions, please consult your doctor.

REFERENCES:

1. Simons SM, Z. J. (2007). Ankle Injuries. In S. Elsevier, *Clinical Sports Medicine: Medical Management and Rehabilitation* (pp. 457-472). China: Elsevier Inc.