



ADVANZ HEALTH

SPORTS MEDICINE | PHYSIOTHERAPY

LATERAL ANKLE SPRAIN

REHABILITATION PROTOCOL

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Sports Medicine & Physiotherapy

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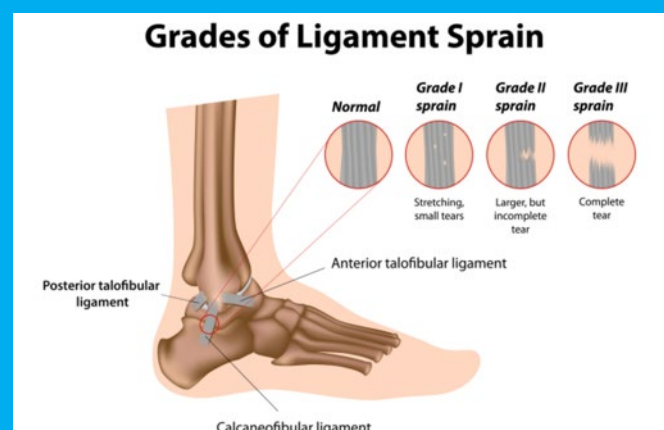
LATERAL ANKLE SPRAIN

Lateral (Outer) Ankle Sprain: A lateral ankle sprain is a common injury and is highly prevalent among the general population and individuals who participate in sports.

Mechanism of Injury: A lateral ankle sprain typically occurs when the foot is in a position of plantarflexion (pointed down) and inversion (turning inwards). Common examples of this injury occur when the ankle is rolled on unstable ground or landing unbalanced/on opponent's foot from a jump in a game.

Anatomy: Ligaments are the soft tissue structures in the body that give stability to joints. When one of these structures is overstretched, it is called a sprain. There are three primary ligaments on the outside of the ankle:

1. Anterior talofibular ligament (ATFL)
2. Calcaneofibular ligament (CFL)
3. Posterior talofibular ligament (PTFL)



WHY IS THIS IMPORTANT TO GET IT ADDRESSED?

A large proportion of individuals who sustain a lateral ankle pain will develop chronic ankle instability. This may be defined as persistent complaints of pain, swelling and/or giving way in combination with recurrent sprains for at least 12 months after the initial ankle sprain, which in turn may lead to long-term absenteeism from work and sports.

PROTOCOL USER GUIDE

This ankle sprain protocol is a guide for both clinicians and people who have had an injury to their lateral ankle ligaments. Every person, ankle and injury are different therefore you move through the ankle protocol at your own pace and the criteria dictate how quickly you go, it is not timeline based.

To progress through the protocol as fast as possible with minimal problems:

- Maintain ankle dorsiflexion range (toes pointing towards your face)
- Use ankle pain and ankle swelling as a guide. If either or both are increasing, the ankle isn't tolerating what you're doing to it.

Clinicians should use a clinical reasoning approach in prescribing an exercise rehabilitation program and management advice for each phase. This protocol briefly suggests typical exercises for each phase, but programs should always be individualised.

ACUTE PHASE

The acute phase is the most important as the goal is to reduce swelling, normalise gait patterns and maintain optimal joint alignment to prevent chronic issues such as ankle instability and reoccurrence of sprains.

All grades of ankle sprains will be managed with the “POLICE” principles which include: Protection, Optimal Loading, Ice, Compression and Elevation.

GRADE 1

Ankle taping for the next 5 days to 1 week depending on the sprain severity

Expect full ligament healing within 2-3 weeks.

GRADE 2

Ankle taping for the next 5 days to 2 weeks depending on the sprain severity

The recovery period is generally 4-6 weeks.

GRADE 3

Required to wear an Air-stirrup brace or CAM boot for 2-3 weeks depending on the severity of ligament sprains. 1 to 2 crutches may be used to assist with walking if gait is painful.

The recovery period is generally 6 – 12 weeks.

Please note that the below timeframes are a guide. Your surgeon or physio may request slight variations for optimum outcome.

PHASE 1: EARLY REHAB

Expected timeframes for this phase:

- Grade 1: 3-5 days
- Grade 2: 5-10 days
- Grade 3: 2-3 weeks

GOALS	PRECAUTIONS	RECOMMENDED PROGRAM	CRITERIA TO PROGRESS TO NEXT PHASE <i>(TICK WHEN COMPLETE)</i>
<ul style="list-style-type: none">• Patient understands timeframes of healing process and rehabilitation process• Settle the swelling• Regain Balance and proprioception• Full or 90% DF range (L=R)• Normal gait pattern• Muscle re-education and activation• Maintain fitness	<ul style="list-style-type: none">• Use assistive device if gait is painful or if an abnormal gait pattern present• Splint or brace may be needed for ambulation• Do not move foot through a painful range of motion i.e. full inversion and full plantarflexion• Avoid poor footwear and unstable surfaces	<ol style="list-style-type: none">1. Ice therapy for pain relief (GameReady in clinic or ice-bath at home)2. Manual therapy to increase range and decrease pain3. Massage for swelling control in the lateral gutter4. Pain-free active range of motion in all planes5. Activation and strengthening of pain-inhibited muscles6. Gait retraining with heel-toe walking7. Balance exercises8. Fitness maintenance: Gym-based exercises for upper body, bike	<ul style="list-style-type: none"><input type="checkbox"/> Minimal swelling and pain in ankle region<input type="checkbox"/> Near or full pain free range of motion (knee to wall test)<input type="checkbox"/> Normal gait pattern without crutches<input type="checkbox"/> Single leg balance with eyes open (30 secs), single leg balance with eyes closed (10 sec)



PHASE 2 – STRENGTH PHASE

Expected timeframes:

- Grade 1: 5-10 days (continues post return to sport)
- Grade 2: 2-3 weeks (continues post return to sport)
- Grade 3: 3-4 weeks

GOALS	PRECAUTIONS	RECOMMENDED PROGRAM	CRITERIA TO PROGRESS TO NEXT PHASE <i>(TICK WHEN COMPLETE)</i>
<ul style="list-style-type: none"> • Full AROM • Normal gait at higher speeds • Regain balance and proprioception 	<ul style="list-style-type: none"> • Tape/ Brace may be used with activity if needed • Avoid exercise that causes more than moderate pain (>3/10) 	<ol style="list-style-type: none"> 1. Continue modalities to manage pain and inflammation as needed 2. Joint mobilization as indicated – AP, midfoot mobs 3. Calf raises <ul style="list-style-type: none"> • L1: Double leg • L2: Single leg 4. Proprioception/ balance exercises 5. Strengthening program for hip/ knee/core 6. Aerobic/endurance activity with weightbearing as tolerated 	<ul style="list-style-type: none"> <input type="checkbox"/> Minimal pain with activity (<2/10) <input type="checkbox"/> Minimal swelling <input type="checkbox"/> Pain free AROM and higher-level gait <input type="checkbox"/> SEBT equal or within 95% of other side



Please note that the below timeframes are a guide. Your surgeon or physio may request slight variations for optimum outcome.

PHASE 3 – FUNCTIONAL STRENGTHENING

Expected timeframes:

- Grade 1: 10 days+ (Continues post return to sport)
- Grade 2: 2-3 weeks+ (continues post return to sport)
- Grade 3: 3-4 weeks

GOALS	PRECAUTIONS	RECOMMENDED PROGRAM	CRITERIA TO PROGRESS TO NEXT PHASE
<ul style="list-style-type: none"> • Pain free functional weightbearing activity • Advance strengthening • Initiate sport specific exercise/ agility 	<ul style="list-style-type: none"> • Avoid activity that causes pain greater than 3/10 on VAS • Continuing bracing as needed for activity 	<ol style="list-style-type: none"> 1. Advanced proprioception/ balance exercises 2. Advanced strengthening for ankle and hip/knee/ core 3. Continue aerobic activity, return to weightbearing activity (running) as tolerated 4. Running program <ul style="list-style-type: none"> • L1: Straight line running • L2: S curves • L3: Figure 8 • L4: Zig zag 5. Sport Specific Drills individualised to the client 6. Agility drills 7. Functional bracing if needed for sport/work 	<ul style="list-style-type: none"> • D/C to HEP if: • Full functional strength, balance and proprioception - Specific movement screen for your sport • Pain free return to sports • Knowledge of injury prevention/use of functional brace as needed <p>NB: It is recommended to continue your phase 3 balance program for 6 weeks after full resolution of pain/symptoms and returning to your normal activities/sport.</p>



RETURN TO SPORT TESTING

This is a general return to sport test and an individualised testing routine should be used for each client and their relevant goals and sport.

EXERCISES	DESCRIPTION	CRITERIA TO PROGRESS BACK TO SPORT
Single leg hop test	Standing on the affected leg - hop as far as you can without losing balance. Measuring hop distance	95% compared with other side
Triple hop for distance	Standing on the affected leg - hop 3 times consecutively and balance on the final hop. Measuring total distance.	95% compared with other side
Triple cross over hop test	Standing on the affected leg to one side of a straight line - hop 3 times, with each hop crossing the line. Measuring total distance.	95% compared with other side
Lateral hop test	Standing on one side of a 30cm tape - hop laterally as many times as possible in 30 seconds. Measuring number of hops. NOTE: hops won't be counted if they touch the marker or are smaller than the 30cm mark.	95% compared with other side



RETURN TO SPORT TESTING

EXERCISES	DESCRIPTION	CRITERIA TO PROGRESS BACK TO SPORT
SEBT (Balance Dynamic)	<p>Standing on the affected leg in the centre of a star - reach out with the unaffected leg as far as possible in all 8 points of the star. Measuring reach distance for each point.</p> <p>NOTE: must not place weight through the unaffected foot - only light touch on the reach.</p>	95% compared with other side
Balance (Dynamic)	<p>Subjects stand on one leg with a small amount of flexion in the hip, knee and ankle, and place their hands on their waist.</p> <p>In this position, two assessments are performed;</p> <ol style="list-style-type: none"> 1. Side to side At a rate of 60 beats per minute, subjects repeatedly turn their head from side to side (70-90 degree turn) for a period of 15 seconds. Vision needs to be inline with head position (no visual fixing) 2. Up and down At a rate of 60 beats per minute, subjects repeatedly tilt their head up and down (looking floor to ceiling) for a period of 15 seconds. Vision needs to be inline with head position (no visual fixing). The test is passed if subjects can maintain single leg stance and do not take their hands off their waist for both assessments 	Pass both limbs

RETURN TO SPORT TESTING

This is a general return to sport test and an individualised testing routine should be used for each client and their relevant goals and sport.

EXERCISES	DESCRIPTION	CRITERIA TO PROGRESS BACK TO SPORT
Vertical jump	Standing on the affected leg - hop vertically as far as possible. Measuring hop height	95% compared with other side

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