A Review of Common Basketball Injuries

Lateral Ankle & Anterior Cruciate Ligament Sprains

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Introduction

Lateral Ankle Sprains (LAS) and Anterior Cruciate Ligament (ACL) sprains are common injuries in the sport of basketball. In their careers, 70% of basketball players have experienced an ankle sprain, and 20% have sustained an ACL injury.[2]

Our review of research regarding LAS and ACL sprains will highlight the following:

- Mechanisms of Injury
- Treatment
- Rehabilitation
- Prevention

Mechanism of Injury

Lateral Ankle Sprain:

- Caused by excessive inversion, rotation, and plantar flexion of the ankle.[1]
- The anterior talofibular, calcaneofibular, and posterior talofibular are the ankle ligaments that are susceptible to a LAS.[1]

Anterior Cruciate Ligament Sprain:

- The ACL prevents anterior tibial translantion in relation to the femur.[2]
- Greater knee flexion, knee valgus, and high ground reaction force make the ACL more vulnerable to injury.[2]

https://osteopathysingapore.files.wordpress.com/2015/05/basketball.jpg

Treatment

Lateral Ankle Sprain:

- Assess grade of ankle sprain and ROM with Anterior drawer test and Ottawa Rules. If athlete cannot walk four steps, they must get an x-ray to look for possible fractures.[1]
- Chronic and acute ankle sprains are treated the same way.
- Treatment includes protection, rest, ice, compression, and elevation of the ankle.[1]

ACL Sprain:

- Assess grade of ACL sprain and ROM with Lachman's test: Ligament is damaged if tibia pulls forward past the femur.
- Complete ligament rupture often requires surgical reconstruction by autografting the patellar tendon or hamstring tendon.[3]
- Rest, ice, compression, and elevation are essential in managing swelling.[3]

Rehabilitation

Principles of Functional Rehabilitation:

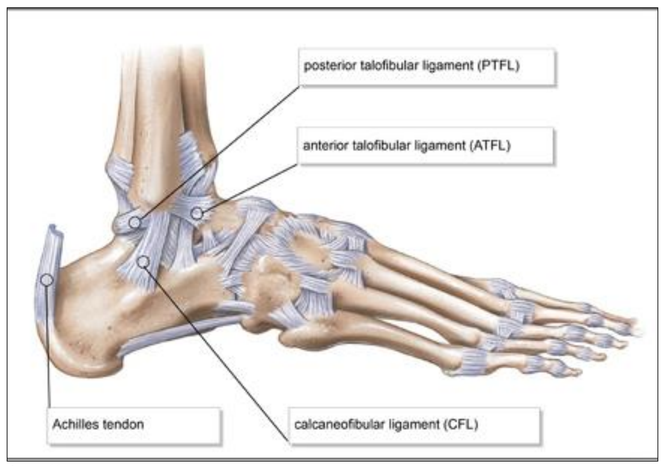
- Establish range of motion (ROM)[1]
- Increase mobility with non-weight bearing exercises
- Maintain cardiovascular endurance
- Retrain neuromuscular & sensorimotor patterns (balance training)[1]
- Regain strength of supporting muscles

Lateral Ankle Sprain:

The muscles targeted in LAS rehabilitation strength-training exercises are:

- Extensor digitorum longus
- Fibularis longus
- Fibularis brevis

Taping or bracing the ankle provides support during late rehabilitation stages and when returning to sport.[1] The recovery process takes between three and twelve weeks.[1]



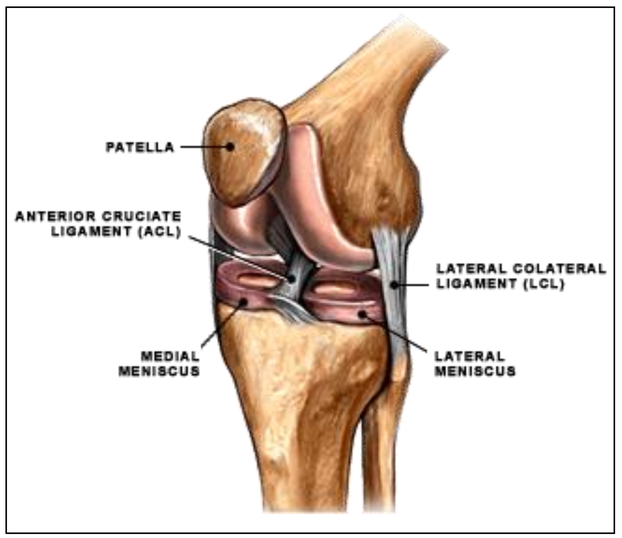
http://www.coringroup.com/images/uploads/c1/1674.jpg

ACL Sprain:

In ACL rehabilitation it is imperative to regain strength of the:

- Quadriceps
- Hamstrings
- Knee stabilizers[5]

Reducing asymmetrical loading is also an important goal in the recovery process. Isometric contraction exercises help build strength.[5] The recovery process can take between six and twelve months.[5]



http://www.nemsi.uchc.edu/images/knee.gif

Prevention

- Absolute injury prevention is nearly impossible. Taping and bracing may decrease the chance of injury by reducing the range of motion to the respective ligaments.[1]

http://www.braceshop.com/allard-usa-m2-acl-knee-brace.htm

http://*vype.com/houston/wp-content/uploads/sites/18/2015/01/Volleyball-Brace.jpg*

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