

# Ligament

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## ACUTE INJURY MANAGEMENT

by: Kristy Commerford, PT, MPT, BSc, CDT

### What can a physiotherapist provide to patients with acute sprains + strains?



Ankle sprains, hamstring strains, rotator cuff tears and acute onset low back pain – these are only a few of the orthopedic injuries that physiotherapists can treat. Timely management of acute injuries is essential to return patients to their work and recreational

activities. Outlined below are 5 of the TOP REASONS why physiotherapists are a great resource for the management of acute injuries

#### 1. Pain and swelling management

>Pain and swelling are often the primary reasons that patients seek medical advice after an acute injury. During the inflammatory stage of tissue healing, the involved tissue is extremely sensitive and prone to re-injury if the affected structure is not properly cared for.

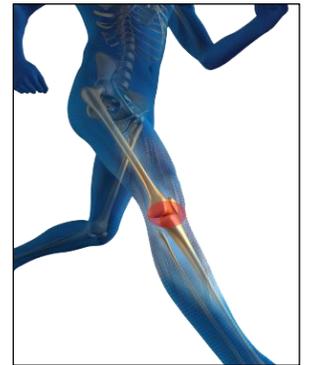
>Managing acute swelling is essential as one of the secondary complications to swelling is the inhibition of muscle functioning in the area of injury → this can produce atrophy in the involved muscles

>Physiotherapists use a wide range of techniques to help control pain and swelling such as gentle joint mobilizations, traction, thermal modalities, manual lymphatic drainage and electrotherapy modalities.

>If the inflammatory cycle remains in a tissue for a prolonged period, adjacent structures can become affected and/or chronic tissue changes can occur.

#### 2. Range of motion and strengthening exercises

>Patients are often apprehensive to move after an acute injury, but maintaining mobility in their joints and muscles is essential for the proper delivery of oxygen/nutrients and the removal of waste products from the affected tissues. Gentle movement also encourages pain control through the “Gate Control Theory” for pain modulation



RED + HOT + SWOLLEN

>Physiotherapists instruct patients on specific exercises as appropriate throughout all stages of healing and progress to strengthening as indicated so that the affected tissue can reach its optimum function and strength.

#### 3. Bracing, compression, taping, gait aid information

>Many injuries can benefit from a functional external support such as a brace, a proprioceptive therapeutic tape job, or a simple gait aid to decreased weight bearing through a joint

>Protecting and decreasing stress through injured tissue is important for some injuries, whereas as proprioceptive taping techniques are useful for others

>Physiotherapists have an extensive knowledge on a wide variety of bracing options, the use of gait aids and functional therapeutic taping techniques

#### 4. Detailed Orthopaedic Assessment + Education

>Patients often have many questions about the primary and secondary structures affected after an acute injury

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# Research Review

>Physiotherapists have a thorough knowledge of anatomy and biomechanics. Through a detailed assessment of the affect area as well as adjacent areas, the primary injury site is identified as well as the potential underlying structures at fault ex. weak muscles in an adjacent joint

## 5. Individualized treatment plan

- >Given each patient has a unique set of therapy goals, no patient is treated exactly alike – one wants to return to playoff competition while the next wants to participate in a recreational walking group
- >Physiotherapists tailor both treatment and home exercise programs to complement the end goals of their patients
- >Special care is taken to highlight how further tissue injury can be prevented through patient education and a comprehensive therapy program

Acute management is essential to avoid chronic tissue changes within injured tissues. Acute management puts patients at an advantage not only in tissue healing but in function, knowledge and confidence.

## STAFF PROFILE

**Kristy Commerford, PT, MPT, BSc, CDT, Registered Physiotherapist**

*Kitchener-Downtown and Kitchener-South locations.*



- **Education:** Honours Bachelor of Science in Biomedical Science at the University of Waterloo. Graduated from the School of Physical Therapy at the University of Western Ontario.

- **Post Graduate:** completed the Master of Physical Therapy program at UWO, the Sport Physiotherapy Fellowship at the Fowler Kennedy Sports Medicine clinic, and ongoing post-graduate physiotherapy courses.

- **Focused Interests and Skills:** Sport Physiotherapy, Manual Therapy, Decongestive Therapy, Manual Lymphatic Drainage, Acupuncture, and McKenzie Techniques

## Evidence-based treatment for ankle injuries: a clinical perspective

Chung-Wei Christine Lin, Clarie E Hiller, and Rob A de Bie

*Journal of Manual and Manipulative Therapy. 2010 March; 18 (1) 22 – 28*

### Study Description

This is a review article to discuss the various treatments for ankle sprains, chronic instability and ankle fractures.

### Research Findings and Study Conclusions

After an ankle sprain, the use of a supportive brace, NSAIDS and manual therapy lead to positive short-term effects on pain, range of motion and function. Exercise and strengthening of the ankle and surrounding muscles can decreased the potential for recurrence of future ankle sprains and are effective to manage chronic ankle instability.

After ORIF for ankle fractures, early activity and exercise during the immobilization phase may lead to better functional outcomes if properly monitored and progressive exercise should be the focus of treatment post immobilization.

### Commentary

This study highlights the importance of a multimodal approach to the treatment of acute ankle sprains. As identified by the authors, there continues to be a lack of high quality research, with high participant numbers in the area of rehabilitation. Clinically, the findings of this study are consistent with the current practice of acute management of ankle sprains by physiotherapists.

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Research Review by Kristy Commerford, PT, MPT, BSc, CDT

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# Tips & Tricks

## R.I.C.E.

“R.I.C.E” is a widely used acronym standing for: Rest, Ice, Compression, Elevation. This acronym is used when going through the protocol of what to do during the acute stage (24-48 hours) after an injury has occurred. Rest will range based on the severity of the injury, from not pushing the injury through a painful range, to using crutches to ensure no weight is being put on the injured area. Ice will reduce the swelling and inflammation on the injured area and bring some brief relief. Ice should be used for no more than 15 minutes at a time. Compression will encourage the swelling to move out of the area and elevation will control swelling of the affected area.

## Let's Get 'HUMERUS'

### Laypeople's Guide to Medical Terminology:

Artery → The Study of Fine Painting

Barium → What you do when a patient dies

Benign → What you are after you are eight

Caesarean Section → A district in Rome

Dilate → To live longer

Fester → Quicker

Medical Staff → A doctors cane

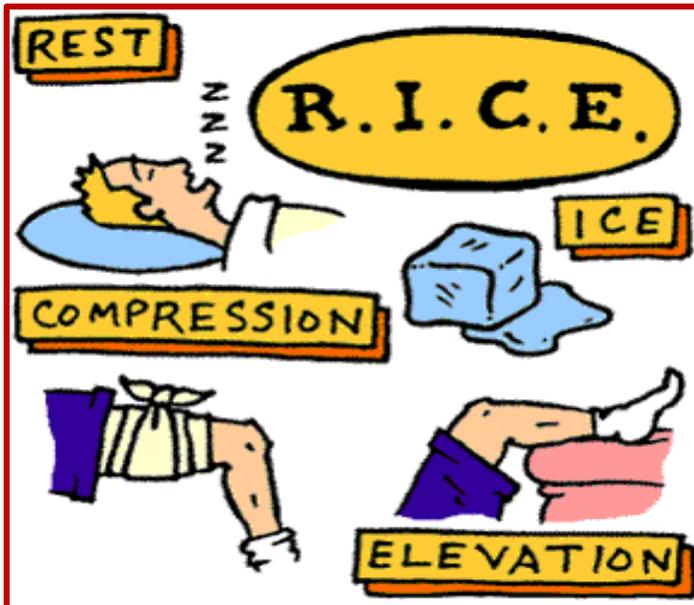
Minor Operation → Coal digging

Morbid → A higher offer

Nitrate → Lower than a day rate

Protein → In favour of young people

Urine → Opposite of you're out



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