

Tender Heart High School,
Sec-33B Chandigarh

Class: X

Topic: Sports Related Injuries

Subject: Physical Education

Chapter - 6

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→ Fracture

A fracture is a break bone. There are different types of fracture and contrary to popular belief, there is no difference between a 'break' and a fracture.

* Symptoms of a Fracture: A fracture is usually a very severe injury and the athlete will know about it due to the pain, tenderness, swelling. In displaced fractures, there may be some deformity present.

* Treatment:

- (i) Keep the patient in a comfortable position
- (ii) Apply cold compression by ice packs.
- (iii) Provide support to the injured body part by using a sling and bandage.
- (iv) This immobility should be for 3 to 6 weeks.
- (v) After full treatment rehabilitation exercises should be performed.

Muscle Strain

Muscle strains occur due to overload of muscles. Muscle strains mostly occur on hamstrings, quadriceps, calf, back, groin strain etc.

Symptoms of Muscle Strain

- * Sudden onset of pain
- * Soreness
- * Limited Range of Movement
- * Bruising or Discolouration
- * Swelling

Causes of Muscle Strains

- * Not Warming up properly before physical activity
- * Poor flexibility
- * Poor Conditioning
- * Overexertion & fatigue

Muscle Strain Treatment

- * Ice & a compression bandage.
- * Elevate the injured region if it is swollen.
- * If it's painful to walk you should be using crutches.
- * Leave or reduce your exercise or activity level.

→ Shin splints

Shin splints is a common name often given to pain at the front of the lower leg. Usually, symptoms occur at the front inside of the shin bone but can arise from several causes.

✱ Shin splints symptoms:

- (i) Pain over the inside lower part of the tibia or shin bone.
- ii) There may be a pain at the start of exercise which often eases as the session continues.
- iii) Pain is often worse the next morning but may ease off over time with gentle use.
- iv) Swelling or lumps and bumps felt along the inside of the bone.

✱ Causes:

- (i) When the foot inwards to much flattening the arch of the foot and causing the lower leg to rotate inwards.
- (iii) When the foot rolls outwards to much during the time the foot is in contact with the ground.
- iv) Inadequate and improper footwear.
- v) Increasing training too quickly is one of the more common causes of shin splints.

→ Shin Splints Treatment:

Apply the PRICE principles of protection, Rest, Ice, Compression and elevation to reduce initial pain & inflammation. Apply a cold therapy and compression wrap to the painful area of the shin for 10 minutes every hour initially, reducing frequency to 3 or 4 times a day as symptoms improve.

→ Stress Fracture

A stress fracture is an incomplete fracture of a bone, sometimes also known as a hairline fracture or a fatigue fracture. They are very thin cracks within the bone and can occur in the tibia (shin).

→ Symptoms of stress fracture:

- A generalized area of pain
- You may find a tender area to touch on the bone.
- Swelling
- Pain is worse with weight-bearing.
- Pain on activity may be worse to start with and then ease before returning afterwards.

→ Treatment

- Treatment of a stress fracture revolves around resting the injured part. Use of crutches.
- Proper rest should be given to the injured part.

➤ Plantar fasciitis

Plantar fasciitis is an overuse injury caused by repetitive over-stretching of the plantar fascia which is a thick band of tissue/tendon that runs under the foot that leads to possible inflammation & thickening of the tendon.

➤ Symptoms

- * Gradual pain under the heel which may radiate forwards into the foot.
- * Pain usually worse.

➤ Causes:

- (i) Overuse of the fascia can become inflamed & painful at its attachment to the heel of bone or calcaneus.
- (ii) It is more common in sports which involve running, dancing or jumping.

➤ Treatment

- (i) Stretching the tight lower leg muscles, correcting any causes and a gradual return to full fitness.
- (ii) Reducing pain & inflammation is the priority.
- (iii) Applying the PRICE principles of protection, Rest, Ice, Compression and elevation is important.

Tennis elbow

Tennis elbow is a general term used to describe pain on the outside of the elbow.

Tennis elbow symptoms:

The main symptoms:

- (i) The main symptom is the pain about 1 or 2 cm down from the bony part on the outside of the elbow, known as lateral epicondyle.
- (ii) There may be an associated weakness in the muscles around the forearm and wrist & this may cause difficulty in performing simple tasks the weakness of gripping things, opening a door handle or shaking hands with someone.
- (i) Ice & Compression: In the first 72 hours post-injury, you should apply the principles of PRICE. Apply a cold compression wrap for no more than 15 minutes as the injured tissues are very close to the skin & do not need longer.

→ Low Back Pain

Back pain is caused by numerous biopsychosocial conditions. Most back pain is caused by musculoskeletal conditions and can be readily treated with great success.

→ Causes of Low Back Pain:

1. Specific spinal Pathologies
2. Radicular Syndromes (5-10%)
 - (a) Radicular Pain, e.g: Sciatica
 - (b) Radiculopathy
 - (c) Spinal Stenosis
3. Non-Specific Low Back Pain (NSLBP)

→ Symptoms:

- i) Pain that worsens with movements
- ii) Muscle Cramping or spasms.
- iii) Decreased function and/or range of motion of joint.

→ Treatment

With accurate assessment and early treatment, most NSLBP and radicular pain syndromes will respond extremely quickly to physiotherapy, allowing you to quickly resume pain free & normal activities of daily living.

Note: * Complete your Assignment (stick diagrams of officials's signals of Volleyball & Basketball game) last date of submission is 25.11.24.

* Complete the chapter Numbers 1, 2, 3, 4, 5, 6 & 8.
on 27.11.24.

• Do by own topic : Runner's Knee, Concussion