

Session 4

Prevention, Assessment & Management of Physical Injuries

A. Introduction

The lecture information that is presented in this session are basic in nature and can be applied in Physical Education as a sort of first aid or assistance when needed. This is practical and not clinical in nature.

B. Session Objectives

- ✓ Identify the two types of injury that are commonly acquired in engaging to physical activities.
- ✓ Recognize symptoms of musculoskeletal injuries and as well as specific skeletal or muscular injuries whether minor or major in nature.
- ✓ Classify and differentiate the type of injury that can possibly acquired through physical activities.
- ✓ Apply the first aid protocol in handling the injured person or an injured part of the body.
- ✓ Identify the need to apply taping, bandaging, splinting and bracing using different and appropriate materials.
- ✓ Acquire knowledge in injury assessment protocol and apply that according to what is required by a particular situation.

C. Session Content

1. Topic 1: TYPES OF COMMON INJURIES

Chronic – this can also be called an overused injury since this type of injury keeps on coming back. It is presumed that even there is no enough recovery time, the injured part of the body is still in use as usual.

Acute – this is the sudden occurrence of injury when given attention and treated rightly, the pain never comes back.

Signs and Symptoms of Musculoskeletal Injury:

1. Always compare injured to non-injured side.
*Inspect : swelling, tenderness, redness, limited range of motion, decreased muscle function.

Treatment of Common Injury: (First Aid)

1. PRICERF Principle
 2. No HARM Principle
 3. Taping, Splinting and Bandaging
1. **PRICERF** – as an acronym it says: *Protect, Rest, Ice, Compression, Elevate, Refer* and *Follow-up*. When we encounter persons facing injury of any type, what we can only do is to provide an immediate assistance to prepare the person to a more detailed and appropriate treatment. Following the RICE principle of assisting injured person, it evolved and made it to PRICER. I personally find it important to know the status of the person that we assisted so I included F that stands for Follow-up. This is even more important to schoolteachers as part of the mission of teaching and guiding students.

Practically, we start assisting the person by giving him/her the *Protection* that he needs or to protect the injured part of the body to prevent it from getting worst. Second, let the injured person *Rest* in order for him/her to go back to normal state. Apply *Ice* whenever there is swelling on the injured part. *Compression* using clean cloth if there is blood coming out from the cuts if there is any. *Elevate* the injured part way a little higher than the heart to allow blood to circulate in its natural flow. After providing the immediate assistance, the injured

person is now ready to be *Referred* to the medical authorities for proper and comprehensive care. *Follow-up* on the status of the injured person so you can have the complete picture of the scenario.

2. No HARM Principle

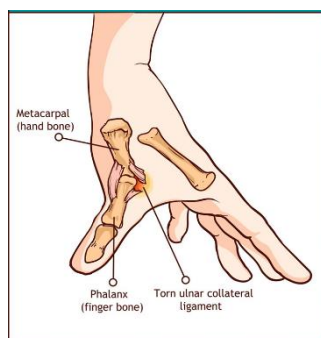
While under treatment or recovery, it is recommended to follow the No HARM Principle. No HARM means, *No Heat, No Alcohol, No Running and No Massage*. This principle prevent the possible over-used of the injured part of the body and the possible secondary injuries.

Terminologies related to physical injuries:



Strain – pulled muscle and tendon

Figure 1: Pulled Hamstring Muscle.
(Source: Wilson, C. 2024:Online)



Sprain- over-stretched ligaments

Figure 2: Thumb Ligament Injury Treatment.
(Source: Hajipour, L.. 2024:Online)



Contusion – caused by blunt hard objects

Figure 3: Thigh Contusion (Quadricep Contusion).
(Source: Goonetilleke, C. 2023:Online)

Tendonitis –inflammation of tendon

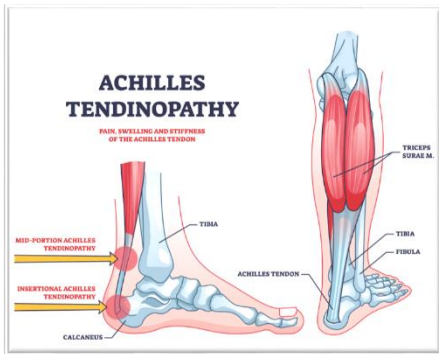
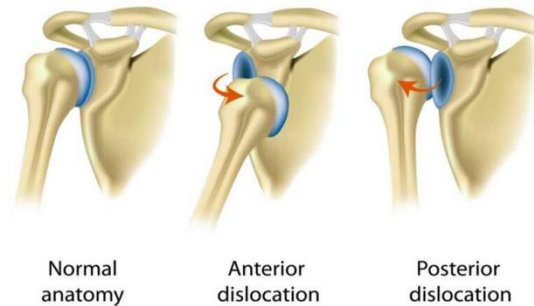
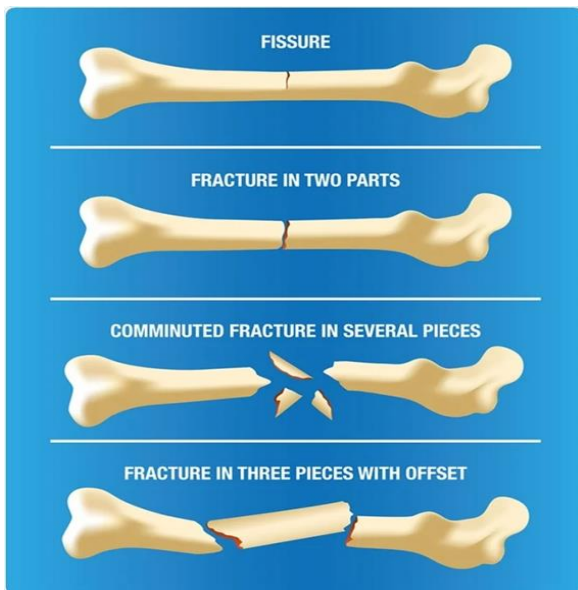


Figure 4: What is Achilles Tendonitis and Why Does It Hurt?
(Source: Stautberg, E. 2024:Online)

Dislocation – joint displacement



(Source: Wikimedia Commons: Dislocation of the shoulder joint)



Fracture – broken bone

Types of Fracture:

- Open*-simple fracture
- Closed*- compound fracture
- Incomplete fracture
- Complete fracture

Preventing Overuse of Sports Injuries:

1. Previous injury
2. Poor conditioning
3. Muscle imbalances
4. Anatomical abnormalities
5. Nutritional factors
6. Errors in training or exercise
7. Inappropriate footwear
8. Improper workout structure

2. Topic 2: *Taping, Splinting and Bandaging*

Taping – the application of adhesive elastic tape (stretchable) or non-elastic (rigid) in order to provide support and protection to soft tissues and joints, and to minimize swelling and pain after getting injured

Role of Taping

- To provide immediate assistance on the injured part of the body (First Aid)
- To provide support for exercise activities

Principles of Tape Application

- Tear the tape
- Follow the contours of the limb
- Maintain the area to be taped in a pain-free but functional position
- Overlap by 1/2 of the width of the tape

Role of an elastic tape (Kinesiotape)



Figure 7: KT TAPE: How it works.
(Source: Dhaliwal, P. 2022:Online)

- Educate weak muscles
- Limits over contraction of muscle
- Decrease cramp
- Decrease inflammation
- Improve range of motion
- Improve joint function
- Reduce Pain

What is Splinting?



Figure 8: A guide to an improvised femoral traction splint in a resource-limited setting
(Source: Swanepoel, S. et.al. 2021:Online)

Splinting (*Movable, Rigid, Soft*)

1. Avoid movement of fractured site.
2. It avoids a closed fracture from becoming an open one.
3. It should be applied in such a manner to immobilize the joint above and below the injury site
4. Rigid splints must be generously padded.
5. If fracture is open, sterile dressings should be applied.
6. Extremity should be elevated and cold packs should be applied.
7. Improvisation is necessary.

D. Conclusion

Being acquainted with the right term and the parts of the body that is affected by injury can be beneficial to both injured person and the one assisting him/her in a way that they can provide initial information when held treated by the More Knowledgeable Others (MKO).

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