TYPES OF INJURIES

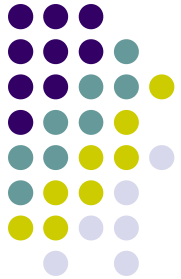

ELEIKO
25


BUZMON.ORG


"Careful, man. There's
some bad joints
going around."


"Four-and-a-half pints please"
POINTING THE FINGER
SWISS MIDFIELDER PAULO DIOGO accidentally ripped off his finger in a goal celebration. After a 4-1 win at Schafthausen, he jumped over a fence and got his wedding ring caught on the metal barrier.

Sport Injury Symptoms



- Symptoms and causes of injury differ according to the type of injury.
- Some injuries, like a torn muscle are not visibly obvious, where others, such as a knee dislocation or cut are obvious and can appear quite gruesome.
- In most cases it's pain that gives us the first sign of injury.

Types of Sports Injuries

Soft tissue:

- **Muscle sprains, strains and bruises**
- **Tendon and ligament tears**

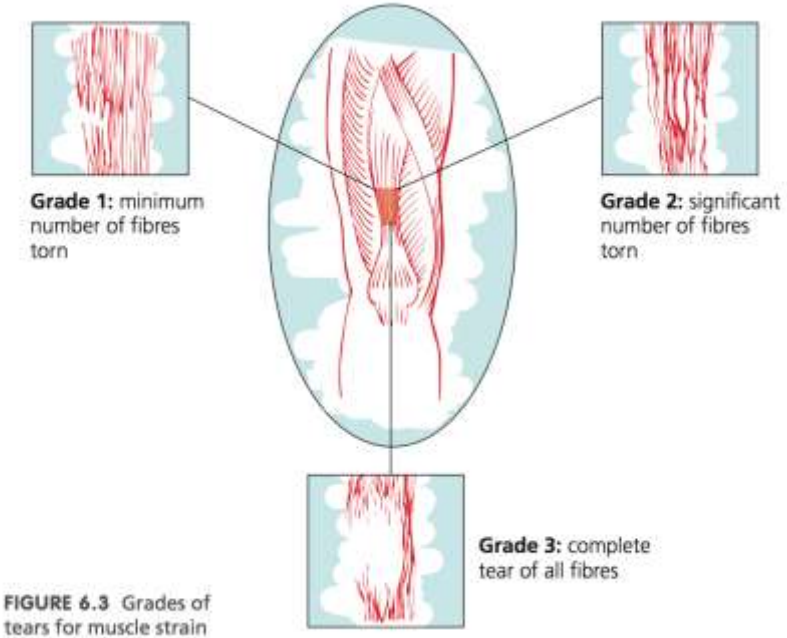


FIGURE 6.3 Grades of tears for muscle strain

Hard Tissue:

- **Joints and bones**
- **Dislocated joints**
- **Fractured bones**

FIGURE 6.4 (a) A simple fracture (b) A compound fracture

TABLE 6.1 Types of sporting injuries

Type of injury	Structure injured	Possible cause
Soft tissue		
Sprain	Ligament	Excessive movement forcing the joint past its maximum range of motion, or external violence such as a side push on the knee during a football tackle
Strain	Muscle or tendon	Overstretching of muscle or tendon generally during sudden acceleration or deceleration
Contusion (bruise or haematoma) or a cork	Muscle, tendon, skin	Direct blow from a collision with a player or piece of equipment, or from a heavy fall
Open wound — cut, abrasion, laceration	Skin	Direct blow from a collision with a player or piece of equipment
Hard tissue		
Fracture	Bone	Direct trauma such as a blow; indirect trauma such as falling on an outstretched hand
Dislocation/ subluxation	Joint	Excessive movement of the joint

Classification of Injuries: Acute, Chronic and Overuse Injuries

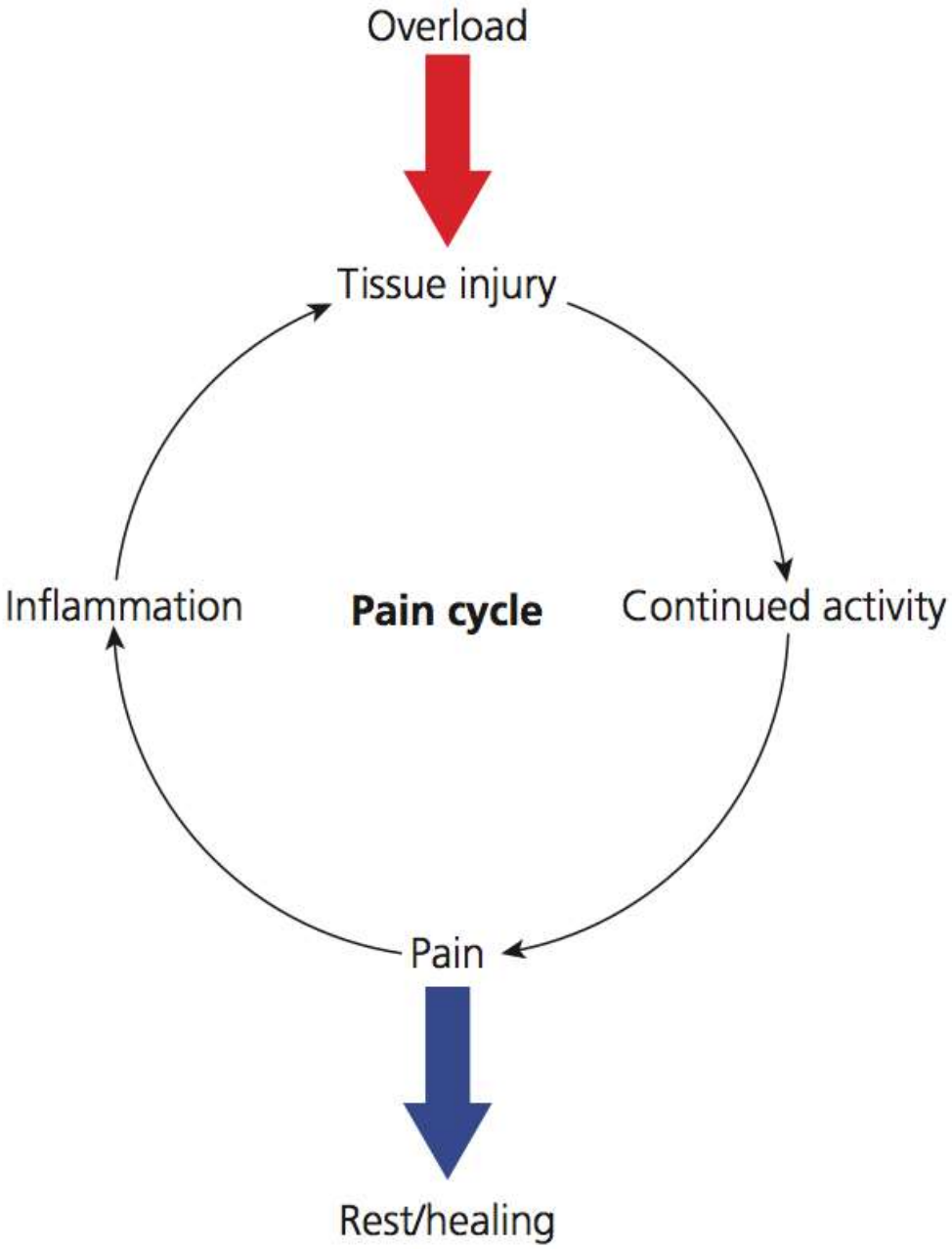
- Acute injuries occur suddenly in an activity. Pain and loss of function are immediate. These can be classified as either:

- **direct injury**: caused by an external force, such as collisions between players or between players and equipment; for example, being hit with a hockey stick. Direct injuries include bruises, 'corks' (such as a corked thigh), fractures and cuts.
- **indirect injury**: caused by an internal force, such as overstretching a ligament; for example, changing direction suddenly in a turnover in basketball. Indirect injuries include sprains, strains and tears.

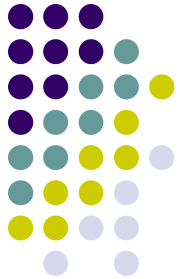
Classification of Injuries: Acute, Chronic and Overuse Injuries

- Chronic injuries tend to start out as acute injuries and then reoccur as a result weakness to the injured site or insufficient rehabilitation after injury.
- Overuse injuries are caused by excessive and repeated use of the same muscle, joint or bone.

Overuse Injuries

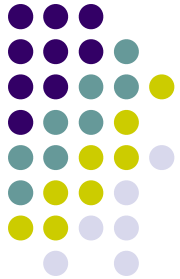


Sprains, strains and bruises



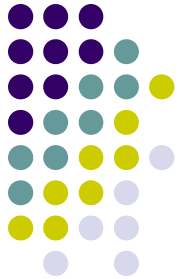
- Injuries that involve body tissues apart from bone are generally classified as soft tissue injuries although the cause and soft tissues involved in each injury are different.
- A **sprain** is an injury that **involves the ligaments and other soft tissues around a joint,** such as an ankle or wrist. It is a stretch or tear of a ligament.
- A **strain** occurs **away from a joint and involves a twisted, torn or over-stretched muscle or tendon**, commonly in the calf, thigh or lower back.

Sprains, strains and bruises



- A **bruise** is a soft tissue injury that involves the skin and nearby tissues following a blow or other forces that break a blood vessel close to the surface of the body.
- Bruising may be seen with a sprain or strain. The colour of tissues may indicate the time of the injury: initially the tissues are reddened, then change to purple and, as the blood is slowly absorbed into the body, the tissues become bluish.

Sprains, strains and bruises



- **Symptoms and signs:**
- Pain at the site of the injury
- Loss of power in the injured area especially with a sprained joint
- Swelling of the injured area
- Nausea
- Feeling faint or giddy
- Pale, cold and clammy skin due to shock

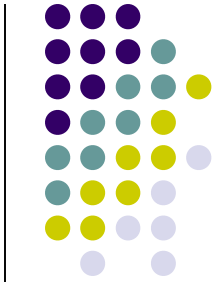
Dislocated Joints

- A dislocated joints is when the two bones that come together to form a joint become separated.
- The joints most frequently dislocated are some of the hand joints and the shoulder.

Fractured Bones

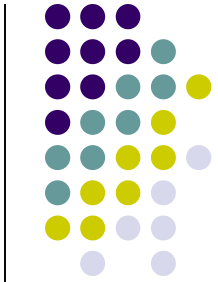
- A fracture is a break in the bone. There are two types of fractures:
- **Acute fractures** – Can be ***simple*** (a clean break of the bone with little damage to surrounding tissue) or ***compound*** (a break which pierces the skin with little damage to surrounding tissue)
- **Stress fractures** - Pain caused by repeated stress to the bone over time

Test Your Understanding:



1. Outline the 3 different classifications of injuries.
2. Give an example of the 3 different classifications of injuries.
3. Outline differences between direct and indirect injuries and provide an example for each.
4. Outline the difference between a d sprain and a strain.
5. What is the difference between hard are soft tissue injuries.
6. Is a dislocation a hard or soft tissue injury?

Apply Your Understanding:



Question 1:

Apply the following questions to cricket, netball and soccer:

A. Identify 3 injuries for each sport that is likely to occur.

B. Provide an example of how these injuries might occur

C. Classify these injuries as hard/soft tissue and direct/indirect injuries.

Apply Your Understanding:

Question 2.

Read the following scenarios and classify them according to the type of injury most likely to have occurred.

(a) A 100-metre sprinter begins his race accelerating from the blocks and feels a sharp pain in his Achilles tendon.

(b) A basketballer jumps for a rebound but lands heavily and twists her ankle.

(c) A tennis player feels discomfort in the elbow during a five-set match.

(d) A footballer hears a crack as his leg collides with an opposing player's leg while disposing of the football.

(e) Two hockey players collide heads when going for the ball, and one complains of a headache.

(f) A netballer trips over her opponent's feet in the goal circle, puts her arms out to slow her fall and hurts her shoulder.

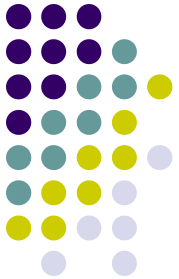
Risk Management

Risk Management:

- Refers to taking steps to reduce the exposure of participants to physical, legal, ethical/moral and financial risk.

- Physical — can someone be injured?
- Legal — are we negligent?
- Moral/ethical — are we discriminating against a particular group?
- Financial — can we afford to do this?

Duty of Care:



- The legal obligation imposed on an individual that requires them to adhere to a standard of care to avoid harm when carrying out any action where the harm is foreseeable.

RISK MANAGEMENT PRACTICES FOR COACHES

Millions of Australians participate in sport at various levels on a regular basis. Sporting activities range from the purely amateur recreational level to high-profile professional sport. No matter where on the scale a sporting organisation or individual is placed, they are exposed to risk that has the potential to cause severe physical, financial or legal disaster. Therefore the effective management of risk is a vital requirement of everyone involved in sport. Coaches have a vital role to play in this regard.

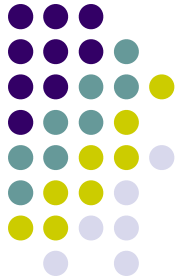
Coaches are in a position of expertise and knowledge. The law imposes a duty to take all reasonable care having regard for the circumstances. They must properly instruct, supervise and warn. As a sporting supervisor their behaviour will be judged according to what is the reasonable level of proficiency among experts or specialists in that field. Coaches must balance the objective of winning against the welfare and safety of all participants. It must be remembered the younger the participants the greater the responsibility placed on a coach.

Prime areas for coaches to address are as follows:

1. **Ensure adequate supervision.**
   - General supervision, e.g. supervising playground
   - Specific supervision, e.g. coach in high-risk activity
   - Transitional supervision — a mix of the two above.
2. **Properly instruct (include demonstrations on techniques of the sport).**
   - Teach any activity that requires an increase in skill level, strength or condition progressively.
3. **Ensure sound planning.**
   - Document plans or action for supervising activities and emergency situations.
   - Record all practice.
4. **Warn of inherent dangers.**
   - The athlete must know, understand and appreciate the risks involved.
   - Properly instruct and demonstrate skills.
5. **Provide a safe environment.**
   - Detect and foresee any dangerous situations:
     - inspect facilities, equipment
     - remove dangerous items from playing arena
     - monitor climatic conditions.
6. **Teach the rules of the sport, especially those necessary for safety.**
7. **Evaluate athletes for injuries or limitations.**
   - How injuries may limit the athlete's ability to participate — doctor's/trainer's clearance for athletes to compete after injury.
8. **Use proper classification criteria.**
   Classify athletes according to:
   - Skill level
   - Age
   - Maturity
   - Gender
   - Size
   - Experience.
9. **Discourage violent actions.**
   - Inform participants that actions on-field can lead to civil action off-field.
10. **Ensure that counselling and information is available on the dangers of drug use.**
11. **Keep up to date with current practices in coaching and sport.**
12. **Supply appropriate first aid.**
    - Knowledge of first-aid skills and procedures — certified in first-aid care and CPR is essential
    - Include the four duties in providing first-aid care:
      - protect from further harm
      - maintain or restore life
      - comfort and reassure the injured athlete
      - activate the emergency response system.
13. **Ensure that care is taken that there can be no sexual molestation of young athletes.**
14. **Discourage any acts of discrimination.**
15. **Ensure your athletes are aware of all selection criteria and train them with regard to the selection criteria.**
    - While the law does affect the conduct of sport more than ever before, this should not be seen as a negative. It is a positive reason to take the initiative to implement safe practices and risk management programs.
    - There can be a great sense of achievement in knowing that your sport has satisfied its legal, moral and ethical duties by providing a safe sporting facility that delivers quality programs.

Injury Prevention and

Injury Prevention



- Sports injuries can be prevented by looking at a wide variety of factors such as the environment of a particular sport, fitness levels, protective equipment and nutrition.

The sports environment includes:

1. Weather
2. Facilities
3. Surfaces
4. Equipment

How can each of these environments make playing sport safer as well as more dangerous?

Write a quick sentence for each

Injury Prevention

Elements to Fitness

Stretch

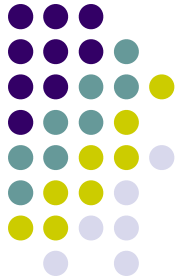
Fluid

Technique & Training

Playing with injuries

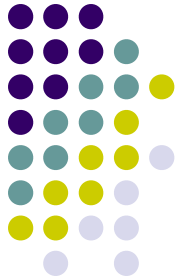
Write a short sentence about how each of the elements of fitness may reduce sports injuries.

Injury Prevention - types of protective equipment



1. Eyewear
2. Mouthguards
3. Wrist, elbow, knee and shinguards
4. Helmets
5. Tapes
6. Braces

Injury Management



- Injury management involves identifying an injury, treating it and then returning to the sport.
- It's extremely important that sports players are adequately rehabilitated before returning to sport. If they are not, the injury can become much worse.
- For serious injuries, like spinal injuries, get help first.
- To assess all other injuries, remember TOTAPS!

TOTAPS

Talk	Ask the player what happened. Where does it hurt? What kind of pain is it?
Observe	Look at the affected area for redness or swelling. Is the injured side different from the other side?
Touch	Touch will indicate warmth for inflammation – touch also assesses pain.
Active Movement	Ask the injured player to move the injured part without any help.
Passive Movement	If the player can move the injured part, carefully try to move it yourself through its full range of motion.
Skill Test	Did the active and passive movement produce pain? If no, can the player stand and demonstrate some of the skills from the game carefully? If an injury is identified, remove the player from the activity immediately.

Injury Management

- If an injury has occurred always remember RICER.

RICER

Rest	Rest reduces further damage. Avoid as much movement as possible to limit further injury. Don't put any weight on the injured part of the body.
Ice	Apply a hot/cold pack to the injury for 20 minutes every 2 hours. Continue this treatment for the first 48-72 hours (ice cools the tissue and reduces pain, swelling and bleeding). Place cold pack wrapped in a towel onto the injured area. Do not apply frozen cold pack directly to the skin.
Compression	Compression reduces bleeding and swelling. Check bandage is not too tight.
Elevation	Elevate the injured area to stop bleeding and swelling.
Referral	Refer the injured person to a doctor

Sports Medicine Australia

Sports Medicine Australia

Sports Medicine Australia (SMA) is active in educating professionals and sports-minded community members by helping them to achieve optimal benefits from their exercise, activity and competition. This is achieved through the programs it delivers as well as its affiliations with sports science and medical professionals such as orthopaedic surgeons, doctors, physiotherapists, podiatrists, dietitians, psychologists, sports scientists, teachers, exercise physiologists and population health specialists.

SMA prides itself on contributing to the creation of a safe playing field for everyone at the community level to freely and actively participate through the delivery of the Safer Sport and Smartplay programs. Both these programs focus on injury prevention, with Safer Sport educating about prevention, assessment, management and referral of injuries and Smartplay educating people and organisations through resources and information advising on how to play smart and safe.

Sports Medicine Australia policies and guidelines

Some of the policies and guidelines of Sports Medicine Australia are outlined below.

- *General sports safety*
  - Warm-up — pre-exercise injury prevention (see the **Warm-up** weblink on page 195)
  - Drink-up — hydration
  - Gear-up — protective safety equipment
  - Fix-up — injury management
  - Mouthguards — preventing dental injury in sport
- *Policy and guidelines*
  - Beat the heat/hot weather guidelines/heat policy
  - Infectious disease/Blood rules OK
  - Emergency planning for sporting clubs
  - Keeping sport safe and fun
  - Safety guidelines for children and young people in sport and recreation
  - Safety personnel for sporting clubs.