Sports Injury and Prevention

Year 10 Physical Education
As PE students you will often face a sporting injury.

If you participate in sport, at some time you will be called upon to treat an injury.
What is an Injury?

An injury is defined as something that causes a person mental or physical discomfort and affects their overall performance.
A sporting injury is defined as something that causes a person mental or physical discomfort as a result of playing sport.
ACTIVITY

- In groups of 4 ‘Brainstorm and record as many sporting injuries as possible

- Highlight on your list the injuries you have suffered

- Using a different colour record the sport being played where you suffered the injury/injuries.
Types of Sporting Injuries

• ACUTE- occurs suddenly
  • Direct injury (impact e.g. corked thigh, concussion, breaks/dislocation)
  • Indirect injury (muscle strain, muscle tear, joint sprain breaks/dislocation)

• CHRONIC- occurs overtime
  • Overuse
  • Over exertion over time
  • Re-injury of previous acute
ACTIVITY

• Individually fill in the table Sports Injuries Symptoms and Causes Worksheet

• the following link to help fill in the worksheet

How do we stop Sporting Injuries occurring?

PREVENTION is the key!!!!

More than 1 million sports injuries occur each year costing an estimated $10 million……. Approximately 30-50% of these could potentially be prevented.
What is prevention?

Prevention is stopping an injury occurring or reducing the risk of injuries occurring during a sporting activity.
How can we prevent Sporting injuries?

- FITNESS-Preseason testing
- FITNESS-Specific training/conditioning to sport played
- Warm Up and stretching
- ENVIROMENT-Protective and Safety Equipment
- Rules / Umpiring
- ENVIROMENT-Facilities
- ENVIROMENT-Surfaces
- Coaching
- ENVIROMENT-Weather
- Nutrition and hydration
FITNESS

• Preseason Testing
  • Undergo preseason fitness testing to identify physical deficiencies

• Specific Training/Conditioning to sport played
  • Developing fitness training/conditioning needed during the season
Warm Up and Stretching

- Increasing muscle temperature and muscle length to reduce injury risk

Protective Equipment

- Provide adequate safety and protective equipment for all competitors. Regularly checked and maintained
  - Mouthguards- (prevents the teeth from breaking, jaw damage and reduces risk of concussion)
  - Shin pads
  - Helmets-
  - **Strapping- prevention and protection**
    - ankles and fingers
Rules /Umpiring

• Ensure the rules of the game are adhered to and that all competitors feel safe in playing the game to the rules
Facilities and Surfaces (Environment)

- Provide adequate and safe facilities and playing surfaces to compete on. Regularly checked and maintained.
Good Coaching

- A coach that emphasise the rules, accredited, trains players well and specific to sport being played. Someone who is conscious that preventing injury is a big part of player management. . . . No players, no game!!

Weather

- Provide care and assess all surfaces/equipment to ensure player safety in-
  - Extreme heat
  - Wet weather
  - Extreme cold temperatures
Nutrition and Hydration

- Good nutrition (healthy eating) and hydration can not only play a big role in a competitor's injury prevention; it can naturally enhance sporting performance.

Finally – PLAY ALL OUT

- When players are mentally and physically under prepared in their approach to physical activity, injuries are more likely to occur.
  - This may be due to errors in techniques, player movement, and poor positioning.
ACTIVITY- Strapping

- Why Strap?
  - Prevention and protection of injury
  - Finger Strapping
    - Buddy Strapping

- Ankle Strapping
  - Basic Ankle Strapping (2 x anchors, 3 x stirrups and 2 x 6’s)
  - Basic Ankle Strapping (2 x anchors, 3 x stirrups, 2 x 6’s and heel lock)
Preparation in prevention of injury

- Look at the newspaper article Maintaining Body Temperature
  - 98.6 F is 37 Degrees Celsius
  - 104 F is 40 Degrees Celsius
- As a class read the article ‘Heat Kills Pro Football Player Korey Stringer’
Preparation in prevention of injury

- As a class read the article ‘Heat Kills Pro Football Player Korey Stringer’
- 90 F is 32.2 degrees Celsius
- 110 F is 43 degrees Celsius
- 106 F is 41 degrees Celsius
- 350 pounds is 160kgs
- Discuss the implications of prevention in this severe case-
  - Fitness
  - Nutrition- prior to, during and after match/training
  - Hydration- prior to, during and after match/training
  - Refuel
HOMEWORK ACTIVITY

• Use the Sheet and other investigations to design suitable for your chosen sport

  • pre-competition nutrition and hydration (10%)
  • during match nutrition and hydration (5%)
  • post match nutrition and hydration (5%)

Must be on HW Sheet provided and detailed (Formative task).

NOTE: Provide example on IWB
Warm Up and Stretching

- As a class discuss the reasons for Warm Up
  - Increase blood flow to muscles (example)

- Students to receive hand out Stretching exercises:
  - Highlight the information on the back sheet of things to avoid when stretching

- ACTIVITY- Basketball Competition
  - In groups of 5 or 6 perform a 10 minute warm up and stretch routine to prepare for a mini basketball competition
  - PLAY!!
A sporting injury needs to be assessed in a correct and sequential manner.

But how?
**T O T A P S**

- **T- talk**
  - stop the player immediately, remove them from the field if possible
  - ask what has happened and gather information about what is hurting

- **O- observe**
  - look at the affected area- is there swelling, redness
  - Is it different from the opposite side of the body
T O T A P S

• T- touch
  • touch will indicate warmth for inflammation
  • touch will also assess for pain

• A- active movement
  • ask the injured player to move the injured part without any help
  • this will help determine seriousness of injury
  • If ‘NO’ move into injury management
TOTAPS

- P- passive movement
  - if the player can move the injured part, carefully try to move it yourself through its full range of motion

- S- skill test
  - Did the active and passive movement produce pain?
  - If ‘NO’, and the player can demonstrate some skills of the game without pain play may continue
  - IF ‘YES’ and an injury has been identified remove the player from any activity and treat injuries immediately
A sporting injury needs to be treated in a correct and sequential manner.

But how?
R I C E R

- R- rest
  - reduces further damage
  - Avoid as much movement as possible to limit further injury
  - Don’t put any/or minimal weight on the injured part

- I- ice
  - apply a cold pack/ice pack to the injury for 20 minutes every 2 hours (wrap in a towel- do not apply directly to skin)
  - Continue this treatment for the first 48-72 hours to cool the damaged tissue and reduce pain, swelling and bleeding
R I C E R

- C- compression
  - apply a compression bandage covering the injured area
  - Avoid as much movement as possible to limit further injury
  - Don’t put any/or minimal weight on the injured part

- E- elevation
  - elevate the injured area to stop bleeding and swelling (place injured area under a pillow for comfort)

- R- referral
  - refer the injured person to a qualified professional for definitive diagnosis and continuing management
Factors to avoid when treating a sports injury

What not to do in the first 48 Hours to cause further HARM to an injured area.
H A R M

- **H-** heat
  - increases the bleeding at the injured site
  - avoid hot baths, hot water bottles, heat packs and ointments (dencorub)

- **A-** alcohol
  - increases bleeding and swelling at the injury site, and delays healing
  - can mask the pain and severity of the injury
H A R M

- R- running
  - running or any form of exercise will cause further damage
  - do not resume exercise unless a medical professional has given you the all clear

- M- massage
  - causes an increase in bleeding and swelling at the injury site, and delays healing
  - can mask the pain and severity of the injury