

SIS - Sport, Fitness and Recreation Training Package

## SIS20412 Certificate II Sport Career Oriented Participation

Unit

SISSSPT201A  
Implement sports injury prevention

*This is not a complete document.  
SAMPLE ONLY*

Student/Trainee Manual



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## STUDENT/TRAINEE DETAILS

**Student/Trainee Name****Student/Trainee Email****Teacher / Trainer Name****School / Institution / Training Organisation / Employer**

SAMPLE SAMPLE

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## INTRODUCTION

This manual was developed to provide training content that addresses the specific 'Unit of Competency' as outlined in the following pages.

We encourage you the student / trainee to take your time when reviewing this content and seek any assistance from your teacher/trainer should you have difficulty in understanding the information.

## LEARNING ACTIVITIES

Also included in this Student / Trainee manual are a series of Learning Activities.

The learning activities in the student and/or trainee manuals are 'Form Enabled' so that if the resources are delivered online, the activities can be entered in using the computer keyboard.

Each learning activity is identified with the following icon.

A blue rounded rectangular button with the text "Learning Activity" in white, bold, sans-serif font.

Learning activities come in the following forms.

- ☆ Questions
- ☆ Research
- ☆ Tasks
- ☆ Interviews

## INTRODUCTION—CONT'D

### **Questions**

Questions generally relate to the information presented on previous pages. Questions will also include multiple choice questions, 'Yes' and 'No' questions and/or 'True' and 'False' questions.

### **Research**

This type of learning activity requires you to locate information by using research methods. The research methods could include:

- ☆ Internet searches
- ☆ Reading textbooks and other reference sources
- ☆ Location visits

### **Tasks**

This learning activity type requires you to actually do something and some examples of tasks may include:

- ☆ Creating reports
- ☆ Visiting locations such as workplaces
- ☆ Performing an activity in a workplace

### **Interviews**

This learning activity type would require you to interview person(s) in an actual workplace environment or a person(s) who are experienced in the industry sector which you currently are undergoing training.

You will be made aware of the type of learning activity by noting the learning activity type displayed under the learning activity icon.

## INTRODUCTION—CONT'D

### USING THE FORM ENABLED FEATURE

If you are using this manual online, you can fill in some of the answers using your computer keyboard.

Your teacher or trainer will provide you with the information and instructions on how to use the 'Form Enabled' feature in this manual.

### SELF ASSESSMENT

At the end of each manual is a series of questions that you should review and answer either Yes or No.

The term 'Self Assessment' means you will ask yourself these questions and therefore is no need to provide the answers to the self assessment questions to your teacher or trainer, unless they require you to do so.

This self assessment is to ensure you have reviewed and understood the information that was presented in this manual.

If you answered 'No' to any of these questions or are unsure of your understanding in any of the topics reviewed, you are encouraged to go back and review the information again and/or seek the assistance of your teacher or trainer.

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**UNIT OF COMPETENCY OVERVIEW**

The following pages are extracts from Training.gov.au website and outlines this specific 'Unit of Competency' including the 'Elements' and the 'Performance Criteria'. The content within this manual has been developed to address this unit.

**SISSSPT201A - IMPLEMENT SPORTS INJURY PREVENTION**

ELEMENT	PERFORMANCE CRITERIA
<b>1. Contribute to injury surveillance</b>	<ul style="list-style-type: none"> <li>1.1. Identify the costs of sports injury to the athlete and other key stakeholders</li> <li>1.2. Source and access information on sports injuries for the specific sport</li> <li>1.3. Monitor occurrence of injury and analyse injury patterns in own sporting area in consultation with appropriate health professionals</li> <li>1.4. Identify risk factors that lead to sports injury in own sporting area according to relevant legislation and organisational policies and procedures</li> <li>1.5. Identify preventative measures in consultation with appropriate health professionals</li> </ul>
<b>2. Implement a sport injury prevention program</b>	<ul style="list-style-type: none"> <li>2.1. Assess the effectiveness of a range of injury prevention programs relevant to own sporting area in consultation with the coach and relevant health professionals</li> <li>2.2. Contribute to the development of a sport injury prevention program according to organisational policies and procedures</li> <li>2.3. Apply preventative measures and strategies to minimise sports injuries in own sporting area according to best practice guidelines</li> <li>2.4. Monitor and adjust application of injury prevention measures according to organisational policies and procedures</li> <li>2.5. Assist in assessment of playing area, facilities and protective equipment for safe participation and advise relevant personnel of problems according to organisational policies and procedures</li> <li>2.6. Conduct ongoing monitoring of injury trends and promote preventative measures to athletes to minimise the likelihood of injury according to sport-specific criteria</li> <li>2.7. Maintain individual and team protective equipment according to instructions and advise relevant personnel of problems</li> </ul>



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ELEMENT	PERFORMANCE CRITERIA
<b>3. Contribute to evaluation of injury prevention program</b>	<ul style="list-style-type: none"><li>3.1. Participate in reviewing the effectiveness of the preventative measures in consultation with appropriate health personnel</li><li>3.2. Adjust preventative measures and interventions in response to ongoing injury surveillance</li><li>3.3. Evaluate own performance and identify potential improvements for future implementation of injury prevention programs</li><li>3.4. Contribute feedback to implementation of injury prevention programs</li></ul>

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# Section One

## Contribute to Injury Surveillance

SAMPLE SAMPLE

# IMPLEMENT SPORTS INJURY PREVENTION

## SECTION ONE – CONTRIBUTE TO INJURY SURVEILLANCE

### INTRODUCTION

Unfortunately, sports injuries do happen and in some cases the injury may bring an athlete's promising career to an end .

The best scenario though, is to put injury prevention strategies, policies and procedures into place.

In this unit we look at implementing a sports injury prevention program and how you can be involved in this program.

### SECTION LEARNING OBJECTIVES

At the completion of this section you will learn information relating to:

- ☆ Identifying the costs of sports injury to the athlete and other key stakeholders
- ☆ Sourcing and accessing information on sports injuries for the specific sport
- ☆ Monitoring occurrence of injury and analysing injury patterns in own sporting area in consultation with appropriate health professionals
- ☆ Identifying risk factors that lead to sports injury in own sporting area according to relevant legislation and organisational policies and procedures
- ☆ Identifying preventative measures in consultation with appropriate health professionals



## IDENTIFY THE COSTS OF SPORTS INJURY TO THE ATHLETE AND OTHER KEY STAKEHOLDERS

In 2011 a private insurance company named 'Medibank Private' funded a research project into sports injury and the health cost to the Australian economy.

On the release of the research project findings it was found that the cost of sports injury to the economy was \$2 billion. Medibank said the top five most injury-prone sports were football, basketball, netball, running and tennis.

However, bringing it closer to home the cost of a sports injury to the athlete can be devastating. For the recreational athlete the costs could include one or more of the following:

- ☆ Medical costs
- ☆ Loss of income
- ☆ Pain and suffering
- ☆ Permanent physical damage
- ☆ No longer participating in the sport of their choice

For the younger athlete the costs could include one or more of the following:

- ☆ Medical costs
- ☆ Missing school
- ☆ Costs to the family (parents missing work, costs of carers)
- ☆ Pain and suffering
- ☆ Permanent physical damage
- ☆ Losing confidence in their abilities
- ☆ No longer participating in the sport of their choice

For the professional athlete the costs could include one or more of the following:

- ☆ Missing competition events
- ☆ Costs to the club such as medical costs
- ☆ Pain and suffering
- ☆ Permanent physical damage
- ☆ Ending their sporting career

**Learning  
Activity**

Question

**LEARNING ACTIVITY ONE**

In this Section we mentioned five sports that were most prone to sporting injuries. What were those five sports?

SAMPLE SAMPLE

**Learning  
Activity**

## Question

**LEARNING ACTIVITY TWO**

In this Section we mentioned the recreational athlete, the young athlete and the professional athlete. Injuries to these athletes all attract costs. What were the common costs for all three?

SAMPLE SAMPLE

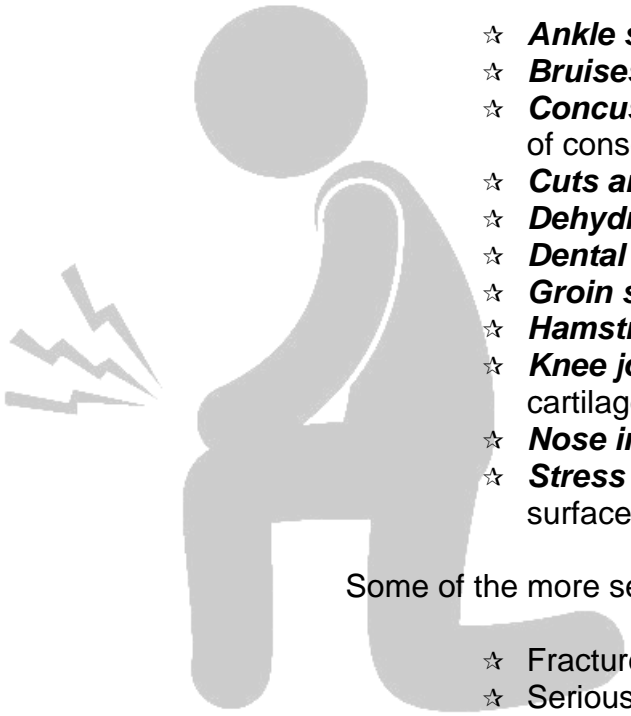


## SOURCE AND ACCESS INFORMATION ON SPORTS INJURIES FOR THE SPECIFIC SPORT

Every sport has its own common type of sports injury. There are categories of sports that are used to identify what injuries are common to that sport. The categories are:

- ☆ **Adventure or extreme sports**—abseiling, rock climbing, ski diving, bungy jumping, mountaineering, white water rafting
- ☆ **Combative sports**—Boxing, martial arts
- ☆ **Cricket**
- ☆ **Cycling**—BMX, endurance events, velodrome racing, mountain bike
- ☆ **Dancing**
- ☆ **Equestrian activities**—Equestrian events, horse racing, rodeos, polo, trail riding
- ☆ **Football**—AFL, rugby, touch football, soccer
- ☆ **Golf**
- ☆ **Gymnastics and trampolining**
- ☆ **Hockey**—Field hockey, floor hockey
- ☆ **Ice and snow sports**—Skiing, ice skating, snowboarding, snowmobiling, ice hockey
- ☆ **Netball and basketball**
- ☆ **Racket sports**—Tennis, badminton, table tennis, squash, racquetball
- ☆ **Roller sports**—Roller derby, skateboarding, inline skating
- ☆ **Running**—jogging, running events
- ☆ **Water sports**—Swimming, diving, boat sports, scuba diving, fishing, water skiing, surfing
- ☆ **Wheeled motor sports**—Car racing, motorbike racing, off road events, go-carting

Some of the more common sports injuries include:

- 
- ☆ **Ankle sprain** – symptoms include pain, swelling and stiffness
  - ☆ **Bruises** – a blow can cause small bleeds into the skin
  - ☆ **Concussion** – mild reversible brain injury from a blow to the head, which may be associated with loss of consciousness. Symptoms include headache, dizziness and short term memory loss.
  - ☆ **Cuts and abrasions** – are usually caused by falls. The knees and hands are particularly prone.
  - ☆ **Dehydration** – losing too much fluid can lead to heat exhaustion and heat stroke.
  - ☆ **Dental damage** – a blow to the jaw can crack, break or dislodge teeth.
  - ☆ **Groin strain** – symptoms include pain and swelling.
  - ☆ **Hamstring strain** – symptoms include pain, swelling and bruising.
  - ☆ **Knee joint injuries** – symptoms include pain, swelling and stiffness. The ligaments, tendons or cartilage can be affected.
  - ☆ **Nose injuries** – either blood nose or broken nose, are caused by a direct blow.
  - ☆ **Stress fractures** – particularly in the lower limbs. The impact of repeated jumping or running on hard surfaces can eventually stress and crack bone

Some of the more serious sports injuries include:

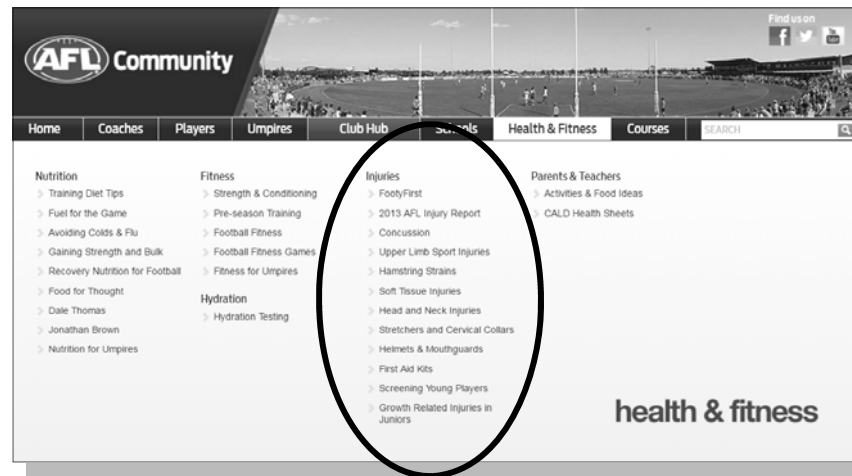
- ☆ Fractured bones
- ☆ Serious concussions
- ☆ Separate/dislocated shoulder
- ☆ Fractured vertebrae



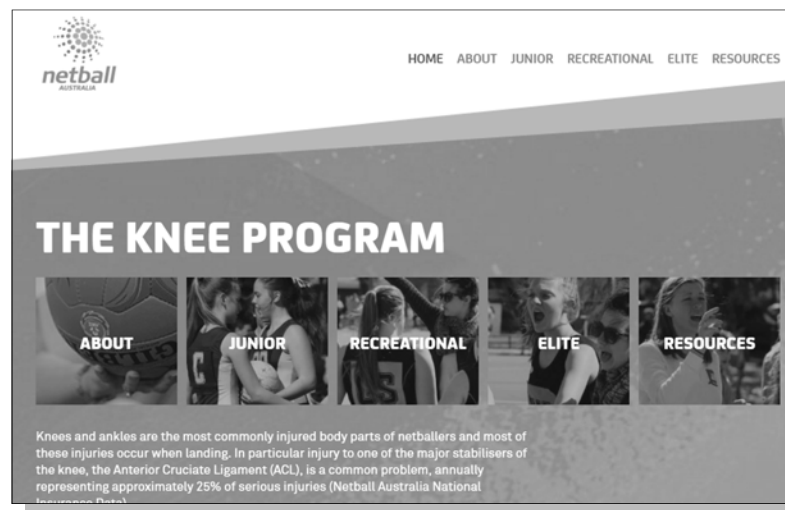
## SOURCES OF INFORMATION ON SPORTS INJURY

There are numerous sources of information on sports injury.


For example, the Australian Football League (AFL) has a website site called 'AFL Community'. On this website there is a section called 'Health and Fitness' and in this section there are pages devoted to 'Injuries'.



Another example is the sport of netball. Netball's most common injuries are those affecting the knee. Netball Australia has a program called the 'Knee' program, designed to reduce knee injuries in the sport. They have a dedicated website to this program that has numerous resources and information.



One final example is the sport of rugby. One common injury in rugby is concussion. Australia Rugby Union has a program for coaches that provides information on concussion. This information is on their website under ‘Coach Development’.



COACH  
DEVELOPMENT

HOMERLCCOACH DEVELOPMENTBECOME A COACHPLAYER DEVELOPMENTCOACHING RESOURCESCOMMUNITY COACH

You are here: Smart Rugby > Program Features > ARU Concussion Guidance (Rugby Public - Standard Care Pathway)

ARU CONCUSSION GUIDANCE (RUGBY PUBLIC – STANDARD CARE PATHWAY)

The Australian Rugby Union provides guidance regarding concussion which applies to everyone involved in Rugby across Australia.

At all times, players, parents, coaches and officials need to act in the best interest of player safety and welfare by taking responsibility for the recognition, removal from play and then ensuring concussion is appropriately managed according to the guidelines.

Under the guidelines:

**Recognise and Remove** – Any player suspected or recognised with concussion **must** be removed from training and playing and **not** return to Rugby or other sport or physical activity until they have been assessed by a medical professional.

**Refer** – Any player with signs or symptoms of a potential head injury or concussion must see a medical doctor as soon as possible. This doctor should have experience in the management of concussion and be aware of this ARU Concussion guidance, World Rugby Concussion Guidance and World Rugby’s Operational Definition of Concussion.






**Rest** – Players diagnosed with concussion **must** rest completely until all signs and symptoms of concussion have disappeared.

World Rugby has defined minimum rest periods for adults and children and adolescents.

**Recover** – The concussed player must first recover from all concussion signs and symptoms at rest and return to activities of normal daily living before starting hard physical activity.

**Return** – Follow the graduated return to play (GRTP) protocol after being able to participate in activities of normal daily life, and after the minimum rest and recovery periods are met.

- Start light exercise (Stage 2) when appropriate.
- Progress through the GRTP without any symptoms or signs recurring.



**Pocket CONCUSSION RECOGNITION TOOL™**  
To help identify concussion in children, youth and adults

**RECOGNIZE & REMOVE**  
Concussion should be suspected if one or more of the following visible clues, signs, symptoms or errors in memory questions are present.

**1. Visible clues of suspected concussion**  
Any one or more of the following visible clues can indicate a possible concussion:

- Loss of consciousness or responsiveness
- Lying motionless on ground/Slow to get up
- Unsteady on feet/Balance problems or falling over/Incoordination
- Grabbing/Clutching of head
- Blank, blank or vacant look
- Confused/Not aware of plays or events

**2. Signs and symptoms of suspected concussion**  
Presence of any one or more of the following signs & symptoms may suggest a concussion:

• Loss of consciousness	• Headache
• Seizure or convulsion	• Dizziness
• Balance problems	• Confusion
• Nausea or vomiting	• Feeling slowed down
• Drowsiness	• “Pressure in head”
• More emotional	• Blurred vision
• Irritability	• Sensitivity to light
• Sadness	• Amnesia
• Fatigue or low energy	• Feeling like “in a fog”
• Nervous or anxious	• Neck Pain
• “Don’t feel right”	• Sensitivity to noise
• Difficulty remembering	• Difficulty concentrating

**3. Memory function**  
Failure to answer one of these questions correctly may suggest a concussion.

“What venue are we at today?”  
“Which half is it now?”  
“Who scored last in this game?”  
“What team did you play last week/game?”  
“Did your team win the last game?”

Any athlete with a suspected concussion should be **IMMEDIATELY REMOVED FROM PLAY**, and should not be returned to activity until they are assessed medically. Athletes with a suspected concussion should not be left alone and should not drive a motor vehicle.

It is recommended that, in all cases of suspected concussion, the player is referred to a medical professional for diagnosis and guidance as well as return to play decisions, even if the symptoms resolve.

**RED FLAGS**  
If **ANY** of the following are reported then the player should be safely and immediately removed from the field. If no qualified medical professional is available, consider transporting by ambulance for urgent medical assessment:

• Athlete complains of neck pain	• Deteriorating conscious state
• Increasing confusion or irritability	• Severe or increasing headache
• Repeated vomiting	• Unusual behaviour change
• Seizure or convulsion	• Double vision
• Weakness or tingling/numbing in arms or legs	

**Remember:**

- In all cases, the basic principles of first aid (danger, response, airway, breathing, circulation) should be followed.
- Do not attempt to move the player (other than required for airway support) unless trained to do so.
- Do not remove helmet (if present) unless trained to do so.

from McCrory et al., Consensus Statement on Concussion in Sport, Br J Sport Med 47 (5), 2013  
© 2013 Concussion in Sport Group

SAMPLE SAMPLE



Aside from the sources of information specific to a sport, there are several sources of information that cover a wide range of sporting injuries and their prevention.

Three examples of such information sources in Australia are:

- ☆ Sports Medicine Australia
- ☆ Healthdirect—Australian Dept. of Health
- ☆ myDr

These organisations have websites that cover numerous types of sports, the common injuries in those sports and some prevention tips. Some of the websites have 'Factsheets' that can be downloaded and retained as hardcopy references.

An overseas source of sports injuries and prevention is an organisation called 'STOP Sports Injuries'. It is a collaboration between several medical associations, sporting and training associations and associations focussed on child safety.



The website covers a vast number of sports and injury specific information.

The website is found at:

***<http://www.stopsportsinjuries.org/>***

**Learning  
Activity**

Question

**LEARNING ACTIVITY THREE**

In this Section we mentioned that sports can be categorised into seventeen categories. What were those seventeen categories?


SAMPLE SAMPLE

**Learning  
Activity**

Question

**LEARNING ACTIVITY FOUR**

In this Section we mentioned eleven common sporting injuries. What were those eleven common injuries?


SAMPLE SAMPLE

**Learning  
Activity**

Research

SAMPLE SAMPLE

**LEARNING ACTIVITY FIVE**

In this Section we mentioned a website called:

***<http://www.stopsportsinjuries.org/>***

In this activity we want you to visit this website. Locate the page that has various sports listed under the tab 'Prevent Injuries'.

Click on 'Field Hockey'. In the space below summarise the tips on how injuries in this sport can be prevented.

SAMPLE SAMPLE

**Learning  
Activity**

## Research

**LEARNING ACTIVITY SIX**

In this Section we mentioned an organisation called 'Sports Medicine Australia'.

Locate their website. Once there locate the page on 'Tennis'.

In the space below summarise the 'Safety Tips' on playing tennis to avoid injury.

SAMPLE SAMPLE



## MONITOR OCCURRENCE OF INJURY AND ANALYSE INJURY PATTERNS IN OWN SPORTING AREA IN CONSULTATION WITH APPROPRIATE HEALTH PROFESSIONALS

If a sporting club is to implement a sports injury prevention program, the club needs to learn what the common injuries related to that specific sport are, as well as the level of occurrence in the club.

As part of most sporting clubs policies and procedures would be records kept on past injuries.

Reviewing past injury records helps to determine any injury patterns and once these are identified a sport injury prevention program can be developed.

It is important to consult with medical professionals when starting to develop a sport injury prevention program. These professionals can assist in providing medical advice in types of training, what to avoid when training or playing and how to identify a suspected injury.

For example ACL injuries (injuries associated with the knee), can be difficult to assess in order to determine how athletes can best modify their movements to prevent noncontact ACL injuries. However, speaking with a professional athletic trainer, physiotherapist or a sports medicine specialist can help identify and target weak muscle areas and identify ways to improve strength and thus help prevent injury.

We mentioned three health professionals above. Other types of health professionals that could also be consulted with could include:

- ☆ General medical practitioner (GP)
- ☆ Chiropractors
- ☆ Osteopaths
- ☆ Sport massage therapists

In large sporting clubs especially in professional leagues or teams or elite athletes, there could likely be a medical team employed. These too could be consulted. Many are happy to offer some advice even though you may not be part of that organisation.



**Learning  
Activity**

## Task

**LEARNING ACTIVITY SEVEN**

Tell us what each of the following health professionals specialise in.

***Chiropractors******Osteopaths******Sport massage therapists***

SAMPLE SAMPLE



## IDENTIFY RISK FACTORS THAT LEAD TO SPORTS INJURY IN OWN SPORTING AREA ACCORDING TO RELEVANT LEGISLATION AND ORGANISATIONAL POLICIES AND PROCEDURES

As with every industry here in Australia, the sport and recreational industry and those participating in this industry sector are required to follow and comply with various workplace health and safety regulations and legislation (WHS).

These laws and regulations ensure that those working in the industry are working in a safe environment and this includes sporting participants.

In line with WHS laws and regulations, sporting clubs are required to establish policies and procedures that will ensure the club has created a safe environment and complies with those WHS laws and regulations.

A major component of WHS compliance is setting up a risk management policy and risk management procedures.

Being able to manage risks in a sporting club has a dramatic effect on the prevention of sports injuries. Every sport has its own specific risk factors, so there is no one risk factor compilation that covers all sports.

For the purpose of this training unit, some of the common risk factors could include:

- ☆ The condition of the playing field, such as ground hardness or surface damage
- ☆ The condition of the playing surfaces, such as tennis courts, gym floors and so on
- ☆ Weather conditions in outdoor sports
- ☆ Condition and suitability of sporting equipment
- ☆ Skills of other players and in some cases size mismatch between participants
- ☆ Poor refereeing
- ☆ Unsafe play and risk taking behaviour
- ☆ Lack of a proper training regime
- ☆ Anatomical characteristics and mental disposition of athletes
- ☆ Fitness levels

Once the risks are known then the sporting organisation is able to develop risk control methods as part of the injury prevention program.

**Learning  
Activity**

Question

SAMPLE SAMPLE

**LEARNING ACTIVITY EIGHT**

For the purpose of this training unit, what were the ten common risk factors that could contribute to sports injuries?


SAMPLE SAMPLE

# Preventative Measures

Physical  
Protective  
Screening  
Conditioning  
Equipment  
Hydration  
Nutrition

## IDENTIFY PREVENTATIVE MEASURES IN CONSULTATION WITH APPROPRIATE HEALTH PROFESSIONALS

There is a term used often called 'mitigating risk'.

This is an overall approach to reduce the risk impact severity and/or probability of occurrence.

There are several methods of mitigating risks of injury that form part of an effective sport injury prevention program.

The four most common methods that can apply to most types of sports include:

- ☆ Screening
- ☆ Physical conditioning
- ☆ Protective equipment
- ☆ Hydration and nutrition

**Screening**—this general includes a pre-participation assessment of the athlete or players that goes through their general health, fitness and any previous injuries. In some cases the screening process will show a need to seek advice or clearance from a medical professional before playing in the sport.

**Physical conditioning**—it goes without saying that the higher the fitness level of the athlete or players, the lower the injury occurrence. Raising the fitness level of the athlete or players can be a result of focussed training sessions at the club level, as well as fitness training undertaken by the athlete or players on a personal level.

**Protective equipment**—there are many sports that require protective equipment such as helmets, gloves, padding and so on. The important thing about sports protective equipment is that it must be in good condition and fitting properly.

**Hydration and nutrition**—because of the physical exertion of many sports, hydration is very important. Drinking water and specially formulated sports drinks ensures that the athlete or players do not experience the adverse health effects of dehydration. Also, proper nutrition ensures that the athlete or players have the sufficient fuel to play sports and as important proper nutrition ensures that the body can recover from a sporting event or training properly.

Again, consulting with health professionals is important. Putting in place proper screening processes, developing proper training programs and creating diet plans should be done with the help of a health professional.

**Learning  
Activity**

Question

**LEARNING ACTIVITY NINE**

There are several methods of mitigating risks of injury that form part of an effective sport injury prevention program. In this Section we mentioned the four most common methods that can apply to most types of sports. What were those for methods?


SAMPLE SAMPLE

# Section Two

## Implement a Sport Injury Prevention Program

SAMPLE SAMPLE

# IMPLEMENT SPORTS INJURY PREVENTION

## SECTION TWO – IMPLEMENT A SPORT INJURY PREVENTION PROGRAM

### INTRODUCTION

In this section we will learn about the steps that should be considered when developing and implementing a sports injury prevention program.

As we have already learned, each sport has its own common sport injury, so these training materials provide information that is common to most sports.

Eventually, you as the student or trainee will need to demonstrate your knowledge on a specific sport relating to sports injury prevention.

### SECTION LEARNING OBJECTIVES

At the completion of this section you will learn information relating to:

- ☆ Assessing the effectiveness of a range of injury prevention programs relevant to own sporting area in consultation with the coach and relevant health professionals
- ☆ Contributing to the development of a sport injury prevention program according to organisational policies and procedures
- ☆ Applying preventative measures and strategies to minimise sports injuries in own sporting area according to best practice guidelines
- ☆ Monitoring and adjusting application of injury prevention measures according to organisational policies and procedures
- ☆ Assisting in assessment of playing area, facilities and protective equipment for safe participation and advising relevant personnel of problems according to organisational policies and procedures
- ☆ Conducting ongoing monitoring of injury trends and promoting preventative measures to athletes to minimise the likelihood of injury according to sport-specific criteria
- ☆ Maintaining individual and team protective equipment according to instructions and advise relevant personnel of problems

## ASSESS THE EFFECTIVENESS OF A RANGE OF INJURY PREVENTION PROGRAMS RELEVANT TO OWN SPORTING AREA IN CONSULTATION WITH THE COACH AND RELEVANT HEALTH PROFESSIONALS

In Section One we reviewed various sources of information relating to sport injuries and how they can be prevented.

As you review the many sources of information, one important thing you need to remember is that once you start choosing injury prevention strategies and start developing injury prevention training programs you need to always consult with any relevant health professionals.

If the sport you are in is a team sport, or the athlete who will be participating in the injury prevention training program has a coach, then it would also be advisable to have the coach involved in the development stages.

You will learn from various health professionals experienced in sports training and injury prevention that any injury prevention training programs should focus on two areas of the athletes body:

- ☆ musculoskeletal
- ☆ neuromuscular

The '**musculoskeletal system**' of the human body is what provides form, support, stability and movement to the body. It is made up of the bones of the skeleton, muscles, cartilage, tendons, ligaments, joints and other connective tissues that support and binds tissues and organs together.

In sports the most common musculoskeletal injuries are from strenuous activities and repeated stresses that are applied to body tissues. Some of the common musculoskeletal injuries include:

- ☆ Strains to muscles that cross two joints, such as the hamstrings, quadriceps or groin muscles
- ☆ Sprains to the ankle, knee, wrist and elbow
- ☆ Stress fractures in the lower leg and foot
- ☆ Tendonitis in elbows, shoulder rotator cuffs, Achilles tendon at the ankle and the knee patellar tendon





The '**neuromuscular system**' of the human body refers to the nerves and the muscles and how they work together. The brain controls the movements of skeletal muscles via specialised nerves. If you want to move part of your body, a message is sent to particular nerve cells, in the arms and legs directly to the muscle they control.

In sports, the most common neuromuscular injuries are those that strain or damage the muscles of the athlete. Once a muscle has been strained or damaged, the brain tells the muscle not to work until it is repaired.

In simple terms, rehabilitation of neuromuscular injuries involves not only the repair of the injured muscle (we will term as the 'hardware') but also involves working with the brain so that the muscle can be used again to its full potential (we will term the 'software').

In 'physiotherapy', the practitioner not only works with the damaged muscle but also is re-training the brain so the body can again use the muscle.

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SAMPLE

SAMPLE SAMPLE

## SPORTS INJURY PREVENTION TRAINING

SAMPLE SAMPLe

Sports injury prevention training programs will differ depending on the sport. However, generally they will include the following.

- ☆ strengthening exercises
- ☆ stretching exercises

Strength training improves the strength of the muscles, tendons, ligaments and bones. The stronger muscles and tendons help hold the body in proper alignment and protect the bones and joints when moving or under impact during sporting activities. The bones become stronger due to the overload placed on them during sport injury prevention training and the ligaments become more flexible and better at absorbing the shock applied to them during dynamic movements that are often in sporting activities.

Muscle 'imbalances' are one of the most common causes of injuries in sports. When one muscle, or muscle group, becomes stronger than its opposing group, the weaker muscles become fatigued quicker and more prone to an injury.

Strength training, focussing on the weaker areas will **balance the body** for the sporting activities it is called to do. Strength training is done using three main types of methods.

- ☆ **Weight machines** – Machine strength training includes resistance exercises done using any of the various machines designed to produce resistance. A weight machine is an exercise machine used for strength training that uses gravity as the primary source of resistance and a combination of simple machines to convey that resistance to the person using the machine. The resistance (or weight) may be changed to increase the intensity of the exercise. The range of motion and position of movement is controlled by the machine.
- ☆ **Free weights** – Free weight strength training involves using weights that are not fixed into a machine. These include barbells and dumbbells. Other free weights are kettlebells, medicine balls and ankle and wrist weights and weight lifting chains.
- ☆ **Bodyweight exercises** – Bodyweight exercises involve using the athlete's bodyweight as resistance during the exercise. As with free weights, the range and path of motion is not fixed by a machine. Exercises such as plyometrics, push-ups, abdominal exercises, even sprinting and jumping rope, are common bodyweight exercise. The weight used in these exercises is constant and only changes when the athlete's body changes.





After strengthening exercises, sporting training or a competition event, it is very important to perform a cool-down and this often involves stretching exercises most commonly called 'static stretches'.

Static stretches should **never** be done before any strength training, sport training session or competition event.

Static stretches are used to improve flexibility and cool the athlete's body down after the athlete's training session or event and are therefore done when the body is standing still.

They reduce post training or event stiffness and soreness as well as help with injury prevention.

Generally, each stretching exercise should be done for 20-30 seconds each and begin the stretch to a point when is **just starts** to feel uncomfortable.

Ease into and out of each stretch slowly and **never bounce**.

Breath normally.

There are many types of static stretches and on the next page we have shown the most common ones.

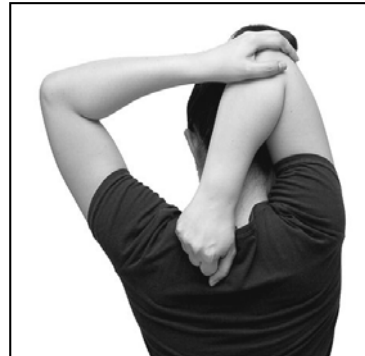
SAMPLE SAMPLE



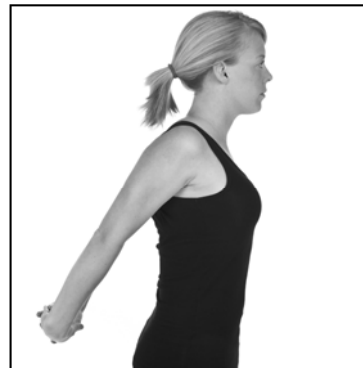
**Shoulder Stretch**—Interlock your fingers and reach above your head. Your lower back should be flat or slightly arched inwards



**Triceps Stretch**—Place your left hand behind your head and reach as far down your back as possible. With your right hand grasp your left elbow and gently pull it behind the back of your head. Repeat with the other arm.



**Chest Stretch**—Clasp your hands behind your back. Gently straighten your elbows and raise your arms as high as comfortably possible.



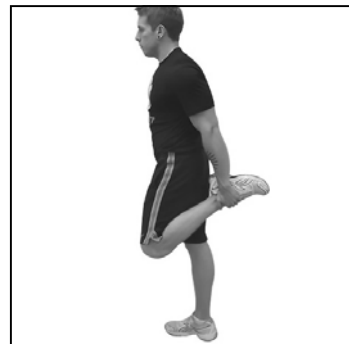
**Lower Back Stretch**—Lying flat on your back place the sole of your right foot on your left thigh. Grasp your right knee with your left hand and gently roll it to the left. Try to get your knee as close to the floor as possible without your right shoulder leaving the floor. Repeat with the other side.



**Groin Stretch**—Stand with your feet about 2 meters apart, toes pointing forward. Gradually shift all your weight to your right leg by bending your right knee. Your left leg stays straight. Place both your hands on your knees or hips for support. Repeat with the other side.



**Quadriceps Stretch**—Standing upright hold onto a support with one hand (i.e. a chair) for balance. With your other hand clasp your ankle and pull your heel into your butt. Repeat for the other leg.



**Hamstring Stretch**—Sitting down, stretch your legs out in front of you while keeping your back flat and upright. Bend your left leg keeping your left foot flat on the floor. Slowly reach forward and try to touch your right toe. Bend from your waist keeping your lower back flat and your head up. Repeat for the other leg.



**Calf Stretch**—Stand arms length away from a wall and with feet shoulder width apart. Place your right foot about 2 feet in front of your left. Keeping both heels flat on the ground lean towards the wall by bending your right knee. Your left leg should stay straight. Push gently against the wall for a deeper stretch. Repeat for the left leg.



**Achilles Stretch**—This is exactly the same procedure as above except as you lean towards the wall let both knees bend. Rather than leaning forward you should feel like you are lowering yourself straight down. Remember to keep both heels flat on the floor. Repeat for the other leg.





## WARM-UP EXERCISES

Earlier we mentioned that static stretching exercises should not be done before any strength training, sport training session or competition event. What is more important are 'warm-up' exercises.

A common warm-up technique is called the 'dynamic warm-up'. It is designed to exercise the athlete's body prior to any type of training or competition and prepare the body for the demands of what is ahead.

The idea of the dynamic warm-up routine is to do some basic leg stretches while moving/walking. Warm-up with exercises for both the upper and lower extremities.

Dynamic warm-ups require dynamic movements and starts with a slow walk (on a treadmill, on a track or playing area/field) for around 5 minutes.

Many coaches or athlete fitness instructors often add other dynamic movements such as squats, high knee skips, lunges, straight leg kicks, and some lateral movements, such as the lateral shuffle.

Many of the dynamic movements would include active movement of the arms.

The warm-up should last around 10-15 minutes depending on the training session or event. It is not advised that any 'stretching' exercises be done until the dynamic warm-up exercises are fully complete.

In other words you warm-up to stretch, **NOT** stretch to warm-up. Warm-up exercises are an essential part of any sport injury prevention program. The advantages of a dynamic warm-up are:

- ☆ Increases core body temperature and blood flow to muscles
- ☆ Enhances muscle elasticity and lubricates joints
- ☆ Increases heart rate and respiratory rate which is the body's preparation for the demands of training or competition
- ☆ It prepares the muscles and joints more than static stretching would
- ☆ It enhances coordination and motor ability as well as revving up the nervous system
- ☆ A series of dynamic movements will develop flexibility, balance, coordination, mobility and strength

The next page show some pictures of common dynamic warm-up exercises.



**Slow walk or jog**



**High knee skips**



**Squats**



**Straight leg kicks**



**Lunges**



**Lateral shuffle**



SAMPLE SAMPLE

SAMPLE SAMPLE



## PLYOMETRICS

Plyometrics is a method used by athletes to improve their speed, quickness and power after developing their strength. Plyometrics is also known as 'jump training'. Sports using plyometrics include basketball, tennis and volleyball, as well as the various codes of football.

These types of elite athletes are asked to have great **body control** in unpredictable circumstances. They need to be able to jump in the air, to catch a ball and to land on their feet under control. At times this catch needs to be completed in combination with contact from an opponent. The best way for these athletes to be prepared for these situations and avoid injury, is to add plyometric jumps to their training sessions.

The most common plyometric jump is the 'box jump'. The person squats in front of a box and then using the legs jumps upwards on to a box.



Similar to the box jump is the 'lateral jump'. The person squats beside a box and then using the legs jumps upwards on to a box from the side.



Another common plyometric jump is the 'jump lunge'. The person starts in the bottom of a split squat position. Their front thigh should be parallel to the floor and torso upright and their abs braced. They would then jump up explosively and switch leg positions in the air. The back leg becomes the front leg and vice versa. They would try and focus on landing quietly with each jump, allowing the muscles to absorb the impact.



Similar to the box jump is the 'squat jump'. The person stands with their feet shoulder-width apart. They start by doing a regular squat, then engage their core muscles and jump up explosively. When they land, they lower their body back into the squat position to complete one rep. They would try and land as quietly as possible.



SAMPLE SAMPLE

There are numerous more types of plyometric jump exercises. We only have reviewed some of the more common types.

**Learning  
Activity**

## Task

**LEARNING ACTIVITY ONE**

From what you have learned in this Section, define in your own words the following terms:

***Musculoskeletal system******Neuromuscular system***

SAMPLE SAMPLE

**Learning  
Activity**

## Task

**LEARNING ACTIVITY TWO**

Fill in the missing words in the following sentences:

***Strength training, focussing on the weaker areas will \_\_\_\_\_ the  
\_\_\_\_\_ for the sporting activities it is called to do.***

***Plyometrics is a method used by athletes to improve their \_\_\_\_\_  
\_\_\_\_\_ as well as speed, quickness and power.***

SAMPLE SAMPLE

**Learning  
Activity**

## Task

**LEARNING ACTIVITY THREE**

Strength training is done using three main types of methods. These are weight machines, free weights and using one's own bodyweight.

Explain or define each one.

**Weight machines****Free weights****Bodyweight**

SAMPLE SAMPLE

**Learning  
Activity**

## Task

**LEARNING ACTIVITY FOUR**

Fill in the missing words in the following sentences:

***Static stretches should \_\_\_\_\_ be done before any strength training, sport training session or competition event.***

***Static stretches are used to improve \_\_\_\_\_ and cool the athlete's body down after the athlete's training session or event and are therefore done when the body is standing still.***

***They reduce post training or event stiffness and \_\_\_\_\_ and help with \_\_\_\_\_.***

SAMPLE SAMPLE

## Learning Activity

### Task

## LEARNING ACTIVITY FIVE

There are four pictures below each showing a type of static stretching exercise. Tell us the name of each exercise.

1




2




3




4




SAMPLE SAMPLE

**Learning  
Activity**

Question

**LEARNING ACTIVITY SIX**

What were the names of the common dynamic warm-up exercises?

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_
- 5 \_\_\_\_\_
- 6 \_\_\_\_\_

SAMPLE SAMPLE



**Learning  
Activity**

Question

SAMPLE SAMPLE

**LEARNING ACTIVITY SEVEN**

What were the six benefits of performing warm-ups aside from injury prevention?


**Learning  
Activity**

Research

SAMPLE SAMPLE

**LEARNING ACTIVITY EIGHT**

In this Section we reviewed four common plyometric exercises. In this activity we want you to do some research and tell us three more types of plyometric exercises. Tell us the name and explain how the exercises is performed.

**1) Plyometric Exercise Name** \_\_\_\_\_**How the exercise is done****2) Plyometric Exercise Name** \_\_\_\_\_**How the exercise is done**

SAMPLE SAMPLE

**3) Plyometric Exercise Name** \_\_\_\_\_  
**How the exercise is done**

SAMPLE SAMPLE



## CONTRIBUTE TO THE DEVELOPMENT OF A SPORT INJURY PREVENTION PROGRAM ACCORDING TO ORGANISATIONAL POLICIES AND PROCEDURES

On the previous pages in this section we reviewed in some details the possible components of a sport injury prevention training program. As a review they included:

- ☆ Strength exercises
- ☆ Stretching exercises
- ☆ Plyometric exercises for body balance and body control improvement

The choice of those exercises and how they are implemented would be dependant on the sport you are involved with.

We also learned that there are several stakeholders that would need to be involved and/or consulted with when developing the sport injury prevention training program and those included:

- ☆ Health professionals
- ☆ Coaches
- ☆ Trainers
- ☆ Athletes or players
- ☆ Parents or guardians of younger athletes/players

It would likely be the policy of the sporting organisation that you follow a defined procedure when assisting in the development of the sport injury prevention training program.

That would generally include:

- ☆ The strategy behind the choice of training exercises
- ☆ The preliminary assessment of the effectiveness of the exercises
- ☆ Feedback from the stakeholders

Policies and associated procedures would also likely include:

- ☆ How the sport injury prevention training program was to be documented
- ☆ Who has the final approval as to the implementation of the sport injury prevention training program
- ☆ How the approval for the implementation of the sport injury prevention training program would be sought

**Learning  
Activity**

Question

**LEARNING ACTIVITY NINE**

Who were the five likely stakeholders that you would need to consult with when assisting in the development of a sport injury prevention training program?


SAMPLE SAMPLE

**Learning  
Activity**

Question

**LEARNING ACTIVITY TEN**

As a review who were the seven types of health professionals that you may need to consult with? (We reviewed these in Section One)


SAMPLE SAMPLE



## **APPLY PREVENTATIVE MEASURES AND STRATEGIES TO MINIMISE SPORTS INJURIES IN OWN SPORTING AREA ACCORDING TO BEST PRACTICE GUIDELINES**

**AND**

## **MONITOR AND ADJUST APPLICATION OF INJURY PREVENTION MEASURES ACCORDING TO ORGANISATIONAL POLICIES AND PROCEDURES**

*(Over the next few pages we cover two 'Performance Criteria' points at the same time to avoid repetition)*

We first start off by defining the term 'Best Practice Guidelines'.

In all industries including sport and recreation, the industry peak bodies in conjunction with those businesses and people involved in the industry will develop 'Best Practice Guidelines'. These 'Best Practice Guidelines' are developed as an alternative to laws and regulations and ensures that those abiding to the 'Best Practice Guidelines' are operating legally and ethically.

A best practice is a technique or methodology that, through experience and research, has proven to reliably lead to a desired result.

If best practice guidelines are followed when applying injury preventative measures and strategies, everyone knows that the injury preventative measures and strategies have been developed using the best research, information and available evidence. This is done in order to provide sporting organisations and their stakeholders with well informed and supported recommendations and programs to ensure the minimisation of sport related injuries.

Each sporting peak body will have developed 'Best Practice Guidelines' specific to their sport.

Most guidelines cover anti-doping policies, use of illicit drugs and so on. Injury prevention generally comes under the guidelines of 'Member Protection'.

Member protection covers areas such as working with children, working with disabled athletes and covers the need to protect the health and safety of all members in that sport, including the prevention of injuries.

## PREVENTATIVE MEASURES AND STRATEGIES

In the previous section we learned about the common injury preventative measures and strategies. As a review those four most common methods that can apply to most types of sports included:

- ☆ Screening
- ☆ Physical conditioning
- ☆ Protective equipment
- ☆ Hydration and nutrition

SAMPLE SAMPLE

Many sports peak bodies suggest that it is 'best practice' to have sporting clubs or organisations perform pre-exercise or pre-participation health and fitness screening. This usually involves the athlete filling in a medical history form. Any medical issues that are evident would need to be referred to a health professional for advice and/or clearance.

Earlier we reviewed many methods that are used to physically condition the athlete's body through a well designed injury prevention training program. The most common and arguably the most important injuries strategy, is the warm-up and cool-down, as well as which exercises are chosen and used to perform the warm-up and cool-down.

Using the advice or guidance from health professionals is also an important strategy in injury preventions, especially for those that need to have clearance from their doctor to exercise.

Having athletes/players (especially unconditioned or unskilled) ease into a program will prevent injury. They will build skills, strength and endurance which will allow them to increase the level of exercises and higher skill level activities. Proper recovery periods after sessions are also important. Each athlete/player will have their own needs and limitations and these needs and limitations will need to be considered closely when developing injury prevention strategies.

Clear instructions are always needed to prevent injury. Those conducting the program and sessions must be assured that the athletes/players know how to do the activities properly, as well as how to use any equipment correctly especially sport, fitness or recreational safety equipment.

Later we will learn more about protective equipment and how it plays an important part in injury prevention.



SAMPLE SAMPLE





### COMMUNICATING THE INJURY PREVENTATIVE MEASURES AND STRATEGIES

A part of using best practices would be to communicate clearly and effectively the injury preventative measures and strategies to those whom it would affect in the sporting organisation.

The methods of communication can vary and could include:

- ☆ Verbally one on one
- ☆ Verbally as a group
- ☆ Providing written instructions
- ☆ Providing written instructions, as well as going through the instructions verbally



Communicating injury preventative measures and strategies may also require demonstrating the use of any equipment and/or how to perform the exercises associated with injury prevention.

The health and safety of the athletes/players is paramount, so in line with best practices, it is important that when commenting injury preventative measures and strategies you are confident that the athletes/players have a full understanding of the safe use of any equipment being used and are aware of the safe and proper way of doing the exercises associated with injury prevention.

Encourage the athletes/players to provide feedback in order to ensure their full understanding and suggest that they ask any questions relating to the equipment being used and the exercises associated with injury prevention should they be unsure.

Once the athletes/players have started to do the exercises associated with injury prevention, it is important to watch the athletes/players in the earlier stages of the session.

You may see an athlete/player struggling with an activity or using a piece of equipment incorrectly. This would require you to approach the athlete/player and explain and possibly demonstrate how to use the equipment properly or what techniques should be used while doing an activity/exercise.

Depending on the type of activities, there could be degrees of 'exercise intolerance'. It can exhibit itself after the simplest exercises, or become evident after more vigorous activity. Likewise, it can afflict the athlete/player during exercise or later. If the exercises are such that could lead to exercise intolerance, then learning to identify exercise intolerance symptoms or signs is essential.



### MONITOR AND ADJUST APPLICATION OF INJURY PREVENTION MEASURES

In the planning stages of your injury prevention training program you had or should have spent a significant amount of time learning about injuries common to your sporting area, with your athletes/players and other stakeholders, learning clearly what relevant elements should be included in the injury prevention training program to achieve injury minimisation goals.

Once the injury prevention training program is implemented, you will be able to observe how the athletes/players are progressing and if it is inline with what the program was designed to achieve.



For example, the injury prevention training program aims to provide sessions that increase athletes/players' physical fitness level and strength. You are observing the tennis club's junior training program and it is clear that most of the young players are unable to finish the training session. Although the aim of the program was to increase the physical fitness level and strength of young players, they are not progressing and they are too tired to finish the sessions.

So if you are observing that many of the athletes/players are clearly not progressing in line with the program aims, then it is likely the program needs some modification. Modifications could include:

- ☆ Changing, adding or removing activities in sessions
- ☆ More instruction on how to use the equipment
- ☆ Different equipment utilised in sessions
- ☆ Different instructional techniques

SAMPLE

SAMPLE SAMPLE

SAMPLE SAMPLE

**Learning  
Activity**

## Task

**LEARNING ACTIVITY ELEVEN**

Define in your own words what the term 'Best Practice' means.

SAMPLE SAMPLE

SAMPLE SAMPLE

**Learning  
Activity**

Question

SAMPLE SAMPLE

**LEARNING ACTIVITY TWELVE**

What were the ten suggested injury prevention strategies we reviewed in this Section?


SAMPLE SAMPLE

**Learning  
Activity**

## Question

**LEARNING ACTIVITY THIRTEEN**

What were the four methods mentioned in this Section that could be used to communicate to the athletes/players?


SAMPLE SAMPLE

**Learning  
Activity**

## Question

**LEARNING ACTIVITY FOURTEEN**

What were the four possible modifications that could be made to an injury prevention training program?


SAMPLE SAMPLE



### ASSIST IN ASSESSMENT OF PLAYING AREA, FACILITIES AND PROTECTIVE EQUIPMENT FOR SAFE PARTICIPATION AND ADVISE RELEVANT PERSONNEL OF PROBLEMS ACCORDING TO ORGANISATIONAL POLICIES AND PROCEDURES

We have learned that conditioning the athlete's or player's body is an important factor in injury prevention in sports.

Another important factor in injury prevention is the condition and use of sporting equipment and facilities. Sporting facilities include outdoor and indoor locations. Outdoor areas would include:

- ☆ Playing pitches
- ☆ Tracks
- ☆ Playing surfaces such as tennis courts, outdoor basketball courts
- ☆ Fairways on golf courses
- ☆ Water areas such as lakes, beaches, rivers
- ☆ Natural surroundings such as parks, walking tracks, mountainous areas, ski hills



Sporting clubs that have their own outdoor playing areas would generally perform routine checks on the condition of the outdoor playing surfaces. This could include:

- ☆ The condition of the grass surface, clay surfaces or pea gravel/sand surfaces
- ☆ The firmness of the ground
- ☆ Any foreign objects such as litter, broken glass, tree branches and so on
- ☆ Condition of goal posts, surrounding fences, surrounding trees and so on
- ☆ Condition on artificial surfaces such as tennis courts, concreted or paved courts



In many sports the playing surfaces need to be firm, free of litter and foreign objects and in the cases of natural surfaces, well groomed. Severe weather conditions could see the playing area damaged by rain, cluttered with fallen tree branches and littered with debris, such as leaves and rubbish.

Wear and tear and age can affect permanent fixtures, such as goal posts and fences. Severe rust on metal fixtures can be a potential hazard both to athletes or players, as well as spectators.

In water sports, hidden objects such as logs, branches and other debris can be a hazard to many water sports. Also the water condition is important. Some rivers and lakes may be polluted and cause sickness to those swimming in the water.



Indoor areas could include:

- ☆ Indoor tennis courts, basketball courts and other types of playing courts
- ☆ Exercising areas
- ☆ Fitness equipment areas
- ☆ Club rooms, change rooms and participant/spectator amenities
- ☆ Access and egress
- ☆ Storage rooms
- ☆ Catering and/or food preparation areas

SAMPLE SAMPLE



Routine checks would include:

- ☆ The condition of the playing and exercising surfaces such as wooden floors, tennis court surfaces and carpeting
- ☆ Condition of any fixtures such as shelving, wall support bars, lighting, mirrors, windows and window screening
- ☆ Emergency doors and hallways obstructions
- ☆ Condition of general public access areas
- ☆ Storage room access and egress
- ☆ Hazardous chemical storage
- ☆ Cleanliness of change rooms, showers, toilets
- ☆ Cleanliness of food preparation areas and catering equipment
- ☆ Food storage such as pantries, fridges/coolers and cool rooms
- ☆ Checks on emergency equipment such as fire extinguishers, first aid supplies and so on



Assessments and routine check on facilities will ensure any risks or hazards associated with the facilities (both indoor and outdoor) are identified and dealt with. This is an important part of any sports injury prevention program.

SAMPLE SAMPLE



## PROTECTIVE EQUIPMENT

As we now know, the health and safety of all athletes and players must be of foremost importance and this is especially true when it comes to sports, fitness and/or recreational protective equipment.

Injury prevention programs must include the availability and assessment of the protective equipment required by each specific sport.

This equipment could include:

- ☆ Helmets
- ☆ Protection such as pads, shields, gloves

As part of any injury prevention program, athletes/players need to be shown how to properly put on and wear any safety equipment or equipment that requires to be worn as part of the sport, fitness or recreational activity.

Before issuing any safety or protective sporting equipment the condition of the safety or protective sporting equipment must be checked. If it is worn or damaged, it could fail and result in injury.

If the club is issuing the safety or protective sporting equipment and the assessment reveals worn or damaged equipment, it then needs to be removed and replaced. The worn or damaged safety or protective sporting equipment is then tagged as being unusable and reported to the relevant personnel within the club or organisation.

If the athlete or player are providing their own safety or protective sporting equipment, the condition of their equipment must be checked and any worn or damaged safety or protective sporting equipment not allowed to be used.



**Learning  
Activity**

Question

**LEARNING ACTIVITY FIFTEEN**

In this Section we mentioned six examples of outdoor areas that would need to be checked for any potential hazards. What were those six examples?

SAMPLE SAMPLE

**Learning  
Activity**

Question

**LEARNING ACTIVITY SIXTEEN**

In this Section we mentioned five examples of what would need to be checked for on playing surfaces. What were those five examples?

SAMPLE SAMPLE

**Learning  
Activity**

Question

**LEARNING ACTIVITY SEVENTEEN**

In this Section we mentioned seven examples of indoor areas that would need to be checked for any potential hazards. What were those seven examples?

**Learning  
Activity**

Question

**LEARNING ACTIVITY EIGHTEEN**

In this Section we mentioned ten examples of types of routine checks that could be done in an indoor facility. What were those ten examples?

SAMPLE SAMPLE


SAMPLE SAMPLE

**Learning  
Activity**

## Question

**LEARNING ACTIVITY NINETEEN**

When it comes to protective sports equipment what is the most important thing a club or sporting organisation can do and how does this relate to athletes or players who provide their own protective sports equipment ?

SAMPLE SAMPLE



## CONDUCT ONGOING MONITORING OF INJURY TRENDS AND PROMOTE PREVENTATIVE MEASURES TO ATHLETES TO MINIMISE THE LIKELIHOOD OF INJURY ACCORDING TO SPORT-SPECIFIC CRITERIA

We learned earlier that to develop a proper and effective sport injury prevention program, you would need to research the common injuries in your sporting area and also look at the injury trends of your club or sporting organisation.

This research and your findings would then allow you to select proper injury prevention training exercises and ensure the facilities and equipment are in good condition and safe to use.

Once implemented, the sport injury prevention program for the athletes/players must be constantly monitored. If certain injuries appear to be increasing, research into why this trend is taking place may need to be taken and look at whether the program needs to be modified.

What is often the case is that the athletes or players are not always undertaking the activities or exercises that are part of the injury prevention program.

If this is the case, the athletes or players need to be encouraged to follow the injury prevention program, especially the activities or exercises that are part of the injury prevention program.

Remind them of the potential cost to them and possibly to the club or team if they do get injured.

Persistent promoting of the injury prevention program will always result in the minimisation of sports injuries.

SAMPLE SAMPLE

SAMPLE SAMPLE



**Learning  
Activity**

## Question

**LEARNING ACTIVITY TWENTY**

On the previous page we suggested a common reason why injury trends may start to appear, even though there is a sport injury prevention program in place. What was that reason and what step was recommended to reverse the trend?

SAMPLE SAMPLE

**MAINTENANCE OF HEAD PROTECTOR**

Keep your head protector away from chemicals. For example, detergents, petrol, glue and sticky labels. Store it away from heat and sunlight. Chemicals, heat and sunlight can all reduce the strength of your head protector.

For plastic helmets: Clean with a soft cloth and tap water only.

For Fabric covered helmets: To clean, lightly rub with a soft bristle clothes brush.

Do not apply paint, solvents, glue or transfers.

Examine faceguard regularly for broken welds or bent wires and in the event either are found, replace the entire helmet immediately.

**REPLACING YOUR HEAD PROTECTOR**

Get a new head protector:

- a) After a severe impact from a cricket ball.
- b) If you can see or feel any damage to any part of the helmet.
- c) After a hard knock or squashing it.
- d) If it gets badly scratched.
- e) If it doesn't fit you anymore.
- f) After 3 years careful use.

**YOU CANNOT ALWAYS SEE WHEN IT IS DAMAGED.**



## MAINTAIN INDIVIDUAL AND TEAM PROTECTIVE EQUIPMENT ACCORDING TO INSTRUCTIONS AND ADVISE RELEVANT PERSONNEL OF PROBLEMS

Earlier in this section we mentioned that a key part of any sport injury prevention is to ensure that all athletes or players have the proper protective equipment and that it is in good condition and it is fitted properly.

In many sporting clubs or sporting organisations, it is the club or organisation that provides the sports protective equipment.

This means that the sports protective equipment must be maintained and stored properly.

Before issuing the equipment it would need to be checked for any damage and if any damage is identified, the equipment would need to be set aside, tagged so it is not used and put in a location where it is either sent off for repair or disposed of and replaced.

The same steps should be taken after the equipment has been used and turned in.

Athletes or players are encouraged to mention and point out any damage to protective equipment during its use and when they have returned the equipment.

Maintenance of protective equipment is important. The manufacturers of sports protective equipment would provide manuals with instructions on how to clean, perform minor repairs and store their sports protective equipment.

These should be followed closely. Any sports protective equipment that either needs to be sent out for repair or totally replaced should be set aside and the relevant personnel advised of the problems.

**Learning  
Activity**

## Question

**LEARNING ACTIVITY TWENTY ONE**

Maintenance of protective equipment is important. What should be consulted before any maintenance is performed on a piece of sporting protection equipment?

SAMPLE SAMPLE

SAMPLE SAMPLE

# Section Three

## Contribute to Evaluation of Injury Prevention Program

SAMPLE SAMPLE

## SELF ASSESSMENT

Self assessment is where you ask yourself certain questions to ensure you have understood what you have learned while reading this manual and completing the learning activities.

This unit requires you the student or trainee at the completion of your training to have a certain level of 'Required Knowledge' in which you would be need to have acquired and in which you will be assessed on.

This self assessment section reviews this required knowledge by way of questions and if you are able to say YES to all of them you can be confident your assessment will be satisfactory.

- ☆ Do you have a clear understanding and be able to perform the following:
  - 1) Identifying the costs of sports injury to the athlete and other key stakeholders?
  - 2) Sourcing and accessing information on sports injuries for the specific sport?
  - 3) Monitor the occurrence of injury and analyse injury patterns in own sporting area?
  - 4) Consult with appropriate health professionals?
- ☆ If asked could you now identify risk factors that lead to sports injury and identify preventative measures after consulting with appropriate health professionals?
- ☆ Do you now know what it means to assess the effectiveness of a range of injury prevention programs?
- ☆ Could you see yourself now being able to contribute to the development of a sport injury prevention program?
- ☆ Did you understand what it meant to apply preventative measures and strategies to minimise sports injuries?
- ☆ Did you understand what the term 'best practices' means?
- ☆ Could you see yourself now being able to do the following:
  - 1) Monitor and adjust application of injury prevention measures?
  - 2) Assist in assessing playing areas, facilities and protective equipment?
  - 3) Conduct ongoing monitoring of injury trends?
  - 4) Promote injury preventative measures?
  - 5) Maintain individual and team protective equipment?
- ☆ Can you now see the importance of participating in the review of the effectiveness of the preventative measures?
- ☆ Could you see yourself being able to adjust preventative measures and interventions?
- ☆ Did you understand the importance of evaluating your own performance and identify potential improvements for future implementation of injury prevention programs?
- ☆ Also, did you understand why you would contribute feedback to implementation of injury prevention programs?

If there were any questions that you were unable to confidently respond YES to, we encourage you to review the information again in this manual, and if required, seek the assistance of your teacher or trainer.

NOTES

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