BTEC Level 1/2 Tech Award in Sport, Activity and Fitness

First teaching September 2018

Sample Marked Learner Work

Subject: Sport, Activity and Fitness

Component 1 - Understand the Body and the Supporting Technology for Sport and Activity

Learning Aim B – Explore common injuries in sport and activity and methods of rehabilitation

Level 1/Level 2

Merit level

Contents

You will need to refer to the appropriate specification alongside these sample materials.

Component 1 from the Level 1/ Level 2 BTEC Tech Awards in Sport, Activity and Fitness can be found by typing the following into your web browser (Google Chrome).

https://qualifications.pearson.com/en/qualifications/btec-tech-awards/sport-activity-and-fitness.html

Note:

- The Authorised Assignment Brief (AAB) used for generating this learner work is the same as the one provided by Pearson. Centres are expected to get the AAB fully internally verified prior to being issued to the learners.
- The learner work generated is an exemplar of standard for a particular Learning Aim(s) and grade(s), and **NOT** a response to the entire task detailed in the Authorised Assignment Briefs. We therefore expect centres to use this resource to exemplify how to structure a response to a task. We also encourage centres to use this work to standardise their Assessment teams and demonstrate to learners the level of work expected to achieve the different targeted grades outcome.

In preparation for the first teaching from September 2017 and as a part of the on-going support that we offer to our centres, we have been developing support materials to help you better understand the application of BTEC Tech Awards Level 1 Level 2 qualification.

The following learner work has been prepared to demonstrate indicative standards at Pass and Distinction level across a component.

Did you know?...

We've worked closely with over 5,000 employers, universities, teaching professionals and trainers to develop the new BTEC Tech Awards.. That means teacher and tutors can be confident their new BTEC courses contain the knowledge and employability skills students need to succeed at higher level study and in their chosen career.

BTEC Tech Awards provide work-related learning across a range of sectors. Delivering the knowledge, skills and under need to preparor their chosen career, BTEC Tech Awards offer progression to higher education, employment or further study.

BTEC Tech Awards use a combination of assessment styles to give your students confidence they can apply their knowledge to succeed in the workplace – and have the study skills to continue learning on higher education courses and throughout their career. This range of vocational assessments, both practical and written, mean students can showcase their learning and achievements to best effect when they take their next step, whether that's supporting applications to higher education courses or potential employers.

On successful completion of a BTEC Tech Award qualification, learners can progress to or within employment or continue their learning within the same or related areas of study programmes.

They provide a more practical, real-world way of learning and their value is widely recognised by teaching professionals, employers, and learners and can be studied full- or part-time.

Each programme of study covers a number of components, for which students must present evidence based on their work and studies to demonstrate the knowledge and skills they've developed on the course.

BTEC Assignment Brief

Qualification	Pearson BTEC Level 1/Level 2 Tech Award in Sport, Activity and Fitness
Component number and title	1: Understand the Body and the Supporting Technology for Sport and Activity
Learning aim(s) (For NQF only)	**B** Explore common injuries in sport and activity and methods of rehabilitation
Assignment title	Injuries and rehabilitation
Assessor	Miss Smith
Issue date	27th November 2017
Hand in deadline	15th December 2017

Vocational Scenario or Context	Following on from your successful presentation and information leaflet the sports club have now asked you to take on some work with their injured athletes to help improve your knowledge on common injuries and rehabilitation. They have asked you to produce a booklet for their athletes that considers common injuries, their rehabilitation and how technology can be utilised.

Task 1	To allow you to successfully complete this task you should first carry out some research into; • Basic common injuries – sprain, strain, bruising • Complex common injuries – dislocation, ligament tear, fracture, tendonitis, shin splints

	• Causes of common injuries – physiological, psychological, environmental, equipment, people-related risks, coaching • How to manage rehabilitation of common sporting injuries, including the use of technology Once completed you should produce a booklet that; • Describes common sporting injuries (both basic and complex) • Describes and explains how sporting injuries may occur using clear sporting examples. Ensure you include each of the areas for causes of common injuries: physiological, psychological, environmental, equipment, people-related risks, coaching • Describes the management of common sporting injuries including both physiological and psychological. You should summarise how each of the injuries can be managed to support the rehabilitation of a sports performers who picked up such an injury • Analyses the common injuries for one sport or activity of your choice. • Provide an analysis of recommended rehabilitation processes for one sport or activity. • Analyses how technology can be used to prevent and rehabilitate injuries.
Checklist of evidence required	Booklet

Criteria covered by this task:	
Component/ Criteria reference	To achieve the criteria you must show that you are able to:
B.2P3	Describe common sporting injuries, their causes and related rehabilitation.
B.2M2	Explain, using clear sporting examples, how sports injuries may occur and suggest rehabilitation.
B.2D2	Analyse common sports injuries in a chosen sport or activity, recommending rehabilitation, including the use of technology.

Sources of information to support you with this Assignment	**Websites** **Free resources for Physical Education and sports coaching** www.teachpe.com www.brianmac.co.uk/trainprog www.livestrong.com/fitness www.sport-fitness-advisor.com www.thinqfitness.com/video.asp
Other assessment materials attached to this Assignment Brief	*eg, work sheets, risk assessments, case study*

FOR NQF LEVEL 2 ONLY: If you have not achieved the Level 2 criteria, your work will be assessed to determine if the following Level 1 criteria have been met.		
To achieve the criteria you must show that you are able to:	Component	Criterion reference
Identify some common sporting injuries, their symptoms and possible causes.	1	B.1P3
Outline common sporting injuries, their symptoms and possible causes.	1	B.1M3

Introduction to Learner work

The learner work that follows has been assessed accurately to national standards. This is one example of **Merit** grade achievement for **Learning Aim B** on an internally assessed component.

The learner is in Year 12 and is completing the Pearson BTEC level 1/ Level 2 Tech Award in **Sport, Activity and Fitness** alongside other qualifications.

The learner has submitted Assignment **2,** Learning Aim **B** and it has been assessed as **Merit** standard.

Commentary

The learner has submitted Assignment **2** to cover **Learning Aim B:** Explore common injuries in sport and activity and methods of rehabilitation

The learner has achieved assessment criteria **B.1P3, B.1M3, B.2P3 and B.2M2**

It is important when assessing or internally verifying to look holistically at the evidence using the assessment criteria and 'Essential information for assessment decisions' section of the specification.

The learner has chosen to complete their assignment focusing on a range of sports within their booklet, looking at each of the injuries.

The learner has met the level 2 merit criteria as they have explained the common sporting injuries providing lots of clear examples from a variety of sports. They have suggested a variety of ways that the different injuries can occur and suggested rehabilitation methods.

The learner has clearly identifies some common sporting injuries and then outlined, described and explained each.

They have gone on to identify the symptoms of each of the sporting injuires that are included in the specification before outlining the symptoms, describing these and explaining what they may look like. In order to achieve the distinction criteria, the learner would be required to fully analyse the common sporting injuries within their chosen sport or activity.

When looking at causes, the learner has clearly identified, outlined, described and explained these. These are clearly listed under a causes section and within this the different categories are included – physiological, psychological, environmental, equipment, age-related and coaching.

They have provided related management and rehabilitation suggestions for each of the injuries clearly linking these to those within specification. For each injury, the management and rehabilitation suggestions are very clear and well described and explained. In order to achieve the distinction criteria, the learner would be required to include the use of technology within their rehabilitation programme. At present, technology is not included within learner evidence. This would ensure that all parts of the specification were represented within the learner evidence and the criteira fulfilled.

Whilst all of the content has been covered from the specification, a range would be sufficient to achieve the grading criteria. However, the range would need to come from across the different topics covered.

Learner Work

Sport Injuries

Coursework

Sarah Rush

BTEC Level 1/2 Tech Award in Sport, Activity and Fitness

There are lots of common sporting injuries and some that are more rare but do occur. Athletes need to look after their bodies to help try to prevent injury.

Athletes should always warm up and cool down as these are ways to help keep injury at bay. A well prepared body can perform to a high standard and cope with the demands placed upon it when exercising.

Warming up is very important. The purpose of a warm up is to prepare the muscles and body systems for exercise. It is to get the muscles and joints warm and more pliable to cope with the tasks ahead and prevent injury from occurring. It is also used to raise the heart rate gradually and increase the demands placed upon the cardiorespiratory system without sudden expectation. The warm up is physical as well as psychological as it helps the athlete to get into the 'zone' before exercising too. It is really important to be in the zone so you can give your all to the exercise that you are taking part in. Athletes who aren't in the 'zone' can get easily injured so a good warm up can help avoid this. A warm up should include a pulse raise, stretching and mobility exercises as well as some sport specific activities. This will prepare the body fully for what is to come.

Cooling down is also very important as it aims to return the body to its previous state (before exercising). If this can be completed quickly the body is able to recover quicker and better. A cool down aims to reduce and ideally prevent muscle soreness by effectively dealing with the lactic acid that has built up in the muscles by removing this. It also allows the heart rate to return to normal in a controlled physiological manner rather than abruptly stopping to help prevent blood pooling. Finally, a good and effective cool down can help to prevent delayed onset muscle soreness which can occur after intense exercise and can leave the athlete in pain for several days after the activity.

I will discuss common injuries in sport, their causes and methods of rehabilitation throughout this booklet.

Well done, you have highlighted what could be a possible cause of injury – towards B.1P3, B.1M3

Basic Common Injuries

These are:

- Sprain
- Strain
- Bruising

Good identification of some common injuries – towards B.1P3

Sprain

A sprain occurs at a joint when too much force is placed on a muscle resulting in ligaments becoming overstretched or possibly twisted. This can lead to severe pain and discomfort but can also be mild. Often, a sprain will result in a lot of localised swelling and bruising that will come out quickly after the injury occurs. It can be very painful and in many cases, when a sprain occurs at the ankle joint, can make walking difficult.

Well done you have outlined, described and explained a sprain. Towards B.1M3, B.2P3

Example: A sprain can occur in netball when a player jumps for the ball and lands awkwardly on their ankle causing it to 'roll'. This action and awkward landing places too much force on the muscle leading to the ligaments overstretching as they try to help control the landing. This results in a sprain of the ankle.

A clear sporting example – well done! Towards B.2M2

Causes: The different causes of a sprain can fall into different categories. Firstly, physiological. A sprain could occur as a result of 'too much, too soon' especially if a warm up is not carried out fully at the start of exercising. If the muscles, ligaments, tendons and joints aren't fully prepared they cannot function as they should and injury occur easily. It could be psychological as the athlete could be stressed and therefore their body not performing to the best of its ability or they could have low self-confidence so when they jump and land they are not fully committed to completing the actions correctly thus land awkwardly on the edge of their foot leading to a 'roll' of the ankle. A sprain can be caused by the environment as if the surface is wet, the netball player may slip when landing leading to their ankle rolling. It can also be caused by wearing footwear that is not appropriate for netball. It is necessary to wear trainers that are designed to hold the ankle firm and absorb shock. However, if the netball player was wearing pumps, this would be likely to result in a poor landing leading to a sprain occurring. There can also be people related causes such as age and skill level/experience. If the player is older and their joints wearing a little they may not be able to cope as well as a younger player and lead to being more prone to injuries or if they are new to the sport they may attempt to jump higher than they are capable of leading to an overstretch in the air so when they land they aren't balanced and 'roll' their ankle.

Clear causes identified, described and explained. Towards B.1P3, B.1M3, B.2P3 and B.2M2

Treatment

Management: To treat a sprain a first aider would usually look at this and may recommend a trip to A&E to have an x-ray and be safe this is nothing more serious. Upon initial examination, the first aider would use SALTAPS to check the player and the seriousness of their injury. SALTAPS = Stop play, Ask the player, Look, Touch, Active movement, Passive movement, Stand up. If the player is able to get through this without any major signs of anything more serious and can stand then the first aider would recommend the use of PRICE. This means they should protect the area from further damage – stop playing and if necessary use a tube grip for support. They would then advise rest in order to help the tissues to heal, the use of ice to help control the swelling, compression by using a tube grip or elastic bandage in order to control the swelling and elevation to limit the swelling around the area – when elevating the limb should be raised above the level of the heart.

Basic rehabilitation: recovery from a sprain would require time to heal. The netball player would need to rest and allow sufficient time for the tissues to repair, the swelling to subside and for weight bearing to be possible. Depending on the severity of the injury, this could require up to 6 weeks of rest to recover effectively. The athlete could use hot and cold treatment to help bring any swelling and bruising out and helping the recovery process to speed up. When walking and depending on the severity of the sprain, the athlete may wear strapping to give the ankle support and help maintain the compression to reduce swelling.

Well done, you have included related and suggested rehabilitation methods for a sprain. Towards B.2P3, B.2M2

Strain

A strain occurs when a muscle or tendon is torn or stretched further than it is used to. This is often referred to as a pulled muscle. These can happen in any of the muscles located within the body and can be very painful, limiting movement in the muscle group afterwards. A strain can be very painful and uncomfortable and like a sprain has different levels of severity. This can result in some localised swelling and bruising although there can often be no obvious signs to anyone other than the person injured.

Well done you have outlined, described and explained a strain. Towards B.1M3, B.2P3

Example: A strain can occur in football when a player is sprinting after their opponent and the hamstring stretches past what is comfortable. This results in a strain of the hamstring and will usually lead to a player being substituted immediately.

A clear sporting example – well done! Towards B.2M2

Causes: The different causes of a strain can fall into different categories. Firstly, physiological. A strain, as with a sprain, could occur as a result of 'too much, too soon' especially if a warm up is not carried out fully at the start of exercising. If the muscles, and tendons aren't fully prepared they cannot function as they should and injury occur easily as a muscle or tendon is easily overstretched as they are not as pliable as they could be yet. It could be psychological as the athlete could be stressed and therefore their body not performing to the best of its ability or they could have low self-confidence so when they run they push their muscles too much as they don't think they can catch their opponent leading to overstretching. A strain can be caused by the environment as if the surface is wet, the player may slip and their legs lead in different ways. This could lead to a pulled hamstring, pulled groin or similar. There can also be people related causes such as age and skill level/experience. If the player is older their muscles may require a lot more warming up. It this isn't completed they could easily pull a muscle. If the player is inexperienced they may not understand why the warm up is so important to prevent the injury and they may also attempt to stretch for a ball that is out of their reach as they have a belief they can reach this. Drinking alcohol could lead to a strain as the athlete may believe that they can stretch further than they can as they are not in full control of what they are doing. They could easily over stretch and strain a muscle. Inexperienced coaching or poor coaching methods can also lead to a strain as the coach may not see the importance of a warm up or be aggressive towards players so that they believe that they have to push themselves harder and therefore injure themselves.

Clear causes identified, described and explained. Towards B.1P3, B.1M3, B.2P3 and B.2M2

Treatment

Management: Treatment of a strain would be very similar to that of a strain. A first aider would usually look at the injured area and carry out an initial examination. They would use SALTAPS to check the player and the seriousness of their injury. SALTAPS = Stop play, Ask the player, Look, Touch, Active movement, Passive movement, Stand up. If the player is able to get through this without any major signs of anything more serious and can stand then the first aider would recommend the use of PRICE. This means they should protect the area from further damage – stop playing and if necessary use a tube grip for support. They would then advise rest in order to help the tissues to heal, the use of ice to help control the swelling, compression by using a tube grip or elastic bandage in order to control the swelling and elevation to limit the swelling around the area – when elevating the limb should be raised above the level of the heart.

Basic rehabilitation: recovery from a strain would require time to heal. The netball player would need to rest and allow sufficient time for the tissues to repair, the swelling to subside and for weight bearing to be possible without pain. Depending on the severity of the injury, this could require up to 6 weeks of rest to recover effectively. The athlete could use hot and

cold treatment to help bring any swelling and bruising out and helping the recovery process to speed up. When walking and depending on the severity of the strain, the athlete may wear strapping to give additional support to the hamstring and help maintain the compression to reduce swelling.

Well done, you have included related and suggested rehabilitation methods for a strain. Towards B.2P3, B.2M2.

Bruising

Bruising occurs when there is a trauma to a part of the body that causes the capillaries to burst trapping blood underneath the skin. Bruises can be very painful as well as going unnoticed by an individual. Bruises often appear in different shades of red, purple, blue or green depending on their severity and the stage of healing. They can also be very small or very big depending on what caused the trauma.

Well done you have outlined, described and explained a bruising. Towards B.1M3, B.2P3

Example: Bruising can occur in hockey when the ball hits a player in the leg following a chip or long pass. The ball hits the player in part of the leg causing the capillaries in this area to burst and bleed internally. This will result in a bruise forming. The speed that the bruise forms can vary and if the ball is struck with speed and power this could be immediate.

A clear sporting example – well done! Towards B.2M2

Causes: The cause of a bruise can fall into different categories. This could be physiological and be more common in contact sports or sports where contact is possible but not expected i.e. hockey. The impact of the ball in hockey would cause contact or in a sport such as rugby where contact is expected, bruising is likely for every player in every game. Equipment could lead to bruising if it is not worn correctly. For example; in football, all players should wear shin pads to stop bruising to the shin during a tackle. Hockey players should also wear shin pads in case of contact from a stick or the ball.

Clear causes identified, described and explained. Towards B.1P3, B.1M3, B.2P3 and B.2M2

Treatment

Management: To treat bruising an athlete would use PRICE. This means they should protect the area from further damage by wearing something that will prevent this being knocked anymore in the game or activity. They should rest the injured area, use of ice to help bring the bruise to the surface, compression in case of any swelling and to help stop any internal bleeding, and elevate this in order to help the rush of blood to the area slow.

Basic rehabilitation: recovery from bruising would be relatively straightforward and would not normally require an athlete to stop playing. Whilst the bruising would take time to heal and return to normal, it should not lead to any further or long-term issues. To speed up recovery, the injured athlete could us an ice-bath to reduce the blood flow to the area and control the bruising quickly. They may then decide to use hot and cold treatment to stimulate the blood and draw the bruising to the surface quicker and therefore allowing recovery to speed up.

Well done, you have included related and suggested rehabilitation methods for a bruising. Towards B.2P3, B.2M2

Complex Common Injuries

These are:

- Dislocation
- Ligament tear
- Fracture
- Tendonitis
- Shin splints

Dislocation

Dislocation occurs when a joint – where two or more bones meet – abnormally separates. This is often caused by trauma to the joint such as a fall or impact from a tough object or another person. Dislocations can lead to many other issues to and normally lead to damage to the muscles, tendons and ligaments around the joint. There can also be damage to the bones with the dislocation leading to a fracture to the end of one or more bones at the joint.

Well done you have outlined, described and explained a disolocation. Towards B.1M3, B.2P3

Example: A rugby player may go in for a tackle on an opponent and not position his shoulder in the correct position or it may catch the bone of the person they are tackling. This could then result in the shoulder dislocating with the bones separating.

A clear sporting example – well done! Towards B.2M2

Causes: A dislocation can be caused by physiological issues such as a direct result of the sport that is being played. For example, a rugby player may dislocate their shoulder joint as a direct result of a tackle. As this is a high contact sport it is an injury that can occur and be incredibly painful. A gymnast may also dislocate an ankle if they land awkwardly from a somersault resulting in the bones separating. Again, this is directly related to the type of sport that is being participated in. Psychological pressures can also result in dislocation as a

rugby player may be low on confidence and not commit themselves fully to a tackle which then results in this going wrong and a dislocation occurring. Environmentally the weather can lead to a dislocation. It cold weather, the surface could be hard and slippy which may result in someone running and falling. A fall could provide sufficient trauma to a joint to cause dislocation. In sport this would often be the shoulder, wrist or ankle. If a rugby player did not wear the correct boots they could easily fall awkwardly and dislocate an ankle. This would result in a possible unnecessary injury that could be prevented with the correct studs to keep you upright when running and that allow you to fall when tackled. The individual's skills level and experience could lead to them attempting a skill that they are not yet capable or have not yet mastered and getting this wrong. A young and inexperienced rugby player may not put their shoulder in the correct position when tackling and therefore effectively cause the injury themselves.

Clear causes identified, described and explained. Towards B.1P3, B.1M3, B.2P3 and B.2M2

Treatment

Management: If a first aider suspected that an individual has dislocated a joint, they would seek further medical attention in order to provide the correct care. This may be via ambulance or a visit to A&E. The affected area would be relocated by a medical professional with care advice provided when leaving.

To help manage pain, the athlete/player may use psychological techniques to help them to control the pain and deal with the rehabilitation process. Relaxation techniques can be used to help the injured person stay calm and understand that they will be ok if they simply follow the medical advice and instructions to regain full use of the affected area. It would also be beneficial to an athlete to set goals as they mentally prepare to recover. For example; they could set a goal of being able to move their shoulder within 4 weeks, then moving with little pain in 6 weeks, then completing key exercises that are provided by a physiotherapist.

Basic rehabilitation: A dislocation requires time in order to heal and to complete a period of physiotherapy treatment to rebuild strength around the joint. If completed successfully the joint will be stabilised and future dislocation minimised. It takes a long time to recover fully from a dislocation. This can be between 12 and 16 weeks in order for the muscles to be rebuilt and the joint stabilised. An athlete may choose to use basic strappings on the affected area when they return to sport or even during the rehabilitation process to provide additional support for the area. In addition to this, after a few days, the injured person may wish to participate in some yoga or Pilates to help develop flexibility in the area. They may support this with the use of resistance bands to develop strength. By using strength and flexibility exercises the affected area will slowly repair and return to a fit state ready for a return to full exercise. Well done, you have included related and suggested rehabilitation methods for a dislocation. Towards B.2P3, B.2M2

Ligament tear

A ligament tear can be a long term injury that sees ligaments that connect bone to bone ruptured/broken. The most common ligament tear in sport is the anterior cruciate ligament (ACL). This is the main ligament that stabilises the knee joint connect the femur to the tibia. This can get injured when playing sports that involve a sudden stop or change in direction.

Well done you have outlined, described and explained a ligament tear. Towards B.1M3, B.2P3

Example: A ligament tear can occur in netball when a player suddenly stops to catch the ball and pivot to pass to their team mate. The ACL can break leaving the femur and tibia no longer attached in the way they should be and the player in excruciating pain. This often requires a surgical procedure to reattach.

A clear sporting example – well done! Towards B.2M2

Causes: An ACL tear can be caused by physiological issues such as 'too much, too soon'. If the player isn't warmed up properly or isn't quite ready to participate in a match, then the ligament may be overloaded resulting in a tear. The type of sport can also contribute to this injury as it is more common in sports where sudden stopping and turning is required. This can include netball, basketball, football and tennis. Psychologically, peer pressure to attempt something new could result in this injury occurring as it may mean that you stop suddenly and turn in an unexpected manner. For example, in netball, a player may attempt to turn in the air but not quite manage this whilst off the ground thus landing and twisting unnaturally into a different position. Overtraining can lead to a ligament tear as the athlete may be asking far too much of their ligaments and not allowing time for them to repair and recover from previous exercise. Overtraining can be very dangerous to an athlete's joints and muscles. Poor coaching could also lead to a ligament tear as a coach may use an unsafe practice during a training session which results in impact upon ligaments that is unexpected. If a trampolinist was bouncing on a trampoline and the springs weren't attached correctly they could land very awkwardly and sudden jolt a joint leading to a ligament tear. This would be an injury sustained as direct result of damaged equipment being used.

Clear causes identified, described and explained. Towards B.1P3, B.1M3, B.2P3 and B.2M2

Treatment

Management: Any suspected ligament tear would require specialist medical advice. However, a first aider would initially use SALTAPS to check the athlete and the seriousness of the injury. SALTAPS = Stop play, Ask the player, Look, Touch, Active movement, Passive movement, Stand up. Once completed, the first aider would then advise the athlete to seek medical attention from a trained doctor and may take them or direct them to a walk-in centre, doctor's surgery or hospital. The psychological impact of a ligament tear can be huge as the time to recover fully can be somewhat lengthy depending on the amount of damage caused. The time required can be from 6 weeks to 6 months depending on the severity. This

can be psychologically difficult to deal with and therefore the athlete may manager this with a combination of goal setting and relaxation techniques.

Basic rehabilitation: There are many ways to support the rehabilitation of a ligament tear and this would often be determined by a physiotherapist. It may include the use of resistance bands, basic strappings or braces, flexibility exercises as the rehabilitation progresses and the use of hot and cold treatments to bring about recovery quicker. The biggest rehabilitation method would be time as this can be anything from 6 weeks to 6 months and therefore it should not be rushed. If rushed, the athlete may find that they do not recover fully or they get easily injured again quickly after the initial injury.

Well done, you have included related and suggested rehabilitation methods for a ligament tear. Towards B.2P3, B.2M2

Fracture

There are different types of fracture that can occur in sport. The most common is a stress fracture of a closed fracture. A fracture is where bone breaks. A stress fracture is tiny breaks in a bone which often heal by themselves whereas a closed fracture is where the bone is broken in two but has not come through the skin.

Well done you have outlined, described and explained a fracture. Towards B.1M3, B.2P3

Example: A footballer may fracture their leg as a result of a tackle. Although they wear shin pads, a player may have a weak point in a bone or a tackle may be very forceful causing the bone to break. A runner may have a stress fracture in their foot as a result of overuse. This would be a tiny break in a bone that may be painful but heel itself.

A clear sporting example – well done! Towards B.2M2

Causes: A fracture can be caused by overuse and overtraining. A stress fracture is a tiny break in the bone following repetitive stress. Therefore, it is important that an athlete rests and allows their body to recover to avoid stress fractures. Low self-confidence can lead to a fracture as it can result in a player making a tackle half-heartedly and therefore getting it wrong. This can result in both the player tackling and the player being tackled fracturing a lower leg bone. By not wearing the full protective equipment for the sport a player could suffer a fracture. For example, if a footballer doesn't wear shin pads they may get tackled, kicked in the shin in the process fracturing the tibia. Poor technique coached to players can also lead to a fracture as it can result in the player not fully understanding how to execute a skill correctly, getting it wrong and injuring themselves or an opponent.

Clear causes identified, described and explained. Towards B.1P3, B.1M3, B.2P3 and B.2M2

Treatment

Management: If a player has a suspected fracture they should not be moved and an ambulance called for so that they can be taken to hospital, x-rayed and a treatment plan formulated by a qualified doctor. If a suspected fracture was moved it could result in further injury or issues to the athlete. Psychologically the impact on the athlete may be instant as they realise the extent of their injury. It can cause panic and a feeling of doom as they see themselves unable to participate for some time. It is really important that the athletes sets themselves milestone goals in order to strive towards in recovery.

Basic rehabilitation: Following a fracture, the athlete is likely to be in a plaster cast for a period of time. During this time, they will suffer muscle wastage but their bone should refuse. Once the bone has refused the athlete would commence physiotherapy. This may te use of strengthening exercises, initially with a resistance band and moving onto resistance weight machines. They may also advise the use of yoga and Pilates in order to ensure the surrounding muscles are working as efficiently as possible to aid recovery. The biggest rehabilitation method would be time as this can be anything from 6 to 8 weeks in a cast followed by physiotherapy to rebuild muscle and confidence.

Well done, you have included related and suggested rehabilitation methods for a fracture. Towards B.2P3, B.2M2

Tendonitis

Tendonitis is an overuse injury. It is caused by repeatedly using a tendon, exceeding its ability to deal with the load, which then becomes inflamed as a result. Achilles tendonitis is the most common type of tendonitis in sport. It is often caused as a result in an increase in training load, distance and speed, the training surface, incorrect technique and muscle imbalances.

Well done you have outlined, described and explained a tendonitis. Towards B.1M3, B.2P3

Example: A long distance runner may suffer from tendonitis as a result of running continually on a hard surface. They may find that this particularly flares up when they increase the distance that they run or the amount of time that they are running for. They will find that they have swelling to the area, pain and limited use of the tendon.

A clear sporting example – well done! Towards B.2M2

Causes: The physiological causes can include pushing the tendon too quickly to improve. By increasing the distance that is run, this can lead to a flare up in the affected area as this is not used to so much stress being placed upon it. Tendonitis can be affected by cold weather

and it is important that an athlete completes a thorough warm up before taking part in their activity. This will ensure that the tendon is ready and prepared to deal with the stress that will be placed upon it. Inappropriate footwear can lead to a flare up of tendonitis too. If the Achilles tendon is not supported sufficiently by trainers of a high quality with sufficient shock absorption then the shock will travel through the Achilles tendon placing undue stress upon this. Overtraining can cause tendonitis as the tendons are being used too much in order to participate in the sport. This can lead to tendon issues as they require time to rest and recover.

Clear causes identified, described and explained. Towards B.1P3, B.1M3, B.2P3 and B.2M2

Treatment

Management: If an athlete suspects that they have tendonitis then it is important that they seek the advice of a doctor. A doctor may suggest rest with the use of PRICE to protect, rest, ice, compress and elevate the affected area. This can help the tendon to repair and return to its normal state. Physiotherapy may be required after a flare up of tendonitis in order for the strength, power and flexibility to be built up and allow the tendon to cope better with the stresses being placed upon it.

Basic rehabilitation: Tendonitis requires rest in order for the tendon to repair and recover. Depending on the severity of the injury would depend upon the time required to rest. This can be anything from a few days to a few months. However, the athlete may find that once they have suffered from tendonitis that when they return to activity that it flares up again. The athlete should try to alter their training and develop the muscle strength in order to be more efficient.

Well done, you have included related and suggested rehabilitation methods for a tendonitis. Towards B.2P3, B.2M2

Shin splints

Shin splints are pains that run down the shin and are usually brought on by exercise or repetitive weight-bearing. This leads to swelling around the tissue of the shin and creates pain that can be severe. A sudden change in activity levels, running on hard surfaces or wearing insufficient trainers can all lead to shin splints.

Well done you have outlined, described and explained a shin splints. Towards B.1M3, B.2P3

Example: A long distance runner may suffer from shin splints as a result of running continually on a hard surface. They may find that this particularly flares up when they increase the distance that they run or the amount of time that they are running for. They may find that they have swelling to the area and will have pain that can be severe.

A clear sporting example – well done! Towards B.2M2

Causes: The biggest causes of shin splits are environmental, equipment and physiological. Firstly, the type of sport can make shin splints more prone as sports which require repetitive weight-bearing can place too much pressure on the lower leg and its surrounding tissues causing inflammation and pain to the shin. In terms of environmental, the hard surfaces can lead to shin splits as they produce a lot of shock in each step that travels up the legs causing pain in the shins. In terms of equipment, it is really important that a long distance runner has good, firm running shoes that can support the actions and absorb some of the shock. Poor running shoes will place more stress upon the lower limbs and can result in shin splints.

Clear causes identified, described and explained. Towards B.1P3, B.1M3, B.2P3 and B.2M2

Treatment

Management: If an athlete suspects that they have shin splints then it is important that they seek the advice of a doctor. A doctor may suggest rest with the use of PRICE to protect, rest, ice, compress and elevate the affected area. This can help the affected area to repair and return to its normal state. Shin splints can cause psychological issues as they are something that can flare up time and time again preventing the athlete from participating to the standard that they want to achieve. It is important that the athlete sets goals that are achievable in order to steadily build up their fitness and the stress placed upon their body after shin splits.

Basic rehabilitation: Shin splits requires rest in order for the inflammation to recede and the area to return to normal. Depending on the severity of the injury would depend upon the time required to rest. This can be anything from a few days to a few months. IT may also be that the athlete needs to adapt from high impact sport to low impact sport in order to prevent the injury from regularly occurring. However, the athlete may find that once they have suffered from shin splints that when they return to activity that it flares up again. The athlete should try to alter their training and consider altering different variables such as their footwear or the surface that they train on.

Well done, you have included related and suggested rehabilitation methods for a shin splints. Towards B.2P3, B.2M2

Learner Assessment Submission and Declaration

This sheet must be completed by the learner and provided for work submitted for assessment.

Learner name: Sarah Rush		**Assessor name**: Miss Smith
Date issued: 27/11/17	**Completion date:** 15/12/17	**Submitted on:** 15/12/17
Qualification: BTEC Level 1/2 Tech Award in Sport, Activity and Fitness		
Assessment reference and title: Learning aim B: Explore common injuries in sport and activity and methods of rehabilitation		

Please list the evidence submitted for each task. Indicate the page numbers where the evidence can be found or describe the nature of the evidence (e.g. video, illustration).

Task ref.	Evidence submitted	Page numbers or description
1	Booklet	1-11
Comments for note by the Assessor:		

Learner declaration

I certify that the work submitted for this assignment is my own. I have clearly referenced any sources used in the work. I understand that false declaration is a form of malpractice.

Learner signature: *S. Rush* **Date:** 15/12/17

ASSESSMENT RECORD SHEET			
Programme	BTEC Level 1/2 Tech Award in Sport, Activity and Fitness	**Learner name**	Sarah Rush
Assignment title	Technology for sport and activity	**Assessor name**	Miss Smith
Component no. & title	Component 1: Understand the body and the supporting technology for sport and activity	**Targeted assessment criteria**	B.2P3, B.2M2, B.2D2
Issue date	27/11/17	**Submission deadline**	15/12/17
First submission / resubmission?*	=First submission	**Date submitted**	15/12/17
Resubmission authorisation by Lead Internal Verifier*		**Date**	

Targeted criteria	**Criteria achieved?** (Yes / No)	**Assessment comments**
B.2P3	Yes	Sarah you have described common sports injuries, what can cause these and related methods of rehabilitation.
B.2M2	Yes	You have provided good explanations of the common sporting injuries, how they may occur and suggested rehabilitation methods.
B.2D2	No	You have provided some analysis to the common injuries but you have not included the use of technology within your rehabilitation suggestions. .

General comments
Well done Sarah. You have worked hard to produce a good booklet that is information for its users. You have clearly completed some good research and have been able to use good examples.

Assessor declaration			
Assessor signature	Miss. Smith	**Date**	18/12/17
Learner comments	I am pleased with my grade. I have achieved a pass and will work hard to improve for future assignments.		
Learner signature	S. Rush	**Date**	21/12/17