**Sports Medicine**

Insert school logo or image instead of this box.

**Flipped Learning Booklet**

**Write your name here.**

2016-17

# Contents

Key Term Definitions 2

Rehabilitation Procedures 3

Content 3

Cornell Note Taking Method 3

Heat and cold 3

Learn to Activity 4

Key word examine 4

Research task 4

Past/Practice HSC Questions 4

Return to Play 8

Content 8

Cornell Note Taking Method 8

Learn to Activity 9

Research 9

Practical activity 9

Policies and procedures for Return to Play 9

Debate 9

Past/Practice HSC Questions 10

Sports Medicine Summary 12

The Steps to Answering Questions (PDHPE) 13

# Key Term Definitions

Complete the table below as you progress through this critical question.

|  |  |  |  |
| --- | --- | --- | --- |
| **WORD** | **DEFINITION** | **EXAMPLE** | **NON-EXAMPLE** |
| rehabilitation |  |  |  |
| progressive mobilisation |  |  |  |
| graduated exercise |  |  |  |
| psychological readiness |  |  |  |
| ethical considerations |  |  |  |
| policies |  |  |  |

# Rehabilitation Procedures

|  |  |
| --- | --- |
| **Students learn about:** | **Students learn to:** |
| * rehabilitation procedures
* progressive mobilisation
* graduated exercise (stretching, conditioning, total body fitness)
* training
* use of heat and cold
 | * examine and justify rehabilitation procedures used for a range of specific injuries, eg hamstring tear, shoulder dislocation
 |

## Content

**Video** *Rehabilitation Procedures* [here](https://youtu.be/KBQ0uw_PUCg?list=PLesvqngPCeVM83T9yIZXK3la6P4i6fxFy).

**Reading** [pdhpe.net](https://www.pdhpe.net/sports-medicine/how-is-injury-rehabilitation-managed/rehabilitation-procedures/)

 Relevant section of your textbook (Cambridge, Outcomes, etc)

## Cornell Note Taking Method

*These notes can be done in the booklet or in a separate exercise book (replace the words in the scaffold).*

|  |
| --- |
| Name, Date, Topic, Class |
| **CUES**Written after the video and classMain ideasQuestions that connect pointsVocabulary wordsUsed for review and study | **NOTES**Taken During the video* Main points
* Bullet points
* Diagrams/charts
* Abbreviate
* Paraphrase
* Outlines

Leave space between topicsAny Questions you still have. |
| **SUMMARY**Written straight after the video. (Checked in class)Brief summary highlighting the main points on the page.Used to find info later. |

## Heat and cold

1. Identify a range of methods/examples used to apply heat AND cold to an injury during rehabilitation and list the proposed benefits and how the heat or cold provides these benefits.

|  |  |  |
| --- | --- | --- |
| **Method** | **Proposed benefits** | **How benefits are provided** |
|  |  |  |
|  |  |  |

1. Select 2 methods and justify (provide reasons why) their used.

## Learn to Activity

### Key word examine

1. Read the article on examine [here](https://www.pdhpe.net/key-word-examine/).
2. Define the term and include what it is not.
3. What terms or phrases would you use to answer an examine question.

### Research task

1. Select an injury and conduct research to find its rehabilitation procedures.
	1. Use advanced Google search AND/OR Google Scholar to find reliable resources
	2. Check key organisations such as Sports Medicine Australia.
	3. Make sure you keep a list of references for where you find your information.
	4. If you are struggling see the following on [hamstring strains](https://www.pdhpe.net/sports-medicine/how-is-injury-rehabilitation-managed/rehabilitation-procedures/rehabilitation-procedures-for-a-hamstring-tear/), [dislocated shoulder](https://www.pdhpe.net/sports-medicine/how-is-injury-rehabilitation-managed/rehabilitation-procedures/rehabilitation-procedures-for-a-dislocated-shoulder/), and [sprained ankles](https://www.pdhpe.net/rehabilitation-procedures-for-a-sprained-ankle/) (use the references/resources, not just the page)

|  |  |  |
| --- | --- | --- |
| **Procedure** | **Justification for use**(why is it used?/how does it work?) | Dash point related to |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
| References |

1. Share your table with another student who looked at a different injury so you have 2 tables on 2 separate injuries.
2. Write a rehabilitation program for your injury that focuses on graduated exercise.

Use your table above to answer the past HSC question for 2014 below.

## Past/Practice HSC Questions

1. 2014 Question 31 (b) Justify the rehabilitation procedures used to manage specific sporting injuries. **12 Marks**

|  |
| --- |
| **Introduction:** |
| **Topic** | **Paragraph** |
|  | Statement: |
| Expand/Explain:  |
| Apply/Example: |
| Link/Why: |
|  | Statement: |
| Expand/Explain:  |
| Apply/Example: |
| Link/Why: |
|  | Statement: |
| Expand/Explain:  |
| Apply/Example: |
| Link/Why: |
| **Conclusion:** |

|  |  |
| --- | --- |
| **Criteria** | **Marks** |
| * Provides an argument that supports the use of rehabilitation procedures for sporting injuries
* Makes evident the relationship between the rehabilitation procedure and management of sporting injuries
* Provides relevant examples
 | 11–12 |
| * Provides reasons why rehabilitation procedures are used for sporting injuries
* Provides relevant example(s)
 | 8–10 |
| * Provides characteristics and features of rehabilitation procedures
* Provides a relevant example
 | 5–7 |
| * Sketches in general terms rehabilitation procedures for sports injuries
 | 3–4 |
| * Recognises and names rehabilitation procedures

OR * Provides an example of a rehabilitation procedure
 | 1–2 |

* 1. Mark your answer using the marking criteria and make amendments so that you would get full marks.
		1. You should identify your arguments
		2. Highlight the syllabus terms used
		3. Highlight (separate colour) your conjunctions (connecting words) that indicate the relationship
		4. Identify injury specific examples (plural)
	2. Read through the sample answer doing steps i-iii above as well as the SEAL/SEXY/PEEL structure.

**Sample Answer**

To ensure an athlete can return to play as soon as possible following a hamstring injury, a variety of rehabilitation processes should be implemented. These should include progressive mobilisation, graduated exercise (including stretching, conditioning and total body fitness), training and the use of heat and cold. When each step is correctly addressed, it will increase the likelihood of a speedy reintroduction to sport.

Progressive mobilisation is necessary to enhance the range of movement available at the hamstring. A hamstring tear causes severe damage to muscle and connective tissues ie tendons and ligaments, leading to scar tissue formation and immobilisation. Active and passive movement techniques can be introduced soon after the injury to prevent muscle inactivity. An example of an active and passive movement exercise for someone who has experienced a hamstring tear might include flexion and extension of the knee by the athlete and physiotherapist respectively. It is important that the athlete is ready to undertake this phase by ensuring the movements are slow, circulation to the area is increased beforehand and movement remains pain free. Therefore progressive mobilisation is a key stage in the initial rehabilitation process as it prevents muscle stiffness.

After the injured site has been mobilised, graduated exercise is introduced in the form of stretching, conditioning and total body fitness. Stretching is beneficial as it reduces muscle tension, increases circulation, increases deltoid muscle and tendon length and improves the range of motion at the injured site. Stretching can be in the form of PNF and static stretches at this stage, ensuring technique is correct and there is no pain. Conditioning of a shoulder injury is vital because inactivity leads to muscle atrophy. Therefore, it is imperative that strength in the muscle is regained and the muscle slowly overloaded with further resistance to initiate further strength gains. Some examples of suitable resistance exercises for someone recovering from a shoulder injury might include anterior deltoid raises with low resistance or rotator cuff exercises. Total Body fitness is the final step in the graduated exercise process. It is essential that overall fitness is restored, not just the recuperation of the shoulder dislocation. The choice of total body fitness exercises will depend on the type and severity of the injury. In the case of a shoulder dislocation, some fitness exercises might include light resistance training through the use of elastic bands and low intensity swimming. Graduated exercise is relevant because it assists in the recovery process of the shoulder dislocation.

Although an athlete may have returned to full fitness, strength and condition, they are still not fit enough to return to competition. Instead, they must undertake training to ensure speed, agility and muscle coordination are restored to full capacity. For example an AFL player who has sustained a hamstring tear may return to the lower grades before re-entering the senior team. It has been found that this will ensure physiological readiness to return to full competition.

The use of cold is vital in the initial treatment of a shoulder dislocation, while the use of heat is helpful prior to commencing the progressive mobilisation phase. Cold therapies ie cryotherapy, include the use of ice and ice baths to minimise swelling and pain at the shoulder dislocation site immediately post injury and for up to 48 hours post injury. Heat is used to increase circulation, increase tissue healing and relax the injured muscle. Heat can be applied superficially via heat packs after the first 48 hours post injury. Research shows that the use of heat and cold is a key component of the rehabilitation process of a shoulder dislocation as it assists and speeds up the healing of the injured site.

It can be seen that rehabilitation procedures are vital to ensuring an athlete is at their peak when returning to play following a soft and hard tissue injury.

1. Describe the rehabilitation procedures used to treat sports injuries. **8 marks (**try not to use a scaffold) INSTEAD
	1. Define describe
	2. Plan your answer (use the syllabus and SEXY/PEEL/SEAL)
	3. Write your answer
2. Create your own question for this dot point. Include:
	1. The question (should use a relevant key word and syllabus terms)
	2. Marking criteria (this should use the definition for your key word, but apply it – ask your teacher if you’re struggling)
	3. Dot points of what could be included in the answer
	4. Sample answer

# Return to Play

|  |  |
| --- | --- |
| **Students learn about:** | **Students learn to:** |
| * return to play
* indicators of readiness for return to play (pain free, degree of mobility)
* monitoring progress (pre-test and post-test)
* psychological readiness
* specific warm-up procedures
* return to play policies and procedures
* ethical considerations, eg pressure to participate, use of painkillers.
 | * research and evaluate skill and other physical tests that could be used to indicate readiness to return to play
* critically examine policies and procedures that regulate the timing of return to play, considering questions such as:
* why aren’t such policies applied to all sports?
* who should have ultimate responsibility for deciding if an athlete returns to competition?
* should athletes be allowed to use painkillers in order to compete when injured?
 |

## Content

**Video** *Return to play*  [here](https://youtu.be/_cGSIVrZTOs?list=PLesvqngPCeVM83T9yIZXK3la6P4i6fxFy).

**Reading** [pdhpe.net](https://www.pdhpe.net/sports-medicine/how-is-injury-rehabilitation-managed/return-to-play/)

 Relevant section of your textbook (Cambridge, Outcomes, etc)

## Cornell Note Taking Method

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Leave space between topicsAny Questions you still have. |
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## Learn to Activity

### Research

1. Find a range of physical tests that are used to indicate readiness to return to play.
2. Justify the use of specific physical tests for specific injuries and specific sports (minimum of 3 max 5).

### Practical activity

1. Design your own physical test for a specific injury and specific sport.
2. Run your test with a small group and get feedback from each other on the test:
	1. How was it appropriate for the injury?
	2. How was it specific to the sport?

### Policies and procedures for Return to Play

1. Select an injury and identify the policies and procedures for this injury in a range of sports.
	1. If you struggle to find information use the [policies and procedures](https://www.pdhpe.net/sports-medicine/how-is-injury-rehabilitation-managed/return-to-play/return-to-play-policies-and-procedures/) page and the resources/links on it.

|  |  |
| --- | --- |
| Sport | Policy details |
|  |  |
|  |  |
|  |  |

1. Work through the question for the policy.
	1. why isn’t the policy the same for all sports?
	2. who should have ultimate responsibility for deciding if an athlete returns to competition?
2. Repeat steps 1-2 for another injury.

### Debate

1. In groups of 4 debate the topic: should athletes be allowed to [use painkillers](https://www.pdhpe.net/sports-medicine/how-is-injury-rehabilitation-managed/return-to-play/ethical-considerations/) in order to compete when injured? (include reasons why an athlete may chose to use pain killers such as pressure to participate)
	1. 2 people for and 2 people against
	2. write your points below and arguments against the others
	3. does not have to be a formal debate, it can be a discussion, but with each pair having done their own research to argue their points.

Notes

|  |  |
| --- | --- |
| **For** | **Against** |
|  |  |
| References used: | References used: |

## Past/Practice HSC Questions

1. 2013 Question 31 (a) How are skill and physical tests used to indicate an athlete’s readiness to return to play after injury?  **8 Marks**

**Your answer here**.

* 1. Use the marking criteria below to mark a friends answer and provide them with feedback.

**Your feedback here.**

|  |  |
| --- | --- |
| **Criteria**  | **Marks** |
| * Clearly explains how skill and physical tests are used to indicate an athlete’s readiness to return to play after injury
* Provides examples that indicate the relationship between the tests and readiness to return to play after injury
 | 8 |
| * Explains how skill and physical tests are used to indicate an athlete’s readiness to return to play after injury
* Provides examples
 | 6–7 |
| * Provides characteristics and features of skill and physical tests used as indicators of an athlete’s readiness to return to play
 | 4–5 |
| * Sketches in general terms the use of skill and physical tests used as indicators of an athlete’s readiness to return to play
 | 2–3 |
| * Provides facts or information regarding tests or readiness to return to play protocols
 | 1 |

* 1. Read through the sample answer below and identify:
		1. The syllabus terms (bold)
		2. The examples (underline)
		3. The linking phrases (back to the question or forward to the next paragraph)

**Sample answer:**

Return to play is a co-ordinated effort between the athlete and medical staff. All athletes returning to play should undertake and pass comprehensive skill and physical related tests. These tests should include a demonstration of pain-free full range of motion. For example an athlete who injures their shoulder in a game of football should be able to complete a circumduction test free of any musculoskeletal pain. Should an athlete experience any discomfort or pain, this would indicate that they are not ready to return to play.

In addition to being pain free the athlete must have a normal degree of mobility at the injury site. For example a soccer player who has a torn ligament should undergo various physical skills such as agility and mobility tests (eg Illinios Agility Test) to ensure that they can successfully bear full weight and complete all full pre injury duties.

There are a few other methods of helping to determine if an athlete is ready to return to play in terms of skill and physical tests, specifically strength and flexibility testing. Strength testing involves comparison between injured and uninjured limb. This is to ensure that the athlete has recovered full mobility and strength to prevent recurrence of injury or causing a secondary injury. It also ensures optimal performance upon return to play. To perform these tests the athlete must perform exercises that are related to the sport eg kicking a football with both inured and uninjured leg. If the athlete can demonstrate they have 90–95% of strength and range of motion returned to the injured limb they would be determined fit to play under this strength and flexibility testing protocol.

A number of the generic skills tests can be utilised to compare an athlete pre injury to post injury, for example using the vertical jump to test for muscular power in a basketball player in pre season can provide you with a guide and comparable statistics to judge their readiness to return to play for activities related to jump shots and slam dunk.

Game-specific skill tests are a traditional method for assessing if an athlete is fit enough to return to play by putting them through a series of game specific drills (like running, pivoting, passing, throwing). Athletes should be assessed by qualified staff that they can complete these specific game related skills to an acceptable level of capable of being competitive upon return to play.

1. Write your own questions for Psychological readiness, specific warm up and 1 other dot or dash point. Include:
	1. Syllabus terms
	2. Common terms (not BOSTES key words)
	3. Marking criteria, including mark allocation)
	4. Minimum of 3 questions worth different amount of marks. At least 1 must be worth 8 or more marks.
2. Answer 1 question from another student.

# Sports Medicine Summary

1. You should now make sure that your entire Sports Medicine summary is complete and follows the syllabus critical questions, dot points and dash points, including notes for learn tos that could be used as exam questions.
2. Once you have this summary together and in a single place write yourself some exam questions (4 minimum, 1 from each critical question). Your questions should:
	1. Use syllabus terms
	2. Use BOSTES key terms
	3. Have a mark allocation (include a range from 5-12 marks) use the steps table on the next page as a guide for mark allocation and the BOSTES key word used.
	4. Include marking criteria
3. Answer 2 of your own questions and 1 of someone else’s questions.
4. Mark and provide feedback for each other.
5. Submit the one you both struggle with to your teacher for feedback.

## The Steps to Answering Questions (PDHPE)

|  |  |
| --- | --- |
|  | What is it? |
|  | What is it? | What does it do? |
|  | What is it? | What does it do? | How does it do it? |
|  | What is it? | What does it do? | How does it do it? | What does it lead to? |
| What is it? | What does it do? | How does it do it? | What does it lead to? | How well does it do it? |
| ***Examples*** | ***Examples*** | ***Examples*** | ***Examples*** |  ***Examples*** |
| **Identify:****Recognise and Name****Outline:****Sketch in general terms, indicate the main features** | **Describe:****Provide characteristics and features** | **Explain:****Relate cause and effect, make the relationship between things, evident, provide what and how****Discuss:****Identify issues and provide points for and / or against** | **Analyse:****Identify components and the relationship between them; draw out and relate implications****Assess****make a judgement of value, quality, outcomes, results or size** | **Evaluate:****Make a judgement based on criteria; determine the value of** |
| Level 1(3-4 marks) | Level 2(4-5 marks) | Level 3(6-8 marks) | Level 4(9-11 marks) | Level 5(12-15 marks) |

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