

HODDER
EDUCATION

MY REVISION NOTES
Cambridge National Level 1/Level 2
SPORT SCIENCE

Cambridge National

Level 1/Level 2

SPORT SCIENCE

SECOND EDITION

For the J828 specification

- + Plan and organise your revision
- + Reinforce skills and understanding
- + Practise exam-style questions



Sue Young
Symond Burrows



My revision planner

7 Exam breakdown

Unit R180 Reducing the risk of sports injuries and dealing with common medical conditions

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- 11 1.1 Extrinsic factors
 - 11 1.1.1 Types of sports activity
 - 12 1.1.2 Coaching/instructing/leading
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 - 17 1.1.4 Equipment
- 19 1.2 Intrinsic factors
 - 19 1.2.1 Individual variables
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 - 26 2.1.1 Key components of a warm-up
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- 45 4.1 Measures that can be taken before and during participation in sport or physical activity to reduce risk and severity of injury/medical conditions
 - 45 4.1.1 Safety checks
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 - 47 4.1.3 Emergency action plans (EAPs)
- 49 4.2 Responses and treatment to injuries and medical conditions in a sporting context
 - 49 4.2.1 SALTAPS on-field assessment routine (See, Ask, Look, Touch, Active, Passive, Strength)
 - 49 4.2.2 DRABC (Danger, Response, Airway, Breathing, Circulation)
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 - 51 4.2.5 Use of X-rays to detect injury
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56 Topic area 5: Causes, symptoms and treatment of medical conditions

- 56 5.1 Asthma
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66 Answers to 'Check your understanding' questions

70 Answers to exam-style questions

76 Glossary

Countdown to my exam

6–8 weeks to go

- + Start by looking at the specification – make sure you know exactly what material you need to revise and the style of the examination. Use the revision planner on pages xx and xx to familiarise yourself with the topics.
- + Organise your notes, making sure you have covered everything on the specification. The revision planner will help you to group your notes into topics.
- + Work out a realistic revision plan that will allow you time for relaxation. Set aside days and times for all the subjects that you need to study, and stick to your timetable.
- + Set yourself sensible targets. Break your revision down into focused sessions of around 40 minutes, divided by breaks. These Revision Notes organise the basic facts into short, memorable sections to make revising easier.

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4–6 weeks to go

- + Read through the relevant sections of this book and refer to the 'remember' tips, key terms, summaries and exam skills. Tick off the topics as you feel confident about them. Highlight those topics you find difficult and look at them again in detail.
- + Test your understanding of each topic by working through the 'Now test yourself' questions in the book. Look up the answers at the back of the book.
- + Make a note of any problem areas as you revise, and ask your teacher to go over these in class.
- + Look at past papers. They are one of the best ways to revise and practise your exam skills. Write or prepare planned answers to the exam practice questions provided in this book. Check your answers at the back of the book or online at **www.hoddereducation.co.uk/myrevisionnotesdownloads**
- + Try using different revision methods as you work through the sections. For example, you can make notes using mind maps, spider diagrams or flash cards.
- + Track your progress using the revision planner and give yourself a reward when you have achieved your target.

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One week to go

- + Try to fit in at least one more timed practice of an entire past paper and seek feedback from your teacher, comparing your work closely with the mark scheme.
- + Check the revision planner to make sure you haven't missed out any topics. Brush up on any areas of difficulty by talking them over with a friend or getting help from your teacher.
- + Attend any revision classes put on by your teacher. Remember, your teacher is an expert at preparing people for examinations.

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The day before the examination

- + Flick through these Revision Notes for useful reminders, for example the 'remember' tips, key terms, summaries and exam skills.
- + Check the time and place of your examination.
- + Make sure you have everything you need – extra pens and pencils, tissues, a watch, bottled water, sweets.
- + Allow some time to relax and have an early night to ensure you are fresh and alert for the examination.

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My exams

Unit R180 paper

Date:

Time:

Location:

Exam breakdown

About the exam

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Unit R180 **Reducing the risk of sports injuries and dealing with common medical conditions** is the only exam-based unit on the OCR Level 1/Level 2 Cambridge National in Sport Science and it counts for 40% of your overall qualification weighting. It is therefore important to understand the content to be covered, how the exam is structured and the different types of questions you are likely to face.

Your exam paper examines five topics from the specification:

- + Different factors which influence the risk and severity of injury.
- + Warm-up and cool down routines.
- + Different types and causes of sports injuries.
- + Reducing risk, treatment and rehabilitation of sports injuries and medical conditions.
- + Causes, symptoms and treatment of medical conditions.

Your paper is 75 minutes long and is worth 70 marks, so you have one minute per mark and five minutes at the end to check through your answers.

Question types

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On your exam paper, there will be a range of different question types such as true/false, multiple choice, completion of tables and extended answer questions. These questions have three performance objectives:

- + PO1: answers here require recall knowledge and an understanding.
- + PO2: answers to these questions require you to apply knowledge and understanding.
- + PO3: answers to these questions require you to analyse and evaluate knowledge, understanding and performance.

Section A: contains 25 marks for simple recall questions so the focus is on PO1. These questions will either be multiple choice questions or lead with a simple requirement to 'state' or 'identify' something, for example, identify three different types of acute injury that can occur at the ankle.

Section B: contains 45 marks and includes short- and medium-answer questions which are focused more on PO2 with some PO1. PO2 means you need to apply your knowledge and questions may ask you to use practical examples to illustrate application of knowledge and understanding, for example, using a practical example, describe how tendonitis can occur at the ankle joint.

This section also contains the eight-mark extended question. This question needs to be answered in more depth and is assessed against a 'levels' mark scheme. These levels have statements related to the written quality of your answer. This means that the examiner needs to be able to read your answer, so keep your handwriting neat. You also have to write in a structured way with accurate spelling, punctuation and grammar and use specialist terminology where you can, to achieve the higher levels. In addition, each level includes a list of the required content you need to include to achieve that level.

Example of levels of response descriptions

Level 3 (7–8 marks)	A thorough discussion which: + shows detailed knowledge and understanding + analyses the points made, showing logical reasoning throughout and reaching a justified conclusion (where one is required) + consistently uses appropriate terminology.
Level 2 (4–6 marks)	A response-adequate discussion: + shows sound knowledge and understanding + analyses the points made; may show some logical reasoning + uses some appropriate terminology.
Level 1 (1–3 marks)	A basic discussion: + shows limited knowledge and understanding + limited analysis of points made; may lack logic + limited or no use of appropriate terminology.
0 = nil response or no response worthy of credit.	

Command words

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When sitting your exam, read each question carefully and identify exactly what is required. You might want to highlight or underline to understand what the question is asking for. If you do this, always highlight the command word, as this will help you to plan the content of your answer.

The following command words could be used in your exam questions and there is an explanation to help you understand what each command word requires you to do.

- + **Analyse** – separate or break down information into parts and identify their characteristics or elements.
- + **Annotate** – add information, for example, to a table, diagram or graph until it is final.
- + **Calculate** – get a numerical answer showing how it has been worked out.
- + **Choose** – select an answer from options given.
- + **Circle** – select an answer from options given.
- + **Compare and contrast** – give an account of the similarities and differences between two or more items or situations.
- + **Complete** – add all the needed or appropriate parts/add information, for example, to a table, diagram or graph until it is final.
- + **Describe** – give an account including all the relevant characteristics, qualities or events/give a detailed account of ...
- + **Discuss** – present, analyse and evaluate relevant points (for example, for/against an argument).
- + **Evaluate** – make a reasoned qualitative judgement considering different factors and using available knowledge/experience.
- + **Explain** – give reasons for and/or causes of. Use the words 'because' or 'therefore' in answers.
- + **Fill in** – add all the needed or appropriate parts/add information, for example, to a table, diagram or graph until it is final.
- + **Identify** – give an answer to answer the question set/select an answer from options given/recognise, name or provide factors or features.
- + **Justify** – give good reasons for offering an opinion or reaching a conclusion.
- + **Label** – add information, for example, to a table, diagram or graph until it is final/add all the necessary or appropriate parts.
- + **Outline** – give a short account, summary or description.
- + **State** – give factors or features/give short, factual answers (often linked to a specific number in the question).

- ✚ **Using practical examples** – show your full understanding of a point by using relevant practical/sporting examples linked to the requirements of the question set.

Key points to remember in the exam

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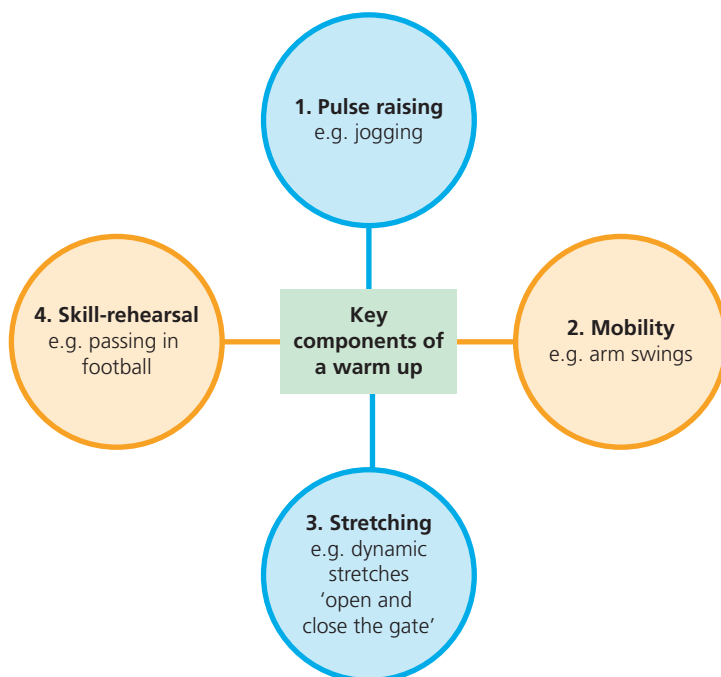
- ✚ When writing your answer produce a response that is clear and concise. Try not to waffle.
- ✚ Make sure you do not repeat information that is already given in the wording of the question.
- ✚ If a question wants you to apply your knowledge and understanding, you need to use examples.
- ✚ Look at how many parts there are to a question and make sure you answer all of them.
- ✚ Check how many marks your question is worth and match your answers to the number of marks in the question.
- ✚ Try not to miss out any questions. You could pick up a mark with an educated guess!
- ✚ You do not have to answer the questions in order. If you do not know the answer straight away do not spend time being stuck – move onto a question you can do and come back later.
- ✚ Write clearly in the spaces provided in the answer booklet.
- ✚ Avoid writing anything you want to be marked in the margins and always indicate if you run out of space that your answer continues on additional paper or at the end of the answer booklet if there is space.

Revising for your exam

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There are lots of different ways to revise for your exam and you may find that some revision methods are better than others. Here are some ideas to help you:

- ✚ **Mind maps:** read through a topic and then without your notes put the key points into a mind map. Check to see if you have covered everything and if not add the missing knowledge to the mind map. You will then have a concise version of your topic notes. A mind map for key components of a warm-up could look like that shown below:



- + **Exam questions:** as well as the practice questions later in this book, you can also visit the OCR website where there are lots of past papers and mark schemes. You can use these to test your knowledge. You will also become familiar with the types of questions that could appear on your paper. Try to answer a whole paper in 75 minutes without stopping, so that you get used to the amount of time you have available. This will prepare you for exam conditions.
- + **Revision cards:** simply read a topic and rewrite your notes briefly onto small cards. Make sure you include all the main points. You may also wish to put notes on one side of the card and questions and answers on the other side.
- + **Study buddy:** revise with a friend and test one another.

Topic area 1: Different factors which influence the risk and severity of injury

1.1 Extrinsic factors

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An **extrinsic factor** that can influence the risk and severity of injury is something that is external to the body.

1.1.1 Types of sports activity

How different sporting activities can influence types of injury

Contact sports

A **contact sport** is a sport in which there is physical contact between performers.

The injuries sustained in these sports often occur as a result of impact. Full contact sports run a high risk of injury.

- + Martial arts such as judo require physical contact with opponents for a participant to score points.
- + In boxing, points are scored when making contact with an opponent.
- + Rugby requires contact in tackling.

Other sports such as netball and basketball do not involve as much contact.

- + The rules of the game try to reduce this; the umpire can award penalties or fouls when contact is made.
- + They are, however, still contact sports as contact is inevitable when contesting for a ball.
- + Injuries in these sports tend to occur more through muscle strains and sprains as there is a lot of running, jumping and twisting.
- + Injuries can also be caused by contact with equipment. For example, two players running to get to a ball and colliding with the goal post.

Extrinsic factors Risk or factor that causes an injury that comes from outside the body.

Contact sport A sport in which there is physical contact between performers.

Typical mistake

Do not be misled by the term 'contact'. A contact sport is not just combat sports such as boxing but can be a rugby game in which players make contact in a tackle.



Figure 1.1 Judo is a contact sport

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Non-contact sports

A **non-contact sport** is where there is no physical contact.

- + Gymnastics and dance are non-contact sports. Injuries in these activities tend to occur through falls and landing incorrectly, such as a sprained ankle or knee.
- + Most net games, such as tennis and badminton, are non-contact sports. Injuries in these sports are more likely to be caused by twisting to change direction quickly, or overuse injuries such as **tennis elbow** from repeated actions (such as playing the same shots).



Figure 1.2 Netball is a non-contact sport. If there is any contact, a penalty is awarded

Now test yourself

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Choose **five** contact and **five** non-contact sports and list the type of injuries that are common in each of these activities.

Check your understanding

- 1 State **two** injuries that can occur in contact sports.
- 2 State **two** injuries that can occur in non-contact sports.

Non-contact sport

A sport in which players are kept apart and any physical contact is penalised, for example, in netball the umpire will award a penalty pass.

Tennis elbow A condition that causes pain around the outside of the elbow caused by repeated stress on the elbow tendons.

Exam tip

If types of sports activities appear in an extended question, make sure you develop your points. Do not just list different types of activity, you also need to explain the differences between activities and give examples of injuries that can occur.

1.1.2 Coaching/instructing/leading

Knowledge of techniques/rules/regulations

Techniques

A coach who teaches poor or incorrect **technique** increases the risk of injury.

- + In rugby, good tackling technique is important. Head position during a tackle and where the shoulders make contact should be coached correctly to avoid shoulder and neck injuries.
- + In football, coaching good tackling technique can avoid injuries to the player being tackled. A correctly coached player will have much better timing and accuracy of contact than a player who has been poorly coached.
- + In high jump, the take-off foot should be planted correctly on the ground so that the take-off is straight and therefore does not place unnecessary stress on the ankle joint.
- + A poor coach may also encourage aggressive (and therefore dangerous) play such as a two-footed tackle in football.

Technique Method used to perform a skill.

Rules and regulations

Not adhering to rules and regulations can lead to injury.

- ✚ Before a sporting activity, a coach should check that players are wearing any compulsory protective equipment and also ensure that they continue to do so throughout the activity, for example, wearing goggles in squash to protect the eyes.
- ✚ A coach or supervisor should also check that children are playing in the correct age group, because an older child may be bigger and stronger and cause injury to a smaller child on contact.
- ✚ A player who does not adhere to the rules and is being penalised for unnecessary contact should be substituted by a coach. They may be able to return to the activity later on.

Experience

An experienced coach/instructor/leader will have the necessary knowledge and skills to reduce the risk of injury.

- ✚ They will have had plenty of practice planning and delivering sports activities in a safe and controlled manner and be fully qualified.
- ✚ They will be able to identify risky activities within the sport they are coaching, such as tackling in football and rugby or landing from a vault in gymnastics, and will ensure that correct technique is used to reduce the risk of injury.
- ✚ An experienced coach will also provide advice on the correct use of equipment, for example, using the correct grip on a tennis racket to reduce the risk of an injury such as **tendonitis**.

Tendonitis Inflammation of the tendons.



Figure 1.3 Coach supporting a gymnast

Communication

Good communication is essential for avoiding injuries.

- ✚ Some sporting activities can be potentially dangerous. When coaching javelin to a group of children, for example, it is essential to communicate effectively with clear instructions when to retrieve the javelin so it is not thrown towards them.
- ✚ Not explaining an activity correctly can also increase the risk of injury, for example, not raising a hockey stick too high where it becomes dangerous.
- ✚ In large groups, coaches and supervisors need to be heard clearly by all performers.

MY REVISION NOTES

Cambridge National Level 1/Level 2

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Target exam success with *My Revision Notes*. Our updated approach to revision will help you learn, practise and apply your skills and understanding. Coverage of key content is combined with practical study tips and effective revision strategies to create a guide you can rely on to build both knowledge and confidence.

My Revision Notes: Cambridge National Level 1/Level 2 in Sport Science will help you:

Improve subject-specific skills with an **exam checklist** at the end of each chapter

Understand **key words** you will need for the exam with user-friendly definitions and a **glossary**

Practise and apply your skills and knowledge with **exam-style questions** and frequent **now test yourself** questions, and answer guidance at the end of the book and online

Avoid **typical mistakes** and enhance your exam answers with **exam tips**

Plan and manage your revision with our **topic-by-topic planner** and **exam breakdown** introduction

Check your **understanding** as you work through the course

Boost

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HODDER EDUCATION

t: 01235 827827

e: education@hachette.co.uk

w: hoddereducation.co.uk

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