

Unit R041 – Reducing the risk of sports injuries

Using warm ups and cool downs to prevent injury

Instructions and answers for teachers

These instructions should accompany the OCR resource ‘Using warm ups and cool downs to prevent injury’ activity which supports OCR Cambridge Nationals in Sport Science.



The screenshot shows a worksheet titled 'Unit R041 – Reducing the risk of sports injuries' with the sub-heading 'Using warm ups and cool downs to prevent injury'. It includes an introduction, a task 'Task 1 – Getting warmer', and five questions with corresponding text boxes for answers. The OCR logo is visible in the bottom right corner.

The Activity:

This resource comprises of 5 tasks.

These tasks will help learners understand the importance of using an appropriate warm up and cool down activity to reduce the risk of injury. Learners will also have a chance to plan and lead their own warm up activities.



This activity offers an opportunity for English skills development.

Associated materials:

‘Using warm ups and cool downs to prevent injury’ Lesson Element learner activity sheet.

Suggested timings:

Task 1: 60 minutes **Task 2:** 30 minutes **Task 3:** 10 minutes
Task 4: 45 minutes **Task 5:** 60 minutes

Task 1 – Getting warmer

Lead a practical session that includes a range of different warm up activities. Try to include:

- Some boring/just running activities
- Some chasing/tag type activities
- Some sports specific/skill based activities
- Any other relevant types of warm up

After the practical session ask learners questions such as:

- What different types of warm up did you do?
- Which activities did you enjoy most? Why?
- Which activities did you enjoy least? Why?
- What is the job of a warm up?
- Which warm up activity do you think was the most effective?

Task 2 – Why warm up?

Now that learners have a good overview of warm ups, they can start to look in a bit more detail at what an effective warm up should include.

Ask learners to note down all of the different jobs that a warm up should do/the reasons why we warm up.

Once they have a list, they can transfer it into Column 1 of the table below depending on whether it is a physical benefit or a psychological benefit. Then learners can suggest in Column 2 reasons why/how/in what way each of the reasons listed might reduce the risk of injury and in Column 3 record the possible negative consequences if a warm up does not include any of the aspects highlighted.

Reason to/benefit of a warm up	How this element could help to reduce the risk of injury	Possible negative consequences of not including this element
<p>Physical</p> <ul style="list-style-type: none"> Increases body temperature Increases blood flow to the heart Helps promote sweating Speeds up nerve impulses Prepares muscles to work harder Increases blood flow to the muscles 	<ul style="list-style-type: none"> Reduces the potential for pulled muscles Reduces the risk of exercise-induced heart problems Stops the body overheating Increases agility and coordination meaning less chance of falling over Reduces the likelihood of sore muscles after exercise Less chance of pulling a muscle when it's warmer 	<ul style="list-style-type: none"> Pulled muscles, ligaments or tendons Exercise induced heart problems Body could overheat More likely to fall over Muscles could feel stiff and sore after exercise Pulled muscles, tendons or ligaments
<p>Psychological</p> <ul style="list-style-type: none"> Creating a positive mental attitude and using visualisation 	<ul style="list-style-type: none"> More likely to succeed if exercise is approached positively. Good mental preparation reduces stress on the body 	<ul style="list-style-type: none"> Might 'bottle it' and hurt yourself because you haven't approached/carried out the activity with the correct technique or effort

Task 3 – What’s in a warm up?

Learners should also understand the different components of an effective warm up.

Print out and cut up the cards below. Hand them out to learners who have to match up the component of a warm up to the correct description and then place them in the right order for an effective warm up.

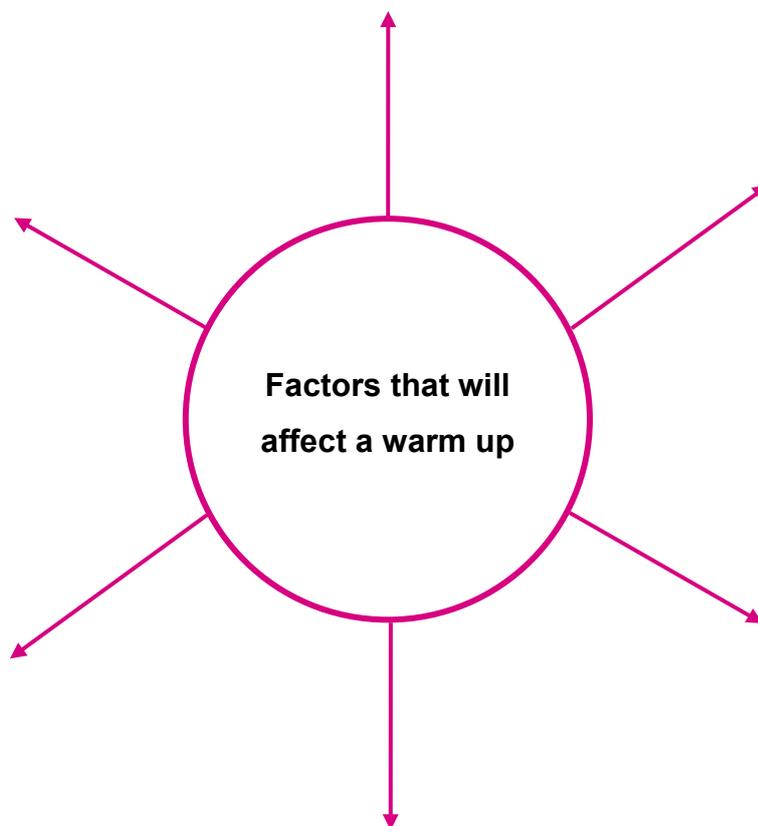
Component	Component	Component	Component
General warm up	Static stretching	Sports specific activities	Dynamic stretching

Definition	Definition	Definition	Definition
Light physical activity like jogging, walking or swimming. Should take between 5 and 10 minutes and result in a general sweat.	Placing the body into a position where the muscle or group of muscles is put under tension.	More vigorous activity which reflect the type of activity which is required during the session.	A controlled, soft bounce of swinging motion that moves a body part to the limit of its range of movement.

Task 4 – Which warm up?

Even though all warm ups should include the same four areas, not every warm up will look the same of be suitable for every group.

Ask learners to mind map the variables that will affect the type of warm up activities that are suitable. They can record their thoughts below.



Once learners have completed their mind map they can suggest why/in what way each of the factors they have highlighted will be relevant when planning a warm up. They can also suggest some possible warm up activities for one of the groups listed in the table (they can select or you can allocate). They can record their ideas in the table below.

Factors that might affect warm up activities	Why/in what way this factor will be relevant
Age of participants	Will affect what participants are able to do. Make it more fun for younger children so they want to take part.
Ability of participants	Maybe more relevant than age, no point having warm up activities that are too difficult for participants to do.
Previous experience	May be an indicator of ability. Might want to include previous activities/learning into the sports specific part of the warm up.
Facilities	Space and type of facility will affect type of activity that can be done.
Equipment	Warm up activities that use equipment will need to take into account the equipment that is available. Equipment must be appropriate for participants' age/ability.
Environment	Outside in the cold will need slower and more thorough warm up to prevent injury.
Aim and content of session	In particular the sports specific aspects of the warm up will reflect the activity planned for the session. Stretches should also focus on muscle groups that will be used during the session.

Select one from the following groups of participants and, in the table below, describe some warm up activities that might be appropriate for them.

- Class of year 4 mixed ability children
- County rugby squad
- Over 60's walking football team
- Rambling group
- Legs, bums and tums class
- National hurdler
- Year 11 girls badminton class
- Under 12's boys football team

Factors that might affect warm up activities	Why/in what way this factor will be relevant
<p>General warm up:</p> <p>Light jogging on the lines of the lines of the court, gradually increasing the speed until learners play a game of line tag using the lines of the court.</p>	<p>Static stretches:</p> <p>Basic whole body stretches but focussing in particular on arms, shoulders and wrists and hips and hamstrings in preparation for the movements involved in badminton.</p>
<p>Activity specific element:</p> <p>Play 'around the world' on half a court.</p>	<p>Dynamic stretches:</p> <p>Using the length of the sports hall, learners can move from one end to the other. Every time they cross a line of a badminton court they must do a dynamic stretch as instructed by the teacher. These to include activities such as walking lunge, shoulder rotations, twist and lunge, hurdle walk, Russian marching etc.</p>

Task 5 – Planning and learning a warm up

Learners can put all of their learning into a practical setting by planning and leading a warm up. This may be for their peers, for younger children or for an external group.

The warm up planning template below can be used by learners when planning their warm up. There is an opportunity for learners to evaluate what went well and what they would change for next time once they have completed their warm up and also space to record any other warm up activities that they might want to use in the future.

Date	Learner name
Participants (age/ability/gender/number)	Aim/focus of session
Facilities/environment	Equipment
General warm up	Static stretches
Activity specific	Dynamic stretches
What went well?	What would you change for next time?
Any new warm up activities that you have found that you want to remember for another time	



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