

KS4 Chest pain

**1. Details of the teacher**

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| Name:  | Date: | Time: | Class: |

**2. Topic overview**

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| **Suggested timing for session (excluding optional activities) is 45 minutes.** **Teaching staff notes:**\*Please ensure all students are comfortable with content of this topic and will not be adversely affected.Delivery of this session must ensure that all students maintain the safety of themselves and others before administering any first aid. By the end of the session, students must be able to identify when a casualty may require an assessment and even possible life support if their condition was to deteriorate.The actions within the topic should include looking after a casualty and reassuring them, seeking medical help, if required, and administration of basic first aid skills. Students should gain a basic understanding of the function of the heart and the causes of chest pain. During this session learning materials will be PowerPoint presentation, video footage and supported teacher demonstration. Students engaging in role play scenarios will allow them to demonstrate first aid skills learnt. |

**3. Key words**

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| * **atrium**
* **ventricle**
* **respiratory rate**
* **heart rate**
* **pulse**
* **DRsABC**
* **CPR**
 | * **resuscitate**
* **circulation**
* **cardiac arrest**
* **angina**
* **heart attack**
* **cardiovascular**
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**4. Learning outcomes**

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| **By the end of the lesson, students will be able to:*** Recognise when a casualty has chest pain
* Provide first aid to a casualty who has chest pain
* Seek help when necessary for a casualty who has chest pain
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**5. Details of activities and resources required**

Note: Feel free to choose activities to fit the time you have available. For example, you could do one task from each intro, main input and optional categories.

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| **Introduction** |
| **Activity** | **Resources required** |
| * Use accompanying PowerPoint presentation
 | Chest pain |
| * Explain the learning outcomes of the session
 | Slide 3 |

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| **Main Input** |
| **Activity** | **Resources required** |
| **Casualty care:*** Brief discussion using points on slide. Ensure that students are aware that they need to keep the casualty calm and safe and call for help. They should obtain relevant information to give call handler as much relevant info as possible
 | Slide 4 |
| **The heart:*** Use the slide to explain the basic anatomy and features of the heart. Explain that if we get injured or unwell it could affect the function of the heart. For example, an injury to the chest area could cause damage to the heart or surrounding area. There may be a long-term condition affecting the heart e.g. Angina
* Chest pain can be a serious condition and help needs to be called for if necessary. A casualty with chest pain may need to go to hospital so that they can receive the correct medical treatment. Calling for help is something that is easy to do but has the potential to make a huge difference
* Use worksheet A48 to research the structure and function of the heart
 | Slide 5 |
| **Cardiac maths:*** Using the information on the slide can the class calculate the missing information? This can be completed as an individual task or a team game. As an extension can the students offer/calculate any further cardiac maths?
* Answer - 6720 a day and 2,452,800 a year.
 | Slide 6 |
| **Create the circulatory system:** * Using the information on the slide and A36 or A49 arrange class into pairs/ small groups and task them with creating their own model/ picture of the circulatory system
* Work should be labelled and annotated; this can be used as an extension activity to session if preferred
 | Slide 7  |
| **The heart:*** Inform the students the difference between a cardiac arrest and chest pain
* Explain that a cardiac arrest means that the heart is not working properly and blood flow around the body has ceased. Students can remember this by knowing that arrest means stop.
* Chest pain can be a heart attack or angina, the pain is caused by lack of oxygen to the cardiac muscle. This can be due to a blockage in the arteries or vessels that supply the heart with blood (and therefore oxygen) or a narrowing of the vessels. Also, to note is that sometimes chest pain can precede a cardiac arrest and some heart attacks do not even present with a chest pain. Pain can also be present in the left arm (or either arms), neck, back, abdomen and the jaw of a casualty that is having a heart attack
 | Slide 8 |
| **Video:*** Explain that students should watch the videos about chest pain, and then be prepared to use information from the video afterwards so watch carefully
 | Slide 9 |
| **Your turn chest pain and your turn heart attack:*** You could print out your turn sheets and give students a scenario to manage and administer first aid skills
* The teacher should demonstrate the key steps to deliver first aid to a casualty that is having, or potentially having, a heart attack. Use the key steps to guide your actions or alternatively let the students direct your actions as you follow their instructions
* Use key steps to simulate looking after a casualty. Ensure that they remember to firstly make the area safe by removing any hazards to themselves or others, reassure the casualty and use decision making skills and rationale to decide if their casualty needs to seek medical attention. Remember if the casualty became unresponsive at any point then a primary survey must be conducted, if not breathing, then CPR must commence
* Teacher to observe and feedback to students. As an option, the student could use peer assessment and score their partners
* The casualty must be prevented from eating and drinking as their body is already under stress and digesting food/drink will put additional strain on heart. Also, if they are going to hospital, they may receive treatment that requires them NOT to have eaten or drank (operation etc.)
 | Slides 10 - 11 |
| **Complete the sentences:** * Can students complete the sentences on the slide and provide rationales for their answers?
* Answers are as follows: 1. left arm/jaw/back 2. be grey/pale 3. anxious/unwell/sick 4. rapid (anxiety)
 | Slide 12 |
| **Check my learning:** * Using the learning outcomes on the slide, ask students to self-assess their competence and confidence when dealing with a casualty who has chest pain
 | Slide 13 |

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| **Optional Activity** |
| **Activity** | **Resources required** |
| **The circulatory system:*** Students can now spend time creating their own circulatory system. The class can use the resources provided or they can be creative and draw/make their own body and organs. The key part is that students demonstrate the flow of blood both to and from the heart
* Students can be allowed access to research within this task
 | Slide 15 |
| **Research task:*** Students should now be able to label several areas of a human heart. Use the unlabeled diagram provided
* Students should then be allowed time to conduct their own research. They may want to include the heart and its function within the body
* S and C: could include statistics relating to heart disease within the UK, recommendation and advice for preventing heart disease
 | Slide 16-17 |
| **Your turn complete the sheet:*** Can the class confirm the missing information from the your tun sheet?
 | Slide 18 |

**6. Check learning**

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| * Check that the learning outcomes have been met from slide 13
* Teacher to ask open questions about safety
* Use key words given in session plan. Can students put these words into sentences?
* What have you learned today?
* Score yourself: how confident would you now be if you came across someone that was having chest pain?
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**7. Details of assessment for learning**

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| * Shared learning objectives
* Peer assessment
* Written feedback
 | * Questions/answers
* Self-assessment
* Reflection/evaluation
 | * Extended questions/answers
* Oral feedback
* Group work
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**8. Teacher notes**

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| **Use this space for differentiation notes, the role of any classroom support, evaluation notes, etc.** |

**9. Curriculum links**

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