

Cambridge **NATIONALS LEVEL 1/2**

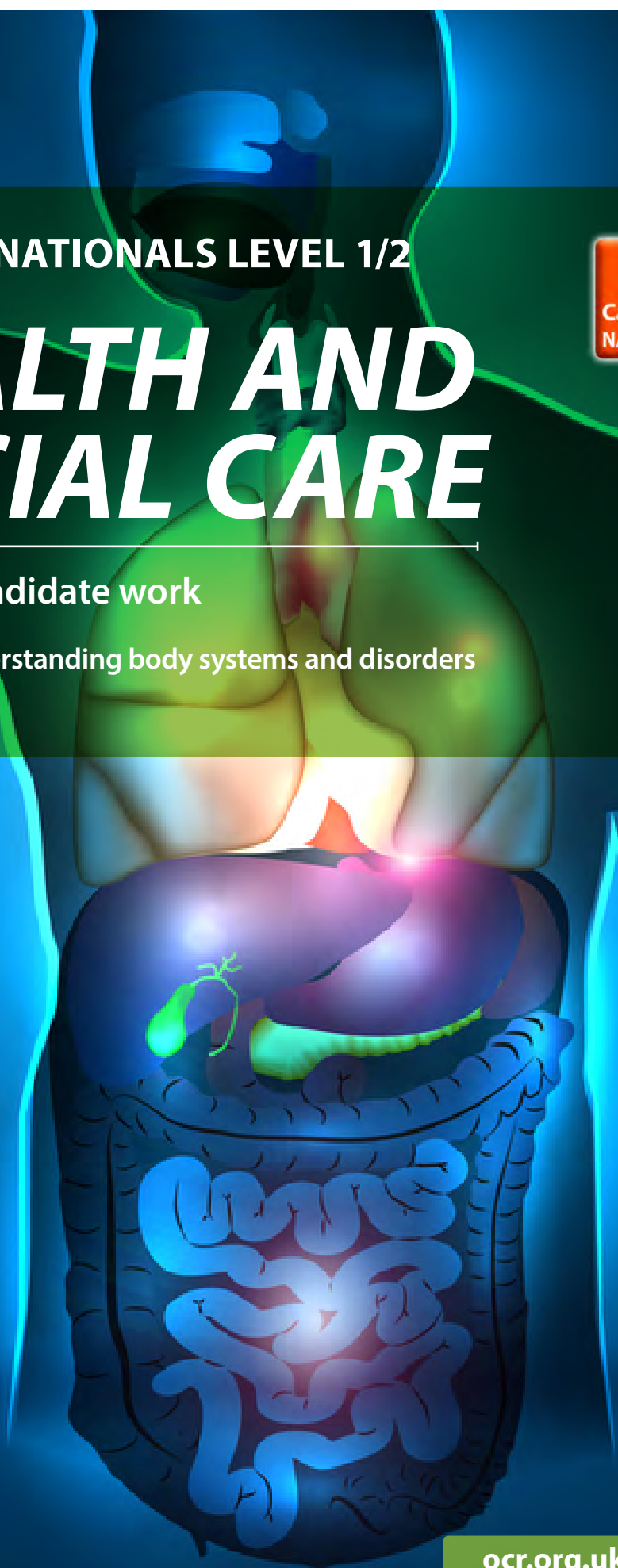


HEALTH AND SOCIAL CARE

Exemplar candidate work

Unit R023 – Understanding body systems and disorders

Version 1



CONTENTS

Introduction	3
LO2 – MB1	4
Commentary	12
LO2 – MB3	13
Commentary	31

INTRODUCTION

This is a guide for teachers so that you can see how we mark work for Cambridge Nationals.

The guide contains exemplar candidate work for this unit and covers selected learning outcomes (LOs), and grading criteria.

The accompanying commentary explains why each piece of work was awarded that grade. Additional guidance has been added to suggest improvements that could be made in order to achieve a higher grade.

Reproduction of candidate work

The candidate's work within this document is reproduced for free of charge distribution to teachers in order to help them prepare candidates for examinations. The work has been reproduced as submitted by the candidates, although, names, logos and third-party copyright material have either been removed or replaced. However, if the work does contain third-party copyright material which we are unaware of and you are the owner of the material, please contact the Resources Team at OCR

resources.feedback@ocr.org.uk

Model Assignments

Model assignments are available for the following units from the link below.

R022 Communicating and working with individuals in health, social care and early years settings
R023 Understanding body systems and disorders
R024 Pathways for providing care in health, social care and early years settings
R025 Understanding life stages
R026 Planning for employment in health, social care and children and young people's workforce
R027 Creative activities to support individuals in a health, social care or early years settings
R028 Understanding the development and protection of young children in an early years setting
R029 Understanding the nutrients needed for good health
R030 Research – a project approach
R031 Using basis first aid procedures

<http://www.ocr.org.uk/qualifications/cambridge-nationals-health-and-social-care-level-1-2-j801-j811-j821/>

Plagiarism

Work must be free from plagiarism. Plagiarism is the submission of someone else's work as your own and/or failure to acknowledge a source correctly. Plagiarism makes up a large percentage of cases of suspected malpractice reported to us by moderators. You must make sure you don't accept plagiarised work as evidence.

In line with the policy and procedures of JCQ on suspected malpractice, the penalties applied for plagiarism would usually result in the claim not being allowed.

Plagiarism often occurs innocently when learners don't know that they must reference or acknowledge their sources, or aren't sure how to do so. It's important to make sure your learners understand:

- the meaning of plagiarism and what penalties may be applied
- that they can refer to research, quotations or evidence produced by somebody else but they must list and reference their sources
- quoting someone else's work, even when it's properly sourced and referenced, isn't an indication of understanding. The learner has to 'do' something with that information to show they understand. For example, if a learner has to analyse data from an experiment, quoting data doesn't show that they understand what it means. The learner has to interpret the data and, by relating it to their assignment, say what they think it means.

LO2 – MB1 Unit Recording Sheet (URS)

3615260345

OCR
Oxford Cambridge and RSA

Health and Social Care

OCR J811/J821 Unit R023 Level 1/Level 2

Cambridge Nationals Certificate/Diploma in Health and Social Care

Unit Recording Sheet

Please read the instructions printed at the end of this form. One of these sheets, suitably completed, should be attached to the assessed work of each candidate.

Unit Title	Understanding body systems and disorders		Unit Code	R023	Session	June	Year	2017
Centre Name								
Candidate Name								
Criteria			Teacher Comments			Mark	Page No.	
MB1: 1 - 3 marks	MB2: 4 - 6 marks	MB3: 7 - 8 marks						

URS124 Revised September 2014

Oxford Cambridge and RSA Examinations

R023/URS

3615260345

Criteria			Teacher Comments	Mark	Page No.
LO2: Understand disorders that affect body systems ¹					
MB1: 1 - 3 marks	MB2: 4 – 5 marks	MB3: 6 - 7 marks	They have provided detailed descriptions of the symptoms & diagnosis & have given many links between disorders & structure & function.	6	2-3
Provides a basic list of the symptoms for disorders associated with the cardiovascular system giving basic reasons for some of the symptoms.	Provides a sound description of the symptoms for disorders associated with the cardiovascular system giving reasons for many of the symptoms.	Provides a detailed description of the symptoms of disorders associated with the cardiovascular system, giving detailed reasons for most of the symptoms.			
Provides a basic list of the methods of diagnosis. There may be few , if any, links made between effects of treatments and the structure and/or functionality of the system.	Provides a sound list of the methods of diagnosis. There may be some links made between effects of treatments and the structure and/or functionality of the system.	Provides a comprehensive list of the methods of diagnosis. There are likely to be links made between effects of treatments and the structure and/or functionality of the system.			
[1 2 3]	[4 5]	[6 7]			

3615260345

MB1: 1 - 3 marks	MB2: 4 - 5 marks	MB3: 6 - 7 marks	Teacher Comments	Mark	Page No.
<p>Provides a basic list of the symptoms for disorders associated with the respiratory system giving basic reasons for some of the symptoms.</p> <p>Provides a basic list of the methods of diagnosis.</p> <p>There may be few, if any, links made between effects of treatments and the structure and/or functionality of the system.</p> <p>[1 2 3]</p>	<p>Provides a sound description of the symptoms for disorders associated with the respiratory system giving reasons for many of the symptoms.</p> <p>Provides a sound list of the methods of diagnosis.</p> <p>There may be some links made between effects of treatments and the structure and/or functionality of the system.</p> <p>[4 5]</p>	<p>Provides a detailed description of the symptoms of disorders associated with the respiratory system, giving detailed reasons for most of the symptoms.</p> <p>Provides a comprehensive list of the methods of diagnosis.</p> <p>There are likely to be links made between effects of treatments and the structure and/or functionality of the system.</p> <p>[6 7]</p>	<p>The list of symptoms & diagnosis is basic & there are few links between disorders & structure & function.</p>	3	4

3615260345

MB1: 1 - 3 marks	MB2: 4 – 5 marks	MB3: 6 - 7 marks	Teacher Comments	Mark	Page No.
<p>Provides a basic list of the symptoms for disorders associated with the digestive system giving basic reasons for some of the symptoms.</p> <p>Provides a basic list of the methods of diagnosis.</p> <p>There may be few, if any, links made between effects of treatments and the structure and/or functionality of the system.</p> <p style="text-align: right;">[1 2 3]</p>	<p>Provides a sound description of the symptoms for disorders associated with the digestive system giving reasons for many of the symptoms.</p> <p>Provides a sound list of the methods of diagnosis.</p> <p>There may be some links made between effects of treatments and the structure and/or functionality of the system.</p> <p style="text-align: right;">[4 5]</p>	<p>Provides a detailed description of the symptoms of disorders associated with the digestive system, giving detailed reasons for most of the symptoms.</p> <p>Provides a comprehensive list of the methods of diagnosis.</p> <p>There are likely to be links made between effects of treatments and the structure and/or functionality of the system.</p> <p style="text-align: right;">[6 7]</p>	No work worthy of credit	0	5

R023/URS

URS124 Revised September 2014
Oxford Cambridge and RSA Examinations

Candidate work

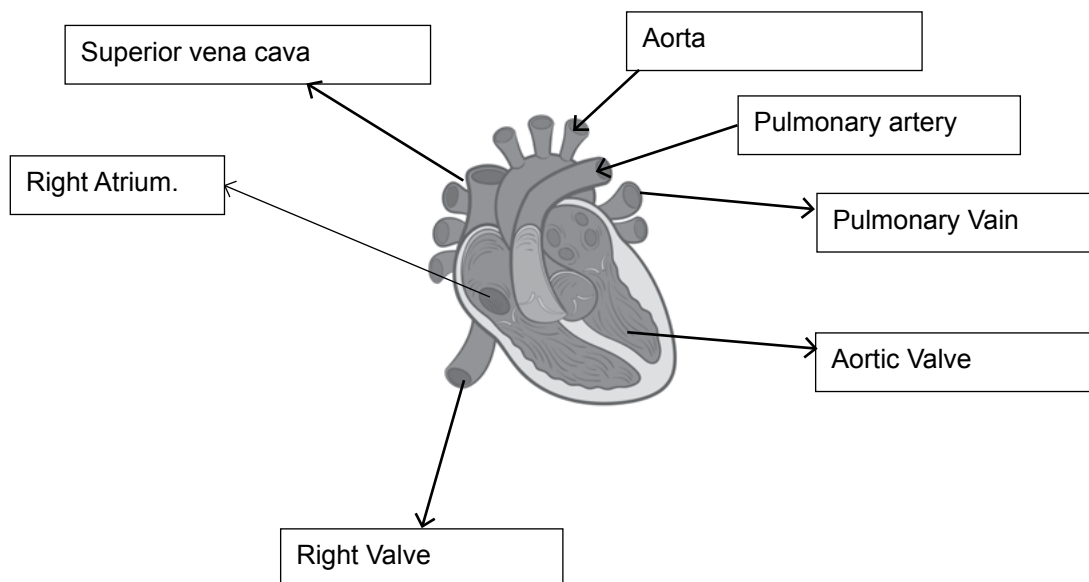
Cardiovascular system

Cardiovascular system is an organ that helps the blood circulate around the body and transport different nutrients such as acids to keep the body repairing and working correctly.

Functions of the cardiovascular system.

The function of CVs is part of the cardiovascular system. It helps the blood circulate the network of the blood vessels throughout the human body. Vessels throughout the body provide individual cells with oxygen and nutrients. Blood enters through the two large veins emptying oxygen poor blood from your right ventricle. The deoxygenated blood arrives at the left hand side of the heart and the blood flows into the right atrium. Blood is pumped into the right ventricle.

Structure of cardiovascular system



Ventricles.

In the heart, a ventricle is a large chamber that collects blood. Blood received from the atrium towards the peripheral verbs with in your lungs. The ventricles of the brain are a communicating network. The Ventricular system has 2 levels.

The heart is part of the cardiovascular system. The blood needs to get through the Organs, Tissues and cells of the body.

Left and right atrium.

The right Atrium is one of the hollow chambers of the heart. It is in the right corner of the heart. Blood entering the heart through veins from the tissue. The right atrium is one part of the heart.

The left atrium is a chamber of the heart. It helps get blood from the lungs. The Left atrium is a small structure of the left of the heart.

Aorta

Aorta is in the main artery of the body, and adding blood into the circulatory system. In the human body it passes over the heart. It's the largest artery in the body. Three leaflets on the

aortic valve open and close again when the heart beats. The Aorta is a tube about a foot long and just over an inch in diameter. The Aorta may swell up like a balloon. It may not allow blood to flow around the body.

Veins

Veins are blood vessels that carry blood toward the heart. Most veins carry deoxygenated blood from the tissues back to the heart exceptions is the pulmonary and umbilical veins, both of which carry oxygenated blood to the heart.

Varicose veins are swollen and enlarged veins – usually blue or dark purple – that usually occur on the legs. They may also be lumpy, bulging or twisted in appearance.

Other symptoms include:

- aching, heavy and uncomfortable legs
- swollen feet and ankles
- muscle cramp in your legs
- dry skin and colour changes in the lower leg

The size of veins are in range from 1 millimetre size and to 1-1.5 centimetres in diameter.

Arteries

Arteries are blood vessels that carry blood away from the heart. While most arteries carry oxygenated blood, there are two exceptions to this, the pulmonary and the umbilical arteries. The effective arterial blood volume is that extracellular fluid which fills the arterial system.

The circulatory system is vital for sustaining life. Its normal functioning is responsible for the delivery of oxygen and nutrients to all cells. The maintenance of optimum pH, and the circulation of proteins and cells of the immune system. In developed countries, the two leading causes of death, myocardial infarction (heart attack). Arteries size are 10 mm in diameter. The arteries are 10mm in diameter and the pressure is lower in the blood than it is in the arteries so the arteries have a higher pressure.

Disorders of cardiovascular system

A heart attack is when a sudden occurrence of thrombosis. Symptoms of a heart attack are: Chest pains, discomfort, and pain in the arms, back or neck, stomach pains, sweating and fainting. The diagnosis of a heart attack is based around your symptoms.

Angina is a condition which is caused by very bad pain in the chest, and could spread to the shoulders. It could also affect the heart. The symptoms of Angina are pain, discomfort. The pain may spread across your chest and full body. When your doctor is going to diagnose you with something he/she will ask you about your symptoms and will do a physical exam.

Heart failure occurs when the heart is unable to pump sufficiently to maintain blood flow to meet the body's needs. 35% of people will die because of heart failure. Heart failure is HF for short, when your heart is not able to pump sufficiently to maintain blood to meet someone needs. Heart failure symptoms are shortness of breath, weakness, swelling of ankles and feet, very fast heartbeat. When your doctor is going to diagnose you with heart failure

he/she will do it based on your medical and family history. He/she will also do a physical exam and test results.

Respiratory System

Respiratory System is a organ responsible for taking in oxygen and to give out carbon dioxide.

Functions of the respiratory system

Inhale:

Your breath is the first thing to respond in your body. A longer exhale in times of stress can help to put a healthy distance between you and others. Your breath will become disturbed when experiencing stressful emotions. To prevent these unwanted emotions from being down and trapped in your body, simply breathe into your organs. Your body can't relax if your mind and breath are racing. Your thoughts are linked to your breathing. When you slow your thoughts your body will soon follow. When you inhale, you suck air in from the atmosphere. Your diaphragm expands and the air from the atmosphere goes into the lungs and a person breathes in oxygen.

Exhale:

Exhaling is breathing out. Breathing is the only autonomous system of the body that we can control. Carbon dioxide breathed out is a by-product of the process of cell respiration, as in water. In this process, energy is produced in the mitochondria of the cells. When a person exhales, their diaphragm relaxes and their ribcage moves inwards and downwards.

Structure of the Respiratory System

Trachea.

Trachea is another name for a windpipe. This tube of bone connects your larynx.

The Trachea is 4 inches long. It runs down behind the breast bone. Cancer of the trachea is quite rare, symptoms can include coughing.

A tumor can grow near the Trachea.

The trachea is hollow. It is an integral part of your airways. The cartilage and the ligaments are connected to the lungs.

Alveoli

Alveoli are tiny sacs within our lungs that allow oxygen and carbon dioxide to move between the lungs and bloodstream. Gas exchanges of oxygen and carbon dioxide takes place in the Alveoli. Oxygen from the inhaled air diffuses through the walls of the alveoli and carried into the red blood cells. The oxygen is then carried by the blood to the body tissues. The alveoli consists of lots of microscopic sacs bunched together.

The alveoli have a structure specialized for efficient gaseous exchange:

- Walls are extremely thin.
- They have a large surface area in relation to volume.
- They are fluid lined enabling gases to dissolve.
- They are surrounded by numerous capillaries.

Lungs.

The Lungs are a pair of air. Organs are located in both sides of the chest. The Trachea

conducts inhaled air into the lungs. The lungs are coned shape. The lungs are the hardest working lungs in the human body. Your right lung is always going to be bigger than the left one. You can also get Lung cancer with is in your lungs

Disorders of the Respiratory System

Asthma is a common inflammatory disease of airways of the lungs. Symptoms are wheezing, coughing and chest tightness. To diagnose asthma, the most certain were to see if someone has asthma is with a lung function test.

Allergy's is a damage immune system by the body to a certain thing. Most popular are Food, Pollen, Fur and dust. Symptoms are sneezing, itchy, runny or blocked nose, red watering eye, wheezing chest tightness, can't breath and swollen lips. They can be diagnosed by carrying out tests. Skin tests are better than blood tests, but you must do a blood test if you are seeing if you have an allergy.

Bronchitis is inflammation of the bronchi in your lungs. The symptoms are coughing up mucus wheezing and shortness of breath and discomfort. During the physical exam, your doctor will use a stethoscope to listen closely to your lungs as you breathe. In some cases, your doctor may suggest chest X-ray.

Pneumonia is an infection in one to both lungs, it could be caused by bacteria or viruses. The symptoms are a cough, Yellow thick spit or green or brown or may even have blood inside. Chest x ray to look for inflammation in your lungs. A chest x ray is the best test for diagnosing pneumonia. Blood tests may also be carried out.

Emphysema is a long term disease that includes the lungs. The symptoms are coughing, finding it hard breath. Chest X-ray can help confirm a diagnosis of emphysema and rule out other lung conditions.

Digestive System

The digestive system is a group of organs working together to convert food into energy and basic nutrients.

Functions of the digestive system

The function of the digestive system is digestion and absorption. Digestion breaks down your food into small pieces, the digestive system is split into two parts. Our teeth break down food into small tiny bits. In your body the excretory system helps to keep salts and urea from building up. Kidneys are two shaped organs that remove these toxins from your body so there are getting rid of the waste. The digestive system absorbs molecules such as water into the blood. The waste products from the food we eat is removed from the body.



Structure of the Digestive System

Stomach

The stomach is a muscular organ located on the left side of the upper abdomen. It has an expanding sac structure and muscular walls inside.

Esophagus

A muscular tube connecting the throat. The length is 25cm and it extends to the stomach. It's job is to move food down to the stomach

Intestines (Small and large)

The small intestine is located between the stomach and large intestine and it's job is to absorb food. Ions and nutrients released by gut bacteria and dissolved in water are also absorbed in the large intestine and is used for metabolism.

Disorders of the Digestive System

Heart attack is the death of a segment of heart muscle caused by the loss of blood supply.

- Chest pains.
- Pain in the body.
- Sweating.
- Shortness of breathing.

The diagnosis of the heart attack is based on your symptoms and test results. You could do ECG.

LO2 MB1 commentary

In LO2 the evidence presented should cover the symptoms of disorders, methods of diagnosis and links made between the effects of treatments and the structure and the function of the system for all three body systems, Cardiovascular, Respiratory and Digestive.

The evidence produced was considered to meet MB1 although for LO2a cardiovascular was assessed at MB3 by the centre. There were a few disorders given but a limited 'list' given for the symptoms associated with heart attack and angina. Very basic diagnosis given without any substance and no links to the structure and function given. Therefore the mark was moved to the top of MB1. Again limited/basic evidence was produced for the respiratory system asthma, bronchitis and pneumonia, but did not show any depth of understanding. The centre mark was agreed. The centre awarded no marks for evidence given for the digestive system, this was agreed as it did not address the assessment evidence grid.

To strengthen the work, evidence needs to meet the command word in the assessment evidence grid and to include work for all three body systems.

The candidate had produced combined evidence for LO1 and LO2 without clearly identifying either the LOs or the task from the MA. Therefore the LO often had implicit reference to the assessment evidence grid.

Commentary on what improvements/extra work need to be done to make it into the middle band: MB2:

The work submitted was considered to be basic, to move into MB2 the symptoms need to be described with reasons being given for the symptoms and there needs to be some links between the impact on the structure and the function of each of the body systems.

Resources – OCR resources available from: <http://www.ocr.org.uk/qualifications/cambridge-nationals-health-and-social-care-level-1-2-j801-j811-j821/>

Textbook from: <https://www.hoddereducation.co.uk/Product?Product=9781471899744>

BBC Bitesize: <https://www.bbc.com/education/subjects/zv6sr82>

NHS Direct: <https://www.nhs.uk/conditions/Pages/hub.aspx>

Alternative formats that the work could be produced in:

Booklet, slide presentation, leaflet on symptoms

LO2 – MB3 Unit Recording Sheet (URS)

3615260345

Criteria			Teacher Comments	Mark	Page No.
LO2: Understand disorders that affect body systems ¹					
MB1: 1 - 3 marks	MB2: 4 - 5 marks	MB3: 6 - 7 marks	Candidate produces 2 '3 fold leaflets of publisher on the symptoms & reasons for symptoms of a heart attack (P7). A comprehensive list of the methods of diagnosis (P8 - leaflet 2).	7	P7 P8
Provides a basic list of the symptoms for disorders associated with the cardiovascular system giving basic reasons for some of the symptoms.	Provides a sound description of the symptoms for disorders associated with the cardiovascular system giving reasons for many of the symptoms.	Provides a detailed description of the symptoms of disorders associated with the cardiovascular system, giving detailed reasons for most of the symptoms.			
Provides a basic list of the methods of diagnosis.	Provides a sound list of the methods of diagnosis.	Provides a comprehensive list of the methods of diagnosis.			
There may be few , if any, links made between effects of treatments and the structure and/or functionality of the system.	There may be some links made between effects of treatments and the structure and/or functionality of the system.	There are likely to be links made between effects of treatments and the structure and/or functionality of the system.			
[1 2 3]	[4 5]	[6 7]			

URS124 Revised September 2014
Oxford Cambridge and RSA Examinations

R023/URS

3615260345

MB1: 1 - 3 marks	MB2: 4 - 5 marks	MB3: 6 - 7 marks	Teacher Comments	Mark	Page No.
Provides a basic list of the symptoms for disorders associated with the respiratory system giving basic reasons for some of the symptoms.	Provides a sound description of the symptoms for disorders associated with the respiratory system giving reasons for many of the symptoms.	Provides a detailed description of the symptoms of disorders associated with the respiratory system, giving detailed reasons for most of the symptoms.	Detailed description of the symptoms of pneumonia & the reasons for the symptoms in provided in a hand written guide & an A4 support sheet.	6	P 9
Provides a basic list of the methods of diagnosis.	Provides a sound list of the methods of diagnosis.	Provides a comprehensive list of the methods of diagnosis.			↓
There may be few , if any, links made between effects of treatments and the structure and/or functionality of the system.	There may be some links made between effects of treatments and the structure and/or functionality of the system.	There are likely to be links made between effects of treatments and the structure and/or functionality of the system.			P 11
[1 2 3]	[4 5]	[6 7]	P4 of guide includes list of comprehensive list of the methods of diagnosis.		

3615280345

MB1: 1 - 3 marks	MB2: 4 - 5 marks	MB3: 6 - 7 marks	Teacher Comments	Mark	Page No.
Provides a basic list of the symptoms for disorders associated with the digestive system giving basic reasons for some of the symptoms.	Provides a sound description of the symptoms for disorders associated with the digestive system giving reasons for many of the symptoms.	Provides a detailed description of the symptoms of disorders associated with the digestive system, giving detailed reasons for most of the symptoms.	Through a word processed 3 fold leaflet and a A4 support sheet candidate provides a detailed description of the signs/symptoms of IB S. A comprehensive list of methods of diagnosis included in leaflet.	6	P12 1 P13.
Provides a basic list of the methods of diagnosis.	Provides a sound list of the methods of diagnosis.	Provides a comprehensive list of the methods of diagnosis.			
There may be few , if any, links made between effects of treatments and the structure and/or functionality of the system.	There may be some links made between effects of treatments and the structure and/or functionality of the system.	There are likely to be links made between effects of treatments and the structure and/or functionality of the system.			
[1 2 3]	[4 5]	[6 7]			

Candidate work

L02

Understand disorders that
affect body systems

Cardiovascular

(2 leaflets)

Cardiovascular:

Heart attack

Heart attack symptoms and reasons for symptoms

Differences in men and women

For men, "classic" heart attack symptoms are typical. Although woman still experience similar symptoms, they are often less intense.

Common in men

- Crushing chest pain
- Cold and profuse sweating
- Nausea
- Pain radiating to neck or left arm
- Sudden onset of symptoms

Common in women

- Profound sense of fatigue
- Shortness of breath
- Flu-like discomfort
- Feeling of indigestion, heart-burn
- Symptoms last for a number of days



What is a heart attack?

A heart attack is when the blood supply to the heart muscle is suddenly blocked, starving it of oxygen and causing damage to the heart muscle. Heart attacks occur when a heart's blood vessel becomes blocked. This blockage occurs when plaque (a sticky substance made of fats, cholesterol and white blood cells) builds up on the walls of the heart's artery. When the plaque gets disturbed, it breaks up into tiny pieces and lodge themselves in various places. Red blood cells and white blood cells attach themselves to the plaque as they think there is a threat to your blood vessel, resulting in the cells blocking the blood vessel. Lack of blood to the heart causes serious damage to the heart muscle. A heart attack is most likely to happen if you are older, male, a smoker, overweight or have high cholesterol or high blood pressure. Most heart attacks involve discomfort in the centre or left side of chest for more than a few minutes. The bigger the blocked blood vessel is, the more severe the heart attack is.



Symptoms and reasons for symptoms

Chest pain-

A sensation of pressure, tightness or squeezing in the centre of the chest, sometimes described as a 'crushing' pain.

Reasons for symptoms-

The arteries that supply the heart muscle with blood and oxygen become narrowed, the blood supply to the heart muscle is restricted. This results in the 'crushing' pain in the chest.

Shortness of breath-

When someone feels as though they are unable to breathe properly and are struggling to breathe in oxygen.

Reasons for symptoms-

Blood backs up in the blood vessels return blood from the lungs to the heart because of the heart not pumping blood out of the heart effectively. This causes fluid to leak into the lungs and interferes with normal breathing.

Pain in arm/arms-

A sensation of a sharp pain travelling through the arms/ arm.

Reason for symptoms-

A heart attack may cause a sensation of pain to travel from your heart to your spinal cord, where nerves merge onto the same nerve pathway. Although your arm may be fine, your brain thinks part of the heart's pain is in the arm.

Fatigue-

Feeling weak, tired and having difficulty performing ordinary activities such as walking or climbing upstairs.

Reasons for symptoms-

The heart is unable to pump the required amount of blood around your body. Blood is diverted away from your less-crucial areas, such as the arms and legs, to supply the heart and brain.

Rapid or irregular heartbeat-

A pounding or racing sensation in the chest.

Reasons for symptoms-

The heart may speed up to compensate for failing to adequately pump blood throughout the body.

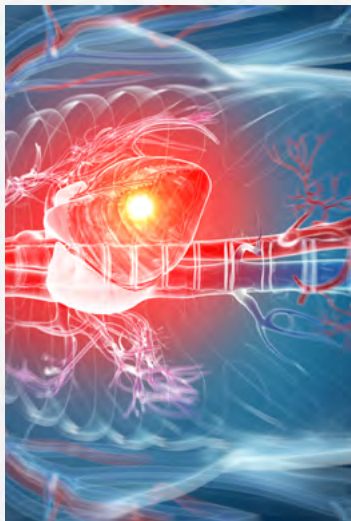
Lack of appetite or nausea-

Feeling nauseous or full, even if you haven't eaten.

Reasons for symptoms-

When the liver and digestive system becomes congested, they fail to receive a normal supply of blood.

Diagnosing a heart attack



https://www.google.co.uk/search?safe=strict&hl=en&biw=1024&bih=673&as_qdr=all&tbn=isch&sa=1&q=exercise+stress+test&oq=exercise+stress+test&gs_l=psy-ib.3.0.0i13k1l4.172080.174979.0.176359.17.17.0.0.0.14.1230.15j2.17.0...0...1c.1.64.psy-ib.0.17.1207...0j0i67k1j0i10i67k1j0i10k1j0i81j0i10i4k1.0mrsUI599ho&safe=active#imgcr=xGGf_uAURvL8eM:4&spf=17
https://www.google.co.uk/search?safe=strict&hl=en&biw=1024&bih=673&as_qdr=all&tbn=isch&sa=1&q=coronary+angi-ography+test&oq=coronary+angiography+test&gs_l=psy-ib.3.0i24k1l4.3118.4017.0.4289.5.4.0.1.1.0.78.251.4.0...0...1c.1.64.psy-ib.0.5.253...0j0i8130k1.JI39SGN0OW&safe=active#imgcr=f0z2z0CBq9r0M:&spf=1
https://www.google.co.uk/search?safe=strict&hl=en&biw=1024&bih=673&as_qdr=all&tbn=isch&sa=1&q=blood+test&oq=blood&gs_l=psy-ib.3.0.0i67k1l2j0i2.81805.83198.0.84229.6.5.0.1.1.0.61.25.5.5.0...0...1c.1.64.psy-ib.0.6.258.KebvewW68CA&safe=active#imgcr=2yX9MEIHnwH0KM:&spf=1
https://www.google.co.uk/search?q=electrocardiogram&safe=strict&hl=en&source=lnms&tbn=isch&sa=X&ved=0ahJKEwj1hJuL2lXTAhWOIVAKHcGUCKQ_AUICcgB&biw=1024&bih=673&as_qdr=all&safe=active#imgcr=Z2QNFKjeT4psj4:&spf=1
<http://www.webmd.com/heart-disease/guide/heart-disease-heart-attacks#1>

What to do if a heart attack is suspected to be happening-

A heart attack is a medical emergency where the supply of blood to the heart is blocked, causing damage to the heart muscle. If you suspect you or someone else is having a heart attack, you need to call 999 immediately as it may be life threatening. You can tell if someone is having a heart attack if they are experiencing chest pain, shortness of breath, feeling weak / lightheaded or an overwhelming feeling of anxiety. After a heart attack occurs, it is important quick treatment to open the blocked artery takes place. The best time to get treatment for a heart attack is within one to two hours after the symptoms occur. Waiting longer will increase the amount of damage to the heart. To diagnose a heart attack, an emergency care team will ask you about your symptoms, evaluate you and may run some tests.

The tests the doctors will do to diagnose a heart attack-

Electrocardiogram (ECG)

This is the first test that will be done if you suspect you are having a heart attack. It records the electrical activity of the heart through electrodes that are attached to your

skin. On the monitor, impulses from the heart are recorded as waves. If there is no electrical impulses, this shows a heart attack has occurred or is occurring as injured heart muscles don't conduct these electrical impulses.



Echocardiogram (echo)

This is a procedure that looks at your heart structure in detail to provide information such as: how well your heart valves are working, how well your heart is pumping, how well your heart relaxes after pumping and whether there are holes in between the chambers.



Blood tests

Blood tests can identify whether there is anything in your blood that indicate heart failure or any other illnesses. A high blood cholesterol level usually indicates coronary heart disease, which can lead to heart failure. Heart enzymes leak into your blood if your heart has been damaged during a heart attack.

by taking a sample of your blood and measuring the level of these enzymes, the doctor can determine the size of the heart attack and when it started.



Coronary catheterization

Coronary catheterization is when a long thin tube with liquid dye is injected into the heart arteries. This finds out if you have a disease on the heart muscle, valves or coronary arteries. The dye makes the arteries visible and reveals the areas of blockage on the X-ray.



Exercise stress test

Days or weeks after you have a heart attack, you may need to have a stress test to see how your heart and blood vessels respond to exertion. This involves walking on a treadmill or a stationary bike whilst attached to a ECG machine.



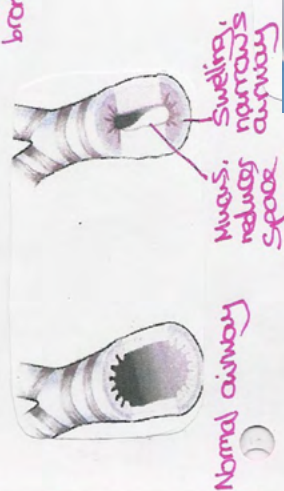
L02

- Understand disorders that affect body systems

Respiratory

(1 guide)

Pneumonia



9

Pneumonia

Pneumonia is inflammation of the tissue in one or both of the lungs, due to an infection. It causes the tiny air sacs at the end of your breathing tubes (alveoli) to become inflamed and swell up with liquid, making it difficult to breathe. There are many different types of bacteria and viruses that cause pneumonia, however the most common cause is a pneumococcal infection, created by bacteria called *Streptococcus pneumoniae*. Pneumonia can also develop after there is an infection in another part of the body that spreads to the lungs. Around 1 in 1000 people each year in the UK get pneumonia, but it can usually be cured by antibiotics. It affects elderly people and young children worse.



2 Normal



Pneumonia

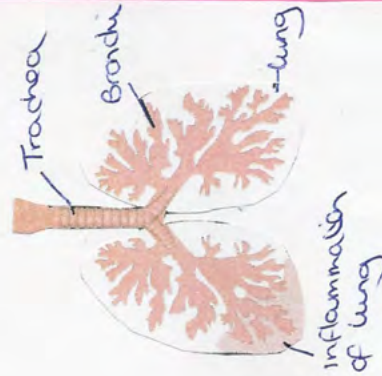
Symptoms

The symptoms of pneumonia can either develop suddenly or slowly over several days. They can vary from mild to severe, depending on what germ caused the infection, your age and overall health.

Seek medical attention if you are experiencing symptoms of pneumonia.

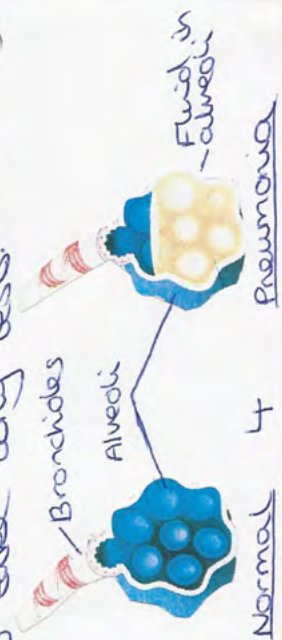
Signs and symptoms

- Chest pains
- Cough
- Difficulty breathing
- Fatigue
- Fever
- Sweating
- Shaking chills
- Nausea/vomiting
- Loss of appetite
- Headaches
- Shortness of breath
- Rapid heartbeat



Diagnosis

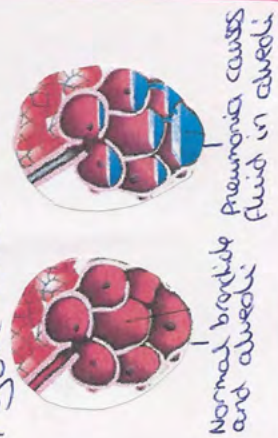
Your GP can diagnose pneumonia by asking you questions and examining your chest. The GP will ask questions such as if you are breathing faster than usual, if you feel breathless or if there is pain in your chest when you breathe in or out. They will usually watch your breathing, tap on your chest, listen to your breathing with a stethoscope and measure your blood pressure. From there, your GP may arrange for you to have a chest x-ray, blood tests or other tests if your symptoms are severe. A chest x-ray can help the doctor distinguish between pneumonia and other chest infections and to see how your lungs are affected. Most people with mild pneumonia do not have to take any tests.



Normal 4

Treatment

The type of treatment used for pneumonia will depend on the type and severity of pneumonia, your age and your overall health. Most of the time, doctors will prescribe antibiotics as they fight off bacteria and will cure the pneumonia. After taking treatment, symptoms should steadily improve, although how quick they do depends on how severe your pneumonia is. If your symptoms are not improving, it is usually due to the bacteria causing the infection is resistant to antibiotic or a virus is causing the infection rather than bacteria. If this happens, a doctor will give you cough medicine or another type of antibiotic. If symptoms still aren't improving, you will be hospitalised.



5

Signs and symptoms of pneumonia & Reasons

Tiny air sacs are at the end of your breathing tubes in your lungs, but if you have pneumonia these tiny air sacs become inflamed and fill up with fluid. The signs and symptoms of pneumonia may vary depending on factors such as the type of germ causing the infection, your age and your overall health. Mild symptoms are similar to those of a cold, however they last longer. These symptoms can develop suddenly over 24 hours or come on slowly over a couple of days. Even if you have pneumonia, you may not experience all of the symptoms. The symptoms are often similar to other chest infections, such as bronchitis and to diagnose it you will need to go to the doctors.

Common symptoms of pneumonia

- **Chest pains**- some people get a sharp pain in their chest when they breathe in and out because the thin outer covering their lungs has become infected and inflamed. This causes your lungs not to move as smoothly when you breathe.
- **A cough**- this is usually dry or produces yellow, green, brown or blood-stained mucus from your lungs. Coughing is the most common symptom of pneumonia. The reason for coughing is due to the Coughing reflex action caused by stimulation of sensory nerves in the lining of the respiratory passages – the tubes used when breathing.
- **Difficulty breathing**- your breathing may be rapid or you may be getting out of breathe quicker than normal.
- **Chills**- Chills are feelings of coldness accompanied by shivering or the body shaking. The infection in the lungs will cause this symptom.
- **Fever**- in bacterial pneumonia, your temperature may be as high as 105 degrees F. the reason for this is the body's response to the infection of the lungs and it is the body's way of fighting it off. Part of the brain called the hypothalamus regulates the body's temperature to a higher level
- **Rapid heartbeat**- your heart rate may beat quicker than it usually does. For a normal adult, 60-100 bpm is a good resting heart rate. If you have pneumonia, it may be higher than this.
- **Sweating and shivering**- In bacterial pneumonia, you temperature rises which is what causes you to sweat.
- **Loss of appetite**- a person suffering from pneumonia will often lose their desire to eat food. This could be due to the treatment of the condition with antibiotics which affects the taste of food. It may also develop due to changes in metabolism.
- Feeling generally unwell

Less common symptoms

- **Coughing up blood**-you may cough up bright red blood, or frothy blood-streaked sputum (saliva and phlegm).
- **Headaches**- the symptom of headaches associated with pneumonia is considered a secondary headache disorder which are based on its causes (other causes apart from infections could be alcohol, head injury, substance misuse etc). Primary headache disorders are based on symptoms; these include migraine, tension-type headache and cluster headaches.
- **Fatigue**- fatigue is the lack of energy and motivation. Often when recovering from having pneumonia, people with experience fatigue. This can last anywhere from a few weeks to a few months.

- Nausea or vomiting- nausea is the uncomfortable feeling in the stomach which very often precedes vomiting (involuntary emptying of the contents of the stomach). Nausea and vomiting are not diseases, but they are symptoms of many conditions including infections such as pneumonia.
- Wheezing- this is due to the mucus in your airways and is found in viral pneumonia.
- Joint or muscle pain- joints are parts of the body where the bones meet and enable an individual to move. These include shoulders, hips, elbows and knees. Joint pain refers to any aches, soreness and discomfort around the joint. Mycoplasma pneumonia is more commonly found in young people and it can occur as an epidemic in groups of people. This type of pneumonia includes joint pain and muscle aches as common symptoms. Viral pneumonia could be caused by the flu virus and is commonly found in the elderly or people who have a weakened immune system. A common symptom of this type of pneumonia is muscle pain.
- Feeling confused- this particularly affects older people.

If you are experiencing these symptoms, you should contact your GP, who should be able to diagnose pneumonia by asking you question about your symptoms and examining your chest.

L02

Understand disorders that
affect body systems

Digestive

(1 guide)

Digestive system- Body systems and disorders

Irritable bowel syndrome



Treatments

Symptoms of IBS can often be managed by changing your diet and lifestyle. If you have diarrhoea, it may help to cut down on the fibre you eat and if you have constipation it may help to increase your fibre intake. Medication and psychological treatments can help reduce symptoms. Many people also find exercise and reducing stress helps to relieve symptoms of IBS.



Medication

- **Antispasmodics**– They work by relaxing the muscles in your digestive system to relieve abdominal pain and cramping.
- **Laxatives**– These are usually given to people with constipation as they make your stool softer so it is easier to pass.
- **Antidepressants**– These work best if pain and diarrhoea are the main symptoms and help to reduce the pain.
- **Anti-diarrhoeal**– Medications such as loperamide can help to control diarrhoea.

Bibliography

<http://www.nhs.uk/conditions/irritable-bowel-syndrome/pages/introduction.aspx>

<http://www.mayoclinic.org/diseases-conditions/irritable-bowel-syndrome/symptoms-types>

Diagnosis

Due to the fact IBS does not cause any detectable abnormalities in your digestive system, there are no specific tests for it and a diagnosis will be based on whether you show typical symptoms of IBS. Your GP will assess you if you have had abdominal pain, bloating or a change in bowel habit in the last six months. If necessary, you will undergo tests such as:

- **A lower GI series**– Doctors will fill your large intestine with a liquid to make it easier to see any problems on the X-ray.
- **Blood tests**– They can help rule out celiac disease, which has similar symptoms to IBS.
- **Stool tests**– Doctors may want to examine your stool to check for bacteria or parasites.

Further tests will be needed if you have certain symptoms, such as a lump in your stomach, because this may indicate you have a more serious condition.

When to visit GP/ hospital

You should visit the GP or hospital when you have been experiencing symptoms of IBS, such as abdominal pain, diarrhoea or constipation or bloating for a few months.

Contents	
Explanation of disorder	2
Symptoms	2&3
Diagnosis	4
When to visit GP/ hospital	4
Treatments	5

An explanation of the disorder

Irritable bowel syndrome (IBS) is a long-term functional disorder of the digestive system. This means the function of the gut is not normal, however all the parts of the gut looks normal, even if it is looked at under a microscope. The exact cause of the condition is unknown, but it is thought to be related to increased sensitivity of the gut and problems digesting food. Food moves through your digestive system by squeezing and relaxing the muscles of the intestines. This process is altered by IBS and results in food moving through your digestive system too quickly or too slowly. It is thought to affect one in five people at some point in their life. Although the condition is usually lifelong, it may improve over several years. IBS does not affect life expectancy or lead to serious diseases.



Symptoms

The symptoms vary between different people and usually get worse after eating. They tend to come and go, especially during times of stress or after

having certain food or drink. The symptoms include:

- Abdominal pain—These usually occur in the lower half of the belly and get worse after eating food and feel better after a bowel movement.
- Diarrhoea or constipation— If food moves too quickly, it can cause diarrhoea because there is not enough time for your digestive system to absorb water from food. If it is too slow, it causes constipation as too much water is absorbed.
- Difference in bowel movements— Bowel movements may occur more or less often, differ in size and consistency or the way stool passes may change.
- Urgent need to go to the toilet— People feel an urgent need to go to the toilet, which is most common in the morning shortly after getting up.
- Excessive wind
- Feeling sick
- Headache
- Poor appetite
- Tiredness
- Belching



Irritable bowel syndrome symptoms & Reasons

The symptoms of IBS vary between people and affect people worse than others. They tend to come and go and can last for a few days or up to a few months. Usually people get them at times of stress or after eating certain foods that make it worse as their colon is sensitive. Some people find the symptoms improve after going to the toilet and emptying their bowels. This condition is usually lifelong; however it may improve over several years. These symptoms can be controlled by managing diet, lifestyle and stress.

Symptoms-

- **Abdominal cramps-** pain in the abdominal (above your hips and below your chest) is caused by the way the bowels move and is usually described as a sharp cramp-like pain. When you have IBS, the nerves in your gut are extra sensitive which causes you to feel discomfort when gas or stool is in your guts. This may be relieved after going for a poo.
- **Diarrhoea-** this is loose, watery stools or a frequent need to have a bowel movement. Most people with IBS suffer from diarrhoea or constipation or both at different times. IBS makes your intestines squeeze too hard, making food move too quickly through your system and your stool does not absorb enough water in your large intestine (colon). Cutting down the insoluble fibre you eat may help with diarrhoea.
- **Constipation-** IBS can lead to food passing through your gut too slowly. When stool remains in the colon for too long, the colon absorbs too much water from your stool, causing it to become hard and dry. Eating more fibre and drinking water will help relieve constipation.
- **Excessive wind (flatulence)** - food passing through your gut too quickly leads to food not being fully digested and natural bacteria residing in the gut feeds on this. This results in a process called fermentation being started, which produces excessive gas. Food moving too quickly may also cause pockets of trapped gas, worsening the problem. Certain foods, such as brussel sprouts and beans can make you produce more gas because of how they interact with gut bacteria. A way to help with flatulence is to exercise.
- **Change in bowel habits-** IBS may cause your bowel movements to differ in size and consistency. They may be hard and small, pencil-thin or loose and watery. It can also cause you to go to the toilet more or less frequently (diarrhoea and constipation).
- **Passing mucus from the rectum-** Mucus is a white or yellow substance produced by the mucus membrane of the large intestine. It protects the inner lining in the intestine and helps ease the passage of stool. In IBS, mucus production may be increased and it is then passed in the stool.
- Bloating
- Loss of appetite
- Experiencing an urgent need to go to the toilet
- Feeling you have not emptied your bowels after going to the toilet
- Bladder problems

LO2 MB3 commentary

The work covered all three body systems, Cardiovascular, Respiratory and Digestive and covered symptoms of disorders for all 3. Heart attack – cardiovascular, pneumonia –respiratory and irritable bowel syndrome for the digestive system. There was detailed description of all and detailed reasons for most of the symptoms. There was also a comprehensive list of the methods of diagnosis. There were few links made between effects of treatments and the structure and function of the system. It was considered that the cardiovascular and the respiratory systems were covered in more depth than the digestive system.

To further improve the work the links between effects and the structure and/or function need to be clearly given for each system.

Commentary on why it was put into MB3 and not into MB2:

The evidence in the main met the assessment evidence grid for MB3 and the command words met for most of the evidence. It was therefore considered to meet MB3 as the criteria was detailed rather than sound and comprehensive for the methods of diagnosis. To award the top of MB3, links need to be made between the effects of treatments and the structure and/or function of the system for all 3 systems. All systems should be covered to the same depth.

Resources – OCR resources available from: <http://www.ocr.org.uk/qualifications/cambridge-nationals-health-and-social-care-level-1-2-j801-j811-j821/>

Textbook from: <https://www.hoddereducation.co.uk/Product?Product=9781471899744>

BBC Bitesize: <https://www.bbc.com/education/subjects/zv6sr82>

NHS Direct: <https://www.nhs.uk/conditions/Pages/hub.aspx>

LIVESTRONG: <https://www.livestrong.com/>

Alternative formats that the work could be produced in:

Booklet, slide presentation, leaflet on symptoms/diagnosis, YouTube clips.



We'd like to know your view on the resources we produce. By clicking on the 'Like' or 'Dislike' button you can help us to ensure that our resources work for you. When the email template pops up please add additional comments if you wish and then just click 'Send'. Thank you.

Whether you already offer OCR qualifications, are new to OCR, or are considering switching from your current provider/awarding organisation, you can request more information by completing the Expression of Interest form which can be found here:

www.ocr.org.uk/expression-of-interest

OCR Resources: *the small print*

OCR's resources are provided to support the delivery of OCR qualifications, but in no way constitute an endorsed teaching method that is required by OCR. Whilst every effort is made to ensure the accuracy of the content, OCR cannot be held responsible for any errors or omissions within these resources. We update our resources on a regular basis, so please check the OCR website to ensure you have the most up to date version.

This resource may be freely copied and distributed, as long as the OCR logo and this small print remain intact and OCR is acknowledged as the originator of this work.

Our documents are updated over time. Whilst every effort is made to check all documents, there may be contradictions between published support and the specification, therefore please use the information on the latest specification at all times. Where changes are made to specifications these will be indicated within the document, there will be a new version number indicated, and a summary of the changes. If you do notice a discrepancy between the specification and a resource please contact us at:

resources.feedback@ocr.org.uk.

OCR acknowledges the use of the following content:
Square down and Square up: alexwhite/Shutterstock.com

Please get in touch if you want to discuss the accessibility of resources we offer to support delivery of our qualifications:
resources.feedback@ocr.org.uk

Looking for a resource?

There is now a quick and easy search tool to help find **free** resources for your qualification:

www.ocr.org.uk/i-want-to/find-resources/

www.ocr.org.uk

OCR Customer Contact Centre

General qualifications

Telephone 01223 553998

Facsimile 01223 552627

Email general.qualifications@ocr.org.uk

OCR is part of Cambridge Assessment, a department of the University of Cambridge. *For staff training purposes and as part of our quality assurance programme your call may be recorded or monitored.*

© **OCR 2018** Oxford Cambridge and RSA Examinations is a Company Limited by Guarantee. Registered in England. Registered office The Triangle Building, Shaftesbury Road, Cambridge, CB2 8EA. Registered company number 3484466. OCR is an exempt charity.



**Cambridge
Assessment**



001