



LEVEL 3 DIPLOMA

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MEDICAL SCIENCE

UNIT 6: Medical Case Study

For use with **Unit 6: Medical Case Study** examination

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Level 3 Diploma in Medical Science

Osteoarthritis

Osteoarthritis is the most common type of arthritis in the UK, affecting nearly 9 million people.

Symptoms of osteoarthritis

The main symptoms of osteoarthritis are:

- joint pain and stiffness
- swelling of joints



Causes of osteoarthritis

As part of normal life, joints are exposed to a constant low level of damage. In most cases, the body repairs the damage itself and no symptoms are experienced. In osteoarthritis, the protective cartilage on the ends of the bones breaks down, causing pain, swelling and problems moving the joint. Bony growths can develop, and the area can become red and swollen.

Diagnosing osteoarthritis

A GP may suspect osteoarthritis if:

- the joint pain tends to get worse the more the joints are used
- the joints tend not to be stiff in the morning
- the patient is over 45

Further tests, such as x-rays or blood tests are not usually necessary. However, they may be used to rule out other possible causes, such as rheumatoid arthritis or a fractured bone.

Treating osteoarthritis

Osteoarthritis is a long-term condition, but it doesn't necessarily get any worse over time. It can sometimes gradually improve. A number of treatments are also available to reduce the symptoms.

Osteoarthritis cannot be cured but the following can help manage the symptoms:

- lifestyle changes such as regular exercise and maintaining a healthy weight
- wearing suitable footwear or using special devices to reduce the strain on joints during everyday activities
- medication such as:
 - diclofenac
 - hyaluronic acid
 - aspirin

In a small number of cases, where these treatments haven't helped or the damage to the joints is particularly severe, surgery may be done to repair, strengthen or replace a damaged joint.

Preventing osteoarthritis

It's not possible to prevent osteoarthritis altogether. However, it may be possible to minimise the risk of developing the condition by avoiding injury and living a healthy lifestyle.

Breast Cancer

Breast cancer is the most common type of cancer in the UK. It affects both men and women. About 1 in 8 women are diagnosed with breast cancer during their lifetime. There is a good chance of recovery if it is detected at an early stage.

The exact causes of breast cancer are not fully understood. However, there are certain factors known to increase the risk of breast cancer. These include:

- age
- a family history of breast cancer
- a previous diagnosis of breast cancer
- a previous non-cancerous (benign) breast lump
- being tall, overweight or obese
- drinking alcohol

Symptoms of breast cancer

Breast cancer can have several symptoms, but the first noticeable symptom is usually a lump or area of thickened breast tissue.

Most breast lumps are not cancerous, but it is always best to have them checked by a doctor.

Diagnosing breast cancer

Diagnosing breast cancer might include breast screening and/or an examination of a small sample of breast tissue under a microscope.

Treating breast cancer

If cancer is detected at an early stage, it can be treated before it spreads to other parts of the body. Breast cancer is treated using a combination of surgery, chemotherapy and radiotherapy.

Newer therapies include:

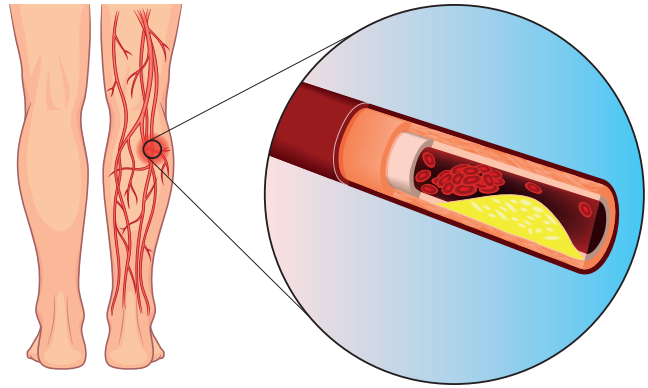
- photodynamic therapy
- combined chemotherapy and immunotherapy
- targeted therapies

Deep Vein Thrombosis (DVT)

Deep vein thrombosis is a blood clot in a vein, usually in the leg. It can be life-threatening and medical help is essential.

Symptoms of DVT

- pain
- swelling
- warm skin around the painful area
- red or darkened skin around the painful area
- swollen veins that are hard or sore when touched



DVT can lead to a pulmonary embolism if the blood clots travel through the blood stream and reach the lungs.

Diagnosing DVT

Emergency admissions to hospital will undergo a series of tests, including:

- an ECG to test heart activity
- haematology tests
- imaging methods to show whether blood is flowing normally through a vein and to determine the position of a blood clot

Treating DVT

Following diagnosis, the main treatment is a course of anti-coagulant tablets. Alternatively, a filter may be placed in a large vein to trap and stop a blood clot travelling to the heart and lungs.

Preventing DVT

Lifestyle choices can reduce the risk of developing DVT, such as:

- maintaining a healthy weight
- taking regular exercise
- avoiding dehydration
- avoiding excessive alcohol consumption
- not smoking
- avoiding long plane journeys