



LEVEL 3 DIPLOMA

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MEDICAL SCIENCE

UNIT 6: Medical Case Study

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

**Resource Folder for use in the following
examination on Monday, 2 June 2025**

Level 3 Diploma in Medical Science

Lyme Disease

Lyme disease is an infection caused by the bacterium *Borrelia*. It can be spread to humans by infected ticks. Ticks are arachnids that attach themselves to larger animals, including humans, and feed on their blood. They live in areas of dense vegetation such as woodland, heathland and long grass.



Symptoms of Lyme disease

A circular or oval, bullseye-shaped rash can appear around a tick bite up to 3 months after being bitten by an infected tick, but usually appears within 1 to 4 weeks.

Some people have flu-like symptoms a few days or weeks after being bitten by an infected tick, including:

- a high temperature, or feeling hot and shivery
- headache
- muscle and joint pain
- tiredness and loss of energy

Some people with Lyme disease develop more severe symptoms months or years later, including:

- pain and swelling in joints
- nerve problems, such as pain or numbness
- heart problems
- trouble with memory or concentration



Diagnosing and treating Lyme disease

An ELISA blood test can be used to detect antibodies against Lyme disease. Treatment involves a course of antibiotics such as doxycycline. Some people with severe symptoms may need to have intravenous antibiotics.

Paracetamol from a pharmacy can be used to help with pain and swelling in joints.

How to avoid tick bites

- cover the skin while walking outdoors and tuck trousers into socks
- use insect repellent on clothes and skin
- stay on clear paths where possible
- wear light-coloured clothing so that ticks are easier to see and brush off

Epidermolysis Bullosa (EB)

Epidermolysis Bullosa is the name for a group of painful skin conditions that cause the skin to become very fragile. It is not contagious and cannot be passed on through contact. It is inherited through a gene mutation which stops the layers of skin binding together so any trauma or friction can cause painful blisters. This results in open wounds and scarring. It can also affect internal linings and organs.



Symptoms of EB

Common symptoms in all types of EB include:

- skin that blisters easily, especially on the hands and soles of the feet
- thickened skin that may become scarred
- thickening of nails
- severe breathing problems

Diagnosis of EB

EB is usually diagnosed in babies and young children. They will be referred to a dermatologist who will take a small sample of skin for testing. This will help determine the type and severity of the disease.

In some cases, it is possible to test an unborn baby for the disease. If the test confirms EB the parents will be offered counselling and advice.

Treatment of EB

There is currently no cure for EB, but treatment can help ease and control symptoms. Managing EB can include:

- popping blisters with a sterile needle
- applying protective dressings

Medicines can be used to treat infection or to reduce pain. Surgery may be needed if EB causes narrowing of the oesophagus, trachea or bronchioles.

Children with EB often have complex needs and may need to be treated by a diverse team of medical specialists, including:

- dermatologists
- dieticians
- physiotherapists
- play specialists
- special nurses to coordinate the team

Research into treating EB includes looking at the role of cannabinoids in pain relief.

Anorexia

Anorexia is an eating disorder and serious mental health condition. People with anorexia try to keep their weight as low as possible by not eating enough food, exercising too much, or both. This can make them very ill because they start to starve. They often have a distorted body image, thinking they are fat even when they are underweight.

Men and women of any age can develop anorexia.

Signs and symptoms of anorexia

Signs and symptoms include:

- BMI being lower than expected
- missing meals, eating very little or avoiding food
- distorted body image
- taking appetite suppressants to reduce hunger, or laxatives to egest more
- periods stopping in women who have not reached menopause, or not starting in younger women and girls
- physical problems, such as feeling lightheaded or dizzy, hair loss or dry skin

Treatment for anorexia

The first stage is getting help and support. It is possible to recover from anorexia but it may take time. The treatment plan will be tailored to the individual and may include:

- specialist support and behavioural therapy
- family therapy, especially for under 18-year-olds
- medication, sometimes avoiding the oral route, to help with some of the physical health risks associated with anorexia

Health risks of anorexia

- malnutrition
- osteoporosis
- fertility problems
- heart and blood vessel problems
- brain and nerve problems
- kidney and bowel problems
- anaemia
- weakened immune system