

Medicine topic 4a knowledge organiser: How did knowledge and treatment of illness and disease improve in the modern period? (1900-present)

Lesson 1: The discovery of DNA

Key words for this lesson:

Double helix: The formation of DNA in every cell.

DNA: Deoxyribonucleic acid. Genetic information of living things.

Genome: The set of DNA needed to make an organism.

DNA: The double helix was seen under an electron microscope, which could magnify up to 10 million times. Rosalind Franklin Maurice Wilkins created images of DNA using x-rays. James Watson and Francis Crick saw the X-rays and built a model of DNA A team of 18 people launched The Human Genome Project to explore DNA.

Deoxyribonucleic acid is the genetic information of living things. A genome is the set of DNA needed to make an organism.



Lesson 2: How has diagnosis of illness changed?

Key words for this lesson:

Diagnosis: Doctors would observe patients, consider the symptoms, consult a medical textbook and say what was wrong with the patient based on their knowledge.

Intravenous drugs: Drugs injected into the veins

Binge drinking: Drinking excessive alcohol in a short space of time.

Ideas of the cause of illness have changed as we now realise poor diet, lack of exercise, smoking, drinking, intravenous drug use, unprotected sex, tanning beds are bad for us.

Technology allows for better diagnosis such as x-rays, blood tests, endoscopes, ECGs, ultrasounds, CT scans and MRI scans.

Lesson 3: Magic bullets

Key words for this lesson:

Magic bullet: A chemical treatment that tackles the illness without harming the rest of the body

Hypodermic needs: Allow people to inject medicine

Compound: A mixture of 2 or more elements

Improvements in treatment:

Magic bullets: Were able to target specific illnesses without causing harm to the rest of the body. Paul Ehrlich had tested as many arsenic compounds as he could to find a cure for syphilis. He tested over 600 but had not found a cure. In 1909 a Japanese scientist named Hata retested all the compounds and found that compound number 606 cured syphilis. The drug, named **Salvarsan 606**, was the first “magic bullet”.

The second was called **Prontosil**: red dye was effective against blood poisoning. Tried it on mice then his daughter.

Mass production of tablets and hypodermic needles meant it was easier to make medicines more easily available.



Lesson 4: The NHS

Key words for this lesson:

NHS: National Health Service: Free health/ hospital care. Funded by taxes.

Chartered: An acknowledgement that someone has a professional level of skill.

Laparoscopic (keyhole) surgery Using tiny cameras and narrow surgical instruments

The National Health Service (NHS) was set up in 1948 by the government and aimed to provide medical care for the entire population of Britain. National Insurance contributions are taken from wages in the same way tax is and these are paid towards the NHS. The NHS took over existing hospitals and medical services. The hospitals were managed by regional hospital boards. They then provided other services like ambulances and health visitors. They also took over primary care like dentists and General Practitioners (GPs.) The government wanted to provide for people regardless of how rich or poor they were. The 1911 National Insurance Act had allowed workers earning under a certain amount to medical care, but this did not extent to women raising families. The aim of the NHS was that it was to be accessible to everyone. Women could get treatment or various veins and children could get treatments for conditions before they got too serious.

