

Knowledge Organiser: Medicine 1900 – Modern Day

Key dates	
1909	Discovery of Salvarsan 606
1928	Alexander Fleming identifies penicillin in his lab.
1932	Prontosil found to kill bacterial infections in mice.
1941	Penicillin successfully used on a human.
1942	Publication of Beveridge Report
1948	NHS is launched.
1990	Launch of the Human Genome Project (completed 2000).

Key characters	
Gerhard Domagk	Discovered Prontosil could cure bacterial infections.
Paul Ehrlich	Tested over 600 arsenic compounds to find a cure for syphilis . His research was continued by a Japanese scientist called Hata who found that compound 606 (which was named Salvarsan) cured syphilis.
Alexander Fleming	Discovered by accident that penicillin , a type of mould, could kill harmful bacteria.
Howard Florey & Ernst Chain	Two scientists who took Fleming's discovery of penicillin and developed it as an antibiotic treatment for use on humans .
Rosalind Franklin & Maurice Wilkins	Took the first X-Ray photographs of DNA .
James Watson & Francis Crick	Two scientists working at Cambridge University who identified the double helix structure of DNA .

Key terminology	
Antibiotic	A treatment that destroys or limits the growth of bacteria in the human body.
Beveridge Report	A 1942 report chaired by William Beveridge which identified five "Giant Evils" in society : squalor, ignorance, want, idleness, and disease, and went on to propose widespread reform to the system of social welfare.
DNA	Short for deoxyribonucleic acid, a substance that carries genetic information that determines characteristics such as hair and eye colour.
Genome	The complete set of DNA containing all the information needed to build a particular organism.
Haemophilia	A genetic disease passed from parent to child that stops blood from clotting.
Human Genome Project	A 10-year project which decoded and mapped all the genomes in DNA . This made it possible for scientists to better understand genetic diseases such as cancer and haemophilia.
Magic Bullet	A chemical treatment that targets specific microbes without harming the rest of the body.
Mastectomy	Surgery to remove one or both breasts.
NHS	National Health Service which provides free medical care for the entire population of Britain.
Penicillin	First antibiotic to be discovered.
Prontosil	A bright red dye which was discovered by scientist Gerhard Domagk to kill bacterial infections in mice, then successfully tested on his daughter who had blood poisoning in 1935.
Salvarsan 606	First magic bullet drug which treated Syphilis .
Streptomycin	Powerful antibiotic , discovered in 1943, effective against tuberculosis which until then, had been considered incurable.

SUMMARY OF THE PERIOD

Massive advances in the understanding, treatment and prevention of disease. Better diagnosis of illness using technology such as X-Rays, blood tests and CT, Ultrasound and MRI scans. Better treatment of disease is made possible with the discovery of antibiotics and the development of "magic bullet" drugs. The discovery of DNA and mapping of human genome enables great strides in understanding hereditary factors in disease. Advances in surgical techniques make life-saving treatments possible, such as transplants and mastectomies. The introduction of the NHS in 1948 means that free healthcare is provided to everyone in Britain. Mass vaccination campaigns to help eradicate diseases such as tetanus, polio and measles. There is more understanding of the lifestyle factors affecting disease, such as the link between obesity and diabetes and the link between smoking and lung cancer.