Penicillin

After Louis Pasteur and Robert Kochs publications on the germ theory of disease, doctors began to develop a better understanding of the cause of infection, however the treatment of diseases was limited to vaccinations and the use of non-toxins. Joseph Lister's carbolic spray worked with some success during operations, but was not suitable with everyday life and work so many doctors were out to find how could people be protected against infection on a day to day basis.

Alexander Fleming was born in 1881 and was a Farmer's son from Ayrshire in Scotland. He moved to London at the age of thirteen and he later trained as a doctor. In 1928 Fleming was research assistant to Sir Almouth Wright working on Bacteria . He accidentally discovered a mould on a set of culture dishes, which were being used to grow the staphylococci germ, the one that turns wounds septic. Fleming noticed that where there was mould the germs had stopped growing. It was one of Flemings colleagues who identified the mould as penicillin. Fleming subsequently tested the penicillin on animals, with no ill effects, and also used it to cure a colleagues eye infection.

After Fleming's initial discovery he did little more than keep a supply of the mould and return to his routine work, however it was the scientists Howard Florey and Ernst Chain who developed penicillin further. Florey and Chain was largely responsible for the research which led to its success as a drug, although Fleming took most of the credit for the discovery and its subsequent development.

Florey was born in 1898 in Adelaide, Australia. He trained as a doctor and worked on a series of important discoveries at Oxford University. Chain a brilliant Jewish biochemist joined Florey's research team after he fled to Britain from Nazi Germany. Their development of penicillin in the early 1940's led to the award of the Noble Prize alongside Fleming in 1945. Chain was researching penicillin in 1929 when he read Fleming's article. It was this research which encouraged Florey and Chain to set up fuller investigation into the drug. In 1940, Florey's team found a way of purifying penicillin which was tested first on mice and then on a patient, a policeman called Albert Alexander. The patient began to recover after receiving the drug, but unfortunately supplies ran out due to their inability to produce it in large quanties. Mass production of the drug was not possible without medical help of large drugs companies.