

Key terms

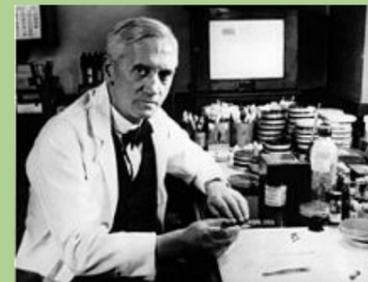
Antibiotic	Medicine that can be digested or injected into the body and kills certain germs as it travels around the body.
Penicillin	Antibiotic mass produced during the Second World War by the US Government. 15% of soldiers were treated with it.
Pharmaceutical industry	Huge global businesses which carry out research into and mass produce new medicines and drugs.
Shell shock	The mental strain of the war. Some soldiers could not speak or had panic attacks. This was the first acceptance of mental health problems caused by war.
Liberal Party	A British political party that were elected in 1906. They realised that they needed to do something to help people who could not look after themselves.
Social reforms	Changes made to society to try and help.
Welfare state	Propositions made by Beveridge for social security, a national health service, free education, council housing and full employment.

Theme review

Government	Liberal social reforms, the welfare state, the NHS
War	First and Second World Wars.
Religion	Use of alternative medicines e.g. hypnotherapy.
Chance	Discovery of penicillin by Fleming in 1928.
Communication	Media campaigns to improve health e.g. antibiotic resistance.
Individuals	Fleming (discovery of penicillin), Florey and Chain (development of penicillin), Landsteiner (blood groups)
Science and tech.	Penicillin (1928), DNA (1953), IVF (1978), keyhole surgery, radiation therapy, laser eye surgery

The discovery and impact of penicillin

- Fleming was determined to find a way to treat infected wounds. He went on holiday in 1928 and left several plates of Staphylococcus germs on a bench in his lab. When he came home, he noticed a mould had killed the Staphylococcus germ.
- Fleming published his findings but concluded it was a natural antiseptic and didn't appreciate its true capabilities.
- In the 1930s, researchers at Oxford University read about penicillin's ability to kill germs. Florey and Chain successfully tested penicillin on eight mice. They then tested it on a patient with a bad infection.
- The Second World War was vital in transforming the supply of penicillin. The US government funded chemical companies to mass produce it.
- 15% of injured soldiers would have died without penicillin.
- The discovery of penicillin as an antibiotic encouraged companies to invest in the development of other antibiotics. It led to the growth of the pharmaceutical industry (drug industry).



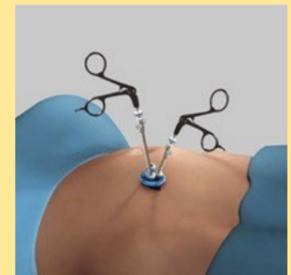
The impact of the First and Second World Wars

- X-rays:** discovered in 1895. They were used on the battlefield when mobile X-ray machines were developed by Marie Curie. Allowed surgeons to pinpoint the bullet/shrapnel.
- Plastic surgery:** Gillies set up a special unit to graft (transplant) skin during the FWW. During the SWW McIndoe used new drugs to prevent infection when treating facial injuries.
- Blood transfusions:** Landsteiner discovered blood groups in 1900 which enabled doctors to carry out blood transfusions. The British National Blood Transfusion Service opened in 1938 and blood banks were developed during the SWW.
- Broken bones:** new techniques were developed during the FWW to repair broken bones e.g. using splints.
- Diet:** as a result of food shortages during wartime, many people grew their own food. This improved their diets.
- Hygiene and disease:** in order to keep Britain 'fighting fit' during the SWW, there was a campaign that warned against the dangers of poor hygiene.



Modern surgical methods

- Keyhole surgery:** surgeons can now perform operations through small cuts using small instruments and small fibre-optic cameras.
- Radiation therapy:** although it has been used for over 100 years, it is developing all the time. It is used to kill cancer cells.
- Laser surgery:** used for eye operations since 1987 and is increasingly being used to treat skin conditions and clear blocked arteries.



Liberal reforms after 1900

- By 1900, millions of ordinary British citizens were still living in desperate poverty. The government began to have more involvement in public health.
- Booth report: found around 30% of Londoners were so poor that they didn't have enough money to eat properly, despite having full time jobs.
- Rowntree report: found that 28% of the population did not have the minimum amount of money to live on at some time in their life.
- The Liberal Party won the 1906 general election and introduced a number of reforms: free school meals provided for poor children (1906), school medical services set up (1907), old age pensions introduced (1908), National Insurance Act (1911) introduces unemployment benefit, free medical treatments and sickness pay.



The welfare state

- During the Second World War, the Beveridge Report argued that the state should provide support for vulnerable people.
- This led to the creation of the welfare state and the NHS.
- When Bevan introduced the NHS in 1948 he overcame opposition from doctors who did not wish to come under government control or lose income.
- Today, the NHS faces many challenges - modern medicine is expensive so costs are increasing and people are living longer and elderly people are more likely to need NHS time and resources.



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