

1800's & 1900's Fight Against Disease.

<u>Event</u>	<u>Germ Theory Pasteur (1861)</u>	<u>Identifying bacteria Koch</u>	<u>Paul Ehrlich and Gerard Domagk Magic Bullets</u>	<u>Penicillin Fleming</u>	<u>Penicillin Florey & Chain</u>
<u>Causes</u>	<ul style="list-style-type: none"> Discovered that germs cause disease and that germs are in the air. Disproves spontaneous generation. Discovered air getting in to wine barrels was making the wine go off. Used the swan neck flask experiment to prove this. Uses Koch's method of identifying to find vaccines for Anthrax and Rabbits. 	<ul style="list-style-type: none"> Learns that using industrial dyes help to identify specific bacteria. 	<ul style="list-style-type: none"> Developed Magic Bullets which killed bad tissue and cells but did not damage healthy tissue. Ehrlich developed a magic bullet for Syphilis called Salvarsan 606. Domagk developed Prontosil for blood poisoning. 	<ul style="list-style-type: none"> Discovered Penicillium mould killed bacteria after he went on holiday, left his lab window open and some of the mould landed on an old petri dish. 	<ul style="list-style-type: none"> Read about Flemings discovery. Decided to purify the mould. Purified enough to test on a police man and proved it worked. Took findings to America to mass produce with support of the government.
<u>Treatments</u>	<ul style="list-style-type: none"> Proved that germs existed and caused disease 	<ul style="list-style-type: none"> Eventually leads to developments of vaccines. 	<ul style="list-style-type: none"> Treatments developed for syphilis and blood poisoning. 		<ul style="list-style-type: none"> Treats infections.
<u>Cures Attempted</u>					
<u>Government Action</u>	<ul style="list-style-type: none"> Backed by government and supported with his ideas. Franco-Prussian War meant the government supported Pasteur as they wanted to be the leading scientist. 	<ul style="list-style-type: none"> Backed by the German government as a result of the Franco-Prussian War, they wanted him to be the best doctor in his field. 			<ul style="list-style-type: none"> Not supported by UK Government as couldn't prove it worked. Supported by USA Government because of WW2.
<u>Consequences</u>	<ul style="list-style-type: none"> Helped medicine improve because doctors no longer assumed unnatural causes for disease. 	<ul style="list-style-type: none"> His discovery of dying to bacteria led to anthrax and rabbits vaccines being developed. 		<ul style="list-style-type: none"> He tried to purify the mould but could not find a way to do this so wrote about his findings in a medical journal. 	
<u>Short Term Impact</u>	<ul style="list-style-type: none"> People opposed this at first saying his theory wasn't true and that germs weren't in the air. Proved why Jenner's Smallpox/cowpox vaccine worked. 	<ul style="list-style-type: none"> His discoveries pushed Pasteur to keep trying to better him. 		<ul style="list-style-type: none"> Identified that Penicillium mould killed bacteria. 	<ul style="list-style-type: none"> Death rates from surgery decreased. Deaths from infection decreased. Saved thousands of lives during D-Day.
<u>Long Term Impact</u>	<ul style="list-style-type: none"> Helped medicine improve because led to Koch identifying different types of bacteria which 			<ul style="list-style-type: none"> Led to Florey and Chain reading about his discovery who then went on to purify the mould and prove it worked to kill infection. 	<ul style="list-style-type: none"> Most widely used antibiotic in the world.