

Knowledge Organiser: 18th and 19th century Medicine (c1700-c1900)

In 1700, many people no longer believed that God was responsible for causing disease. Instead they focused on developing scientific explanations. By 1900, germs had been discovered, and there was ongoing work to create vaccines for diseases caused by them. The cleanliness of hospitals improved and surgery became less dangerous through the development of anaesthetics and antiseptics.

Summarise your learning

Causes	<ul style="list-style-type: none"> Miasma ('bad air') Spontaneous generation – (that germs were produced by decaying things.) Diseases could be spread through water – Cholera 1854 – John Snow Germs cause disease – the germ theory created in 1861 by Pasteur with experiments on wine – slow to be accepted. Koch followed this be identifying germs like TB, cholera by using dyes
Diagnosis	<ul style="list-style-type: none"> Observations and examinations of patients
Prevention	<ul style="list-style-type: none"> Breakthrough with vaccinations – Jenner did the first for small pox using cowpox. Pasteur followed with Chicken Cholera, Anthrax and Rabies. Cleanliness – Nightingale lowered the death rate from 40% to 2% in Scutari in the Crimean war by cleaning hospitals. This was then brought to hospitals in England and nurses were trained. Government action to improve the sanitary conditions of towns - Public Health Act– 1875 – Inspired by Pasteur's germ theory and Snow's work on cholera. City authorities must provide clean water, sewers and public toilets – better than 1848 Act which was not compulsory
Treatments	<ul style="list-style-type: none"> Very little change from before except in surgery. Many herbal remedies and quack potions. Knowledge of germs causing disease did not lead to new treatments at this point – problem of infection still to be solved Better hospitals and nursing Improvements in surgical treatment: <ul style="list-style-type: none"> Anaesthetics – ease pain in operations - Laughing gas, Ether then Chloroform used by James Simpson – made popular by Queen Victoria. Led to 1850 Black Period – more deaths after operations due to infection and new surgery that had not been possible before when patients were awake. Antiseptics – kill germs – Carbolic acid used by Joseph Lister to spray room patients and clean instruments Aseptics – keep germs away - by 1900 sterilised instruments and clothing – Halsted first to use rubber gloves Blood loss still a problem

Chronology: what happened on these dates?	
1796	Jenner discovered the vaccination for smallpox.
1847	James Simpson discovered chloroform.
1848	First Public Health Act
1854	John Snow discovered the cause of Cholera.
1861	Pasteur identified that microbes (germs) cause disease (Germ Theory).
1865	Joseph Lister discovered carbolic acid.
1872	Smallpox Vaccine made compulsory in England
1875	The Second Public Health Act. City authorities had to provide clean water, dispose of sewage and employ a public office of health to monitor outbreaks of disease.

Who were these people?	
Edward Jenner	Developed the vaccination to prevent smallpox through using cowpox, which became compulsory in 1872.
Louis Pasteur	Pasteur's Germ Theory claimed that microbes that spread through the air caused decay. This disproved the idea of spontaneous generation.
Robert Koch	Koch used industrial dyes to stain and grow bacteria in a Petri dish. He was able to find which bacteria caused Anthrax (1876), septicaemia (1878), TB (1882) and cholera (1883).
Florence Nightingale	Following Nightingale's experience in the Crimean War she improved hospital care in Britain in two different ways: the way hospitals were designed and the training for nurses.
Joseph Lister	Discovered the antiseptic carbolic acid, which surgeons used to spray the operating theatre, wash their hands and clean their instruments.
James Simpson	Discovered chloroform, the first effective anaesthetic. Queen Victoria used chloroform during the birth of her eighth child.
Edwin Chadwick	In 1842, Chadwick published his <i>Report on the Sanitary Conditions of the Labouring Classes</i> , which argued that disease was the main reason for poverty, and that preventing disease would reduce the poor rates.
John Snow	Snow discovered that cholera was transmitted by dirty drinking water.



Vocabulary: define these words	
Germ	Any living organism that is too small to see without a microscope, e.g. bacteria.
Vaccination	A substance used to stimulate the production of antibodies and provide immunity against a disease.
Inoculation	Deliberately infecting oneself with a disease, in order to avoid a more severe case of it later on.
Antiseptic	A substance that makes things free from or cleaned of germs and other microorganisms.
Anaesthetic	A substance that makes you unable to feel pain.
Aseptic surgery	Surgery where microbes are prevented from getting into a wound in the first place, as opposed to being killed off with an antiseptic.
Laissez-faire	This French term means 'leave be'. It is used to describe governments who do not get involved in the day-to-day lives of their population.
Cholera	An infectious disease characterized by profuse diarrhoea, vomiting, cramps, etc.
Legislation	The act of making or enacting laws.
Chloroform	A colourless, sweet-smelling liquid used as an anaesthetic.

Change and Continuity	
Change	Continuity
<ul style="list-style-type: none"> New technology - microscope Germ Theory Anaesthetics and Antiseptics Greater government action – compulsory vaccinations and Public Health Acts 	<ul style="list-style-type: none"> Miasma (but was becoming less popular) Spontaneous generation (early 18th century) Germ theory does not lead to new treatments for disease yet