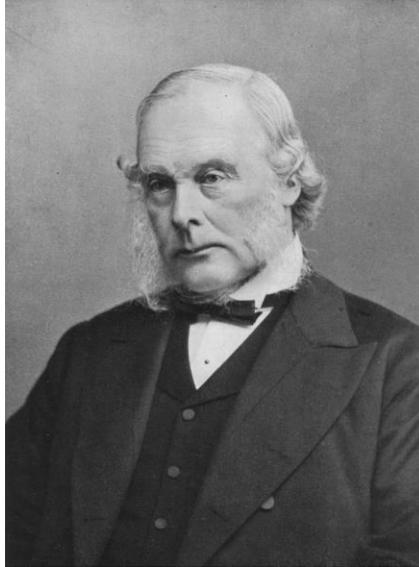


# BRITISH SURGEON JOSEPH LISTER & HIS GROUNDBREAKING WORK



## KEY FACTS

<b>Occupation</b>	Scientist: known as the ' <b>father of modern surgery</b> ' because he pioneered the earliest form of antiseptic as well as developing hospital hygiene and cleanliness.
<b>Born</b>	5 th April 1827 in Essex, England
<b>Married</b>	Agnes Syme in 1856
<b>Died</b>	10th February 1912, aged 84 in Kent England. His funeral service was carried out at Westminster Abbey, London

<b>EARLY LIFE</b>	Joseph was brought up in a village near London called Upton, the fourth of seven children. His father, a successful Quaker merchant, was interested in optical lenses. This led to teaching Lister how to use a microscope and at the age of 16, Lister's ambition was to become a surgeon.
<b>ADULT LIFE</b>	He was an excellent student, graduating with a Bachelor of Medicine degree with honours in 1852. In 1861, he was appointed surgeon to the Glasgow Royal Infirmary, where he was in charge of the wards in a new surgical block. It is whilst working here as a surgeon that his interest in germs and the lack of cleanliness and hygiene began.

<b>FAMILY</b>	Joseph Lister married Agnes Syme in 1856. Agnes often assisted her husband's medical research. They had a home laboratory, where Joseph Lister conducted experiments that would eventually lead to the development of antiseptic sprays for surgical theatres.
<b>MAIN ACHIEVEMENT</b>	As a surgeon, Lister was shocked to discover half of patients died after surgery. After learning about invisible germs from French chemist Louis Pasteur's work on rotten food, Lister began experimenting with chemicals to clean patients' wounds. Cleaning wounds and surgical instruments with antiseptic made the survival rate higher. Lister published his discovery and began persuading others to use the same methods.
<b>LISTER'S EXPERIMENTS</b>	<ul style="list-style-type: none"> <li>● Lister thought germs caused infection</li> <li>● He soaked bandages in carbolic acid to keep wounds clean. It was normally used for cleaning sewers!</li> <li>● Patients who would otherwise need limbs amputated due to infections began to heal properly with Lister's new antiseptic treatment</li> <li>● Lister decided that hands, clothes, surgical tools and wounds should also be washed with this chemical.</li> <li>● This led the way for other types of surgery, due to less risk of infection.</li> <li>● Lister even invented a carbolic acid spray machine to clear surgical theatres. However, breathing in acid was dangerous!</li> </ul>

## GLOSSARY

- **Amputated** - remove a limb (arm or leg) by surgical operation
- **Antiseptic** - preventing the growth of disease-causing germs (microorganisms)
- **Carbolic acid** - is one of the oldest antiseptic agents
- **Germs** - a microorganism (bacteria), especially one which causes disease.
- **Infection** - An infection is any disease caused by a pathogen (germ) such as a virus, bacteria, parasite, or fungus.
- **Microscope** - A microscope is a device that magnifies tiny objects, or makes them look larger
- **Survival rate** - survival rate is defined as the percent of people who survive a disease for a specified amount of time.

## FIND OUT MORE...

<https://www.bbc.co.uk/bitesize/topics/zxwxvcw/articles/zkpdrj6> Joseph Lister story:

<https://www.bbc.co.uk/bitesize/clips/zyys34j>

The importance of Joseph Lister's work: <https://www.youtube.com/watch?v=ZOYA00mE4MQ>