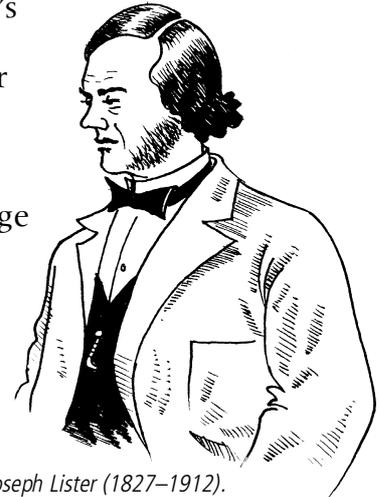


In the early 19th century, hospitals were dirty places and many people died after having operations. Their wounds often started to rot, a condition known as sepsis. The German chemist Justus von Liebig (who invented the Liebig condenser) thought that sepsis was a kind of slow combustion caused by exposing flesh to oxygen. He said that to prevent it, wounds should be covered in plaster to stop air getting to them. This did not work!

In 1861, Joseph Lister became a surgeon at the Glasgow Royal Infirmary. During his first four years he amputated many septic limbs and nearly half of these patients died because the cut ends also went septic. Then he read about Louis Pasteur's theory that diseases were caused by microbes in the air. Pasteur had shown that fermentation was caused by microbes and Lister thought that a similar process caused parts of the body to rot.

Lister knew that carbolic acid was being sprayed onto sewage in Carlisle. Cattle in the area used to get a disease when sewage was spread on their fields but they did not get the disease when sewage treated with carbolic acid was used. Lister thought that carbolic acid might kill microbes and so he put his surgical equipment in carbolic acid before operations. He also soaked wounds with the acid and bandaged them up with dressings soaked in it. In 1867 he reported to the British Medical Association that no sepsis had occurred in his operations for nine months.



Joseph Lister (1827–1912).



- 1
 - a What is 'sepsis'?
 - b What did von Liebig think sepsis was caused by?
 - c What did Pasteur think sepsis was caused by?
- 2
 - a What is an amputation?
 - b Why do you think so many limbs needed amputation in Lister's time?
 - c Why do you think many fewer amputations are needed today?
- 3
 - a Why did Lister choose to use carbolic acid?
 - b Why do we now refer to carbolic acid as an 'antiseptic'?
- 4 Lister once wrote 'You must be able to see, with your mental eye, the septic ferments.'
 - a What do you think he meant by 'septic ferments'?
 - b Why did he have to imagine them with his 'mental eye' rather than just look at them?
- 5 A mighty creature is the germ, though smaller than a pachyderm.
His customary dwelling place is deep within the human race.
His childish pride he often pleases by giving people strange diseases.
 - a What does the poet mean by a 'germ'?
 - b Find out what a pachyderm is.
 - c Find out who this poem was by.
 - d How does the poem continue?