

James Lind

James Lind was a British **naval** surgeon famous for his **pioneering** work aboard navy **vessels** in the 1700s. He was born in Edinburgh in 1716 and travelled across the world, including to the Mediterranean, the West Indies and the English Channel, treating sailors on ships. He developed an important treatment for a disease called scurvy, which used to affect many sailors and worked hard to improve the lives of those at sea.



The Royal Navy

In the 18th century, the Royal Navy was a very powerful and effective fighting force. Fleets of ships sailed across the world, fighting and winning many important battles. Sailors often spent many months at sea and conditions onboard were poor. There were no fridges on ships and because of this, sailors ate a limited diet, surviving mostly on salted meat, biscuits and beer.



What Is Scurvy?

Scurvy is a disease that is caused by not getting enough vitamin C, an important vitamin which helps look after the body. It is found in many fruits and vegetables, including:

- oranges
- red and green peppers
- strawberries
- broccoli
- potatoes

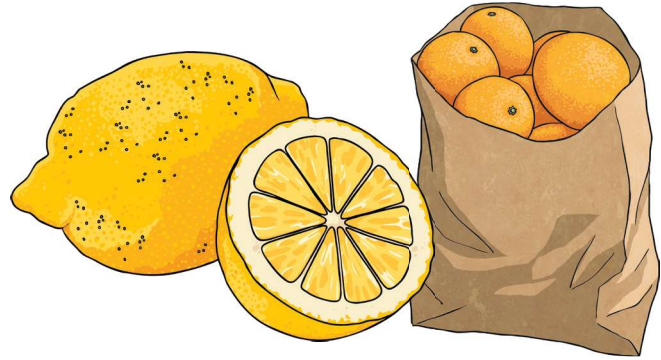
The symptoms include bleeding gums, tiredness and wounds that take a long time to heal, sometimes resulting in the death of the patient. In fact, scurvy killed more sailors than combat during the 18th century. Scurvy is very rare in modern times. There are fewer than 200 cases in the UK every year.



James Lind's Discovery

James Lind started work as a surgeon on a large ship called the HMS Salisbury in 1747. He had seen many cases of scurvy and other dangerous diseases, including **typhus** and **dysentery**. He started to investigate what caused scurvy by carrying out experiments on the sailors. He fed groups of sailors different foods:

- cider
- vinegar
- sea water
- garlic, mustard and horseradish
- oranges and lemons



He made the test fair by choosing sailors that were equally ill and making sure they lay down in the same place. It quickly became obvious that the sailors eating oranges and lemons were recovering from scurvy much quicker than the other groups of sailors. After his discovery, James continued to investigate the health of sailors at sea.

Although James Lind was not the first to suspect that citrus fruits helped cure scurvy, he was the first to test the idea out with a methodical scientific experiment. He wrote a report about what he had found out and also recommended different ways to keep the ships clean and free from sickness. His suggestions included having a separate ship to treat ill sailors, treating water to make it safe for drinking and getting rid of lice onboard. 40 years after he first found out how to help sailors with scurvy, an official order made sure that all ships had a supply of lemon juice onboard. Scurvy almost completely disappeared onboard ships after this.

Glossary

dysentery: An illness that causes sickness and diarrhoea.

pioneering: Creating new ideas or methods.

surgeon: A person who is qualified to perform surgery.

typhus: A disease that causes rashes and fevers, passed to people by lice and fleas.

vessel: A ship or a large boat.

Questions

1. What was James Lind's job? Tick one.

- ☐ sailor
☐ surgeon
☐ chef
☐ soldier

2. Draw six lines to match the information to the correct subtitle.

The Royal Navy

What Is Scurvy?

James Lind's Discovery

Sailors spent many months at sea.

Scurvy almost completely disappeared onboard.

Scurvy is very rare in modern times.

Vitamin C is found in many fruits and vegetables.

He had seen many cases of scurvy.

The sailors ate a limited diet.

3. Find and copy a word that means the same as '**ships**'.

4. Why do you think scurvy is '**rare in modern times**'?

5. Fill in the missing words to complete the sentence.

There were no _____ on ships and because of this, the sailors ate a
 _____ diet, surviving mostly on
 salted meat, _____ and _____.

6. Why were conditions onboard ships in the 18th century poor? Explain your reasoning using evidence from the text.

7. Summarise what James Lind recommended to keep sailors healthy.

8. Do you think James Lind was a hero? Explain your reasoning using evidence from the text.
