

Is plague still a killer?

WHO, WHAT, WHY?

The Magazine answers...

Reports that "black death" has swept through an al-Qaeda camp in north Africa, killing dozens of trainees, are unproven, but the story highlights how plague has never been wiped out.

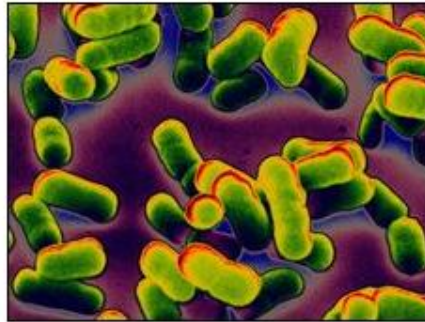
One of the "oldest identifiable diseases known to man", according to the World Health Organization (WHO), plague tends to be associated in the developed world with the Middle Ages.

The most notorious pandemic, during the 14th Century, wiped out about a third of the population of Europe.

Caused by the bacterium *Yersinia pestis*, plague is primarily a disease of wild rodents that is spread by their fleas. It can be transmitted to humans by flea bites or contact with animals infected with the bacterium.

"There are diseases circulating like this in the world's rodents, and in many cases having very little impact on them," says Mike Begon, professor of ecology at the University of Liverpool.

"You could only get rid of plague if you got rid of all the rodents, and you are never going to do that."



Plague bacteria are primarily carried by fleas on wild rodents

But Professor Begon adds: "When diseases can jump the species barrier to infect humans they can have a devastating effect."

As well as the medieval pandemic which led to the name "black death", because of victims' blackened skin, there have been two other worldwide outbreaks in the 6th Century and as recently as the second half of the 19th Century.

WHO still reports between 1,000 and 3,000 cases of plague every year; its figures show 182 deaths from the disease in 2003.

The organisation says plague remains endemic - present in a community at all times, but occurring in low frequency - in many countries in Africa, in the former Soviet Union, the Americas - including parts of the US - and Asia.

"There is this presumption that it is confined to history, but certainly that's not the case," says Professor Begon.

Plague can be fatal to humans left untreated in 30 to 60% of cases, and WHO says "rapid diagnosis and treatment is essential".

If diagnosed in time, almost all plague patients can be cured with treatment including antibiotics.

THE ANSWER

- ♦ A few hundred deaths a year
- ♦ Pneumonic plague can kill within 24 hours
- ♦ Almost all cases curable if diagnosed in time

Symptoms

The sudden onset of flu-like symptoms is usually the first sign of the disease, including fever, chills, head and body-aches and weakness, vomiting and nausea.

The most common form of the disease, bubonic plague, usually causes swelling and tenderness in the lymph gland in the neck.

The disease's least common but most deadly form, pneumonic plague, can be inhaled and transmitted between humans without involvement of animals or fleas.

Pneumonic plague involves infection of the lungs, causing a severe respiratory illness with symptoms including coughing up blood and breathing difficulty.

"It's about how fast you can get to it. If you can recognise it fast enough you can contain it," says Philippa Strong, a PhD student at the London School of Hygiene & Tropical Medicine.

Suspected sufferers should be hospitalised and medically isolated, and testing should be carried out on people who have been in close contact with them.

Miss Strong warns that research must continue into the plague bacterium, which could develop resistance to current treatments.

"You ignore these things, think they are going away, then they become a problem again," she says.

"It's a case of 'know your enemy'. We need to carry on researching it. If we can understand more about the bacterium, we will find other ways to treat it."

WHO, WHAT, WHY?

A regular part of the BBC News Magazine, Who, What, Why? aims to answer some of the questions behind the headlines

