

# Bubonic Plague Detected In US

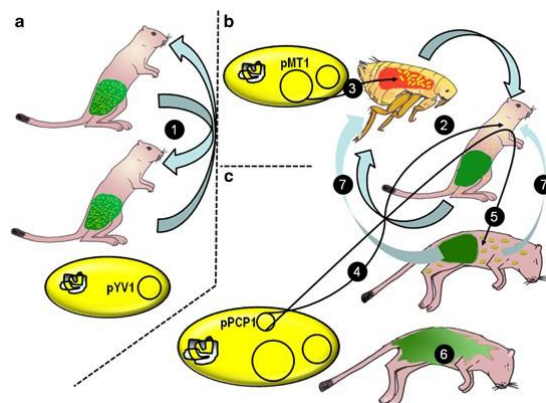
## Why In News

- A confirmed case of **human bubonic plague** in Oregon raised fears over a resurgence of the **infamous contagion** that wiped out millions in the Middle Ages. But officials say there's no cause for alarm. According to various reports, the person probably got the disease from a sick pet cat.



## What Is Bubonic Plague

- The plague is caused by **Yersinia pestis**, a **zoonotic bacteria**, i.e. bacteria that can spread between animals and people.
- Y pestis is usually found in small animals and their fleas.

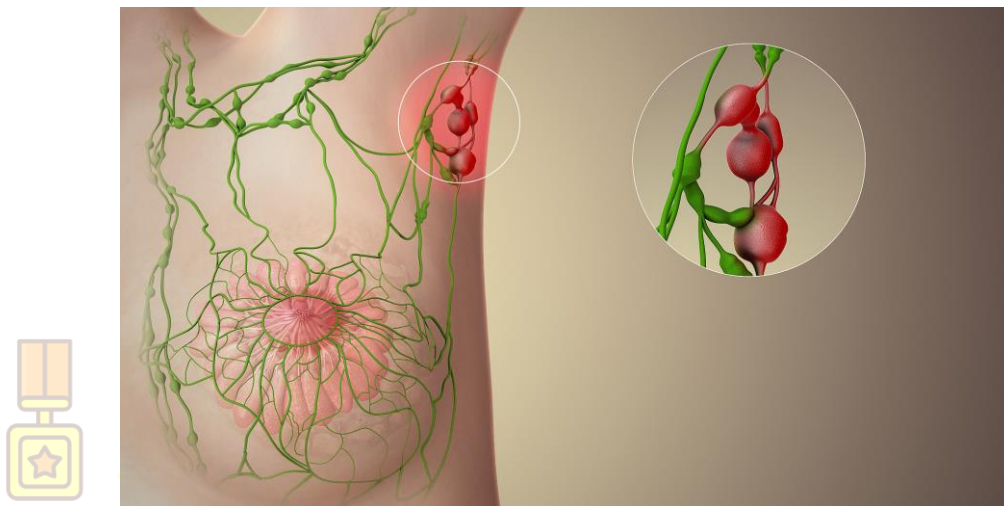


- According to the World Health Organisation (WHO), humans can be **infected in one of three ways** — “the bite of infected vector fleas”, “unprotected contact with infectious bodily fluids or contaminated materials” (like bitten by an

infected rat), and “the inhalation of respiratory droplets/small particles from a patient with pneumonic plague”.

## Disease’s Symptoms

- Plague symptoms can manifest in a number of ways. Bubonic plague specifically refers to cases where **bacteria gets into the lymph nodes**. According to the United States’ Centre for Disease Control and Prevention (CDC), it can cause fever, headache, weakness and painful, swollen lymph nodes, and usually happens from the bite of an infected flea.



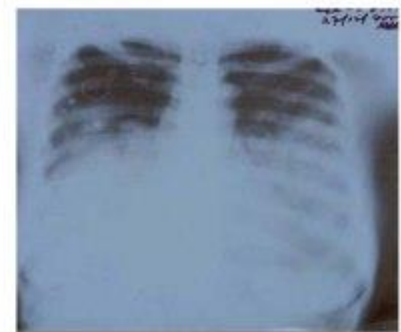
- **Septicemic plague** happens if the bacteria enters the **bloodstream**. This often follows untreated bubonic plague, and causes additional, more serious symptoms. These include abdominal pain, shock, bleeding into the skin, and blackening of appendages, most often fingers, toes or the nose.
- According to the CDC, this form comes either from flea bites or from handling an infected animal. **Pneumonic plague** is the most dangerous, and according to the WHO, “almost always fatal” if untreated.



Bubonic plague



Septicemic plague

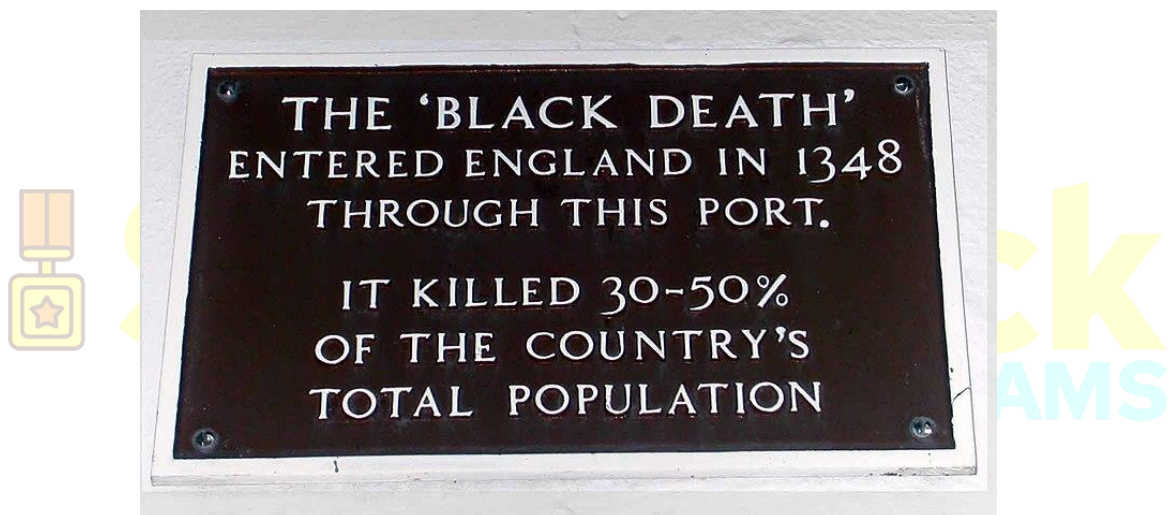


Pneumonic plague

- As the name suggests, it happens when the bacteria enters the lungs, and adds rapidly developing pneumonia to the list of symptoms.
- According to the CDC, it is the only form of plague that can be spread from person to person by inhaling infectious droplets — also making it the most contagious.

## Black Death

- Black Death was the **single most deadly disease outbreak** in history till the Great Influenza pandemic of 1918-20.
- Taking into account the significantly lower population levels of the **14th century**, **the Black Death is still** the most deadly outbreak of all time, by some estimates, wiping out up to half of Europe's population.



- More than anything, it left a lasting impact on those who survived. A study published in 2022 in the **journal Nature** found that **certain genetic mutations** increased survival chances by around 40 per cent.
- This 40 per cent “was the strongest selective fitness effect ever estimated in humans,”. Unfortunately, this mutation, which has since been passed, has been directly linked to the incidence of certain autoimmune diseases — meaning what happened 700 years ago might be impacting your health today.
- The **Black Death also left lasting social, economic and cultural impacts** in Europe and beyond. Historian James Belich, in his 2022 book *The World the Plague Made: The Black Death and the Rise of Europe* argues that European global dominance can be directly traced to the mediaeval pandemic.



- Although this might be an oversimplification, it nonetheless provides an interesting insight into the story of the “**Great Divergence**” which continues to shape the world today.
- An earlier major plague pandemic, dubbed the Justinian plague, started in Rome around 541 and continued to erupt for the next couple hundred years.
- **The third major plague pandemic** started in the Yunnan region of China in the mid-1800s and spread along trade routes, arriving in Hong Kong and Bombay about 40 years later.
- It eventually **reached every continent except Antarctica**, according to the Cleveland Clinic, and is estimated to have killed roughly 12 million people in China and India alone.
- In the late **1800s, an effective treatment with an antiserum** was developed. That treatment was later replaced by even more effective antibiotics a few decades later.

## Current Scenario

- **Doctors do not expect** the disease to spread from Oregon or cause any deaths among humans.
- **Bubonic plague epidemics became a thing of the past** by the 1930s. **According to the CDC**, a couple of thousand plague cases are reported worldwide each year, mostly in Madagascar, the Democratic Republic of Congo, and Peru.
- **Fatality is roughly 11 per cent.** This is because of modern antibiotics, which are fairly capable of dealing with the danger posed by *Y. pestis*, as well as better hygiene and understanding of the disease.



- According to the CDC, all forms of plague are treatable with common antibiotics, with early treatment drastically improving chances of survival.
- Even though **Y pestis can still occur** almost anywhere, and can be fatal to individuals, a larger pandemic echoing the Black Death is thus pretty much impossible.



- All forms of plague are **treatable with common antibiotics**, and people who seek treatment early have a better chance of a full recovery, according to the CDC.
- Though **plague remains a serious illness, antibiotic and supportive therapy** is effective for even the most dangerous pneumonic form when patients are treated in time, according to the World Health Organization.
- In the US, an **average of 7 cases of human plague** is reported each year, according to the CDC, and about 80 per cent of them are the bubonic form of the disease.
- Most of those cases were in the **rural western and southwestern US**. A welder in central Oregon contracted it in 2012 when he pulled a rodent out of his

choking cat's mouth in 2012 - he survived but lost his fingertips and toes to the disease.

- A **Colorado teen contracted** a fatal case while hunting in 2015, and Colorado officials confirmed at least two cases last year - one of them fatal.
- Worldwide, most **human cases of plague** in recent decades have occurred in people living in rural towns and villages in Africa, particularly in Madagascar and Congo, according to the Cleveland Clinic.

