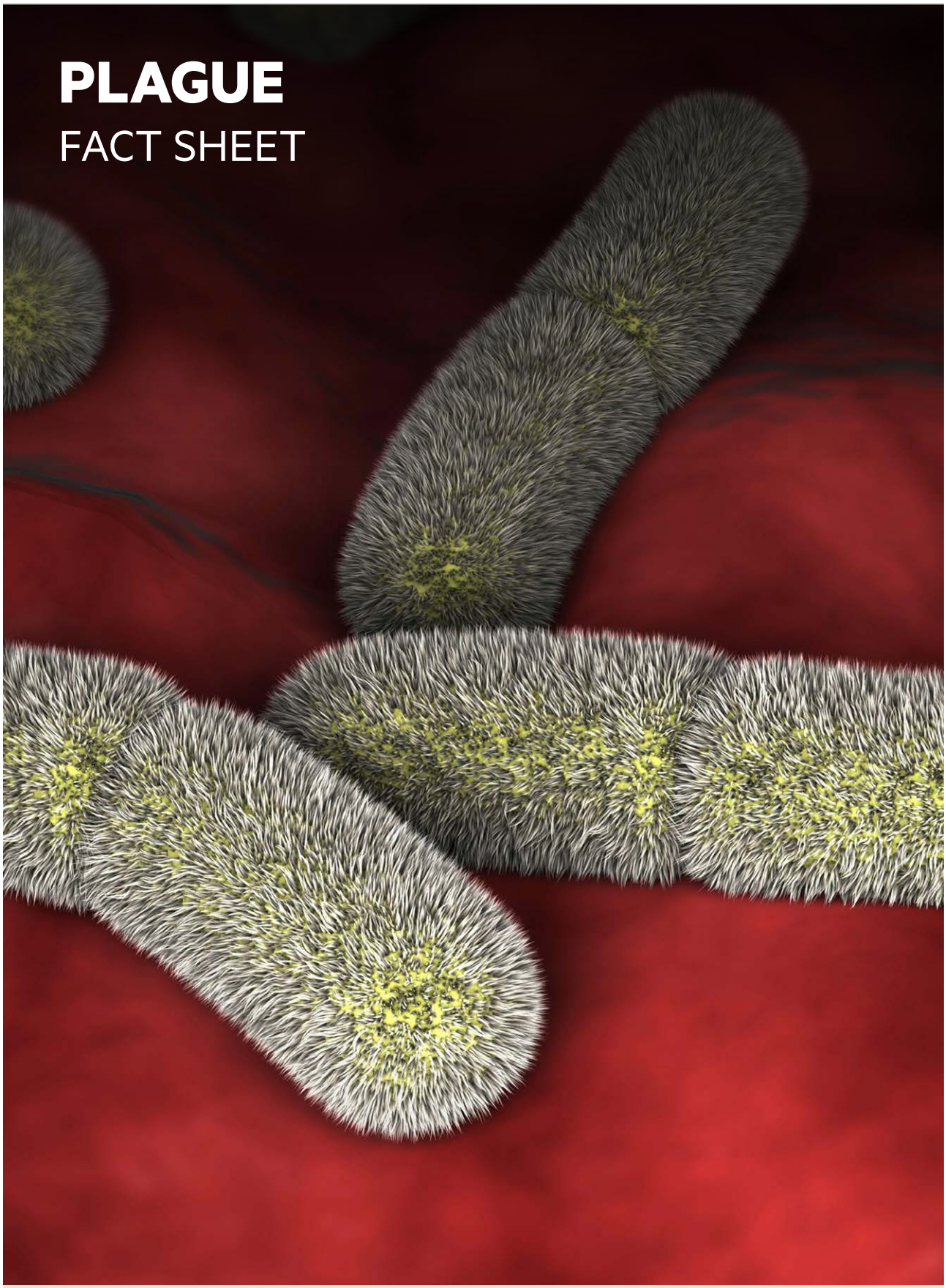
QUEENSLAND MUSEUM

PLAGUE

FACT SHEET



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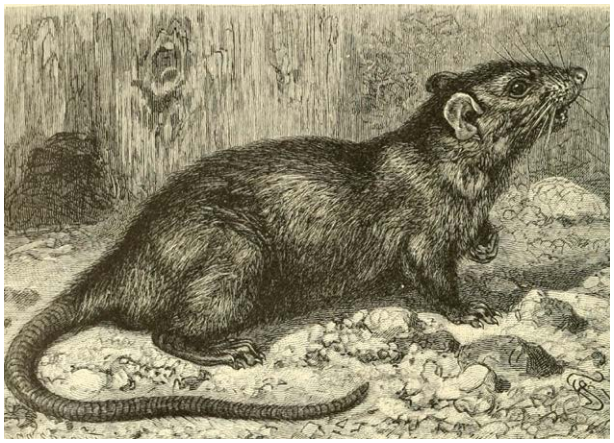
Queensland Government

WHAT IS PLAGUE?

Plague is a zoonotic disease with two main clinical forms, both caused by the bacterium *Yersinia pestis*. It can be transmitted to humans by rodent flea bites (fleas are the vector for bubonic plague) or by inhaling infectious droplets from coughs or sneezes (pneumonic plague). Bubonic plague is the most common form and is characterised by painful swollen lymph nodes (buboes).

Plague is a serious disease. Bubonic plague has a fatality rate of 30–60%. (In the 14th century, bubonic plague was responsible for the most fatal pandemic in history, killing up to 50% of Europe's population.) Pneumonic plague has a fatality rate of 100% unless treated very early.

Australia is currently free of plague.



Natural hosts

Rodents are the natural reservoir hosts of plague.

How is it spread?

Bubonic plague is spread from animals to humans through:

- the bite of a flea infected by feeding on a viraemic host (vector-borne infection)
- direct contact with infected animals (e.g. handling, skinning or processing infected rodents)
- direct contact with infected tissues, fluids or contaminated items.

Human infection with pneumonic plague occurs from inhalation of infectious respiratory droplets from other infected humans or animals.

Plague transmission is primarily linked to rodents and fleas. Flea bites are the most common route of infection.

Who is at risk?

- People travelling overseas to countries where plague is endemic, particularly if handling rodents or wildlife while away.
- Scientists and laboratory staff handling *Y. pestis* bacteria.

The risk in Australia is extremely low, as plague is not found here.

What are the symptoms?

In animals

Mammals, such as rodents, may develop either mild or fatal illness, and may die suddenly with few warning signs.

Symptoms in rodents include:

- a sudden high fever
- lethargy
- weakness
- bleeding.

In humans

Early symptoms occur 1–6 days after infection and depend on the type of plague. Pneumonic plague can develop in 24 hours, with rapid onset of severe illness, including death, if not treated promptly.

Symptoms may include:

- fever
- chills
- swollen lymph nodes (buboes)
- headache
- body aches
- weakness

- general malaise
- nausea, vomiting or diarrhoea
- bleeding into skin and organs (septicaemic plague)
- pneumonia (pneumonic plague).

⚠ Plague can be fatal if left untreated.

How can I prevent infection?

Currently, a vaccine for plague is not available; however, one is in development. Preventive measures are aimed at reducing contact with fleas and potentially infected rodents and other wildlife. Prophylactic antibiotics can help prevent infection if you are exposed to plague while travelling.

Prevention measures include:

- Avoid contact with rodents overseas.
- In areas where plague is endemic, use flea control measures.
- Follow public health advice when travelling.

ⓘ Prevention focuses on avoiding exposure overseas.

What treatments are available?

Plague is treatable with antibiotics if diagnosed early.

ⓘ Early treatment is highly effective.

If you think you might have been exposed to plague, please see your doctor or public health agency for further advice.

Cover: Microscopic view of *Yersinia pestis* bacteria. Courtesy: Alamy/Stocktrek Images
Page 2: Illustration of a black rat from *Brehm's Life of Animals* (1895). Courtesy: Alamy/Library Book Collection

Last updated: June 2026

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