

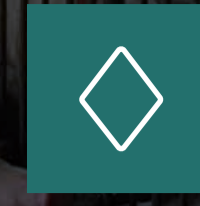
Erysipelas

associated with

Erysipelas, caused by the bacterium *Erysipelothrix rhusiopathiae*, together with parvovirus and leptospirosis is one of the main infectious causes of reproductive loss in swine. It is a contagious disease of many animal species, including humans. Therefore, it is a potential occupational zoonosis with public health implications.

Erysipelas can be seen in all age groups of pigs, although adults and growing pigs above 12 weeks of age are more commonly affected.

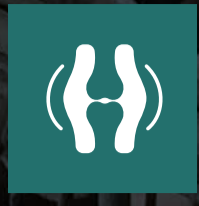
In growing pigs:



skin: typical rhomboid (diamond-shaped) and urticarial lesions



fever (acute form)

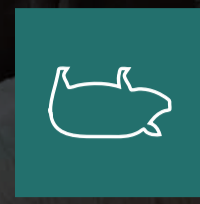


arthritis (chronic form)

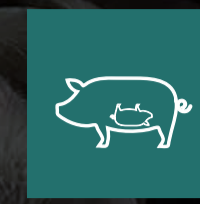
In sows:



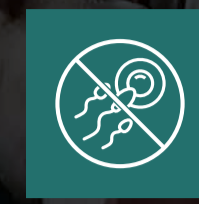
Lameness



Even death due to generalized infection or septicaemia (acute form)



Abortion



Infertility



Increased numbers of mummified fetuses and stillbirths



Economic impact

In the UK, it was estimated that a **400-sow breeding herd** with an acute **Erysipelas outbreak could lose 388 pigs** due to abortions and sow mortality (for 2008, **this would have cost £14,000**).

Chronic Erysipelas in a **600-head finisher herd** from the UK could result in **58 pigs being euthanized** and **31 condemned** for a total loss of **£17,451** over a six-month period.



Erysipelas accounted for **>37% of causes of whole carcass condemnations** in a pig slaughterhouse in Tuscany (Italy).¹

¹ Guardone L, et al. A Retrospective Study after 10 Years (2010-2019) of Meat Inspection Activity in a Domestic Swine Abattoir in Tuscany: The Slaughterhouse as an Epidemiological Observatory. *Animals (Basel)*. 2020



Prevalence

Erysipelas is worldwide distributed and ubiquitous.

It is estimated that approximately **30-50% of healthy pigs carry *E. rhusiopathiae***.



Diagnosis

E. rhusiopathiae is known to cause 3 main clinical manifestations in animals:

- Acute
- Subacute
- Chronic disease.



Key points to recognize erysipelas:

- High fever (41 to 42 °C), usually without respiratory signs or diarrhoea.
- Rhomboid or diamond shape skin lesions.
- Swollen joints and lameness (pain in the legs).
- Piglet sudden death.
- Infertility, irregular returns to oestrus, abortions, increased numbers of mummies and stillbirths, and small litters.
- Endocarditis (growths on the valves inside the heart).



When fresh foetal tissues are available, detection of *E. rhusiopathiae* by PCR is the test of election, as a positive result is highly indicative of the reproductive problem aetiology.



Treatment and prevention

Control and prevention of erysipelas are key to ensure good reproductive performance in breeding herds. They should include:



Rodent and bird control programs.



Cleaning and disinfection (especially important as *E. rhusiopathiae* can remain infectious for long time periods).



Vaccination, to improve immunity and reduce disease prevalence



Antimicrobials to control outbreaks

No herd, irrespective of its health status, is likely to be free of *E. rhusiopathiae* infection and therefore eradication is not possible or very unlikely.