

# Swine erysipelas

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Animal Biosecurity & Welfare

## Introduction

Swine erysipelas is an infectious disease caused by the bacterium *Erysipelothrix rhusiopathiae* seen mainly in growing pigs and characterised clinically by sudden death, fever, skin lesions and arthritis. The fever can induce abortion in pregnant gilts and sows.

Stress factors such as overstocking, mixing pigs after weaning and sudden changes in temperature can trigger clinical erysipelas.

Environmental contamination is common because bacteria are excreted via saliva, nasal secretions, faeces, and urine.

*Erysipelothrix rhusiopathiae* can survive for weeks outside the pig. Ecoshelters with deep litter bedding on earth bases can allow an environmental build-up of bacteria.

*Erysipelothrix rhusiopathiae* also causes polyarthritis in sheep and lambs and serious mortality in turkeys. In humans, infection causes erysipeloid, a local skin lesion, which occurs mainly as an occupational hazard of abattoir workers, veterinarians, laboratory workers, etc. The organism is occasionally isolated from cases of endocarditis in humans and rarely causes acute septicaemic disease.

## Clinical Signs

Clinical signs of swine erysipelas can be divided into acute, subacute and chronic forms. Subclinical infection can also occur where no disease is apparent, but may lead to chronic disease.

Pigs with the acute septicaemic form may die suddenly without showing any clinical signs. Acutely infected pigs have a fever, walk stiffly on their toes, spend a lot of time lying down separate from other pigs, and resent being disturbed. Anorexia and thirst are common. Skin lesions may vary from red to purple widespread discolouration of the ears, snout and abdomen to diamond-shaped skin lesions almost anywhere on the body.

Clinical signs of the subacute form include characteristic skin lesions, inappetence and a mild fever. In this form, the skin lesions may not persist for more than a few days.

The chronic form may follow acute or subacute disease as well as subclinical infection and is characterised most commonly by arthritis. Signs of heart problems due to infection of the heart valves may be evident occasionally and will be most obvious after exertion, which may lead to sudden death.

## Diagnosis

Diamond-shaped skin lesions are pathognomonic for swine erysipelas. Acute erysipelas cannot easily be differentiated clinically from other septicaemic diseases such as *Actinobacillus suis*, but the combination of sudden death in previously normal pigs, fever, stiff gait, and a reluctance to move, but quite responsive to humans (bright demeanour) is highly suggestive.

Isolation of *Erysipelothrix rhusiopathiae* from acutely affected pigs provides a definitive laboratory diagnosis of swine erysipelas.

Pig with typical diamond-shaped skin lesions as a result of *Erysipelothrix rhusiopathiae* infection



## Treatment

The treatment of choice is penicillin. Treatment early in the course of disease usually produces a dramatic improvement within 24-36 hours. There is no practical treatment for chronic swine erysipelas.

## Prevention

All gilts and young boars should be vaccinated before entering the breeding herd. Sows should be vaccinated 3-4 weeks prior to farrowing and boars should be vaccinated every 6 months. Progeny may need vaccination if there is a high challenge.

If disease breakdown occurs despite a vaccination program, review hygiene and management practices and consider changing to all-in-all-out production systems in consultation with your veterinarian.

Autogenous (herd-specific) killed vaccines can be produced once the serotypes in a herd have been identified.

Further information on registered vaccines is available at <https://portal.apvma.gov.au/pubcris>.

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