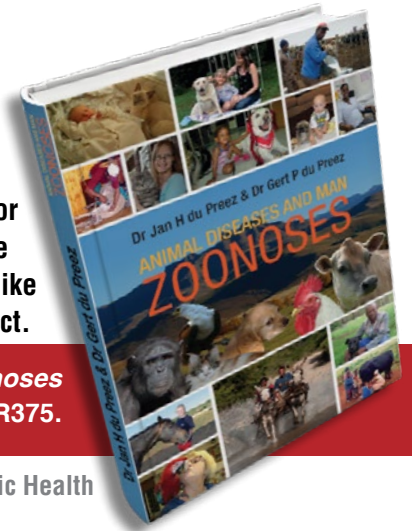


ZOONOSES

SARCOPTIC MANGE OR SCABIES

Sarcoptic mange or scabies is a skin infestation of humans and animals caused by a very tiny mite (cannot be seen by the naked eye) known as *Sarcoptes scabiei*. The microscopic mite burrows into the upper layer (epidermis) of the skin where it lives for up to two months and lays eggs. The most common symptoms of scabies are intense itching (a reaction within the skin to the faeces of the mite) and a pimple-like skin rash. The mite is usually spread through direct skin contact.



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Dr Jan H du Preez, Veterinary specialist: Public Health



Prof. J Boomker

↔ **Sarcoptic mange mite under the microscope. This mite causes a skin infestation of humans and animals**

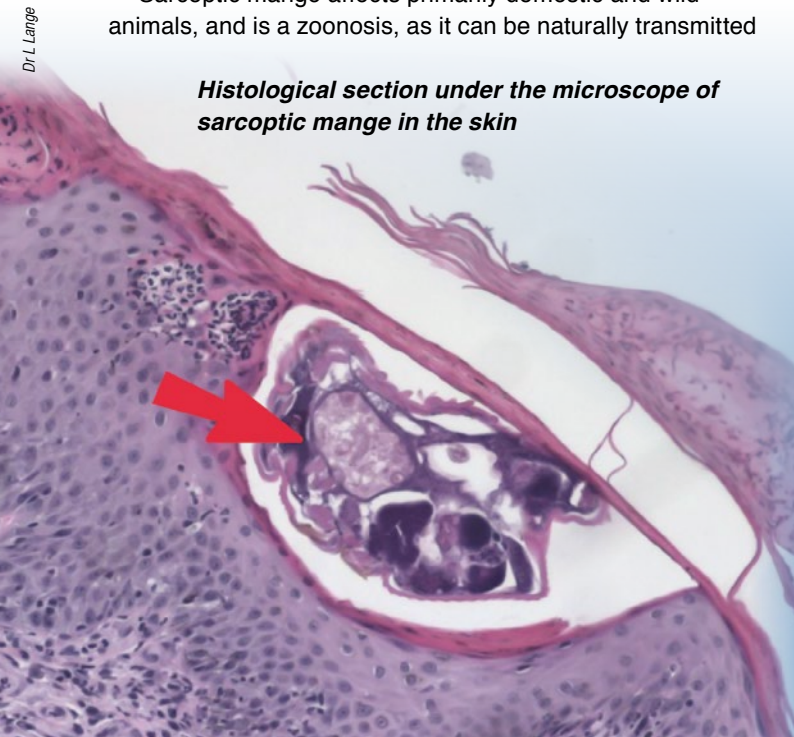


Introduction

Scabies or sarcoptic mange caused by *Sarcoptes scabiei* occurs worldwide and affects people of all races and social classes. This parasite has a very broad host range that includes more than 100 mammalian species and causes sarcoptic mange in pets and other companion animals, livestock such as pigs, horses, donkeys, and wild animals. It is estimated that 300 million people are infested annually with scabies worldwide. The prevalence of scabies in African children can be as high as 40 to 80 per cent. In developing countries, scabies is a significant public health problem because it is contagious and highly prevalent, and complications (e.g. bacterial superinfection) are frequent.

Sarcoptic mange affects primarily domestic and wild animals, and is a zoonosis, as it can be naturally transmitted

Histological section under the microscope of sarcoptic mange in the skin



to human beings. The parasite that causes this disease in dogs is known as *Sarcoptes scabiei* var *canis*. Humans can be infected through contact with infected animals (e.g. dogs and game). These mites cannot survive for very long on humans, and so the infestation is light. Another strain, *Sarcoptes scabiei* var *hominis*, commonly known as scabies, is the cause of a severe skin disease called scabies in humans, following contact with other infected people. *Sarcoptes scabiei* var *bovis* can also be transmitted from cattle to people and results in a transient, self-limiting dermatitis. Mange is rare in horses. Although rare, sarcoptic mange is the most severe type of mange in horses. The most common victims of scabies are dogs and pigs.

Other names

Sarcoptic mange or scabies is also known as scabies mite, canine scabies and 'itch mite' (Afrikaans: *sarkoptesbesmetting* of *sarkoptidose*).

History

Based on archaeological evidence, including Egyptian drawings depicting people afflicted with symptoms of scabies, scabies is estimated to have been infecting humans for at least 2 500 years. The earliest known drawings of scabies were made in 1687 by Giovan Bonomo, who collaborated with Diacinto Cestoni and was arguably the discoverer of the scabies mite. In Australian literature, the scabies mite *S. scabiei* was first collected from a wombat in Tasmania in 1804, but was not described as a separate species until 80 years later.

Source of infection and people at risk

The sources of *S. scabiei* infections in humans include a wide range of mammalian hosts such as dogs, cats, cattle, sheep, goats, horses, donkeys, pigs, game and human beings. As the mites are transmissible to humans, utmost care should be taken while handling infected hosts. People with weak immune systems, those who are being treated with immune-suppressants, toddlers and young children should not be exposed to infected animals. People suffering from malnutrition are also at great risk of contracting this

The most common victims of scabies are dogs and pigs

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disease. However, as sarcoptic mites on humans are short-lived (spend about three to four weeks on the skin of the host), the infestation can usually be treated effectively. Scabies mites can live for 48 to 72 hours after falling off the host.

Transmission

Scabies is a contagious zoonotic disease and transmission of infection is via direct physical contact. The infection can also spread from animal to human or human to human via bedding, towels or clothing (fomites).

Signs and symptoms in humans

In all hosts, mites tunnel in the epidermis (upper layer of the skin) and produce a classic, intensely pruritic dermatitis (itching inflammation of the skin) with hyperkeratosis (thickening of the skin) and alopecia (absence of the hair from skin areas where it, is normally present). A uniform, red, pimple-like rash, especially on the arms or trunk, and small papules that look like insect bites can be seen. Excessive itching occurs mostly at night. Due to the constant itching and the presence of the rashes, a secondary bacterial infection often develops on the surface of the skin (dermatitis). However, the infestation is self-limiting, as the mites (*Sarcoptes scabiei* var *canis*) do not generally thrive on human skin and die within two to three weeks. Infestations between hosts occur, but the mites tend not to survive for

long on hosts other than those to which they are adapted; they are therefore considered host-adapted strains of a single species rather than distinct species.

Diagnosis

- The physician will likely be able to diagnose scabies by performing a clinical examination and inspecting the affected skin area.
- In some cases, the physician may want to confirm the diagnosis by doing a skin scraping and examining it under a microscope.

Treatment

Scabicides to treat humans are available only with a doctor's prescription. Contact your veterinarian about treatment of infected pets and other animals. Selamectin, moxidectin and ivermectin are available to treat infected animals.

Prevention and control

- Contact your veterinarian.
- Routine use of fipronil, tropical moxidectin or selamectin will likely prevent infestations with *Sarcoptes scabiei* in dogs.
- Prevent contact between healthy and scabies-infected animals. Infection spreads by close contact.
- Ensure good nutrition for your pets and companion animals. 🐾

For more information visit the website www.zoonoses.co.za or or send an e-mail to: drjanh.dupreez@gmail.com

Sarcoptic mange in a kudu and warthog