

## *Fungal Skin Disease in Pet Guinea Pigs*

*Lynsey Rosen, DVM*

*August 2013 JACBA*

Most mammals, guinea pigs included, are susceptible to fungal infections caused by dermatophytes. Dermatophytes (derived from the Greek for “skin plants”) are fungi that cause skin, hair, and nail infections. Infections caused by these fungi are also sometimes known as “ringworm” or “tinea”. The name “ringworm” comes from the pattern of hair loss caused by the infection, but the name is misleading as no worm is actually involved. Dermatophytes can live on moist areas of the skin and on household items such as clothing, towels, and bedding. Younger animals, or animals that have a compromised immune system for any reason, are more susceptible. Like many health problems that are seen in guinea pigs, poor husbandry can play an integral role in skin disease. High environmental temperatures and humidity, as well as dirty caging can lead to skin infections as well as other health issues. Guinea pigs need to be kept in a clean environment, free from excrement and dust. Daily cage cleaning with a mild detergent and warm water, as well as changing your guinea pig’s bedding daily is important. Poor nutrition can also contribute to the development of skin problems. Guinea pigs on poor diets can become immunosuppressed, making them more susceptible to infections. Guinea pigs are one of the few species like primates who cannot synthesize their own vitamin C. Therefore, they need a dietary supplement of vitamin C to maintain their health. Because vitamin C is necessary for the formation of healthy collagen, guinea pigs who have vitamin C deficiencies (i.e. scurvy) can develop skin and joint problems.

Fungal skin infections typically present with hair loss, crusts on the skin, itching, and redness. Dermatophytosis is caused by a fungal infection of the hair shafts and surrounding skin. Trichophyton mentagrophyte is the type of fungus most commonly isolated from guinea pigs diagnosed with ringworm, but Microsporum canis can also cause disease. An otherwise healthy guinea pig may be infected and not show any clinical signs (i.e. a carrier), but this same guinea pig may develop lesions in times of stress, malnutrition, or illness. Dermatophyte lesions usually present as itchy areas of circular, irregular, or diffuse hair loss with visible scaling or crusting of the skin on the head, ears, back, and limbs. Remaining hairs may be broken. Other diseases that can mimic the signs of dermatophytosis are parasite infestations (fleas, lice, and mites), bacterial skin infections, or the barbering that occurs when a guinea pig chews off its own fur or its fur is chewed off by a cage mate.

If your guinea pig has any skin lesions or hair loss, you should take it your veterinarian as soon as possible. Diagnosis is made using a combination of testing modalities, including looking at the skin with an ultraviolet lamp, looking at the hair and skin scrapings under a microscope, and culturing a hair sample. Some types of dermatophytes will fluoresce under an ultraviolet light, called a Wood’s lamp, but many will not. Crusts and plucked hairs may be examined under the microscope for evidence of fungal hyphae, but they can be difficult to identify. Fungal culture performed on a sample of hair and skin crusts is the best test to definitively diagnose dermatophytosis. Fungus can take several days to weeks to grow in culture, and so treatment may be started by your veterinarian on suspicion of ringworm while waiting for

culture results.

Dermatophytosis is a zoonotic disease, meaning it can be transmitted to humans. If you suspect that your pet has ringworm, you should wear gloves when handling it and wash your hands carefully after contact. Children are particularly susceptible to ringworm and should not be allowed to handle the guinea pig until after treatment has ended. If any person in the house has suspicious skin lesions they should see a human physician immediately. All bedding in the guinea pig cage should be discarded and the cage should be thoroughly cleaned with dilute bleach. Rinse the cage thoroughly and allow to dry completely before replacing your guinea pig in the cage. Food bowls and water bottles should be cleaned and rinsed thoroughly in a dishwasher with detergent or replaced. All toys, wood blocks, and hide boxes should be discarded and replaced. During treatment your guinea pig should be kept confined to its cage and not allowed to roam free in the house.

Treatment of ringworm consists of topical and/or oral antifungal medications which must be prescribed by a veterinarian and cannot be obtained over-the-counter. Home remedies are not recommended. Drug choices and dosages vary by animal and case, and can be found in the 4th edition of the Exotic Animal Formulary by Carpenter. It is recommended to treat for 2 weeks past the resolution of clinical signs. The prognosis, or outcome, for animals diagnosed with ringworm is generally good. However, guinea pigs who are more susceptible to fungal skin infections because of an underlying health condition may have a poorer prognosis depending on the cause of their underlying illness.

Regular veterinary care is important to keep your guinea pig happy and healthy. It is important for pet guinea pigs to have physical exams by a veterinarian every 6-12 months to check their overall health and well-being. For additional information about skin diseases in guinea pigs, you should contact your veterinarian.

*Reprinted from the August 2013 JACBA. Permission to place on ACBAOnline.com given by the author April 29, 2013*

Except as specified below, no part of this publication may be reproduced in any form or by any means, including electronically, or transmitted by any means without permission in writing from the American Cavy Breeders Association (ACBA). Copying: Single copies of individual articles may be made for private use or research providing copies bear the ACBA copyright notice. Authorization does not extend to copies made or distributed for profit, commercial advantage, promotional purposes, to electronic storage or distribution, or to republication in any form. In all such cases, specific written permission from ACBA must be obtained. Permission for Other Use: Permission is granted for brief quotes with the customary acknowledgment of the source. To reprint a figure, table or other excerpt requires the consent of the ACBA. For permission contact the ACBA Secretary. Opinions of individual authors are their own and do not necessarily reflect those of the ACBA, its board or officers.