

Mange - Demodectic in Dogs

Mange is a parasitic skin disease caused by microscopic mites. Two different mange mites cause skin disease in dogs. One lives just under the surface of the skin, while the other resides deep in the hair follicles. Although both mites share similar characteristics, there are also important differences. It is important not to confuse the two types of mange because they have different causes, treatments, and prognoses.

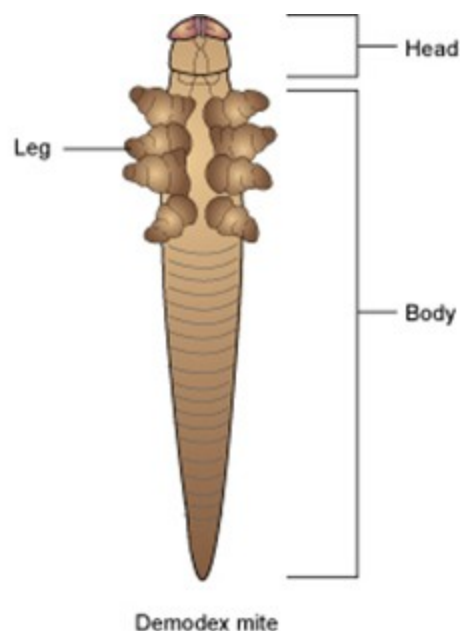
What causes demodectic mange?

Demodectic mange, sometimes just called "demodex" or "red mange", is the most common form of mange in dogs. It is caused by the *Demodex canis*, a parasite that lives in the hair follicles of dogs. Under the microscope, this mite is shaped like a cigar with eight legs.

"As long as the body's immune system is functioning properly, these mites cause no harm. "

All normal dogs (and many humans) have a few of these mites on their skin. As long as the body's immune system is functioning properly, these mites cause no harm.

Demodectic mange most often occurs when a dog has an immature immune system, allowing the number of skin mites to increase rapidly. As a result, this disease occurs primarily in dogs less than twelve to eighteen months of age. As the dog matures, its immune system also matures. Adult dogs that have the disease usually have defective immune systems. Demodectic mange may occur in older dogs because function of the immune system often declines with age. Dogs who have immune suppression due to illness or certain medications are also candidates for demodectic mange.



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Is demodectic mange contagious?

"Demodectic mange is not contagious to other animals or humans."

No, demodectic mange is not contagious to other animals or humans. *Demodex* mites are transmitted to puppies from their mother during the first few days of life. Since the mite is found on virtually all dogs, exposure of a normal dog to one with demodectic mange is not dangerous.

Why doesn't the immune system mature correctly in some dogs?

Development of the immune system is under genetic or hereditary control. Thus, an affected dog often has littermates that are also affected. Owners of littermates should be alerted to watch for the development of mange in their puppies. Because the disease is due to a genetic defect, affected dogs should not be bred, and the parents of the affected dog should not be bred again.

What does demodectic mange do to the dog?

Surprisingly, a dog with demodectic mange usually does not itch severely, even though it loses hair in patches. The hair loss usually begins on the face, especially around the eyes. When there are only a few patches of hair loss, the condition is called **localized** demodectic mange. If the disease spreads to many areas of the skin, it becomes **generalized** demodectic mange.

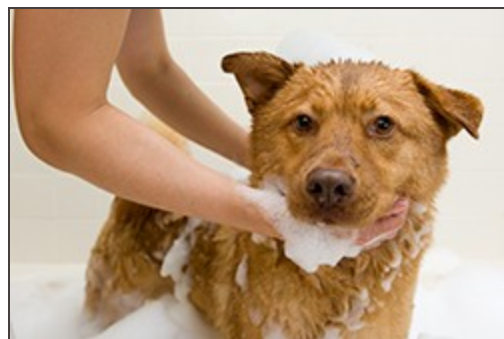
How is demodectic mange diagnosed?

"Your veterinarian will take deep skin scrapings and examine them under the microscope to diagnose this disease."

Your veterinarian will take deep skin scrapings and examine them under the microscope to diagnose this disease. The finding of larger than normal numbers of Demodex mites in skin scrapings confirms the diagnosis. Occasionally, the disease will be diagnosed by means of a skin biopsy in dogs that have chronic skin infections that have not responded appropriately to treatment.

How is demodectic mange treated?

The localized form is usually treated with topical medication. The generalized form requires more aggressive treatment using special shampoos and dips, along with oral medication. Shampooing with special cleansing shampoos containing benzoyl peroxide helps to flush out and open the hair follicles prior to dipping. A separate handout is available to describe the dipping process. In some cases, especially dogs with generalized demodectic mange, secondary skin infections complicate the condition, requiring antibiotic therapy. Dogs with skin infections often have very red, inflamed skin. This is the source of the term "red mange."



Are there any problems with topical treatment?

The dip commonly used for demodectic mange contains the insecticide *amitraz*. It must be used cautiously because it is a strong insecticide that can cause *side effects, both to your dog and to you*, if not used properly. Your dog may experience vomiting and sedation for twenty-four to thirty-six hours following each application. Most of these problems are self-limiting and resolve without medical intervention. If your dog reacts in this manner, you should dilute the next dip with 25% more water. Since most dogs develop tolerance to the dip as they are repeated, your dog is less likely to have side effects with each subsequent treatment. After receiving two to three dipping treatments at seven-day intervals, skin scrapings should be repeated and examined for the presence of live mites or mite eggs. The results of these skin scrapings will determine whether further treatment is needed.

I heard that there is a drug that can be given orally for demodectic mange. Is that true?

Yes, under certain conditions.

Ivermectins are a class of drugs that are approved for prevention of heartworm disease in dogs and cats. Milbemycin oxime, the active ingredient of Interceptor® and Sentinel® heartworm preventives, may be used to treat demodicosis in certain cases. Certain ivermectins are used to treat parasites on cattle. In the past, the cattle preparation has been used orally for demodectic mange in some dogs. However, it is a very strong drug that can cause severe side-effects, including death, if it is not administered properly. It is not approved for use in dogs, so we would only consider using it as long as you are willing to accept liability for adverse effects. Veterinarians do not generally recommend ivermectin usage in collies, Shetland sheepdogs, Australian shepherds, old English sheepdogs, or any other herding breed.

Advantage Multi ®, containing imidacloprid and moxidectin, is now labeled and approved for the treatment and control of generalized demodectic mange, and may be the treatment of choice for generalized disease.

What is the prognosis for my dog?

Treatment of demodectic mange is generally successful. However, if the immune system is defective, neither the mites nor the infection may respond to treatment. With generalized demodicosis, successful treatment may take a long time.

Following successful treatment, is it likely to recur?

"It is important to treat as soon as a relapse occurs to minimize the possibility of developing uncontrollable problems."

Because the immune system does not mature until twelve to eighteen months of age, a dog with demodectic mange may have relapses until that age. It is important to treat as soon as a relapse occurs to minimize the possibility of developing uncontrollable problems.



*This client information sheet is based on material written by: Ernest Ward, DVM
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