

# Demodicosis



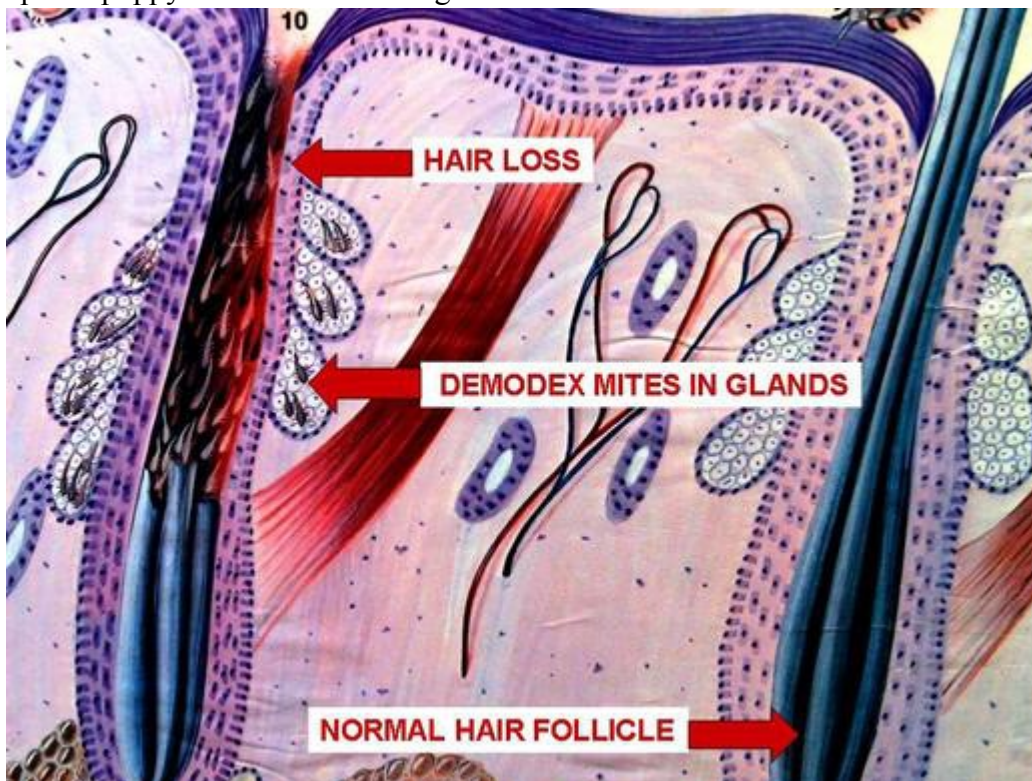
German shepherd puppy with demodex mange



Demodex mite seen microscopically



Demodex on the feet and legs



Demodex mites live in the sebaceous oil glands deep in the hair follicle. Mite infestation causes the hair to fall out.

# Demodex Mange Caused by *Demodex canis*

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Adult Pit Bull with demodex mange

Demodex mange is a common inflammatory, parasitic disease of dogs characterized by the presence of larger than usual numbers of demodectic mites in the skin. The initial uncontrolled reproduction of the mites may be due to a genetic or immunological disorder and stressors (like illness, surgery, or giving birth). Mites can be found in young and older dogs.

Normal dogs have some demodex mites on their skin. In some individuals these mites multiply in the thousands to cause redness of the skin and hair loss. The mites live in the oil producing glands in the hair follicles, deep in the skin. It is thought that the mites secrete something that actually decreases the dog's ability to control their growth, so they proliferate. The hair follicle damage causes hair loss.

The demodex mite spends all of its life in the skin and is not believed to be contagious. Demodex mites are spread from mother's skin to pup's skin during birth and lactation. That is why mites are primarily found on the head, muzzle, around the eyes and front legs of pups. Mites have been found puppy hair follicles within 16 hours of birth. Some breeds of dog are genetically more susceptible to demodex mites.

There are 2 forms of demodectic mange; localized and generalized. Localized is seen in young dogs under a year old. It is often seen on the face or around the eyes as small patches of hair loss. It is usually not itchy. Some localized cases resolve on their own with time. In generalized disease, large areas of the body can be affected by redness and hair loss. There is usually a secondary bacterial infection and the dog may be very itchy. Scaly skin and comedones (blackheads) can occur. Some dogs with generalized demodex mange may only have mites in their feet, causing swelling of the feet and painful lameness.

**Diagnosis** When we suspect demodex mange as the cause of red skin and hair loss we diagnose it by finding large numbers of mites under the microscope from multiple deep skin scrapings. Sometimes scrapings are negative but we are still very suspicious of the mite.

**Treatment** Demodex mange is a frustrating and expensive disease to treat but we are successful in over 90% of dogs treated. Most dogs will have a secondary bacterial skin infection and they will need antibiotics. Good nutrition and treatment of fleas and intestinal worms is also important.

Amitraz (Mitaban) is the only licensed insecticide for treatment of demodex mites in the US. Because of its toxicity to people, treatment is done in our hospital in a ventilated bathing area with the bather wearing protective glasses, an apron, and gloves. Amitraz is used as a whole body rinse or dip done 6 times over a 3 month interval. Long hair dogs are usually clipped short before therapy. A benzoyl peroxide shampoo is used first to get rid of all the crusts on the skin and to open up the hair follicles where the mites reside.

Treatment is done initially every 2 weeks for 3 treatments. Before the 4th treatment, a repeat skin scraping is done. If there are live mites found, then dips are done every 2 weeks until a negative skin scraping is achieved. If the skin scraping is negative, then 3 more dips are done at 3 week intervals. Some dogs require periodic dips for life.

**DAY 0 AMITRAZ DIP**

**DAY 1 AMITRAZ DIP**

**DAY 28 AMITRAZ DIP**

**DAY 49 REPEAT SKIN SCRAPING, AMITRAZ DIP**

**IF SKIN SCRAPING IS NEGATIVE FOR MITES, THEN REPEAT DIP EVERY 3 WEEKS FOR 3 MORE DIPS.**

**IF SKIN SCRAPING IS POSITIVE FOR MITES, THEN CONTINUE EVERY 2 WEEK DIPPINGS UNTIL A SKIN SCRAPING IS NEGATIVE FOR MITES.**

Ivermectin and milbemycin are oral drugs that have shown some success in treating demodex. They are much more expensive and cannot be used in all breeds because many breeds are sensitive to the off label use of these drugs.

Two new oral drugs used not specifically indicated for demodex mange, but primarily used for flea and tick control are showing very good effects in treating demodex mange. **Nexgard** is used monthly and **Bravecto** is used every 3 months.

**Some dogs with poor immune systems need treatment throughout their lives. Our goal is to prevent the serious hair loss and infection that follows untreated demodex mite infections.**