

Demodicosis in dogs

Demodicosis is a disease caused by a mite (*Demodex spp.*) that lives deep in the hair follicles. This mite is transmitted from the dam to offspring during suckling and is found in small numbers on all dogs. It is believed that these mites may initially cause problems in dogs due to an immunologic or genetic disorder. This can occur in two “general” ages of dogs. One group is less than 2 years old at onset (juvenile onset) demodicosis. The other age group affected is older dogs (adult onset demodicosis).

In the younger group, the pathogenesis of the immune system disorder is not completely understood. Approximately 50% of the dogs cure relatively easily, often spontaneously, therefore their immune system probably matures and keeps the mites in check. The other 50% of dogs are difficult to treat, but 35-40% of this group may be cured. Overall approximately 50-80% of this younger group can be cured.

In adult on set demodicosis, an underlying problem must be searched for since any systemic disorder/disease can result in mite overgrowth. Typically full bloodwork and x-rays are taken initially to screen for any disorders, and other tests may need to follow. Steroids, and some other hormones can also induce demodex mites to multiply. Diseases that can induce adult onset demodicosis include: liver or kidney disease, heartworm disease, hormonal disorders, chronic steroid use, and neoplasia.

In either age group, the treatments available are very similar. The usual method of treatment is bathing in a medicated shampoo (containing benzoyl peroxide) followed by dips weekly to biweekly. If a dog has a medium or long hair coat, it must be clipped very short to help this dip penetrate to the skin where it works. The shampoo should be applied to the entire dog and should remain on the dog for 10-15 minutes. The shampoo is designed to decrease secondary bacterial infections and to flush the hair follicles. The shampoo is rinsed thoroughly, and then the dog is dipped in a dilute Mitaban solution which kills the mites. The main side effect of this dip is sedation. It can also cause problems in the regulation of diabetes in animals or people. Other uncommon side effects that have been noted in animals includes: slow heart rate, increased itching, weakness, difficulty walking and diarrhea or vomiting. This bath and dip is performed weekly to biweekly. These biweekly dips are the only therapy that is label approved for use to treat demodicosis.

Another more recent therapy is an oral medication called milbemycin. This is routinely used monthly as a heartworm preventative. It has been used daily as a treatment for demodicosis, but is not licensed for this type of use. The main “side-effect” is cost. This type of therapy is generally reserved for those cases in which Mitaban (dip) therapy has been unsuccessful.

A third type of treatment is daily ivermectin therapy. This is not licensed for use at this dosage, and can not be used in Collies, Shelties, Old English Sheepdogs, Border Collies, or any related or cross-breeds. Additionally, all dogs must be heartworm negative. This is usually used in dogs in which the dips have failed as therapy.

Total length of therapy can vary anywhere from weeks to months to years (in rare cases), and some patients required lifelong therapy. Scrapings and mite counts to assess progress of therapy must be done at least monthly, and treatment continues until there have been 3 negative scrapings IN A ROW. After stopping therapy, scrapings are done at 1,3,6 and 12 months after stopping therapy. If at any point the mites return, therapy is re-instituted. A small percentage of the younger dogs are never cured. In older dogs, underlying causes of immunosuppression must be pursued.