

# Inflammatory Brain Disease

by Dr. Carrie Journey DVM, DACVIM (Neurology)

## SUMMARY:

- 1) This is a group of diseases that affect mostly small breed adult dogs.
- 2) This is a very serious disease. Most dogs diagnosed with this disease will be on medications long term if not life long.
- 3) Please monitor your pet carefully, give medication on schedule and contact your veterinarian with any concerns.

## EXPLANATION:

Inflammatory Brain Disease is a name that encompasses several different diseases including Granulomatous Meningoencephalitis (GME) and Necrotizing Encephalitis (NE). Steroid Responsive Meningitis Arteritis (SRMA) is sometimes included with these disease, but often presents with different symptoms (neck pain, fever) and is generally easier to treat. SRMA is not covered in this handout.

Inflammatory brain diseases usually occur in small breed dogs like Pugs, Yorkies and Chihuahuas but can be seen in any type of dog and very rarely cats. Most patients are between 2 and 7 years old at the time of diagnosis. Seizures and other brain signs (confusion, difficulty walking, blindness, circling) are the most common symptoms.

Inflammatory brain disease is diagnosed with imaging (CT or MRI scan), a spinal tap and by ruling out infections with special blood work. To tell you if your pet had GME or NE specifically, we would have to do a brain biopsy. Brain biopsies are not often recommended due to cost and side effects of the procedure. Because brain biopsies are recommended so infrequently, we often group these two diseases together as inflammatory brain disease. In some medical papers they are also called meningoencephalitis of unknown etiology. Because we often skip the biopsy, Dr. Journey feels it's important to do as many of the supporting test as possible (CT/MRI, CSF, Infectious disease testing) to make us as sure as possible that this is what your pet has.

In inflammatory brain disease the immune system is attacking the brain like there is an infection, but there is no infection. Basically, the immune system has made a mistake and is attacking the brain like it's an enemy invader. We treat this disease with immunosuppressive drugs. There are a lot of different protocols for treating inflammatory brain disease, but most involve using a type of steroid, for instance prednisone or dexamethasone. Many dog will also be placed on a second medication to help control the immune system. This second medication lets us use less steroid over time, which is helpful because steroids can have serious side effects when used long term or at high dose. Examples of the second medication that your veterinarian might recommend include cytarabine, mycophenolate, cyclosporin, azathioprine and CCNU. Your pet will be less able to fight infections on these drugs and vaccination may not be recommended.

If you dog has seizures, they will also like be on one or more seizure medications.



**Journey Veterinary Neurology**

©2015 Journey Veterinary Neurology, licensed under CC BY-NC-ND 4.0

**PROGNOSIS:**

These are dangerous diseases, and unfortunately some dogs will die of their disease despite treatment. However, with treatment, many dogs can go on to have a very good quality of life for many years. Some dogs can even be cured of this disease, but this takes many months or even years of treatment and may not happen at all.

**MONITORING:**

Regular check ups with your veterinarian will be important in monitoring your pet's health. Especially early on. Dr. Journey usually rechecks her patients 1 week after the initial diagnosis and then monthly for the first several months. Further recheck schedule will be dependant on how severely your dog is affected. Severely affected dogs may need to stay in the hospital at first and have more frequent rechecks. Blood and urine screens are recommended on a regular basis to monitor for side effects of medications- your veterinarian will tell you a schedule based on the medication your pet is on.

Please contact your veterinarian if your pet develops new symptoms or if existing symptoms seem to be getting worse. Symptoms include:

- 1) Seizures
- 2) Change in personality
- 3) Difficulty staying awake
- 4) Difficulty sleeping
- 5) Difficulty walking
- 6) Dizziness
- 7) Circling
- 8) Blindness
- 9) Difficulty eating, drinking or swallowing

