

## **Head Tremors in English Bulldogs: *Idiopathic head tremors***

**By Laura Landstra and Jay McDonnell, DVM, MS, Diplomate ACVIM (Neurology)**

### **1. What are idiopathic head tremors?**

Idiopathic head tremors are a series of repetitive, horizontally (“no” gesture) or vertically-directed (“yes”), involuntary muscle contractions involving the head and neck. A typical episode lasts about three minutes (yet may seem to last much longer as you are watching it!). Dogs remain fully conscious and aware during the episode, and when the episode ends, your dog should be completely unaffected. The tremors are benign – meaning the dog is not caused any pain or distress, and there are no short or long-term effects.

### **2. Who gets them?**

Young to middle-aged male and female dogs are most commonly affected. All dogs including mixed breed dogs have been seen with these tremors but Dobermans, Bulldogs, French Bulldogs, Boxers, and Labradors seem to be more commonly affected.

### **3. What causes them?**

We don’t know, hence the term “idiopathic.” The exact cause of head tremors has yet to be determined. However, the most likely cause is dyskinesia (a movement disorder) that originates in the basal ganglia – the area of the brain involved in patterned motor activity. Another theory is that affected dogs have an abnormality involving the stretch mechanism and the proprioceptive pathway of the head – i.e., the trigeminal nerve. This theory suggests that when the dog’s attention is diverted during an episode, the head tremors temporarily stop because the neck muscles contract, thereby releasing the stretch mechanism that first provoked the tremors. In both instances, there is likely a genetic basis since it occurs most commonly in certain breeds of dogs.

### **4. How are they diagnosed?**

Idiopathic head tremors are a diagnosis of exclusion, meaning that other diseases must be investigated and ruled out before idiopathic head tremors can be diagnosed. A diagnostic workup may include a bile acid test (pre- and post-prandial), ocular examination, brain MRI, and a cerebrospinal fluid (CSF) analysis. These tests will allow

your veterinarian to ensure that your dog's behavior is not caused by an ocular or progressive central nervous system problem before he/she makes a diagnosis of idiopathic head tremors. Dogs with idiopathic head tremors do not exhibit any other neurological abnormalities, and will have normal findings from both the MRI and CSF analysis.

### **5. What should I do when my dog is having an “episode?”**

Don't panic! Your dog is not affected by the tremors, but may become alarmed or stressed by your reaction. Distracting your dog is the most helpful way to end the episode. Try supporting your dog's head, or offer your dog a treat such as peanut butter, Karo syrup, honey, or vanilla ice cream in an attempt to distract your dog out of the episode. If there is someone available, have them videotape the episode. If the episode does not spontaneously terminate in 5-10 minutes, try to distract them with food or walking outside.

### **6. What about treatment?**

Currently, there is no treatment for idiopathic head tremors. Head tremors often are confused with epileptic seizures; in these cases the patient is prescribed phenobarbital. However, this drug does not improve idiopathic head tremors, and long-term administration may have deleterious effects on the liver. The most helpful “treatment” for idiopathic head tremors is to distract the patient out of the episode, as described above.

Click on link for more info: <http://bit.ly/headtremors>

~~~~~  
From other owners:

Nitschke was two years old when his head tremors started just prior to the video I have attached below. We taped a few episodes, showed them to our vet and he was sure they were head tremors, but wanted to be positive so he sent us to a neurological specialist in New Jersey for an evaluation. When we met with the specialist, he viewed the videos and examined Nitschke while talking with us. Based on our answers to his questions he told us Nitschke was experiencing 'idiopathic head tremors - meaning there is no real reason for them, no cure and the dog is in no pain or discomfort at all; we as humans are more bothered by them than the pup is.'

The doctor's questions were as follows with our answers:

- Does he respond to his name when called.. look at or walk over to you? **Yes**
- Any foam or drool coming from mouth during episode? **No**
- Any pacing or walking into walls/doors/furniture? **No**

Based on the above, the specialist told us, "if you want, I can run about \$2500 worth of testing, but you can easily stop the tremor by distracting the dog with a treat or clap of your hands while calling his name." We opted out of the test and would monitor our boy and with the next tremor, we did the treat with his name -- it worked. With Nitschke as with our other bully, Banks, the treat works best... say their name, give the treat and the tremor stops.

Over a six month period of time, we logged every time the tremors took place and what we came to determine with Nitschke, they were consistent in happening when his allergies were at their worst, spring and fall. As you'll see and hear in the video, his face is very red/pink and we are discussing him vomiting and having very soft stool, all of which were symptoms of his allergies and added stress to his immune system as well as made him tired and just overall stressed. This does not mean that is the case with all bulldogs, as stated in the below article, the cause is still not fully understood so it could be a different trigger for each dog. Some members here on EBN have noticed the tremors happen when over-stimulated, over-tired or stressed. Try to keep a journal of what is taking place when the tremor happens and you will eventually determine what may be the trigger/cause for your bulldog. We found for Banks it is stress and uncertainty in what is going on around her. She has had several tremors since moving into our new home, but prior to the move it was rare that she would have them at all.

Keep in mind, it is important to make sure that this isn't some other, more serious condition. It's definitely worth a good neurological examination by your veterinarian. A dog with idiopathic head tremors should be normal on exam unless they're having an

episode at that moment. Your vet may also run bloodwork to make sure there isn't a problem with calcium, glucose, or other lab values although, if given information of a the long history of tremors the lab tests may be less likely necessary.

[Here is an article from the Metropolitan Veterinary Hospital Emergency Service Newsletter](#)

### **Idiopathic Head Tremors of English Bulldogs By Bradley Stephens, DVM**

Lucy, a two-year-old female spayed English bulldog, presented to the Metropolitan Veterinary Hospital Emergency Service with seizures, which the owner described as rapid head tremors. The owner stated that the episodes never involved any pre-ictal or post-ictal phase, loss of consciousness, urination, defecation or other autonomic signs typically seen with grand mal seizures. Lucy would walk around and respond to her name while she was in the middle of the episodes. The patient was referred to Northeast Ohio Internal Medicine Associates for further workup.

#### **A mysterious affliction:**

The initial physical examination was unremarkable, with the exception of a right grade II medial patellar luxation. The complete blood count and serum chemistry panel were within normal limits. A CT scan of Lucy's head, including bone and soft tissue structures of the forebrain and cerebellum, was unremarkable. A phone consult with Dr. Marc Kent, a neurologist at the University of Georgia Veterinary Teaching Hospital, was sought. He indicated that these clinical signs were consistent with a condition tentatively called "Idiopathic Head Tremors of English Bulldogs," or IHT. The condition consists of rapid up-and-down or side-to-side movements of the head only. They start and stop spontaneously and are not related to any identifiable pathology or seizure condition. They typically occur while the animal is resting and may occur during sleep. Although this condition is most commonly seen in English Bulldogs, a similar condition has been described in Boxers and Dobermans.

**Possible causes:**

Many explanations have been formulated for the cause of the tremors, such as a seizure focus with no forebrain involvement or a defect in the elements of the muscle fibers. The current theory is that the tremors are a result of dysfunction of the proprioceptive fibers in the neck. Abnormal sensory input, causing alternating contraction and relaxation of muscle groups, may be responsible. This explanation, while almost impossible to prove, would explain why those affected stop shaking if something is done to focus their attention on an object such as a toy or treat. With this condition there are no abnormalities on tests such as CBC, chemistries, infectious disease titers, CSF taps or on imaging studies such as radiographs, CT or MRI. Therefore, IHT is confirmed based on clinical condition and through exclusion of other disorders. Treatment for this disorder with anti-seizure drugs such as phenobarbital, potassium bromide, Gabapentin or Keppra has not been successful and is not recommended. Many neurologists recommend offering the animal something to “focus” its head position, such as a treat or toy, which supports the idea that this is actually a movement disorder and not seizure-related.

**No cause for concern:**

Animals with IHT do not progress to have actual seizures and do not have issues with quality of life. The tremors are innocuous to the patients. Symptoms other than head tremors may indicate concomitant disease, requiring further investigation. Patients with IHT have only head tremors. The tremors may persist for the duration of the animal’s life, but often stop completely. IHT should be strongly considered in any English bulldog, Boxer or Doberman that is experiencing compatible clinical signs of intermittent head tremors.

**Video samples:**

Maggie has a Head Tremor: <http://youtu.be/KJlwBoFuJMY>

Nitschke -- <http://www.youtube.com/watch?v=ywxC7TWbzvo>