



MEGAESOPHAGUS

IRISH WOLFHOUND PUPPIES

Although not a common condition in Irish Wolfhounds, ME can occur and can often be identified when puppies are very young by their tendency to regurgitate milk/food; less severe cases may take longer to diagnose.

Anatomy of this condition: The Oesophagus – (the tube that takes food to the stomach), and the Larynx/Trachea (tube that takes air to the lungs), run parallel to each other.

ME is a condition where the muscles of the oesophagus do not work properly, so food and water are not transferred down to the stomach as they should be. The oesophagus becomes stretched, which leads to a proportion of food and fluid getting lodged in the oesophagus; the puppy will regurgitate this, which can result in food particles being inhaled into the trachea and thereby the lungs, which can in turn lead to aspiration pneumonia. Note: Regurgitation is not the same as vomiting, when a dog regurgitates it is a passive action and the food appears as if it's just been chewed up.

Adult hounds can also develop late onset megaesophagus because of some other underlying condition, but this is different to the congenital form which is the subject of this study.

Critical to the management of a dog with this condition is feeding style, and food consistency. The objective is to feed with the neck stretched as much as possible so that the food slides down more easily, Wolfhound owners often make their own built up feeding station to allow the dog to adopt the necessary posture. Food is often better soaked to a slurry/porridge consistency that will slide down the throat and avoid debris lodging in the oesophagus. More specialised advice on management can be found on the many websites dedicated to this subject, in addition to your vet's advice.

The oesophagus in a dog is on the left side of the throat and the trachea is central. None of the treatment for megaesophagus points this out specifically - so if you massage the throat to flush the food down, you also run the risk of pushing any other fluid that is trying to be expelled back into the lungs. It is possible that this might promote pneumonia in these dogs, because if there is a build up of mucus, it cannot escape if the owner massages the entire throat in a downward direction. It may be best if owners massage on the left hand side of the dog's throat if they are using this as part of the feeding management.

Research into ME in the Irish Wolfhound is currently being undertaken by Prof. Jared Jaffey, who became interested in congenital ME when he started his residency at the University of Missouri and encountered a couple of cases. He worked with Geneticist Dr Gary Johnson at the University of Missouri, who performed a whole genome sequence on the first affected puppy, but did not find anything obvious with that sample alone. They began collecting more DNA samples to attempt to find a genetic cause for the condition in the breed. Prof. Jaffey acquired three further DNA samples from affected dogs, but obtaining blood samples has not been easy.

Following an article on the Irish Wolfhound Club of America website describing a breeder's experience with this condition, he realised that it may be more prevalent than first thought. More recently five more cases have been added and provided blood samples. With a wider search for cases we may find that congenital ME is common enough in the breed that efforts to try and identify a genetic cause is warranted.

What is needed:

Blood samples (3mls) for DNA acquisition from Irish Wolfhound puppies that were diagnosed with ME with radiographs at less than 1 year of age. *

Please contact Prof. Jared Jaffey who will send instructions to your veterinary surgeon on the preparation and mailing of the samples. Email: jjaffe@midwestern.edu

If you suspect that your puppy may be suffering from ME, please consult your veterinary surgeon and notify your breeder.

*Please note that in the UK blood samples cannot be taken for research purposes alone and only surplus blood can be used if the dog is having blood taken for a specific reason.

There is some indication that the use of Sildenafil (Viagra) can aid some dogs with acquired ME by reducing regurgitation. For information on this please see <https://veterinaryrecord.bmj.com/content/180/16/404> and speak to your veterinary surgeon.