



## Upper Airway Syndrome in Norwich Terriers

Breeders and owners of Norwich Terriers have known for a long time that “snort and snuffle” respiratory noises are common. In recent years, evidence has slowly emerged, pointing to an underlying respiratory condition that affects our breed. We have seen that the condition is quite variable in presentation, ranging from noisy breathing to severe distress, even death.

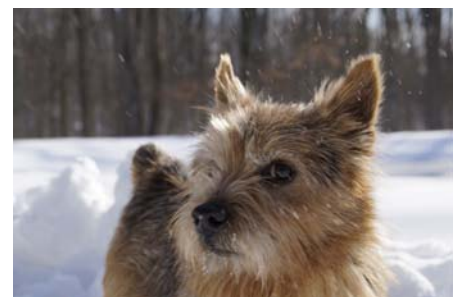
Today, we know that our breed is affected by a complex disorder of the upper airway, specifically the larynx. The true prevalence of the condition is unknown because even dogs with no apparent symptoms may be affected. The condition is breed-specific to Norwich Terriers and a genetic basis seems likely.



TEAR/CUT ALONG DOTTED LINE

The AKC Canine Health Foundation has recently approved a new grant, initiated by the Norwich Terrier Club of America.

See the reverse side of this flyer to read more about this exciting research and how you can help or visit [www.akcchf.org](http://www.akcchf.org) to learn more!!





**CHF Grant 2232-MOU: Characterization of Upper Airway Syndrome in Norwich Terriers**

The NTUAS Study Group is a multi-disciplinary collaboration based at the College of Veterinary Medicine at Michigan State University led by Principal Investigators: Dr. Bryden J. Stanley and Dr. Nathan Nelson.



Collaborating veterinary schools include the University of California Davis (Dr. Lynelle Johnson), Texas A&M University (Dr. Kelley Thieman), and University of Pennsylvania (Dr. David Holt).

The NTUAS Study Group includes surgeons, radiologists, internists, pathologists, anesthesiologists and licensed veterinary technicians working to identify and characterize this disease.

**Grant Period: 11/1/2015 - 10/31/2017**

In this study, NTUAS will be characterized in detail through comprehensive history, oral examination and upper airway endoscopy in 150 US Norwich Terriers. Results will be used to create a NTUAS severity grading system. A subset of 25 of the dogs will additionally undergo computed tomography and nasal airflow measurements. Results will be compared for 25 Norfolk Terriers, 25 brachycephalic and 25 mesaticephalic dogs of similar ages from a separately funded study. Identifying the contributory components of NTUAS is the first step in determining prognosis and evaluating treatment options. This work will lay the groundwork for future research to follow the youngest dogs in the study throughout their lives, and to examine the effect of time and treatment on NTUAS.

Make a donation today to support this important research!

TEAR/CUT ALONG DOTTED LINE

I want to donate to CHF Grant 2232-MOU: Characterization of Upper Airway Syndrome in Norwich Terriers!

Name(s) \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_

Telephone \_\_\_\_\_ Email \_\_\_\_\_

Credit Card Number: \_\_\_\_\_

Type: \_\_\_\_\_ Expires: \_\_\_\_\_ CID # (three digit code): \_\_\_\_\_

Amount of Donation:  \$20  \$50  \$100  Other

\*Call CHF at 888-682-9696 to make your donation over the phone, make your donation recur monthly, or to make your gift in honor or memorial of a dog or person!

Mail to: AKC Canine Health Foundation, PO Box 900061, Raleigh, NC 27675-9061