

# Viagra promising as treatment for dogs with often fatal eating disorder

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Sildenafil, the generic version of the drug known as Viagra, could be the long-awaited remedy for a group of dogs with a rare disorder called megaesophagus.

The condition involves an enlargement of the esophagus and a loss of the organ's ability to move [food](#) to the stomach, which leaves food bottling up in the lower esophagus. If left untreated, many animals regurgitate their food and aspirate food into their lungs, causing aspiration pneumonia.

"The literature tells us that many [dogs](#) with the disease die from [aspiration pneumonia](#) or are humanely euthanized due to poor quality of life within eight months of diagnosis," said Dr. Jillian Haines, a veterinarian at Washington State University who co-led the study.

Liquid [sildenafil](#) was shown to relax the smooth muscle of the lower esophagus so it will open to let food pass to the stomach. Besides some rare gastrointestinal irritation, there are no side effects to dogs at the dose used in the study. While sildenafil is most known to treat [erectile dysfunction](#), the drug is also used to treat elevated pulmonary blood pressure in dogs and humans.

The research, conducted at WSU's College of Veterinary Medicine, was published in the [American Journal of Veterinary Research](#).

"If you look at the literature, there are no drugs we can use to manage megaesophagus. Sildenafil is the first to target these mechanisms and reduce regurgitation, which is big because that's what ultimately kills these dogs," said Haines. "It opens the lower esophageal sphincter for 20 minutes to an hour, which works really well for dogs because we only want that to open when they are eating."

WSU veterinarians Drs. Susan Mehain and Sarah Guess co-led the study with Haines. The three researchers used videofluoroscopy to monitor liquid and later, blended wet food as it traveled down the esophagus.

Ten dogs with megaesophagus enrolled in the study were administered

either a placebo or sildenafil for two weeks at a time. The dogs then went one week without either drug. Then the placebo and sildenafil groups were switched.

Their owners were tasked with logging regurgitation episodes but were not informed of which drug their dog had been taking.

There wasn't a significant difference between the placebo and sildenafil during a 30-minute videofluoroscopy, where veterinarians use a moving X-ray to examine how food is swallowed. However, the study found nine out of the 10 owners reported reduced regurgitation during the two weeks when liquid sildenafil was administered.

"In many cases, the owners were able to figure out which drug was sildenafil because it was working," Haines said.

The dogs enrolled also gained an average of a little more than 2 pounds by the study's end.

"Moderately affected dogs that were regurgitating frequently but not excessively seemed to see the most dramatic results," Haines said. "I actually prescribed sildenafil to several of those patients after the study, and they are still using it today."

Dogs that showed severe signs of the disease didn't show as positive of results. In those cases, the researchers found it was harder to get the drug into the stomach for absorption.

While the study is promising, Haines said much is still to be known about the drug. She hopes future studies will investigate sildenafil's use in veterinary medicine.

"A lot of veterinarians are reaching out and asking about this [drug](#),"

Haines said. "I think sildenafil will be life changing and life saving for a lot of dogs. This research helps support its use and hopefully will encourage more people to use it."

Haines said it's important to note the owners' efforts in these studies.

"It's always important to recognize the commitment of the owners in these studies because without them, advancements in [veterinary medicine](#) just aren't possible," she said.

**More information:** Susan O. Mehain et al, A randomized crossover study of compounded liquid sildenafil for treatment of generalized megaesophagus in dogs, *American Journal of Veterinary Research* (2022). [DOI: 10.2460/ajvr.21.02.0030](https://doi.org/10.2460/ajvr.21.02.0030)

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