If your dog has a heart attack and collapses, what should you do?

For years, different veterinarians may have offered different pieces of advice -- but now veterinary medicine researchers from the University of Pennsylvania and Cornell University have produced the first set of evidence-based guidelines for resuscitating dogs and cats with stopped hearts.

University of Pennsylvania researcher Manuel Boller and his colleagues looked at decades of peer-reviewed data and determined that the proper rate for chest compressions on dogs and cats is between 100 and 120 per minute. That's the same rhythm recommended for humans. It also happens to align to the 103-bpm Bee Gees classic disco hit "Stayin' Alive," which studies have shown aids medical students in performing chest compressions.

The guidelines, while primarily for veterinarians, are "very translatable to pet owners and bystanders," Boller said in a phone interview.

Of course, performing chest compressions on a Pekingese is very different from doing so on a full-grown person, or even on a Great Dane.
For most dogs, chest compressions can be performed on the widest part of the chest while the animal's lying on its side. But in some breeds like greyhounds with more keel-shaped chests, the guidelines recommend pushing down closer to the dog's armpit, directly over the heart. Barrel-chested dogs like English bulldogs can be laid on their back and compressed on the sternum, like people.

Smaller cats and dogs can either be chest-compressed with one hand wrapped around the sternum, encircling the heart or two-handed on the ribs.

One fundamental difference between human patients and animal patients is that dogs and cats have much lower rates of coronary heart disease, the most common cause for cardiac arrest in people.
"Sudden cardiac arrest in dogs is therefore not as common as in people and may be more comparable to what occurs in young athletes with structural abnormalities of the heart muscle or a defect in the electrical circuitry," Boller said in an email.

Pets can also suffer a cardiac arrest due to difficulties with breathing or a severe illness that also affects the heart.

Boller says it's gratifying to have these standards, especially since the original experiments on animals used in their review were instrumental in developing CPR guidelines for people.

"Now we can translate that benefit back to their own kind," he says.

SOURCE: Journal of Veterinary Emergency and Critical Care 22. Reassessment Campaign on Veterinary Resuscitation: Evidence and Knowledge Gap Analysis on Veterinary CPR.

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