# Capsules [the current literature in brief]

## **CPR Guidelines: Standardized Success**

FOCUS: Emergency/Critical Care

The Reassessment Campaign on Veterinary Resuscitation (RECOVER) initiative was designed to develop a set of clinical guidelines for cardiopulmonary resuscitation (CPR) in dogs and cats. An extensive review was conducted, and questions in 5 domains were evaluated: preparedness and prevention, basic life support, advanced life support, monitoring, and postcardiac arrest care. An organized, efficient response is necessary for a good outcome. The location, storage, and content of resuscitation equipment should be standardized and regularly audited. Personnel should also be trained and adhere to CPR guidelines with refresher courses and periodic performance assessments. Clinical guidelines from this

study were developed, reviewed, and published. An algorithm of CPR, CPR drug dosing chart, and postarrest algorithm are also available (acvecc-recover.org).

#### Commentary

Many veterinarians are disappointed by overall outcomes with CPR; however, the onus is on members of the profession to provide the best possible care. The RECOVER project will likely have some measurable impact for our patients—not only have we identified many ideal aspects of CPR that can be easily employed (to maximize outcomes), but we have also identified knowledge gaps so further research can be focused to answer specific questions. As a Diplomate of ACVECC and a contributor to the RECOVER project, I am proud of my colleagues' work to create and carry out such a project; this information will further contribute to our profession.—*Andrew Linklater, DVM, DACVECC* 

#### Source

RECOVER evidence and knowledge gap analysis on veterinary CPR. Part 7: Clinical guidelines. Fletcher DJ, Boller M, Brainard BM, et al. *JVECC* 22:s102-s131, 2012.

### **Right Environment for Hip Dysplasia Prevention**



The Norwegian Kennel Club has developed a screening program for hip dysplasia in certain breeds, including a standardized radiographic evaluation of hip joints of dogs at 12 or 18 months of age. For this study, puppies were used to investigate environmental factors that may affect development of hip dysplasia in growing dogs. Information from 501 dogs from 103 litters was included. Labrador retrievers and Irish wolfhounds underwent radiographic evaluation at 12 months of age; Newfoundlands and Leonbergers were evaluated at 18 months of age. Questionnaires were completed by breeders, who provided date of birth, litter size, type of housing, and type of bedding in the whelping box; and by dog owners, who noted housing type, presence of children and other animals, types of surfaces exposed to dogs, and details of daily exercise. The study found that puppies that walked on stairs from birth to 3 months of age had an increased risk for developing hip dysplasia. Puppies with off-leash exercise from birth to 3 months of age, born during spring and summer (ie, April-August), and born on a farm had decreased risk. There was significant clustering of dogs with hip dysplasia within litters.

#### Commentary

The dogs in this study represented 23% of all registered puppies of these breeds born in Norway in a 3-year period. Overall, 25% had radiographic evidence of hip dysplasia, with the highest percentage in Newfoundlands (36%) and the lowest in wolfhounds (10%). The large number of dogs provided reasonable suggestions for breeders. Exercise on soft ground seemed to have a protective effect, especially if puppies had the summer to enjoy it. This study raised the possibility of manipulating early puppyhood development to reduce phenotypic expression of a dysplastic genotype.— *Jonathan Miller, DVM, MS, DACVS* 

#### Source

Housing- and exercise-related risk factors associated with the development of hip dysplasia as determined by radiographic evaluation in a prospective cohort of Newfoundlands, Labrador retrievers, Leonbergers, and Irish wolfhounds in Norway. Krontveit RI, Nødtvedt AN, Sævik BK, et al. *AM J VET RES* 73:838-846, 2012.