

"Pearls"
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AT A GLANCE

Accepting new cat in house; P 3
Anesthesia priming; P 1
Anesthesia, adverse effects of; P 1
Anesthesia, brachycephalic; P 2
Anesthesia, local, doses; P 3
Diet, puppy homemade; P 3
Feeding large-breed puppies; P 4
Gabapentin; P 3
Heartworm testing; P 1
Heartworm treatment, website for; P 3
Heartworm, cat, testing positive; P 4
IBD, diet therapy; P 3
Pregnant employee, dealing with; P 1
Rabbits, nutritional support; P 4
Ridgebacks, deafness; P 4
Separation anxiety; P 2
TPLO, complication of; P 2
Vaccine mandates; P 2
Website, refreshing; P 2

Adverse effects of local anesthesia

Local tissue effects - swelling, bleeding, inflammation, dyesthesias ('tingling'? unknown if this occurs in animals). A commonly held misconception is that **local anesthetics impair wound healing** - although they can powerfully inhibit the inflammatory component of cellular tissue influx, there is no evidence to support a clinical effect of impaired wound healing. Both bupivacaine and ropivacaine have been implicated in myotoxicity when injected IM, although this has not been listed as a complication in most human studies where these drugs were infused for 24-36 hours postoperatively into a wound bed. Anaphylaxis - rare, more common with esters (but still rare).

Mark Epstein, DVM, DABVP, CVPP
Am Assoc. Feline Practitioner's Conf, 10:21

Heartworm testing

Dogs can be microfilariae-positive but have no detectable antigens. This can occur for various reasons, including infection with a different filarial parasite, blood transfusion from an infected dog, or antigen blocking, in which the heartworm antigen is presumably bound by host antibodies, masking the antigen from antibodies in the testing kit. In these patients, a fresh sample should be collected and submitted for further investigation. Additional testing may include a modified Knott's test or molecular modalities to differentiate *Dirofilaria immitis* from other species (e.g., *Acanthocheilonema reconditum*) or antigen testing with heat-treated serum at a reference laboratory

(high heat can break antigen-antibody complexes, leaving free antigens for detection). If a microfilariae-positive, antigen-negative dog seroconverts to antigen-positive after heat treatment, then heartworm adulticide therapy is warranted. Because of these phenomena, testing dogs for both antigen and microfilariae is recommended.

Andrew R. Moorhead, DVM, and Cassan N. Pulaski, DVM
Clinician's Brief, Mar 2022

Dealing with the pregnant employee

When you are made aware that an employee is pregnant, the next step is to schedule a meeting between the pregnant employee and the office/safety manager. During this meeting, the employee should be reminded of the potential risks to the developing fetus that exist in the workplace. Employees should also be advised to seek medical advice from their obstetrician regarding the potential workplace risks. Remember to keep a written record of all meetings with employees. The standard form can assist with making sure all appropriate steps are taken with regards to the pregnant employee. While employers have a duty to make reasonable accommodations for pregnant employees, when such accommodations are recommended in writing by the employee's doctor, employers must remember that the decision as to whether to avoid workplace hazards during pregnancy remains in the sole discretion of the employee. It is unlawful for employers to prohibit an employee from working in her usual capacity simply because she is pregnant.

Charlotte Lacroix, DVM, JD
IVECCS, 09:18

Using anesthetic priming

Injectable anesthetic induction agents can significantly alter patient physiology. For example, propofol and alfaxalone (even when titrated to effect for induction) can decrease systemic vascular resistance and blood pressure in cats. Further, both agents can cause respiratory depression and apnea. Thus, anesthetic procedures that minimize the total administered dose (e.g., cardiopulmonary-sparing premedications, slow administration of the anesthetic induction agent, priming doses of the anesthetic induction agent) may help reduce these effects. These data suggest that a small priming dose of alfaxalone (0.25 mg/kg, IV) administered over 60 seconds, which corresponded to ~25% of the lowest recommended induction dose, before orotracheal intubation reduces