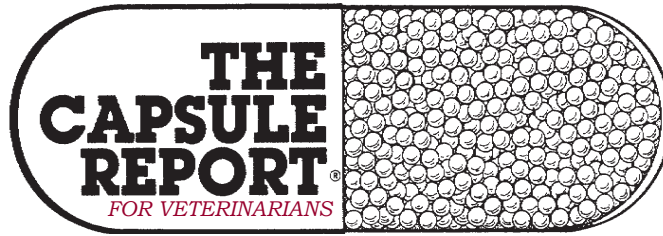


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### Novel weight loss plan for cats

Purina recently conducted a study comparing the effects of **chronic caloric restriction (CCR) and intermittent caloric restriction (ICR)** on weight loss in overweight cats. Fourteen cats were placed in a CCR group and fed 75% of baseline maintenance energy requirement (MER) for 6 months. In the ICR group, 11 cats were fed at 75% of baseline MER for 2 weeks and at 100% of baseline MER the following 2 weeks every month for one year. All cats were fed Purina Veterinary Diets OM Overweight Management Dry Formula. Of the ICR cats, 82% reached an ideal body condition score (BCS) of 5, while 36% of cats in the CCR group reached that ideal BCS during their respective phases of the study. In addition, the ICR cats experienced faster weight loss and had greater reductions in their percentage of body fat than their CCR counterparts. The ICR cats also appeared to maintain higher energy metabolism during the weight loss study, making it easier for them to maintain their ideal body weight after weight loss. It was concluded that **intermittent caloric restriction could be a more optimal weight loss strategy** than chronic caloric restriction. In addition, because the pet has to contend with only two weeks of reduced calories at a time, the program may feel less restrictive to the pet and pet owner, and thereby achieve better compliance.

Yuanlong Pan, PhD  
NAVC Clin Brf, 12:8

### Program to bring back clients

Veterinary practices can participate in a free, new program to help bring back pets that have not been in for over 14 months. The new program is from Partners for Healthy Pets, an alliance of veterinary associations, veterinary colleges, and animal health companies with a mission of ensuring that pets receive preventive care through regular visits to the veterinarian. In August, Partners for Healthy Pets announced a new endeavor: a program of targeted emails to help practices **reconnect with past-due patients**. Partners for Healthy Pets an-

nounced in August that it is now offering the program to all practices for free. Vetstreet clients can enroll through their administrative portals. Other practices can enroll by visiting [www.PHPEExclusiveOffer.com](http://www.PHPEExclusiveOffer.com) or by calling Vetstreet at 888-799-8387.

JAVMA, Sep 15, 2015

### IM, SQ use of alfaxalone

Although not licensed for IM or SQ use in the United States, alfaxalone has been used by those routes to provide stressed, anxious cats mild to heavy sedation, which is typically enough to obtain IV access or perform other simple procedures (e.g., blood collection, diagnostics). However, IM and SQ injections of alfaxalone are associated with prolonged recoveries characterized by agitation and hypersensitivity to stimuli. Addition of a sedative and an opioid helps reduce the dose of alfaxalone and extends duration of effect. The combination also improves the quality of recovery, attenuating excitement that can be seen when only alfaxalone is used. Intramuscular use of alfaxalone is limited by the large volume of injection and thus is restricted to smaller patients (cats, rabbits, ferrets, and other exotic patients [e.g., iguanas, turtles]). IM administration does not cause tissue damage, although some cats resist the injection. At doses of

2.5-5 mg/kg, IM, cats achieved maximum sedation at approximately 10-15 minutes, while with SQ administration of 3 mg/kg (with butorphanol at 0.2 mg/kg), peak effect was only reached by 30-45 minutes post-administration. IM use in dogs is not recommended because of the large volumes of injection and potential for undesirable recoveries (padding, vocalization, and muscle tremors).

Marlis Rezende, DVM, PhD, Dip AVCAA  
NAVA Clin Brf, Jun 2015

### Otitis in the Siamese

A common predisposing factor for otitis externa in cats and dogs is the regular use of cotton-tipped applicators for the removal of normal cerumen. A good example of this is the mature Siamese or Persian cat

#### Valuable Information Inside

Alfaxalone, SQ, IM use; P 1  
Antifreeze poisoning; P 4  
Avian, feather picking; P 4  
Blindness; P 2  
Bring back clients; P 1  
Cardiology case assistance; P 4  
DKA, treatment, long-acting insulin; P 2  
Emetic agents; P 4  
Gingivitis vs. stomatitis; P 2  
Heart failure, bronchodilation; P 4  
IBD, budesonide; P 2  
Limb amputation, owner satisfaction; P 3  
Osteoarthritis, and exercise; P 3  
Otitis, Siamese; P 1  
Parturition, monitoring system; P 3  
Pet food, and corn; P 3  
Rabbits, dosing tramadol; P 4  
Seizures, cat, new cause; P 3  
Tarsorrhaphy; P 2  
Weight loss plan, cats; P 1

# The Capsule Report.

with excessively ceruminous ears noted on physical examination but considered asymptomatic. If left alone, the asymptomatic cat will often remain asymptomatic, if cleaned, the trauma of cleaning will often result in the development of clinical signs. **Consider**

**a little benign neglect** for these patients and explain to the owners why we take a minimalist approach to these cases. However, if symptomatic and infection is identified, treatment is warranted.

*Michael Canfield, DVM, Dip ACVD  
Gulf-Atl Vet Conf, 10:13*

## Treating DKA with long-acting insulins

Treatment of sick diabetic/diabetic ketoacidotic patients (e.g. sick with diabetes) with long-acting insulins can be entertained in dogs or cat with diabetes, especially if given at conservative doses and may have advantages over the use of regular insulin given intermittently or by CRI. Specifically, insulin is required to reverse ketosis, and intermittent regular insulin or insulin CRI may result in dramatic swings in glucose levels, which may increase the time frame required for resolution of ketosis. One common fallacy in veterinary medicine is that IV fluids alone will decrease blood glucoses into an acceptable range, and that insulin should be avoided until a patient is completely volume replete. However, a previous study has confirmed that earlier insulin therapy is not associated with a worse outcome. Patients with severe hypovolemia will benefit from active volume resuscitation and fluids remain a cornerstone of therapy for sick diabetics and diabetic ketoacidotic patients. However, earlier institution of insulin therapy may be beneficial for several reasons; 1) Decreased hyperglycemia will decrease PU/PD and volume loss and make fluid therapy easier. 2) Insulin will reverse ketosis and prevent on-going catabolism. Normalizing pH helps improve electrolyte disturbances as well as clinical signs of metabolic acidosis. Side effects of insulin are uncommon in the hospital and primarily include hypoglycemia, which is easily treated in the ICU.

*Elizabeth Rozanski, DVM, Dip ACVECC, Dip ACVIM  
19<sup>th</sup> Int VECCS Conf*

## Blindness

A common cause of retinal degeneration in dogs is progressive retinal atrophy (PRA), an inherited condition that manifests first as difficulty seeing in dim light. There is no proven therapy for this condition and vision loss is expected to progress to complete blindness but nutritional supplementation (lutein or OcuGLO, PO, SID; [ocuglo.com](http://ocuglo.com)) can be attempted to possibly halt the disease. Sudden acquired retinal degeneration syndrome (SARDS) is another disease that causes canine blindness due to retinal dysfunction but occurs rapidly and initially without observable signs of retinal degeneration.

*Rachel Allbaugh, DVM, MS, Dip ACVO  
122<sup>nd</sup> SD VMA Conf, 08:13*

## Gingivitis vs. stomatitis

Sometimes it is difficult to discern whether a cat has stomatitis or merely gingivitis. Clinical signs will often be a good indicator, even before you take a look in the mouth. Gingivitis is generally well tolerated by cats. However, cats with stomatitis will show signs of hyporexia progressing to anorexia; preference for canned vs. dry food, crying when yawning or eating, ptyalism and occasionally bloody oral discharge. When trying to distinguish gingivitis from stomatitis, the key is the mucogingival line. Routine gingivitis never extends beyond the gingiva, whereas stomatitis always extends beyond the mucogingival line into the alveolar and buccal mucosa. Cats with stomatitis also often show inflammation lateral to the palatoglossal folds in the caudal oral cavity. Inflammation associated with true gingivitis tends to be worst at the free gingival margin, with minimally inflamed gingiva toward the mucogingival line. In cats with stomatitis, the full height of the gingiva is equally red, ulcerated and bleeding.

*John Lewis, VMD, FAVD, Dip AVDC  
Vet Pract News, 26:9*

## Budesonide for IBD

Budesonide is a potent glucocorticoid (reportedly 15X more potent than prednisolone) with excellent topical activity. This drug formulation has delayed dissolution until it reaches the duodenum with subsequent controlled active drug release, allowing exertion of topical antiinflammatory activity in the intestines. Its unique metabolic activity reduces systemic glucocorticoid effects of the drug and allows for more prolonged exposure of the drug to the intestinal mucosa. While this drug may reduce systemic corticosteroids effects, significant suppression of the HPA-axis (and cushinoid side-effects) may still occur in some patients. The primary indication for this glucocorticoid is its oral use to treat inflammatory intestinal disease in patients refractory to or intolerant of systemic steroids such as prednisone or dexamethasone. Dosage: Dogs —3 mg/m<sup>2</sup> (0.5-3 mg per dog), PO, q24hr or 1 mg (total dose), PO, q24hr for small dogs and 2 mg (total dose), PO, q24hr for larger dogs. Cats-1 mg (total dose), PO, q12-24hr. The drug is supplied as 3 mg capsules (micronized) (Entocort EC) (often requires compounding in smaller patients). The enteric-coated sugar spheres found inside the capsule should not be altered or damaged as it may alter activity.

*Gary P. Oswald, DVM, Dip ACVIM  
82<sup>nd</sup> AAHA Conf, 2015*

## Tarsorrhaphy

Following proptosis reduction and tarsorrhaphy, the medial canthus of the palpebral fissure is usually left open a few millimeters to allow topical medications to be applied to the ocular surface. Alternatively, one of the tarsorrhaphy sutures can be left with long tags that can be **tied in a bow** (rather than a knot) and can be opened and dosed as needed to apply medication or check the globe's status.

*Caryn E. Plummer, DVM, Dip ACVO  
NAVC Clin Brf, 11:9*

## A newly recognized cause of seizures in cats

Feline audiogenic reflex seizures (FARS) is a newly defined nonprogressive clinical syndrome affecting geriatric cats characterized by myoclonic seizures and generalized tonic-clonic seizures (GTCSs) **triggered by high-pitched sounds**, often with persistence of the sound serving to increase the severity of the seizure episode. Levetiracetam appears to be more effective than phenobarbital in controlling both the myoclonic seizures and GTCSs associated with FARS. Birman cats were over represented in this study, suggesting breed predilection and genetic basis for the disorder. Some common sounds that induced PARS episodes in affected cats were a) crinkling tin foil; b) dropping a metal spoon into a ceramic bowl; c) clinking or tapping a glass; d) crinkling paper or plastic bags; e) typing on a computer keyboard or clicking a mouse.

Lowrie M. Bessant et al.  
*Vet Med, Oct 2015*

## Pet foods and corn

**Myth: Corn is only used as filler** in pet foods.

**Reality:** Corn often gets a bad reputation for being used in pet foods as filler. By definition, a filler is an ingredient with little to no nutritional value. However, corn in fact contains many important nutrients, including protein, carbohydrates, essential fatty acids, vitamins and minerals. Corn gluten, the protein portion of corn, is highly digestible when ground into a meal and cooked. It contains up to 70% protein and is a good source of amino acids, such as methionine and cystine. Corn also provides the essential fatty acid linoleic acid, which is important for healthy skin and hair coat as well as vitamin A, niacin, and the antioxidants vitamin E and beta carotene. **Key point:** Corn is a highly nutritious ingredient and is not used as a filler in pet food. Another **Myth** concerning corn: **Corn is a common cause of food allergies in pets.** **Reality:** Food allergies make up only an estimated 10% of allergic skin conditions in dogs and cats. In those cases, it has been reported that beef, dairy, wheat and egg are the most common food allergens in dogs while beef, dairy, and fish are the most common in cats. **Key Point:** Corn is not a common allergen in dogs and cats.

Melinda A. Wood, DVM, MS, Dip ACVIM  
*So Ca VMA Pulse, Aug 2015*

## Exercise and osteoarthritis

Exercise is a vital component of OA treatment, both to help with weight loss and to maintain muscle mass and soft tissue support. Acute exercise increases the resting metabolic rate for 2-48 hours, and frequent exercise over an extended period may prevent the reduced resting metabolic rate associated with caloric restriction. Therapeutic exercise also increases muscle mass, making it easier to burn calories.

Darryl L. Millis, MS, DVM and I. Craig Prior, BVSc  
*NAVC Clin Brf, Oct 2015*

## Owner satisfaction of limb amputation

Limb amputation frequently represents the safest,

least demanding, and most cost-effective treatment for a variety of pathological conditions affecting the limbs of dogs. But little current information is available on owner satisfaction with the procedure or perception of their dogs' adaptation following amputation. In a review of medical records for 64 dogs that underwent amputation of a thoracic or pelvic limb, 58 of 64 (91%) owners perceived no change in their dog's attitude after amputation, 56 (88%) reported complete or nearly complete return to presurgical quality of life, 50 (78%) indicated the dog's recovery and adaptation were better than expected, and 47 (73%) reported no change in the dog's recreational activities.

Vannna M. Dickerson, DVM et al.  
*JAVMA, Oct 1, 2015*

## Parturition, monitoring system

In the days and hours leading up to parturition, the uterus has characteristic patterns of contractility that progress in an orderly pattern with normal delivery. These contractions can be monitored with a uterine monitoring system such as that supplied by Whelpwise ([www.whelpwise.com](http://www.whelpwise.com)). The system consists of a tocodynamometer, recorder and modem. The sensor detects changes in intrauterine and intra-amniotic pressures. The sensor is strapped to the clipped abdomen of the bitch (or queen), the recorder is held in a small pouch on a harness. Once monitoring is complete, information is transferred to the service via modem. The service's obstetrical staff immediately evaluates recordings. This system can be used by breeders at home, with veterinarian in consult or used in the clinic in cases that are not already on the service. Fetal heart rates are also monitored using a handheld Doppler in conjunction with the uterine monitoring system.

Joni L. Freshman, DVM, MS, Dip ACVIM, CVA  
*SW Vet Symp, 09:14*

## Bronchodilation in feline heart failure

For a cat with acute severely decompensated heart failure (HF), minimizing stress is of the utmost importance. Often times, stress may have even precipitated the episode of heart failure. Giving the cat small breaks in between diagnostic and therapeutic interventions is wise and potentially lifesaving. Many times, one should start empiric therapy for presumptive heart failure if history, physical exam and preliminary low stress diagnostic testing are most suggestive for HF. Initial treatment typically includes oxygen, sedation, IV or IM furosemide and thoracocentesis if indicated. Another low risk empiric treatment option in cats in which the diagnosis of heart failure is uncertain and feline asthma is also being considered is inhaled bronchodilation. The bronchodilation may help some cats with heart failure as they can develop peri-bronchiolar pulmonary edema with associated bronchoconstriction. Generally, **one or two puffs of albuterol are administered with a mask and spacer chamber.** An additional one or two puffs could be repeated in 15-30 minutes to ensure delivery of the drug to the smaller

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airways. Bronchodilators should be used with caution, as they can cause tachycardia and tachyarrhythmias, especially at higher doses.

*Terri DeFrancesco, DVM, Dip ACVIM, Dip ACVECC  
21<sup>st</sup> Int VECCS, Sep 2015*

### Cardiology cases assistance

Cardiology cases can sometimes be difficult for general wellness practitioners to treat. Most GPs are confident to realize when cardiac issues arise, but lack the advanced training to treat a potentially complicated case. The Cardiology Service at the UC Davis Veterinary Medical Teaching Hospital (VMTH) can help in determining the severity of cases. The hospital maintains a cardiology hotline available for immediate consultations on cardiac cases with board-certified cardiology specialists, whether or not veterinarians intend to refer the case to UC Davis. UC Davis is able to consult on cases, review diagnostic test results and help craft a cardiology treatment plan. For immediate assistance, veterinarians can reach a faculty member directly at (530) 979-0751. (Please note this hotline is for veterinarians only.)

*Rob Warren  
So Cal VMA Pulse, Oct 2015*

### Questioning dose of tramadol in rabbits

Ideally, dosing recommendations for all animals would be based on controlled clinical trials; however, dosing in exotic animals is often based on anecdotal experience or word of mouth. Analgesics and antimicrobials are of particular concern when dosing exotic animals. For example, because of zoonotic potential, treatment of mycobacteriosis in birds is controversial. When references given for mycobacteriosis treatment in a popular exotic animal formulary are closely examined, none are based on pharmacokinetic or pharmacodynamic studies or clinical trials; this raises the question of whether practitioners have enough data to eradicate infection without contributing to circulating drug-resistant zoonotic strains. As another example, anecdotal doses of 10-11 mg/kg of tramadol, once or twice daily are recommended for rabbits. However, the author's pharmacokinetic study suggested that plasma concentrations at this dose were below those associated with analgesia in humans, which leads to the concern that these dosages may not be beneficial in rabbits.

*M.J. Souza  
NAVC Clin Brf, Jun 2015*

### Feather picking

Multiple pharmacologic agents have been advocated for use in feather destructive behavior (FDB). Opioid blockade with receptor antagonists has been shown to be effective in treating self-injurious behavior in people and as such has been advocated for treatment of FDB. A naltrexone dose of 1.5 mg/kg, BID, orally has been advocated, but pharmacokinetic studies are lacking. Antipsychotic

drugs act as antagonists to dopaminergic D2 receptors and also interrupt the endogenous opioid feedback cycle; of these drugs haloperidol has received the most attention in avian medicine. Haloperidol is used most often for self-mutilation, as opposed to feather destructive behavior. Doses from 0.01-2 mg/kg have been published.

*Teresa Lightfoot, DVM, Dip ABVP  
CVC, Kansas City, Aug 2015*

### Treatment of ethylene glycol poisoning

**Ethanol.** Dogs: 20% ethanol: 5.5 ml/kg, IV, every 4 hours for 5 treatments, then every 6 hours for 4 treatments or same dose administered as CRI until EG levels are negative, which is typically more than 48 hrs. 30% ethanol: 1.3 ml/kg, slow IV bolus, then 0.42 mL/kg/hr CRI, for 48 hours. Cats: 20% ethanol: 5.0 ml/kg, IV, every 6 hours for 5 treatments, then every 8 hours for 4 treatments. 30% ethanol: 1.3 ml/kg, slow IV bolus, then 0.42 mL/kg/hr CRI, for 48 hours. **Fomepizole.** Dogs: Initial 20 mg/kg, slow IV bolus over 15-20 minutes. At 12 and 24 hours after initial bolus, 15 mg/kg, IV. At 36 hours after initial bolus, 5 mg/kg, IV. Cats: Initial 125 mg/kg, slow IV bolus. 31.25 mg/kg, IV, every 12 hours after initial bolus for 3 treatments. Antizol-Vet has been withdrawn from the market, but human-use fomepizole and compounded versions are available.

*Erin McGowan, VMD and Lori S. Waddell, DVM, Dip ACVECC  
NAVC Clin Brf, Oct 2015*

### Emetic agents

Hydrogen peroxide works by local irritation of the oropharynx and gastric lining which results in a gag reflex. It is usually recommended for oral administration by the dog owner when transportation to a veterinary clinic is delayed. Only a 3% hydrogen peroxide solution should be used, as higher concentrations can potentially be corrosive to the GI mucosa. Hydrogen peroxide is not a reliable emetic in cats and its use generally is NOT recommended in this species. In addition, cats can develop profound clinical signs from the administration of H<sub>2</sub>O<sub>2</sub> including profuse foaming from the mouth and severe hemorrhagic gastritis. **Methods that are not recommended for emesis** induction include digital induction of emesis, syrup of ipecac, liquid soaps, dry mustard powders, and salt. Digital induction of emesis often results in physical injury to the pet owner, or injury to the pet's throat and soft palate. Syrup of ipecac has historically been recommended to induce emesis, but is no longer the standard of care. Its cardiotoxic potential and tendency to result in prolonged vomiting, lethargy, and diarrhea have caused it to fall out of favor in both human and veterinary medicine. Soaps, mustard powders, and table salt are not reliable as induction agents and may be detrimental (e.g., resulting in further complications such as hyponatremia).

*Justine A. Lee, DVM, Dip ACVECC, DABT  
19<sup>th</sup> Int VECC Symp*