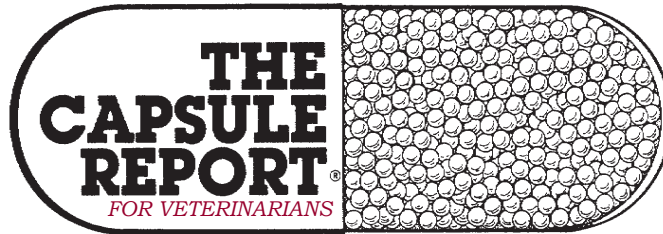


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### Xylitol now found in some peanut butters

Xylitol, a natural sugar alcohol sweetener popular for its low glycemic index but known to cause hypoglycemia and hepatic necrosis in dogs, **is now also found in several specialty peanut and nut butter brands.** Nuts 'n More, Krush Nutrition and P-28 Foods all make peanut butter and nut-based spreads containing the ingredient. Dogs fed straight peanut butter as a treat or fed treats baked with xylitol-containing peanut butter may certainly be at risk for harm. A dog that nabs the entire jar of xylitol-containing peanut butter and happily gorges on its treasure without anyone knowing could quickly become extremely ill. If this occurred during the day while the owners were not home, it's possible the dog could die before people returned. Something to check is whether the packaging says "sweetened naturally" or that it uses a "natural sweetener." It's a common misconception that xylitol is an artificial sweetener—but it's not. It's normally found in small amounts in fruits and vegetables, so if you see those terms, look deeper to see if xylitol is listed. Chemically, xylitol is classified as a sugar alcohol, so this is another phrase to look for. Because xylitol and other sugar alcohols are not technically sugar, they might also be found in products labeled "sugar free" or "no sugar added." P-28 Peanut Spread reported the following.

For a 10 lb dog, 0.8 oz is potentially toxic; for a 25 lb dog, the potential toxic dose is 2 oz; for 50 lb, 4 oz; and for 75 lb, 6 oz.

Ahna Brutlag, DVM, MS, Dip ABT, Dip ABVT  
DVM News Mag, Aug 2015

### Oclacitinib use in the cat

Oclacitinib is not approved for use in cats. In one case involving feline cutaneous mastocytic dermatitis, the patient was successfully treated with 31 days of oclacitinib therapy at 1 mg/kg, PO, twice a day. A recently published abstract described success of oclacitinib to control nonflea- and nonfood-induced hypersensitivity in 12 cats that received 0.4-0.6 mg/kg, PO, twice a day for 14 days, then once a day for 14 days. Owner-assessed

efficacy was reported to be good or excellent in 4 cases.

Jennifer S. Pendergraft, DVM, MS, Dip ACVD  
Plumb's Ther, Jul 2015

### Boswellia serrata dosage for canine OA

The resin from *Boswellia serrata* has been shown to inhibit leukotriene biosynthesis from endogenous arachidonic acid in intact peripheral mono-nuclear neutrophils through the inhibition of 5-lipoxygenase (LOX) and to inhibit tumor necrosis factor alpha production. An appropriate dosage has not been fully established in dogs or cats, but a clinical trial giving 40 mg/kg of a resin extract to dogs with osteoarthritis had a **positive subjective effect on pain and lameness.**

Julia Tomlinson, BVSc, MS, PhD, Dip ACVS,  
Dip ACVSMR  
DVM News Mag, Aug 2015

### A novel bone marrow sampling technique

Not wanting to anesthetize or heavily sedate this critical ill patient, a novel bone sampling technique was used. The dog was placed in lateral recumbency, and using local analgesia, a 22-gauge needle attached to a 3-mL syringe was inserted at the costochondral junction of the 10th rib and advanced dorsally into the medullary cavity to aspirate bone marrow. Cytology was performed on the aspirate. This

novel technique may be useful in a variety of cases.

Elizabeth Rozanski, DVM, Dip ACVIM, Dip ACVECC et al.  
NAVC Clin Brf, Jul 2015

### Steroids for anaphylaxis

Glucocorticoids are indicated for the treatment of anaphylactic reactions. However **immunosuppressive doses are recommended** (i.e. 2-6 mg/kg, IV MPSS OR 0.3-1 mg/kg dexamethasone), not shock doses. If cardiovascular collapse is present administration of epinephrine (2.5-5 µg/kg {0.0025-0.005 mg/kg} IV) will provide immediate cardiac stimulant and vasopressor effects.

Butch KuKanich, DVM, PhD, Dip ACVCP  
West Vet Conf, 02:13

#### Valuable Information Inside

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# The Capsule Report.

## Propolis for dermatophytosis

Canine dermatophytosis is caused by pathogenic dermatophytes. Propolis, a natural antifungal compound produced by bees, is comprised mostly of polyphenols. In dogs, propolis has been shown to be effective treatment of fungal otitis. This study reported 3 dermatophytosis cases that resolved with topical propolis therapy (i.e., baths with commercial propolis-containing soap, propolis ointment). Lesions resolved in 2 dogs after 3 weeks and in the third dog after 8 weeks. Although additional studies are needed, the results of this study are promising.

*TAC Sánchez et al.  
Plumb Ther, Jul 2015*

## Altering drug dose in geriatric pets

Older pets may have other concurrent diseases that may complicate drug therapy. They are also more likely to be receiving other drugs chronically for treatment of a disease compared to a younger pet. These drugs can increase the likelihood of adverse reactions or produce a drug interaction. However, **old age alone is not a reason to reduce the drug dose**, alter the dosing interval, or withhold potentially helpful medications. If there is accompanying organ failure (liver, kidney) dose adjustments may be necessary if these organs are used to clear the drug from the body. If multiple other drugs are used, adjustments may be needed to avoid an interaction. However, age alone is not a good reason to adjust the regimen.

*Mark G. Papich, DVM, Dip ACVCP  
West Vet Conf, 02:13*

## Treating bladder infections

Researchers compared 14 days of amoxicillin-clavulanic acid at a dose of 13.75-25 mg/kg, PO, BID to three days of enrofloxacin dosed at 18-20 mg/kg, PO, SID to treat urinary tract infections in 68 dogs. Results showed no significant difference between the therapies when cultures were taken at 0, 10 and 21 days. The microbiologic cure rate was 77% and 81% for three days of enrofloxacin and 14 days of amoxicillin-clavulanic acid respectively. **Conclusion:** Consider short-term, high doses of enrofloxacin for simple UTI.

*Phil Zeltzman, DVM, Dip ACVS, CVJ  
Vet Pract News, 26:3*

## Geriatric anesthesia, emergence delirium

Delayed metabolism of drugs prolongs the recovery phase. A benzodiazepine or opioid antagonist (e.g., flumazenil or naloxone, respectively) may be required if profound sedation is suspected and metabolic disturbances have been ruled out. Both classes of drug can cause emergence delirium. This is especially true of patients experiencing little pain or discomfort after surgery. They are more likely to experience emergence delirium caused by the residual effects of the sedatives and analgesics. Emergence delirium can also be exacerbated by

cognitive dysfunction, which has been reported in humans, cats, and dogs. Pathological changes have been observed similar to human Alzheimer disease and age-related storage diseases of the brain. Even changes in environment can cause significant uncharacteristic behaviors and poor recoveries. If drug-induced dysphoria is suspected, it is not necessary to fully antagonize their effects but to partially antagonize effects until the patient returns to a state where it is comfortable and can function normally. Based on the experience of this author and others, both flumazenil and naloxone have been used to treat emergence delirium. Used at 0.001-0.005 mg/kg, IV to antagonize their respective agonists, they are given in small IV boluses every 3 minutes until the patient is calm. When antagonizing opioids, it is necessary to monitor for signs of pain.

*Patrick M. Burns, BVSc, MANZCVS, Dip ACVAA  
NAVC Clin Brf, Jun 2015*

## By-products not of low quality

**Myth:** By-products are low quality ingredients. **Reality:** A by-product is simply a secondary product produced in addition to the principal product. The Association of American Feed Control Officials (AAFCO) defines meat by-products as “the non-rendered, clean parts, other than meat, derived from slaughtered mammals. It includes, but is not limited to, lungs, spleen, kidneys, brain, livers, blood, bone, partially defatted low temperature fatty tissue, and stomachs and intestines freed of their contents. It does not include hair, horns, teeth, and hoofs.” By-products may be considered delicacies by other generations or cultures, such as tripe or chicken feet, or may be commonly used without concern such as chicken stock or gelatin. Importantly, by-products **can be essential to the diet of the dog and cat** in whom nutritional deficiencies would develop if they consumed only skeletal muscle, providing an excellent source of nutrients such as iron, vitamins A, B12, E, K, riboflavin, biotin and folic acid.

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

## Hip dysplasia, be sure of diagnosis

Over 30% of dogs sent to referral practices for treatment of hip dysplasia are actually **lame from a ruptured cranial cruciate ligament**, not from dysplasia. Careful clinical diagnosis backed up by elimination of other disease differentials is necessary to establish a diagnosis of hip dysplasia. Diagnosis of hip dysplasia has been improved by knowledge that the curvilinear osteophyte around the neck of the femur is a reliable early indicator of hip dysplasia. The presence of hip laxity elicited by the Ortolani palpation method is a reliable indicator of hip dysplasia after approximately 16 weeks of age. The PennHip method remains the best clinical predictor of hip dysplasia in the adult animal.

*James K. Roush, DVM, MS, Dip ACVS  
West Vet Conf, 02:13*

## Home analgesia option

Indwelling epidural catheters have been used in

small animals, but this method has not been described for outpatient care. This study compiled data from 83 dogs that had undergone surgical procedures of the pelvic limb. Dogs were discharged with an indwelling epidural catheter over the lumbosacral space. Owners were given pre-dosed syringes of morphine at either 0.05 mg/kg or at 0.1 mg/kg. Doses were administered immediately after catheter placement, then q6h for 48 hours. Effectiveness of pain management and occurrence of adverse effects and complications were assessed by owner questionnaire. Most patients seemed comfortable and behaved normally in the home environment. Owners reported both normal defecation (83%) and urination (61%) habits in a majority of dogs. None required emergency or rescue therapy. Epidural catheter placement is a relatively simple, affordable way to offer localized analgesia for an extended postoperative period. Of the adverse effects reported, catheter dislodgement, breakage, or major infection were not prevalent. These results provide a compelling argument for epidural catheter use in post-operative pain management. Adverse effects of epidural morphine administration include urinary retention and fecal incontinence.

Heather Troyer, DVM, DABVP, CVA, et al.  
NAVC Clin Brf, Jul 2015

### Chronic GI disease in the cat

This author finds measurement of serum cobalamin to be a useful ancillary test for two reasons: 1. Deficiencies of cobalamin indicate small intestinal malabsorption and further solidify the suspicion of GI disease. 2. Supplementation of cobalamin in cats with deficiencies may help to improve clinical signs. Cobalamin is absorbed exclusively in the ileum of cats. Therefore cobalamin deficiency can indicate distal small intestinal disease. However, cobalamin absorption requires the presence of intrinsic factor, which is made exclusively by the pancreas in cats. As such, cobalamin deficiency can be caused by EPI in cats. Any cat with cobalamin deficiency **should have serum fTLI testing performed**. Cobalamin supplementation at 250 µg per cat, SQ, once weekly (using cyanocobalamin 1 mg/ml injection) has been shown to improve clinical signs in some (but not all) cobalamin deficient cats. If a positive response to cobalamin supplementation occurs after 4 weeks, it is recommended continuing weekly injections for a total of 6 weeks, then decreasing to every other week for 6 treatments (12 weeks), then giving monthly injections for life or until the underlying disease is well controlled.

Mark P. Rondeau, DVM, Dip ACVIM (SAIM)  
Penn Vet Conf, 03:14

### Making glucose meters more accurate

Blood samples were tested in a glucose meter and as a control, a biochemical analyzer, the gold standard of blood glucose measuring. The researchers found that testing either blood plasma or blood serum in the glucose meter gave results nearly the same as those given by the biochemical analyzer and were **more accurate than with whole blood**. The

plasma and serum results were very tightly clumped with the results from the gold standard machine. On the power of these results, the hospital in this report has changed its practice from using whole blood to using plasma or serum.

Rebecca Hess, DVM, Dip ACVIM et al.  
Vet Pract News, Aug 2015

### Infection control for Lepto

\*House the dog in isolation, when possible. \*Start appropriate antimicrobial therapy promptly, before confirmation of leptospirosis, if it is a reasonable differential. \*Use enhanced barrier precautions (e.g., gloves, gown or dedicated lab coat) when handling the patient or any potentially urine-contaminated items or when working within the patient's environment. \*Wear eye protection and a mask or full-face shield when performing activities that might aerosolize leptospire (e.g., handling a urine-soaked animal that might struggle or be excitable). \*Wash hands or use an alcohol-based hand sanitizer after glove removal and any contact with the animal or potentially contaminated environments. \*Treat soiled laundry, especially urine-soaked bedding, as infectious. Wear gloves and a gown or dedicated lab coat when handling soiled laundry, and wash hands after glove removal. \*Restrict contact between leptospirosis patients, suspected cases, and pregnant personnel as possible. \*Clean and disinfect any potentially contaminated areas promptly and effectively using a disinfectant effective against *Leptospira* spp (e.g., accelerated hydrogen peroxide). \*Use adequate cage signage so all personnel know the animal is infectious. \*If the dog is walked outdoors, ensure it cannot contaminate the clinic environment while leaving and try to reduce the risk for outdoor contamination (e.g., have the dog urinate on a hard surface that can be cleaned and disinfected).

J. Scott Weese, DVM, DVSc, Dip ACVIM  
NAVC Clin Brf, 12:7

### Otitis - be sure to check for Demodex

When diagnosing otitis, remember when performing ear smears for yeast or bacteria to also perform ear smears in oil in dogs and cats. Otitis caused by *Otodectes* species and especially *Demodex* species may be missed if smears are not checked in oil. As with demodicosis of the feet, if you find yeast on smears or cytology, then make sure to dig deeper by doing smears in oil to look for demodectic otitis. Ear smears in oil need to be performed on all patients with otitis, especially those with generalized demodicosis that you think may have resolved their skin lesions. Sometimes demodectic otitis tends to linger despite resolution in other parts of the body, and practitioners may forget to monitor ear smears. The author also reminds us that all ear drops should be **administered at room temperature**. One study showed that in any species-people included—cold ear drops should not be instilled in the ear since ver-

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tigo, nausea or vomiting may result. So if certain ear preparations need to be refrigerated, bring them to room temperature before administration.

Alice M. Jeromin, RPh, DVM, Dip ACVD  
DVM News Mag, Jun 2015

### Skin disease and importance of bathing

It's absolutely critical that we teach owners the importance of bathing their dogs with skin disease. Often, this author thinks, there are old misconceptions that bathing will damage the coat or the skin, but we didn't always have the quality products we have now. If an owner is willing to bathe multiple times a week, great — but now we have a topical product for every client. We've got sprays, mousses, and for focal lesions wipes and spot-ons. Many clients will only use antiseptic shampoo during the active infection, and then go back to their regular grooming routine once every 6-8 weeks. But with chronic allergic skin disease, continuing to bathe that dog once a week is a very important. **A dog can never be bathed too often.** Topical therapy is critical to not only resolving the current infection but also preventing relapse. Appropriate antibiotic therapy should be coupled with frequent bathing: two to three baths per week during active infections, and then once a week thereafter for prevention.

Valerie Fadok, DVM and John Angus, DVM  
NAVC Clin Brf, May 2015

### Management of the moribund bird

**Immediate emergency treatment for the moribund bird.** Slide bird and cage into warm, humidified, oxygenated environment. That's it! Then go talk to the owner - both to get information that may help direct treatment, to ensure that the owner realizes how critical their bird is, and to permit the bird to restore oxygenation if possible. **The moribund/minimally responsive bird.** If the bird is minimally responsive, palpation of the keel and sterno-pubic area, *without* moving the bird may be accomplished. \*Emaciation indicates *chronicity*. \*Increased sterno-pubic distance (abdominal distention)—narrows the differential diagnosis. \*In the absence of these findings, more acute disease is likely. After this brief exam, the bird goes back into oxygen. Oxygen should be warm and humidified, Warm, because hypothermia is very common and under diagnosed. Humidified, since dehydration and hypovolemia are common.

Teresa L. Lightfoot, DVM, Dip ABVP  
Music City Vet Conf, 02:14

### Lumbosacral stenosis, medical management

Although medical treatment has been suggested for dogs with degenerative lumbosacral stenosis (DLSS) that have only mild or moderate clinical signs without neurologic deficits, little is known about the outcome of these dogs. In a review of medical records of dogs with DLSS treated medically (n = 49) or surgically (49), neurologic deficits were observed significantly **more often**

**in surgically treated dogs.** Of the 31 medically treated dogs available for follow-up evaluation, 17 were managed successfully, 10 were managed unsuccessfully and underwent surgical treatment, 3 were euthanized because of progression of clinical signs, and 1 was alive but had an increase in severity of clinical signs after medical management.

Steven De Decker, DVM, PhD, MVetMed et al.  
JAVMA, 245:4

### Giving fluids in urethral obstruction

After catheter placement and phlebotomy, isotonic crystalloid fluid therapy (e.g., lactated Ringer's solution, 0.9% NaCl) is often started to address common abnormalities (e.g., dehydration, hypotension, electrolyte derangements). Despite concern about IV fluids distending the bladder further (with the potential for rupture), this rarely occurs. The pressure transmitted from the bladder to the kidneys reduces the glomerular filtration rate and decreases urine production, so the bladder is not often impacted in this early phase of treatment.

Garret Pachtinger, VMD, Dip ACVECC  
NAVC Clin Brf, 12:7

### Using prazosin in urethral obstruction

Prazosin (0.25-0.5 mg/cat, PO, q12h x 7-10 days) or phenoxybenzamine (2.5-7.5 mg/cat, PO, q12-24h x 7-10 days), are alpha-2 antagonists that cause smooth muscle relaxation. These medications are routinely administered to cats with urethral obstruction in the hopes that it will prevent urethral spasm and re-obstruction. Clinically, cats with urethral spasm (aka urethral hyper-reactivity) may strain to urinate and only produce small amounts of urine after the urethral catheter is pulled. Typically, urine can be expressed from these cats with bladder palpation, however, there is a large concern for recurrent urethral obstruction as these cats do not completely empty their bladder. At this time, there is no evidence whether this treatment helps to prevent recurrent urethral obstruction and the appropriate duration of therapy is not currently known. A possible side effect of prazosin is low blood pressure (can cause vascular smooth muscle dilation as well) seen following the first dose administered. However, based on this author's experience, this effect does not generally persist with repeated doses.

Erica L. Reineke, VMD, Dip ACVECC  
VECCS Spr Sym, 04:13

### Taking care of the umbilicus

The umbilicus of neonates should be treated with tincture of iodine immediately after birth to reduce contamination and prevent ascent of bacteria into the peritoneal cavity (omphalitis-peritonitis). This condition is the primary cause of the subsequent "fading puppy or kitten syndrome," neonatal septicemia.

Autumn Davidson, DVM, Dip ACVIM and Tomas Baker MS  
West Vet Conf, 02:13

### Welcome, Dr. Farmer to The Capsule Report

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