

# Facts about long-term medications

*What all pet owners should know about their pet's pills*

**Y**our pet deserves the best care. Because of this, we carefully monitor your pet's health after prescribing medication to ensure greater success in treating his or her condition. Monitoring helps us choose the proper drug and dosage for your pet's age, size, breed, and physical condition, and it helps ensure your pet's safety as we evaluate for any side effects, complications, or interactions with other drugs. Monitoring also helps us establish a baseline picture of your pet's vital organs so we know when changes indicate areas of concern. This helps us assess the treatment plan and make adjustments as necessary. Here are some facts about commonly prescribed long-term pet medications:

## Arthritis medications

- ❑ **Carprofen, firocoxib, etodolac, deracoxib, meloxicam, and tepoxalin:** Nonsteroidal anti-inflammatory drugs (NSAIDs) reduce inflammation, fever, and pain. NSAIDs are generally safe for dogs (meloxicam is approved for cats) and have few side effects if given as directed, although some vomiting and diarrhea may occur. We'll take blood samples to check liver and kidney function before administration and two weeks afterward to ensure safety. We'll also do blood tests every six months to detect any abnormalities that arise with long-term use.

Potentially fatal bleeding ulcers in the stomach and intestines may result if NSAIDs are given with aspirin, acetaminophen, ibuprofen, prednisone, or methylprednisolone. These drugs should be used with caution in patients receiving enalapril or digoxin, and they may decrease the effects of furosemide and phenobarbital.

## Seizure medication

- ❑ **Phenobarbital** is used to treat epilepsy and seizure disorders. We'll take blood tests before administration and then check phenobarbital blood levels every two weeks until the drug is at the right level. We'll test liver function one month after starting phenobarbital and then every six months. With this drug, we'll need to take blood samples as close to the normal time of administration as possible (up to two hours before or two hours after). Common side effects include lethargy or depression, especially the first week; anxiety or agitation; and increased thirst, appetite, and urination. Phenobarbital may decrease the effectiveness of antihistamines, corticosteroids, metronidazole, doxycycline, and beta-blockers.

## Allergy medications

- ❑ **Methylprednisolone, prednisolone, and prednisone:** Corticosteroids are commonly used to treat allergies, especially itchy skin (allergic dermatitis). We'll perform liver and kidney function blood tests before prescribing these drugs for long-term use and after 30 days to ensure safety. We'll then do regular blood tests every six months to detect any abnormalities.

If given every other day, these drugs have few side effects. Common side effects include increased appetite, thirst, and urination. Long-term daily usage or high-dose usage can lead to potentially fatal Cushing's disease, gastrointestinal (GI) ulcers, increased appetite and weight gain, panting, a dull and dry haircoat, GI upset, diabetes, hypothyroidism, pancreatitis, muscle wasting, or behavioral changes such as depression, lethargy, or aggression. We'll keep an especially close eye on your pet if he or she is also receiving amphotericin B, furosemide, insulin, erythromycin, or a cancer medication. And we won't ever give corticosteroids along with carprofen, etodolac, aspirin, acetaminophen, or ibuprofen.

- ❑ **Hydroxyzine and diphenhydramine** are antihistamines often used to treat allergic conditions. We'll do blood tests after one month of usage and then every six months. The most common side effect is sleepiness. Other side effects include dry mouth and gastrointestinal (GI) upset. If your pet has glaucoma, prostatic hypertrophy, hyperthyroidism, or heart disease, we'll need to be especially careful with antihistamines.

Handout courtesy of Dr. Ernest E. Ward Jr. These are suggested guidelines only. As with any medication regimen, your doctor will use his or her discretion with each patient and will refer to product inserts and other sources for a complete description of drug interactions and cautions.

## Heart medications

- ❑ **Digoxin** is a cardiac glycoside used to treat congestive heart failure and abnormal heart rhythms. We'll test your pet's kidney and liver function and electrolyte levels before prescribing digoxin, after 30 days of use, and every three to six months after that. We'll also evaluate blood levels 14 days after starting treatment to make sure we're giving the right amount, and we'll check blood levels every three months to keep an eye out for complications. Common side effects of digoxin include gastrointestinal (GI) upset, loss of appetite, and weight loss. Potential complications include fatal abnormal heart rhythms and kidney damage. Most side effects are related to high blood levels.
- ❑ **Enalapril** is an ACE inhibitor used to treat many forms of heart disease, especially congestive heart failure caused by mitral insufficiency. We'll do blood tests before prescribing enalapril, 30 days after administration, and every six months to ensure proper kidney function and electrolyte levels. Side effects include gastrointestinal (GI) upset (vomiting, diarrhea, or loss of appetite), low blood pressure, and kidney damage. If your pet is also receiving other drugs, such as furosemide, carprofen, or etodolac, we may need to adjust the dosage of enalapril.
- ❑ **Furosemide** is a diuretic commonly used to treat pulmonary edema (fluid in the lungs) associated with congestive heart failure. We'll do a complete blood count (CBC), liver and kidney function blood tests, and an evaluation of electrolyte levels, especially potassium, before giving furosemide and 30 days afterward to ensure safety. We'll then perform regular blood tests every six months. Side effects include increased thirst and urination, dehydration, electrolyte imbalances (especially potassium, sodium, and calcium), gastrointestinal (GI) upset, anemia, leukemia, restlessness, and weakness. We'll be especially careful if your pet is also receiving theophylline, corticosteroids, NSAIDs, digoxin, or insulin.

## Thyroid disease medications

- ❑ **Levothyroxine** is used to treat hypothyroidism. We'll test total levels of  $T_4$  (a thyroid hormone) one month after beginning levothyroxine, then every six months to ensure proper dosing. Occasionally another test—free  $T_4$  by equilibrium dialysis—will be necessary. We'll need to take blood tests four to six hours after administration.

At proper levels there are usually no side effects to levothyroxine, but it may affect your pet's insulin and digoxin requirements. Also, many drugs can affect  $T_4$  levels, so let your veterinarian know if your pet is receiving any other medications.
- ❑ **Methimazole** is used to treat hyperthyroidism. Because of the potential for serious complications with this drug, blood tests are very important. We'll do a complete blood count (CBC) and a total  $T_4$  test before starting methimazole, and we'll test liver and kidney function every 14 days until proper levels are achieved. We'll then perform these blood tests every three to six months to ensure safe and proper dosing.

Patients with liver disease or clotting disorders should not receive the drug. Up to 20 percent of all cats treated develop adverse effects. Notify the hospital if you observe decreased appetite, vomiting, lethargy, or any abnormality that concerns you.

## Urethral incontinence medication

- ❑ **Phenylpropanolamine:** This drug is commonly used to treat urethral incontinence. We'll take blood tests before any long-term usage, after one month, and every six months to ensure continued safety. Common side effects include hyperexcitability, increased heart rate, and decreased appetite. We'll be extra-careful if your pet is also receiving selegiline, ephedrine, carprofen, etodolac, aspirin, acetaminophen, or amitriptyline.