

ANGIOTENSIN-CONVERTING ENZYME INHIBITORS (ACEI)

An angiotensin converting enzyme inhibitor (Enalapril or Benazepril) has been added to your pet's therapy. ACEIs are "vasodilators" that lower blood pressure by dilating blood vessels. ACEIs also have effects in the kidneys, preventing salt and water retention.

When cardiac function decreases, the body tries to maintain blood pressure by constricting blood vessels in the skin and some internal constriction in your pet as cool ears and feet and a decreased tolerance for exercise (as blood flow to the muscles is decreased). Even though this constriction of blood vessels increases blood flow to some organs, the increased pressure in the arteries provides an additional load for the failing heart must overcome in order to pump blood. The purpose of a vasodilators like ACEIs is to decrease blood pressure just enough to allow the heart to empty more easily, without decreasing the pressure so much as to make your pet feel weak.

Side effects of ACEIs may include weakness (if blood pressure is too low), or kidney failure and elevated blood potassium levels (if blood pressure in the kidney is too low). Kidney failure and high blood potassium does not occur very often and is usually reversible, but must be diagnosed early. If you pet is receiving an ACEI, watch him or her for signs of weakness: lethargy, increased heart rate, listlessness or inability to rise. Signs of deteriorating kidney function include loss of appetite and/or vomiting. If these signs occur, please call us immediately.

We may request that you return with your pet for an "electrolyte" evaluation approximately 4 days after beginning therapy with an ACEI. This is the most common time for kidney or potassium problems to occur, and measurement of normal kidney function and potassium levels ensures that your pet is handling the drug well.

FUROSEMIDE

Furosemide (Lasix) has been prescribed for your pet as part of the treatment for congestive heart failure. Furosemide is a diuretic drug and helps the body get rid of excess salt and water.

In states of heart failure, the body tries to compensate for poor cardiac function by increasing the amount of blood in the body. The kidneys "save" salt and water and the blood volume increases. When the heart is not functioning normally, it cannot cope with this increased load and fluid then builds up in the lungs ("pulmonary edema") and sometimes in the abdominal cavity ("ascites"). You may notice signs of fluid build-up as development of a cough, shortness of breath, or an increase in the size of the abdomen. The addition of Furosemide to your pet's medication routine allows him or her to urinate more frequently and in larger amounts, thereby getting rid of excess fluid build-up. The drug will need to be given in varying doses, depending on your pet's underlying disease and his or her response to treatment.

Common side effects of Furosemide therapy include increased thirst and increased urination. It is important that your pet has fresh water available always; do NOT restrict water intake. If the increase in frequency of urination becomes a problem call us for advice. Furosemide use may lead to low potassium levels, especially if your pet is not eating well. This problem is usually detected when “electrolytes” are measured during re-evaluations of your pet’s progress.

If your pet becomes ill and stop eating and drinking while receiving Furosemide, dehydration can occur very rapidly. Please contact us if your pet’s appetite or water consumption decreases.

PIMOBENDAN

Pimobendan (Vetmedin) has been added to your pet’s therapy for congestive heart failure. Pimobendan is a medication with multiple actions on the heart and blood vessels. Pimobendan dilates blood vessels, thereby decreasing blood pressure and decreasing the load on the heart. In addition, Pimobendan increases the contractile function of the heart, allowing it to contract more vigorously. Pimobendan is indicated for therapy of valvular (mitral valve insufficiency) and heart muscle disease (dilated cardiomyopathy) when congestive heart failure is present.

Pimobendan is given every 12 hours orally. Pimobendan is well tolerated in dogs and has few adverse effects. If you notice any vomiting or diarrhea, call us. Pimobendan should not be used as a replacement for, but rather as co-therapy with, other cardiac drugs to enhance quality of life with congestive heart failure.

SPIRONOLACTONE

Spirolactone has been added to your pet’s therapy for congestive heart failure, systemic hypertension (high blood pressure) or pulmonary hypertension.

Spirolactone is an aldosterone antagonist used as a potassium-sparing diuretic and it prevents the excessive sodium and water retention that can exacerbate heart failure or high blood pressure. Spirolactone is most commonly used in patients with congestive heart failure who do not adequately respond to Furosemide (Lasix) or angiotensin- converting enzyme inhibitors (for example, Enalapril or Benazepril) or who have developed low potassium and are unable to supplement with other potassium sources. Spirolactone may also be used to treat high blood pressure in some animals.

Spirolactone has few side effects, but because it affects electrolyte and water balance, your veterinarian may request that you monitor your pet with blood tests periodically. Please notify your veterinarian if there are symptoms of GI upset (vomiting, diarrhea, loss of appetite) or development of abdominal distention or unexpected weight gain.

MONITORING RESPIRATORY RATE AT HOME

Monitoring your pet's respiratory rate at home can provide early warning of developing problems, and allow you to assess the efficacy of medications.

Ideally, your pet's respiratory rate should be counted when your pet is sleeping. If your pet is not sleeping, be sure that she is not panting, not resting in a warm place (sunny window or in front of a fireplace) or purring.

One "count" in a respiratory rate includes one inhale/exhale cycle. You can count the number of inhale/exhale cycles in 10 seconds and multiply by 6 to obtain a rate in "breaths per minute".

Normal respiratory rates for dogs and cats are generally between 16 and 24 breaths per minute. Animals with a history of congestive heart failure are well controlled on their medications should have respiratory rates below 30-32 breaths per minute.

Dr. Neumeister may ask you to take the respiratory rate daily at first to get an idea of what is normal for your pet. It may be helpful to keep a log of these daily respiratory rates. Once we have that information you can monitor the respiratory rate as frequently or infrequently as you like. Many people find that knowing their pet's "normal" rate can help them distinguish if the pet is having a problem. For example, if your pet looks like it is breathing rapidly or abnormally, you can count the rate and compare it to your pet's normal rate. If the new rate is more than 10 breaths per minute higher than normal, it may indicate that there is a problem and you should contact us for an emergency evaluation.