

“DOs and DON’Ts” for Lasix Use in Dogs

Lasix is the most common medication used in dogs with confirmed heart failure. It is also, unfortunately commonly misused. Here are some general “DOs and DON’Ts” for lasix use.

DOs

- 1) **Prior to prescribing lasix, a renal panel with electrolytes and a urine specific gravity should always be performed.** This is necessary to establish a baseline for which to assess renal function and tolerance and response to therapy.
- 2) **Any time the lasix dose is increased, a renal panel with electrolytes should be performed.** This is indicated to ensure continued tolerance to the medication.
- 3) **When performing a lasix trial, a dose of 2 mg/kg of lasix PO BID is recommended.** If you use too low of a dose and they don’t respond, you won’t know if they didn’t respond because they weren’t actually in heart failure, or if your dose was just too low.



DON’Ts

- 1) **Don’t start a dog on lasix just because the NTproBNP level is elevated, even if they are coughing or having respiratory distress.** Causes other than left sided heart failure can cause elevated NTproBNP levels such as pulmonary hypertension. Moreover, false positives can occur. For example, I have also seen dogs with laryngeal paralysis have elevated NTproBNP levels. Therefore, it is necessary to take thoracic radiographs to confirm the presence of pulmonary edema prior to starting lasix. If left sided heart failure is equivocal based on the radiographs, a lasix trial is indicated.
- 2) **Don’t start a dog on lasix just because it has a heart murmur and respiratory signs such as coughing or labored breathing.** Many dogs have heart murmurs (particularly middle aged to older small breed dogs with chronic degenerative valve disease), but a heart murmur and cough or labored breathing does not equal heart failure. Dogs with CDVD can have concurrent pulmonary disease which may be the cause of their clinical signs, rather than heart failure. Thoracic radiographs are a must as you don’t want to use lasix if it is not indicated. Plus, you want to give the owner an accurate diagnosis so appropriate decisions can be made.

- 3) Don't base your lasix trial on improvement of clinical signs alone.** Turns out lasix also has some bronchodilator effects. Thus, a dog's respiratory signs may improve with the use of lasix, even if they are not in heart failure. In addition, there is the owner placebo effect. You don't want to put your patient on life long lasix if it is not (or not yet) indicated. So, follow-up radiographs 5 to 7 days after starting the therapy is necessary to look for an objective radiographic improvement.
- 4) Don't taper down and then discontinue the use of lasix once your patient starts breathing comfortably.** Once a dog is in heart failure, he/she will always need lasix therapy. 2 mg/kg PO BID is generally a good maintenance dose. If you taper the dose down below this dose he/she will most likely go back into heart failure. This adds additional stress to the patient and owner, added visits to the hospital, and may even result in a choice for euthanasia. So as long his/her kidneys are tolerating this baseline dose, dropping below that is not necessary.
- 5) Don't prescribe lasix and then tell the owner to give a particular dose two to three times daily as needed.** Consistent dosing is important for management of heart failure and the comfort of the patient. Don't rely on your clients to know how and when to give their dog lasix. Be specific in your instructions. If you want to give them the ability to make some judgement calls at home, do so in a very specific manner. For example, "Give X mgs orally three times daily. If after 3 days, the resting respiratory rate (RRR) is consistently < 30 breaths per minute, decrease to twice daily dosing. Continue to monitor RRR carefully. If values begin to exceed 30 breaths per minute, increase back to every 8 hour dosing and inform us so we can adjust the record accordingly" OR "Give X mgs orally twice daily and if he/she is having a particularly bad day in regards to elevated resting respiratory rates, add a mid day dose. However, if you frequently need to give the medication three times daily, contact our clinic so we can reassess as this may be a new baseline for your pet and follow-up bloodwork is indicated".
- 6) Don't keep increasing the dose of lasix in a patient that is not responding.** If a patient is not responding to your lasix dose, consider why not. Doses as high as 4 mg/kg PO TID can be appropriate if the kidneys are tolerating the lasix well, but going above this dose can be futile. If they are not responding, consider the following:
 - a) They may have become refractory to lasix and addition of another diuretic may need to be considered
 - b) Switching from lasix to another loop diuretic such as torsemide may need to be considered
 - c) They may not be absorbing / metabolizing the oral form of lasix and injectable lasix may need to be considered
 - d) They may not actually be getting their medication. A renal panel is typically telling as dogs on high doses of lasix should have at least some degree of azotemia. If they do not, they either aren't getting it, or they aren't metabolizing it.

HOPE THIS HELPS!