



General information for hemodialysis referrals.

Hemodialysis is most frequently used in cases of kidney disease (both acute and chronic), but is also used successfully to treat acute intoxications, immune mediated diseases, and refractory heart failure.

While there are no absolute size or weight restrictions for treatment with hemodialysis, smaller patients (e.g. small cats) may require more intensive monitoring compared to larger animals (e.g. a Labrador Retriever).

Renal indications for hemodialysis

Acute kidney injury

Acute uremia is by far the most common indication for hemodialysis. Hemodialysis should be considered when the clinical manifestations of uremia, as well as hyperkalemia, acidemia, and fluid overload, cannot be managed by conventional medical therapy.

While hemodialysis is life-saving when uremia is severe, it can also be employed early in the course of disease to prevent, rather than reverse, the life-threatening complications associated with renal failure.

When hemodialysis is undertaken, pet owners should be emotionally and financially prepared for at least 2 weeks of hemodialysis treatments (although patients are frequently treated for a shorter period). Many patients, especially those for which treatment is started early, can be treated on an outpatient basis, which allows their families to play an active role in facilitating recovery.

Commonly asked questions:

What are the indications for hemodialysis in cases of acute kidney injury?

- *Oliguria or anuria – when either of these conditions is detected, hemodialysis should be started before fluid overload occurs (e.g. as soon as the patient’s weight increases)*
- *Fluid overload, resulting from oliguria/anuria, or excessive fluid administration – fluid overload plays a large role in patient morbidity, mortality, and cost of treatment*
- *Acidemia – hemodialysis allows for correction of acidemia more safely and efficiently than parenteral administration of sodium bicarbonate*

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- *Azotemia – while there are no absolute thresholds of blood urea nitrogen and creatinine concentrations above which hemodialysis is warranted, treatment should be considered when:*

- *azotemia is not improving and clinical signs of uremia (anorexia, vomiting, diarrhea) are poorly responsive to conventional medical therapy*
- *mild azotemia shows a worsening trend*

How many hemodialysis treatments are necessary in cases of acute kidney injury?

- *Patients are typically treated every 24 to 72 hours until improvement in kidney function (typically assessed by serial blood creatinine concentrations) improves. The average number of treatments for acute kidney injury is 3 to 4.*

Are hemodialysis treatments uncomfortable for the patient?

- *Hemodialysis treatments are not harmful or uncomfortable for patients. Dogs and cats typically rest or sleep on a large, soft bed. Many patients actually seem to enjoy hemodialysis treatments, as they are given one-on-one attention from a member of the hemodialysis team. By the end each treatment, many patients are more energetic and show an interest in food. Many pet owners remark that they wouldn’t know their pet is sick, as many of the previous clinical signs of uremia resolve within 1 to 3 treatments.*

How can we tell when hemodialysis is no longer needed?

- *As the patient’s blood creatinine concentration starts to improve, the interval between treatments is gradually extended until dialysis can be discontinued and the patient can be cared for with conventional medical management.*

What can the pet owner expect during a patient’s hospital stay?

- *In cases of acute kidney injury, a pet owner’s commitment to hemodialysis requires a great deal of emotional and financial preparation. Pet owners should understand that it may require at least 2 weeks for a clear picture of the likelihood for recovery to emerge. Often, by the end of a 2 week period, and many times sooner, it is possible to determine whether a trend in improvement of renal function is evident. Depending on the patient’s underlying disease process and response to hemodialysis, some dogs and cats can be treated on an outpatient basis, only requiring hospital visits every 48 to 72 hours for hemodialysis treatments. While the patient is hospitalized, owners are encouraged to visit and spend time with their pets.*

Chronic kidney disease

Hemodialysis can be successfully utilized for the treatment of chronic kidney disease that is refractory to medical therapy. However, the treatment goals are drastically different compared with those for acute kidney injury. For patients with end-stage chronic kidney disease, the goal of dialysis is to provide the patient with an excellent quality of life. This is accomplished by regular treatments, spaced evenly, 2 to 3 times per week. For cats, renal transplantation is preferred over chronic dialysis, and is offered at some universities. Unfortunately, the availability and success of transplantation is extremely limited for dogs.

We're here for you!



