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2024 AAHA Fluid Therapy Guidelines for Dogs and Cats – A Quick Reference Guide

NB: the tables referenced are in the [Guidelines](#) on the indicated page.

NB: The spreadsheet “2024 AAHA Fluid Therapy Guidelines for Dogs and Cats Quick Reference” contains calculations for each of the phases of fluid therapy based on weight and level of dehydration, as well as suggested doses for anesthesia and SC fluid therapy. The spreadsheet labeled “2024 AAHA Fluid Therapy Guidelines Quick Reference to Electrolyte Disturbances” gives a list of common electrolyte abnormalities and a quick reference guide to recognizing and treating each one. It also lists KCl supplementation recommendations and guidelines for bolusing dextrose.

The new AAHA Fluid Therapy Guidelines updated their 2013 Guidelines. These guidelines emphasize understanding the 3 fluid spaces and addressing each in a specific order, which the committee terms, “goal-directed fluid therapy.” The committee also underscores the importance of not overhydrating patients. The committee preferred the term fluid intolerance but used the term fluid overload due to its common usage.

Goal-directed fluid therapy involves designing a fluid prescription to replace fluid deficits across the 3 fluid compartments which contain the Total Body Water. Total body water (TBW) is divided into the intracellular (67%) and extracellular (33%) fluid compartments. Extracellular is further divided into the interstitial (25%) and vascular (or intravascular) (8%) spaces. See Figure 1, p134 for the Normal distribution of water graphic.

The tonicity of extracellular fluid is primarily determined by sodium, the most abundant cation in this compartment. When an IV fluid with a sodium concentration similar to that of extracellular fluid is administered, it will redistribute within approximately 45 minutes according to the compartment’s relative body water percentage. For instance, in a healthy animal, around 25% (~8%/33%) of the administered fluid will remain in the intravascular space, while the remaining 75% (~25%/33%) will shift to the interstitial space. See Figure 2, p135 for the Modified Starling hypothesis cartoon.

Goal-directed fluid therapy includes the following considerations:

Fluid Therapy Phases: Calculate fluid needs for resuscitation plus rehydration (along with ongoing losses), plus maintenance (including oral intake). Use enteral routes if possible based on the patient’s fluid deficit and ability to drink.

The extracellular fluid compartment, which includes the vascular and interstitial spaces, must have adequate volume before addressing deficits in the intracellular fluid compartment. Therefore, assess and correct any volume imbalances in the following order:

1. **Restore the intravascular volume** (correct shock/hypovolemia)
2. **Rehydrate the interstitial space** (dehydration)
3. **Reestablish normal sodium concentrations** (correct the intracellular space)