2013 AAHA/AAFP Fluid Therapy Guidelines for Dogs and Cats

Supplemental Information

Maintenance Fluid Requirements: FELINE

Body weight (kg)	Feline total water mL/day	Feline mL/hr
1.0	80	3
1.5	108	5
2.0	134	6
2.5	159	7
3.0	182	8
3.5	204	9
4.0	226	9
4.5	247	10
5.0	267	11
5.5	287	12
6	307	13
6.5	326	14
7	344	14
7.5	363	15
8	381	16
8.5	398	17
9	416	17
10	450	19

Cat: *Formula* = 80 × body weight $(kg)^{0.75}$ per 24 hr
Rule of thumb: 2–3 mL/kg/hr

Maintenance Fluid Requirements: CANINE

Body weight (kg)	Canine total water mL/day	Canine mL/hr
1.0	132	6
2.0	222	9
3.0	301	13
4.0	373	16
5.0	441	18
10	742	31
20	1248	52
30	1692	71
40	2100	87
50	2481	103

Dog: *Formula* = 132 × body weight $(kg)^{0.75}$ per 24 hr
Rule of thumb: 2–6 mL/kg/hr

Calculating Potassium Amounts for Fluids

Serum K* (mEq/L)	Maximum rate* (mL/kg/hr)	Total mEq KCl needed per 1 L
<2.0	6	80
2.1–2.5	8	60
2.6–3.0	12	40
3.1–3.5	18	28
3.6–5.0	25	20

Note: Do not add KCl to fluids used for rapid intravascular expansion.

*Do not exceed 0.5 mEq/kg/hr. DiBartola SP. *Fluid Therapy in Small Animal Practice*. 3rd ed. Philadelphia (PA): WB Saunders.

This tip sheet is part of the *2013 AAHA/AAFP Fluid Therapy Guidelines for Dogs and Cats* Implementation Toolkit, sponsored by a generous educational grant from Abbott Animal Health.

Equipment Used for Fluid Therapy

Equipment	Comments
Intravenous catheter	Largest-gauge reasonable (16–20 gauge in dogs and 20–24 gauge in cats). Short length preferred.
IV pump	Important for smaller patients. Delivers the pre-set desired volume of fluids.
Buretrol	An infusion device that holds limited quantities of IV fluids or medications, designed to prevent free flow of fluids or air once the infusion is done. Allows accurate administration of small volume (e.g., cats; neonates) and frequent changes to fluid composition without replacing entire bag.
Drip set	Micro-drip set recommended for small patients; easier to set desired flow rate if using gravity flow.
Fluid pressure bag	For rapid administration of fluids to shock patients.
Needle-less adapter systems	To reduce risk of needle-stick injuries.
Flow restrictors	Inserted into fluid line to roughly regulate rate (not as accurate as fluid pump).
Luer-lock connections	Minimizes chance of disconnection.
Y-port	Location of y-piece: If giving small volumes, connect close to patient.
T-port	Pediatric and adult sizes available.
Syringe pump	Useful for administering small amounts of fluids and constant-rate infusion (CRI).

AAHA
The Standard of Veterinary Excellence

American Association of FELINE PRACTITIONERS

This tip sheet includes contributions by members of the task force convened to write the 2013 AAHA/AAFP Fluid Therapy Guidelines for Dogs and Cats. This tip sheet was developed by the American Animal Hospital Association (AAHA) to provide information for practitioners regarding fluid therapy for dogs and cats. The information contained in this tip sheet should not be construed as dictating an exclusive protocol, course of treatment or procedure, nor is it intended to be an AAHA standard of care. This fluid therapy tip sheet is part of the implementation toolkit, sponsored by a generous educational grant from Abbott Animal Health.

STORE AND USE THIS TIP SHEET IN TREATMENT AREAS TO GET THE INFORMATION YOU NEED AT A GLANCE.