**Monitoring Fluid Therapy**

All animals receiving fluids should have a physical examination, including assessment of hydration and body weight, with urine production checked at least twice per day, more frequently in the critically ill. Overzealous administration of crystalloids can manifest as increased respiratory rate and effort, crackles or wheezes on auscultation, serous discharge from the nares, chemosis, jugular vein distention or pulsations, shivering, edema, hypertension (>140–150 mmHg systolic), increased CVP (>8–10 cm H2O), significant increase in body weight (>12%–15%), and rapid and/or dramatic decrease in PCV and total solids. In animals with urinary catheters, urine output can be monitored and compared with fluid administration volumes. Monitoring CVP, pulmonary capillary wedge pressures, and cardiac output variables may be helpful in selected animals, although pulmonary artery catheters are rarely placed. Monitoring electrolytes and PCV/total solids may provide an objective measurement of fluid balance.

When parenteral fluid administration is to be discontinued, the animal should be able to maintain hydration by voluntary drinking and eating or tolerate enteral supplementation (through a feeding tube) or subcutaneous fluid administration. Tapering the volume infused IV throughout 24–48 hr allows the renal medulla to reestablish the osmotic gradient and helps prevent excessive fluid loss through diuresis.

Source: <http://www.merckmanuals.com/vet/emergency_medicine_and_critical_care/fluid_therapy/maintenance_fluid_plan.html>