

IV Fluids and Catheter Care

1. Components of fluid therapy
 - a. Fluid bags – usually 5 liters or 1 liter
 - b. IV catheter – placed in jugular vein and sutured to skin
 - c. T-Port – small tubing that connects IV catheter to fluid line
 - d. PRN/Male Adaptor – Green/yellow cap that is placed on end of T-port when fluids are not used
 - e. Stat set – large coiled fluid line that connects fluid bags to the T-port
 - f. Buritrol – clear cylinder on the stat set that the fluids collect and flow through
 - g. Flush syringe – saline/heparin solution designed to keep catheter from clotting
2. All clamps on Stat set and T-port should be opened when fluids are running
3. Fluid rates
 - a. Adjust white dial on Stat set to increase or decrease flow rate
 - b. Bolus – fluids stream in quickly
 - c. 1 liter per hour – 3 drops per second
 - d. 2 liters per hour – 6 drops per second
4. The buritrol should always be half-way full of fluid so you can monitor the drip speed
5. When fluids are not running
 - a. **Close all clamps on Stat set and T-port**
 - b. **Detach Stat set from T-port**
 - i. Re-attach PRN to T-port
 - ii. Place capped needle over the exposed end of Stat set
 - c. **Flush the catheter**
 - i. Open T-port clamp
 - ii. Flush catheter once through the PRN with **5ml** Flush
 - iii. Close T-port clamp
 - d. **Flush T-port every 6-8 hours** when fluids not running to prevent clotting
6. To change fluid bags
 - a. ALWAYS change out bags before they completely run out to avoid running the line dry and causing blood to back up into the lines
 - b. **Close all clamps on Stat set and T-port** (including blue clamps on Stat set “spikes”)
 - c. Pull blue tabs off bottom of fluid bags
 - d. Place one Stat set spike into each bag until it is all the way in
 - e. Open blue spike clamps
 - f. Squeeze buritrol a few times if needed to fill it half way with fluid
 - g. Make sure there are no air bubbles in coil line. Flush line to remove bubbles
 - h. Open all clamps and fluids should run easily
 - i. Adjust fluid rate if instructed to do so
7. Catheter removal
 - a. Snip all suture with small scissors
 - b. Pull T-port and catheter out at same time
 - c. Hold off vein with cotton ball for 1-2 minutes
 - d. Place Neosporin over hole in skin
 - e. Watch for bleeding when horse lowers head during first 5-10 min after catheter removed

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Troubleshooting

8. Fluids are not flowing well
 - a. Make sure all clamps are open (including blue camps on Stat set spikes and white fluid rate dial)
 - b. Try flushing catheter
 - i. First detach Stat set as mentioned earlier
 - ii. Flush catheter as mentioned earlier
 - iii. Clamp everything and reattach Stat set and try running fluids again
 - c. Check to be sure catheter is not kinked
 - i. Catheter is no longer functional if the white part is exposed out of the neck and is bent
 - ii. Do not attempt to push the catheter back in
 - iii. Call your veterinarian right away
9. Catheter is not flushing easily
 - a. NEVER force flush into the T-port
 - b. Check to see if catheter is kinked
 - c. Call your veterinarian if you cannot easily flush the catheter or if it is kinked
10. Blood has backed up into the fluid line
 - a. Try flushing the catheter right away
 - b. If it is not flushing easily it is most likely clotted beyond repair and you must call your veterinarian
11. Air bubbles in coil line
 - a. Several small pinpoint bubbles are not a concern
 - b. Large air pockets need to be flushed out
 - c. Start by detaching Stat set (clamp first)
 - d. Make sure buritrol is half way full of fluid
 - e. Open blue spikes and then white clamp on Stat set and let fluid and air bubbles in coil line flow out onto the ground
 - i. Will flow faster if capped needle not placed on end
 - ii. Be very careful not to let exposed end touch anything
 - f. Once all bubbles are flushed out
 - i. Clamp coil line
 - ii. Reattach to T-port
 - iii. Open all clamps and resume fluid rate

Please feel free to call us with any questions!
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