½ % Acetic Acid Irrigation

Introduction:

- **Catheter Encrustation** - Encrustation developing around the urinary catheter is related to an increase in urinary pH (.7). This increase in pH causes precipitation of calcium and magnesium phosphates that collect around the catheter producing a crust-like substance, which may lead to blockage.

- **Prevention of Encrustation** - Catheter encrustation and blockage is a common problem in long-term (>1 month) catheterized patients. Current management is to either replace the catheter before blockage occurs, or to irrigate on a routine basis. Although encrustation cannot be predicted, taking preventive steps is fundamental in good catheter care.

- **Increase Fluids** - Inadequate hydration is linked to catheter complications. Increasing your fluid intake could delay the onset of encrustation and decrease your risk of blockage. Certain types of carbonated drinks may increase urinary pH and should be limited. Drinking water, however, will help maintain the proper acidic urinary pH (5-6.5) and decrease encrustation complications.

- **Irrigation** - When water alone seems unsuccessful, studies show that instilling an acidic irrigation solution into the bladder via the catheter can help prevent or dissolve encrustations. Acetic acid ¼% is the most inexpensive way to irrigate your bladder if encrustation develops, or if your doctor has recommended the procedures.

**Supplies for making ¼% acetic acid solution**

1. Water- used either distilled water or boiled tap water that has been cooled
2. Vinegar-use plain white vinegar
3. Clean Container- Such as a mason jar with lid, preferable boiled (or washed in dishwasher)

**Instructions:**

1. The solution should not be kept for more than two (2) weeks, so do not make up more than you will need in that length of time. It is best to keep it in the refrigerator after you begin using it, but be sure to allow it to return to room temperature before irrigating the bladder.

2. Decide how much acetic acid you need and then make up one of the volumes below:
   a. 1 Pint- add 5 teaspoons (tsp) of vinegar to 1 pint of water.
   b. 1 Quart- add 10 teaspoons (tsp) of vinegar to 1 quart of water.
   c. 1 Gallon- add 13 tablespoons (tap) of vinegar to 1 gallon of water.

3. Using a large (50-60ml) catheter tip syringe, slowly flush approximately 50ml of acetic acid through the catheter into the bladder and attempt to aspirate the same volume back into the syringe. Do not force fluid into the bladder or back into the syringe; fluid should flow easily. Gently wash catheter and bladder by flushing and aspirating the solution two or three times. Disconnect syringe and discard contents. Repeat above steps once more if necessary. Catheter irrigation should be performed when needed and should not be used as a substitute for drinking more water.

Instructions for catheter irrigation are specifically for patients of the undersigned provider. If complications persist, please give the office a call at 614 293 8155