Evidence to define our practice:

Pathophysiology of CIN –

Patients at risk:

- Renal Insufficiency – acute, chronic – acute on
  - 60% pts with CIN had pre-existing renal insufficiency*
  - Risk is proportional to level of renal insufficiency
  - Diabetes and renal insufficiency increases risk
- CHF Elder Dehydration
- PRIOR PROCEDURES WITH CONTRAST

Osmolality of contrast:

- Concentration of particles in a solution
  - Higher osmolality – denser solution
  - Fluid shifts interstitial to intravascular space
- Normal serum osmo 275 – 290 mOsm/L
  - Iodine contrast media excreted via kidney
- Renal function affected less by nonionic iso osmolar agents
  - Visipaque (Iodoxanol)
- than nonionic low osmolar agents
  - Omnipaque (iohexal)
  - Less nephrotoxic
  - Less impact on proximal tubular function

Hydration Strategies:

Research is not conclusive as to best fluid - but that hydration pre and post prevents CIN

Considerations for hydration – volume status, cardiac disease, renal function

Several formulas – based on weight and creatinine levels