**Isotonic Crystalloids (example Hartmann’s and 0.9% Sodium Chloride)**

These are solutions containing small molecules that will pass freely out of the blood vessels and are capable of entering all body compartments. Due to the fact that these solutions “leak” from the blood vessels only about 1/5 of total volume given will remain in blood vessels. “Shock doses” of 90ml/kg given in bolus increments of 20-40ml/kg with regular reassessment are suggested. It is possible to give repeated boluses if a relapse is seen but consideration should be given to the possibility of ongoing blood loss. Rapid expansion of blood volume with crystalloid fluids may worsen blood loss.

*Benefits of Isotonic Crystalloids –*

They are inexpensive and readily available with a wide range of uses, not just in emergency resuscitation. In addition assuming renal function is adequate any excess fluid or solutes will be excreted in urine.

*Potential Problems with Isotonic Crystalloids –*

The benefit of intravascular expansion may be short lived with fluids redistributed within 1-2hrs. With repeated boluses there is a risk of interstitial oedema, dilution of RBCs and dilution of clotting factors.