Crystalloids for Shock Resuscitation

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Half of what we have taught you is wrong.
Unfortunately, we don’t know which half!

Evidence-based medicine
Crystalloids for shock resuscitation

- Physiology of body fluid

- Crystalloids
  - Types and basic components
  - Clinical studies
Fluid for shock resuscitation

- Hypovolemic
- Distributive
- Cardiogenic
- Obstructive
Transcapillary filtration

Starling’s equation

\[ J_V = K \left[ (P_c - P_i) - \sigma(\Pi_c - \Pi_i) \right] \]

- \( P_c \): hydrostatic pressure
- \( \Pi \): osmotic pressure
- \( c \): capillary / intravascular
- \( i \): interstitium