

SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES

Affiliated To The Tamil Nadu Dr. MGR Medical University, Chennai

Approved by Pharmacy Council of India, New Delhi

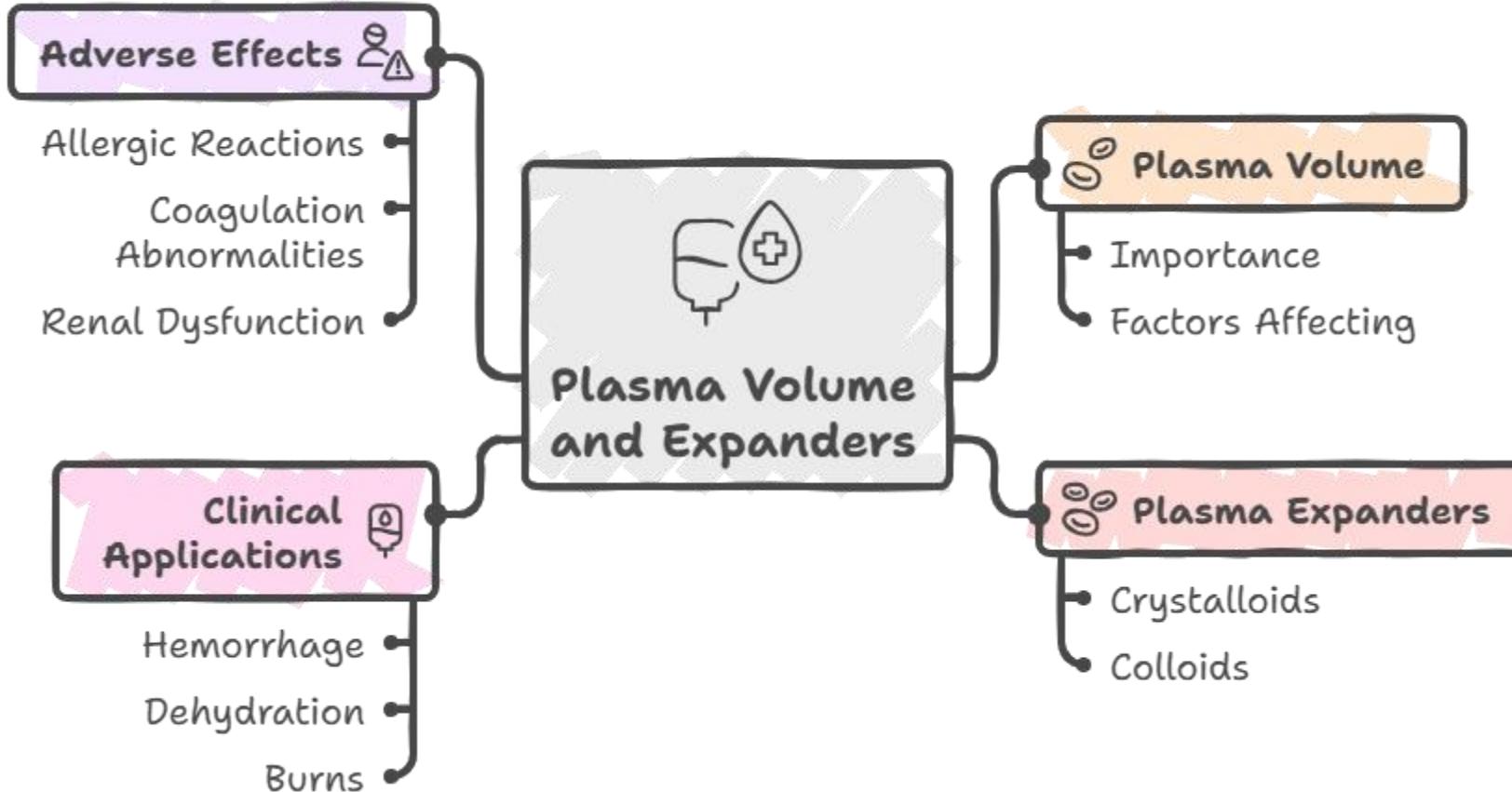
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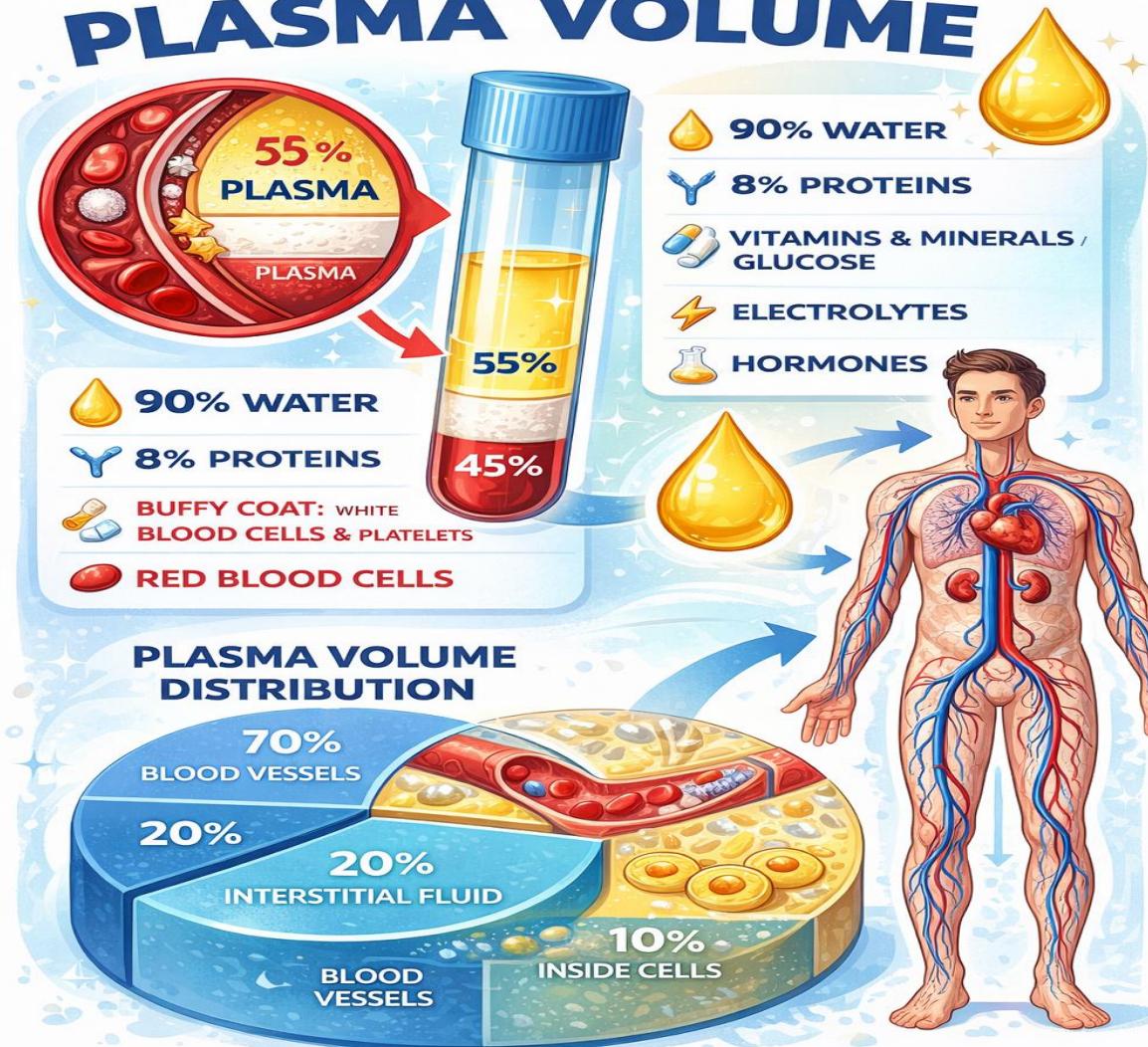
TOPIC : PLASMA VOLUME AND EXPANDERS

COURSE:PHARMACOLOGY II

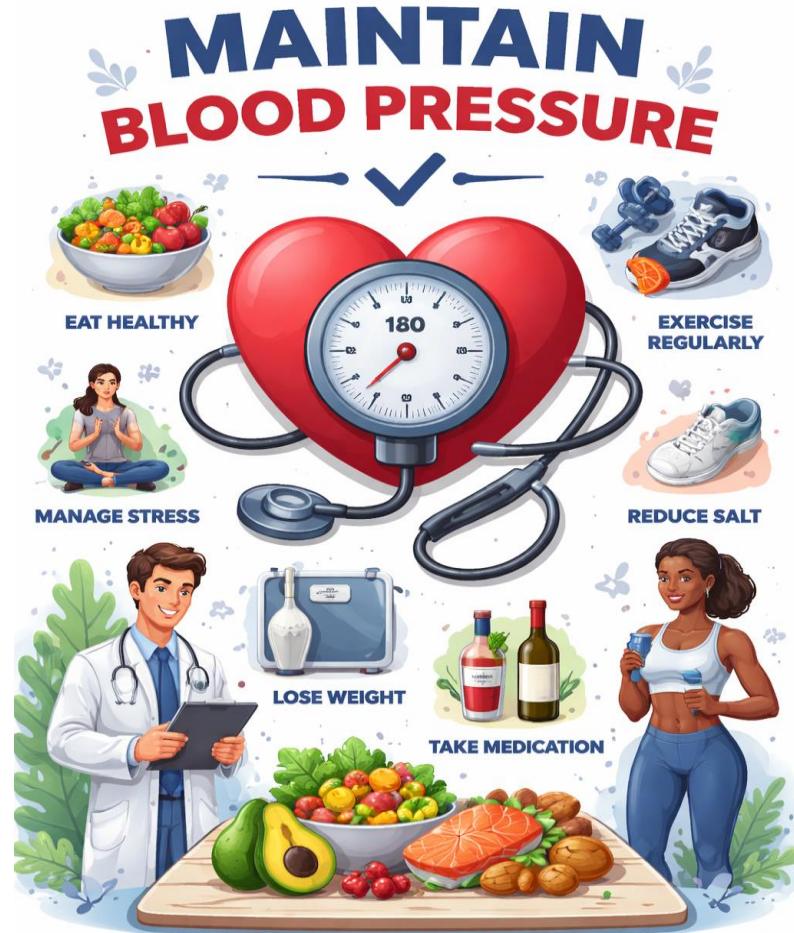
MIND MAP:

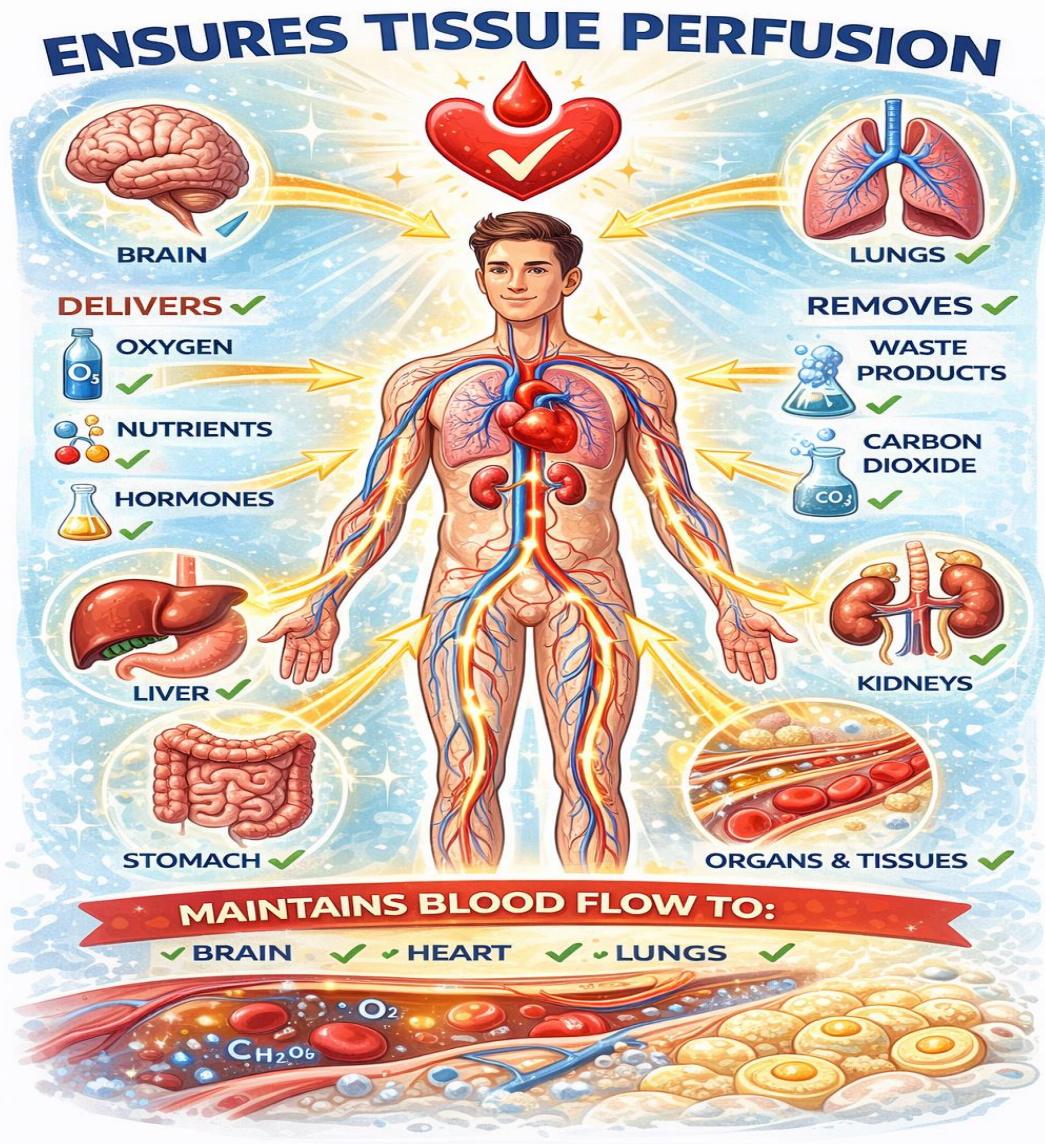


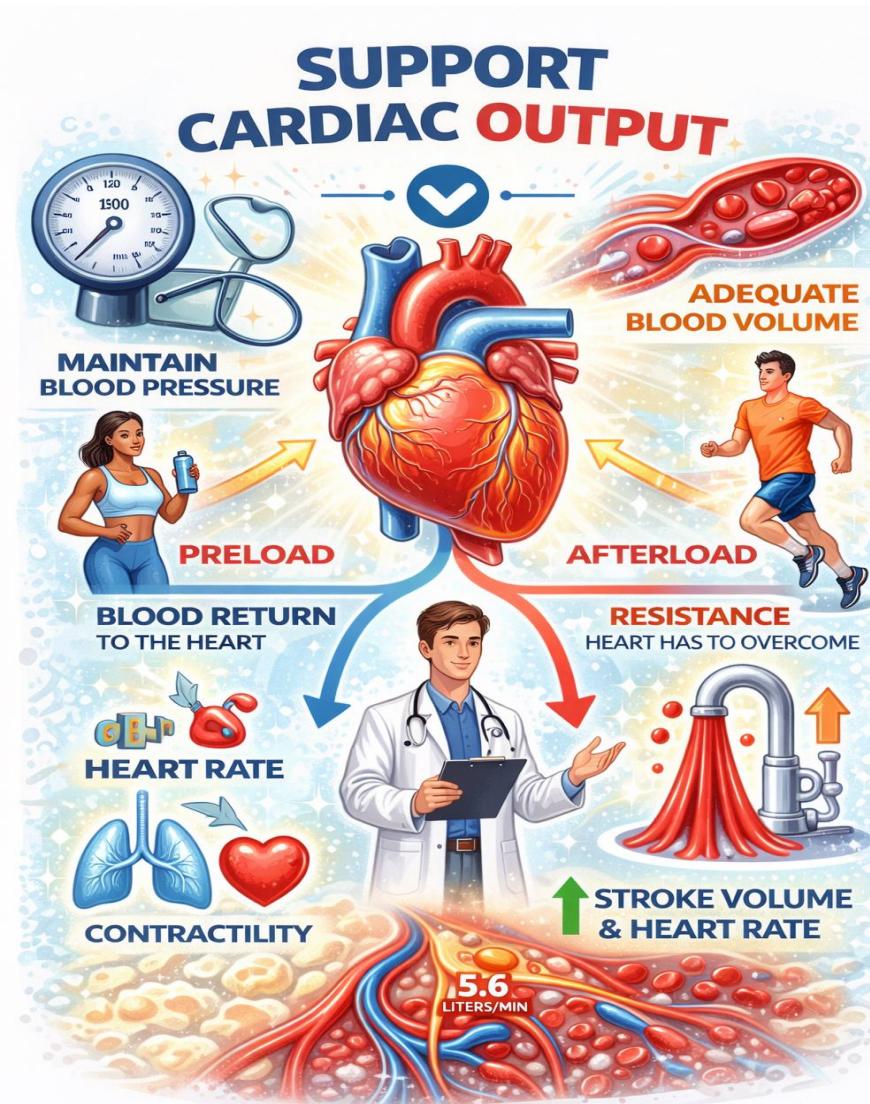
PLASMA VOLUME



Physiology of Plasma Volume :



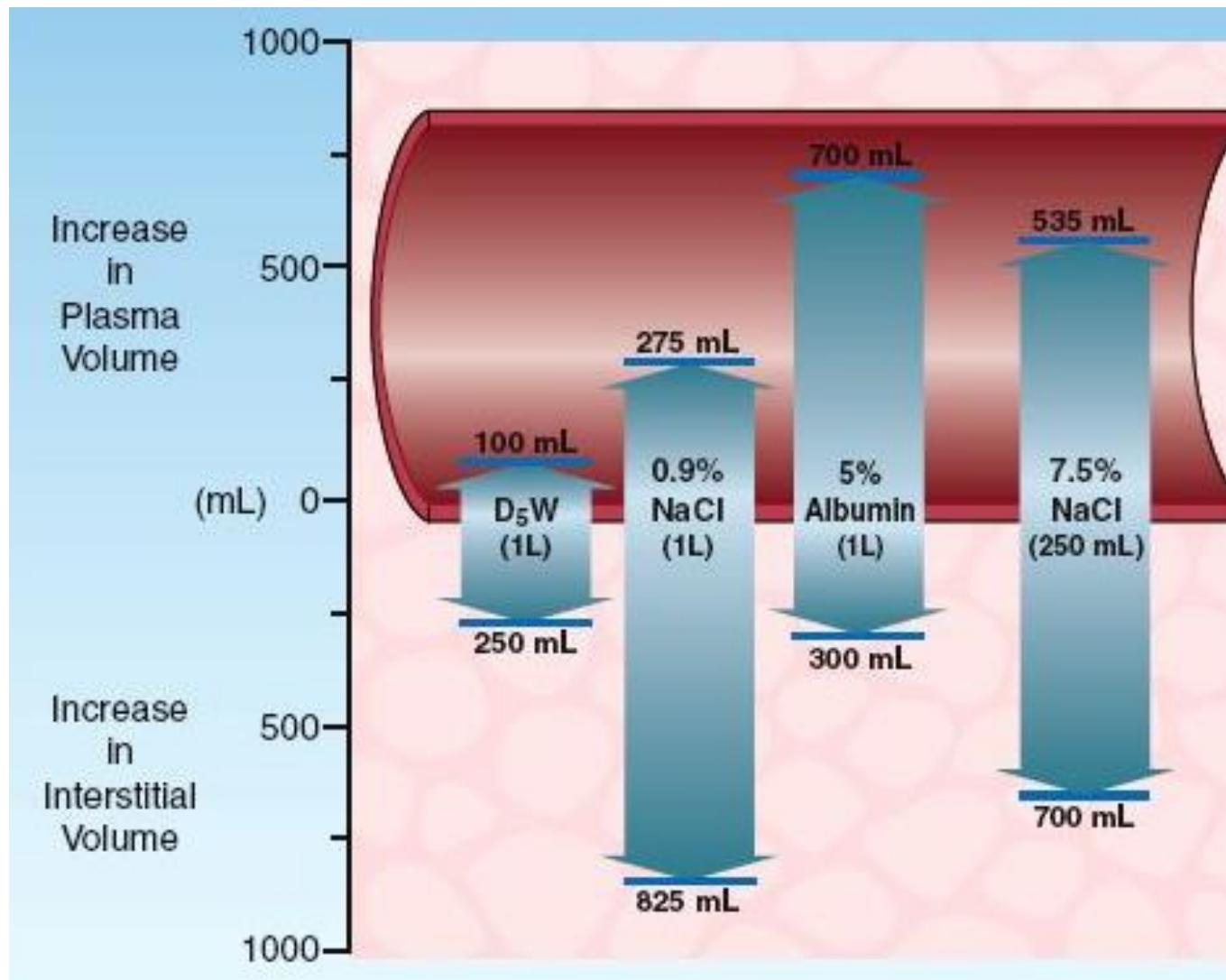


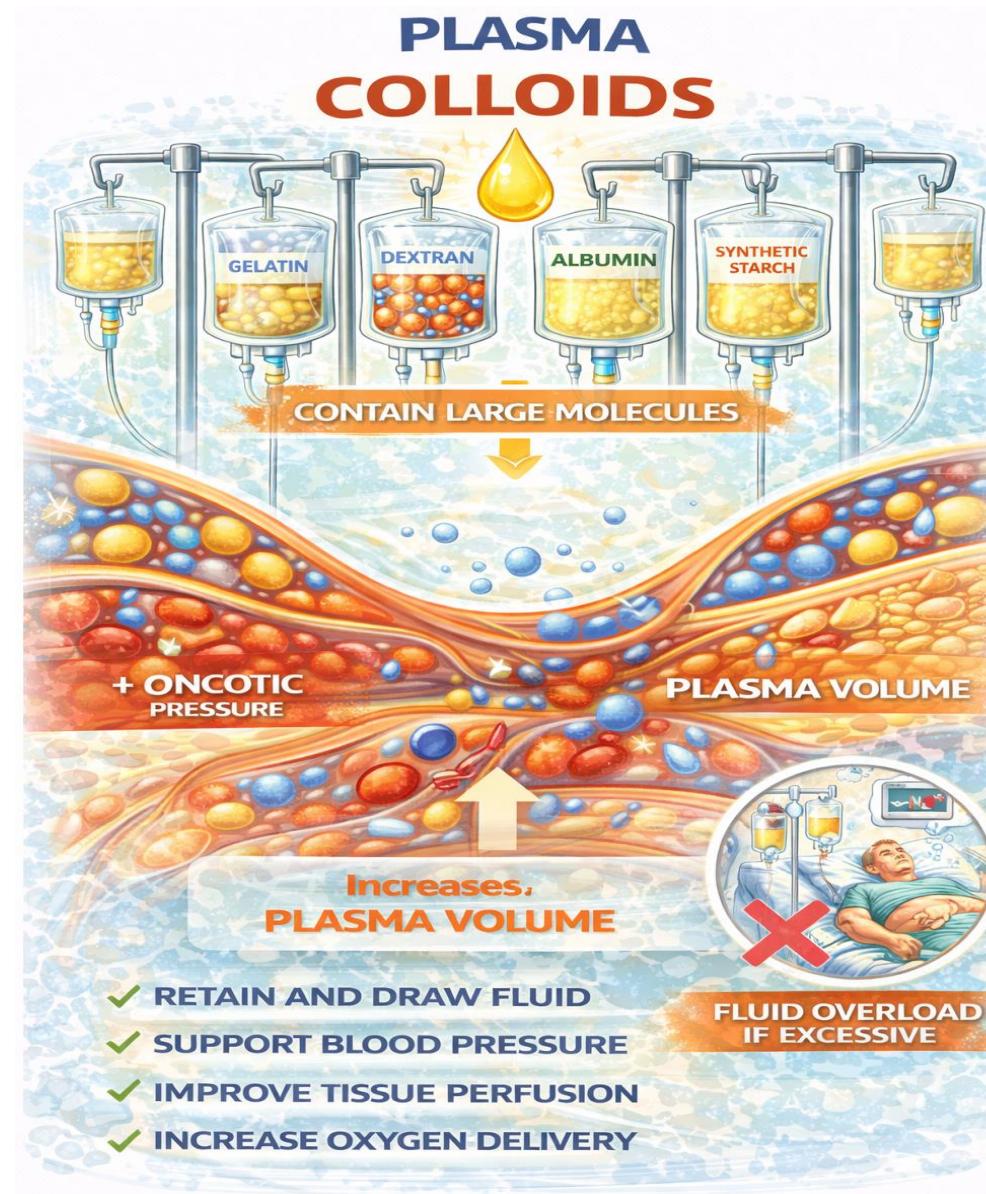


Types of Plasma Expanders:

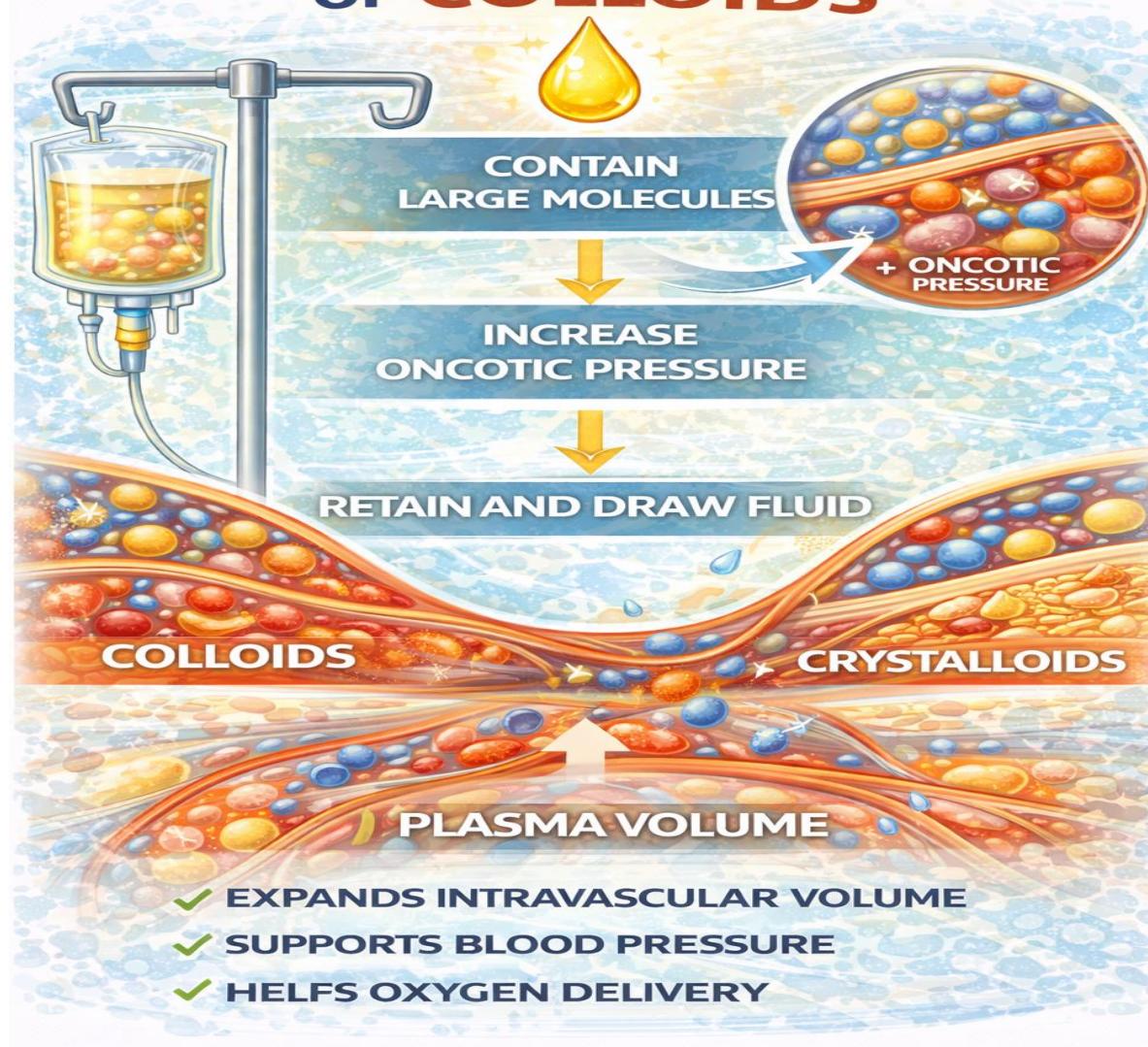




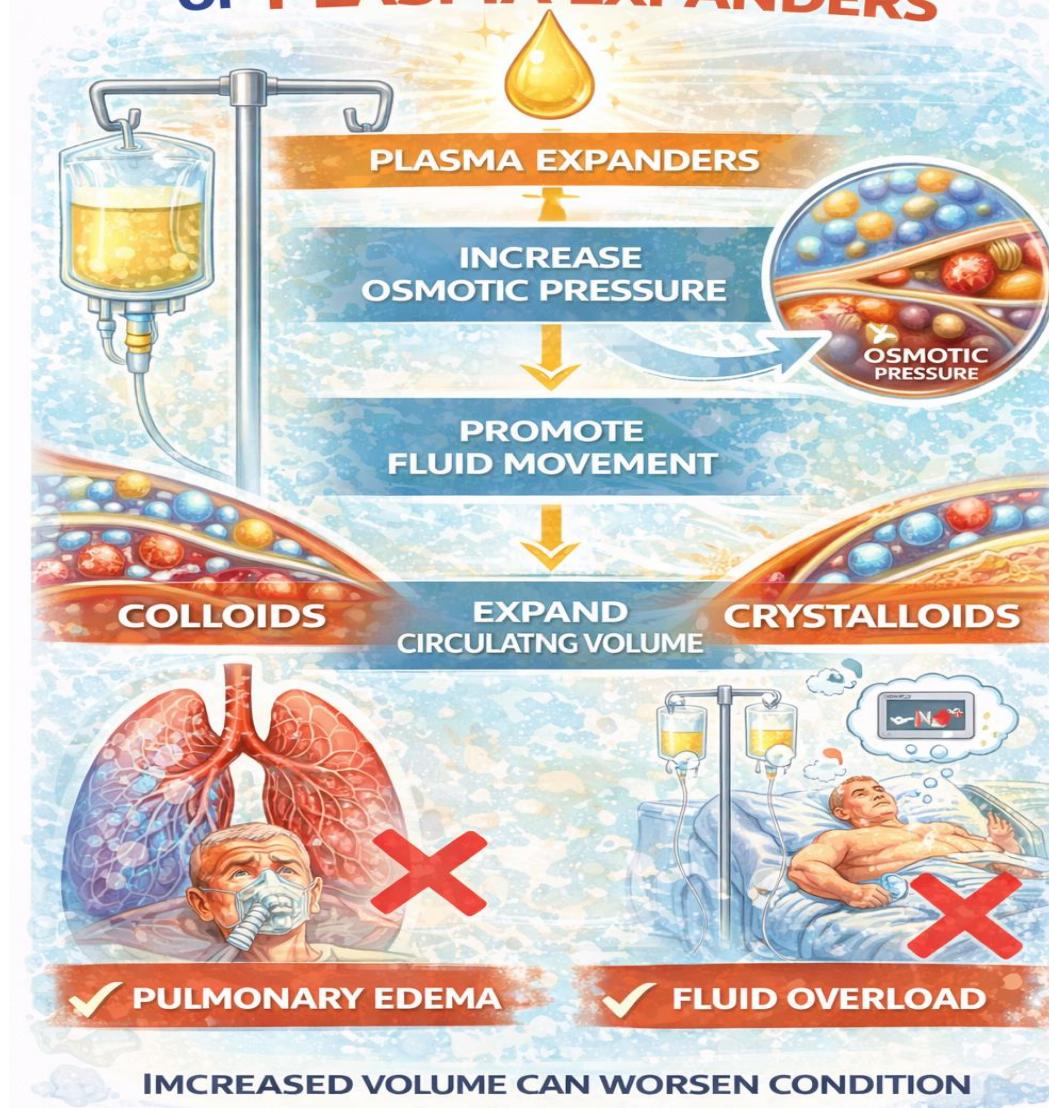




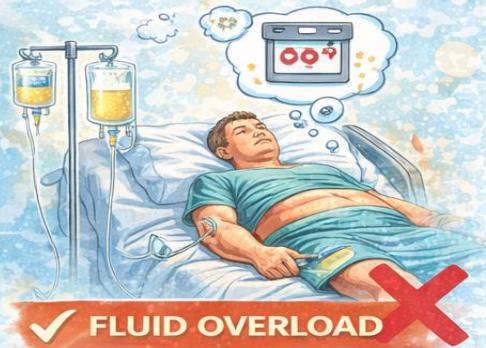
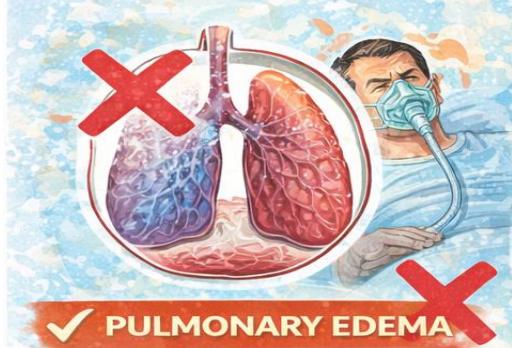
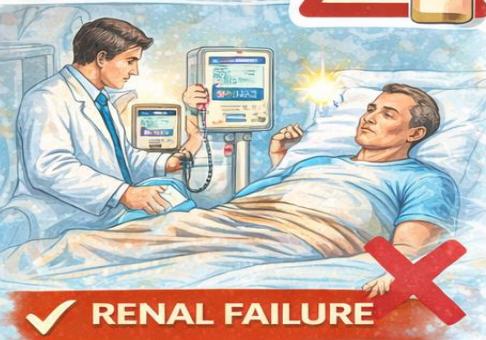
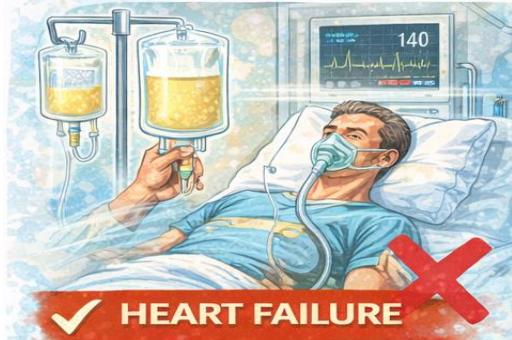
MECHANISM OF ACTION OF COLLOIDS



MECHANISM OF ACTION OF PLASMA EXPANDERS



CONTRAINdications OF PLASMA VOLUME

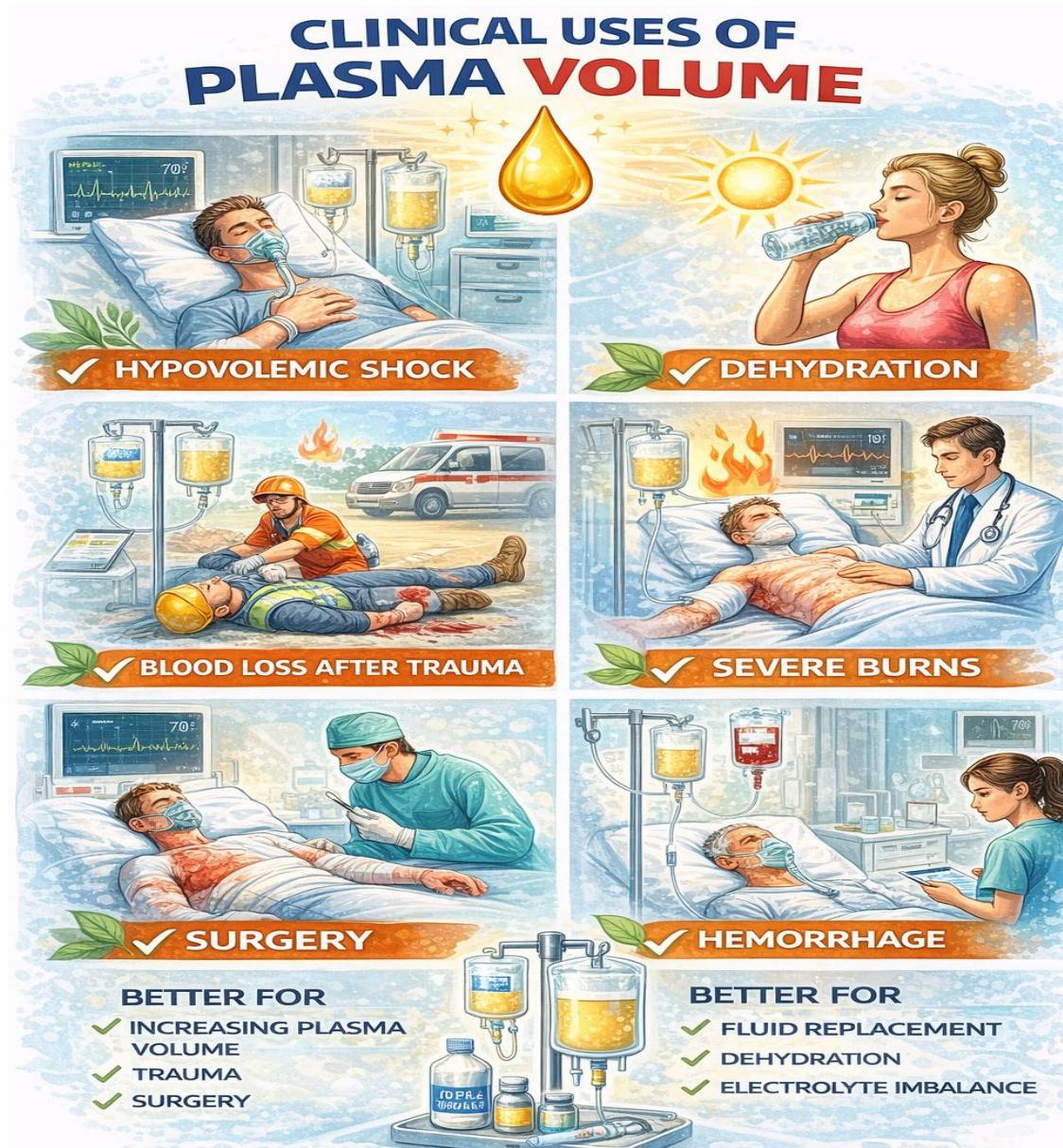


INCREASED
VOLUME CAN
WORSEN CONDITION



BETTER FOR

- ✓ FLUID REPLACEMENT
- ✓ TRAUMA
- ✓ HYPOVOLEMIA



Multiple Choice Questions (MCQs)

1.Which of the following is a crystalloid plasma expander?

- a) Albumin
- b) Dextran
- c) Normal Saline
- d) Hydroxyethyl Starch (HES)

2.Which of the following plasma expanders is most likely to cause allergic reactions?

- a) Albumin
- b) Normal Saline
- c) Dextran
- d) Ringer's Lactate

3.Which of the following is a potential complication of using Hydroxyethyl Starch (HES) as a plasma expander?

- a) Hyperkalemia
- b) Acute Kidney Injury
- c) Hypoglycemia
- d) Metabolic Alkalosis

4.Which type of plasma expander is most effective at rapidly expanding plasma volume?

- a) Crystalloids
- b) Colloids
- c) Both are equally effective
- d) Depends on the specific solution

5. Plasma constitutes approximately what percentage of total blood volume?

- A. 35%
- B. 45%
- C. 55%
- D. 70%

References:

- Myburgh, J. A., & Mythen, M. G. (2013). Resuscitation fluids. *New England Journal of Medicine*, 369(13), 1243-1251.
- Vincent, J. L., & De Backer, D. (2013). Circulatory shock. *New England Journal of Medicine*, 369(18), 1726-1734.
- Wilkes, N. J., & Woolf, R. (2008). Intravenous fluids: What clinicians need to know. *British Journal of Anaesthesia*, 101(3), 301-308.

THANK YOU !