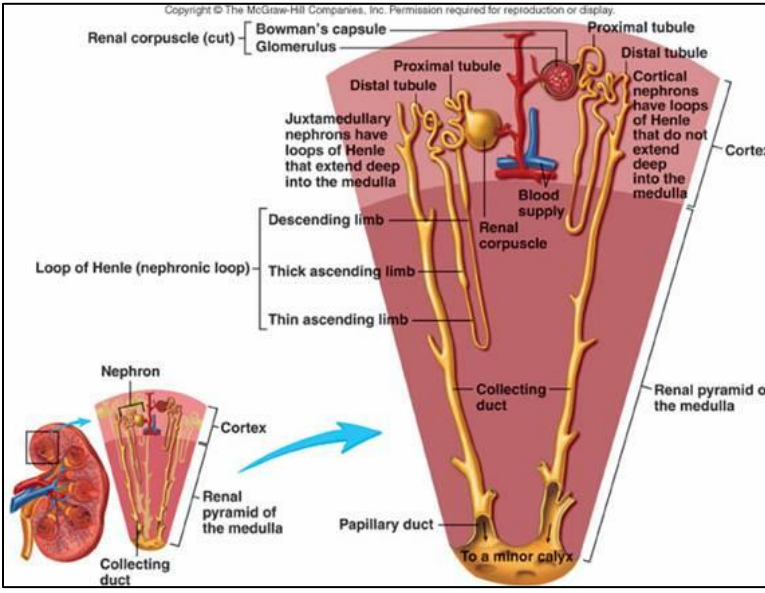
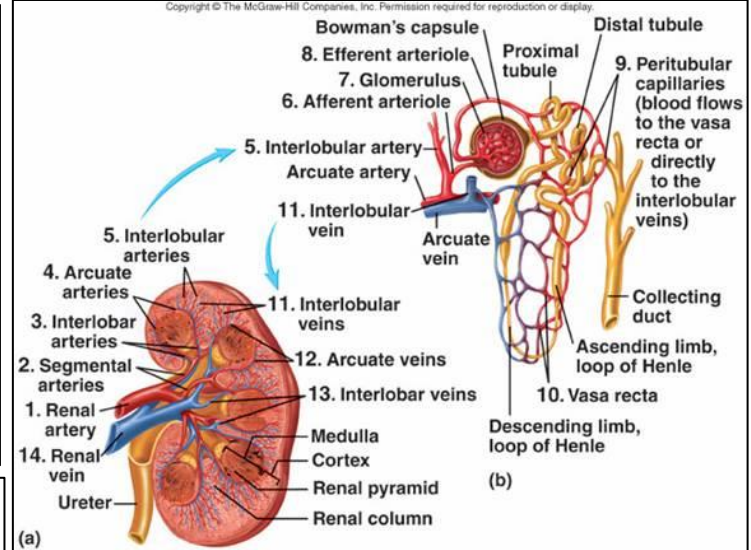
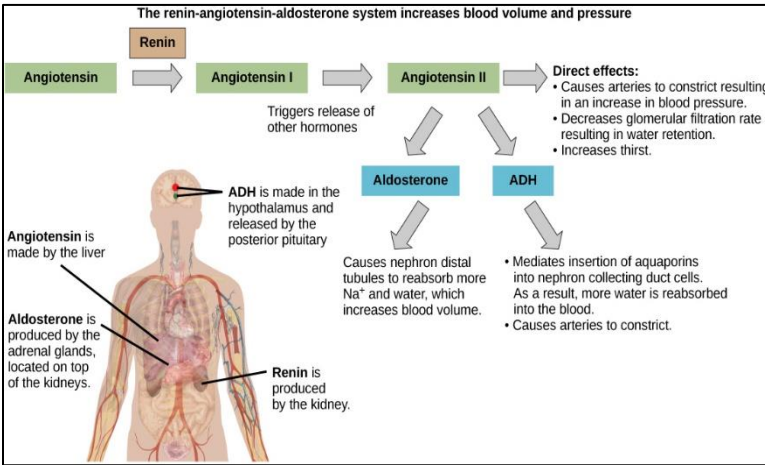
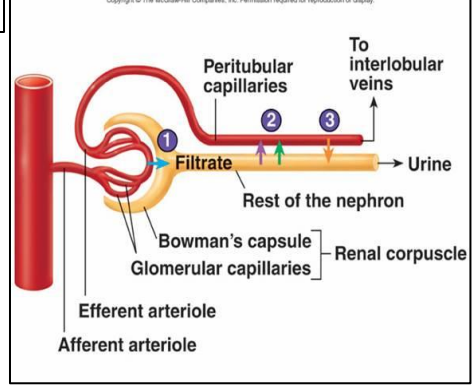
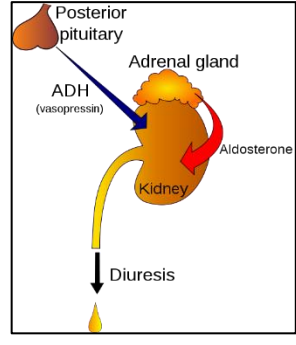
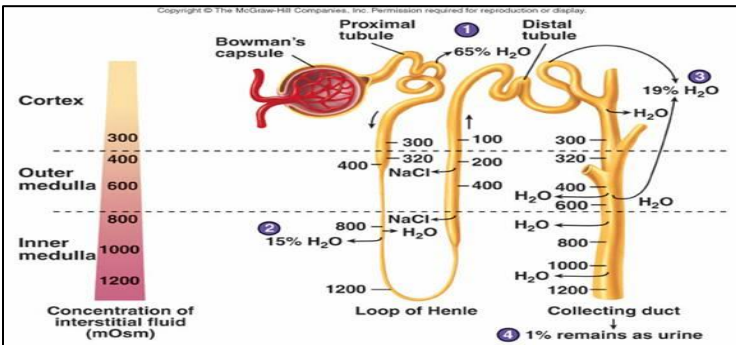
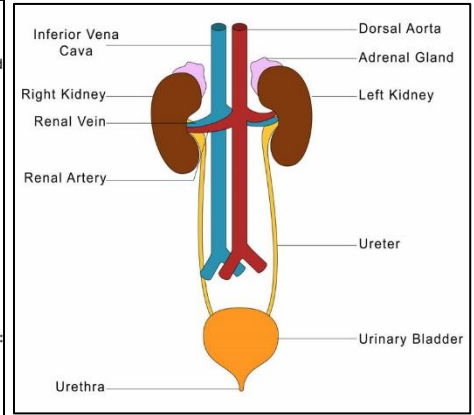
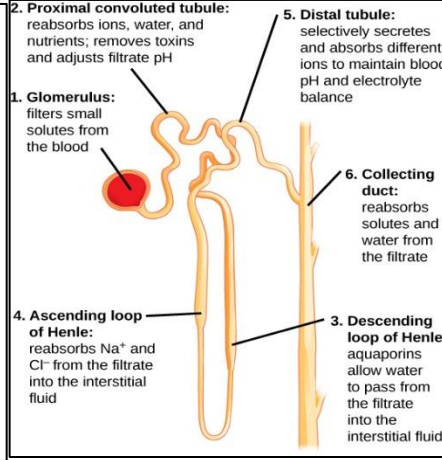
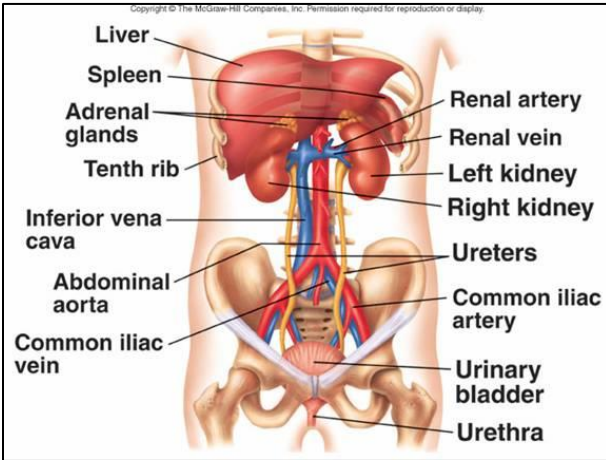


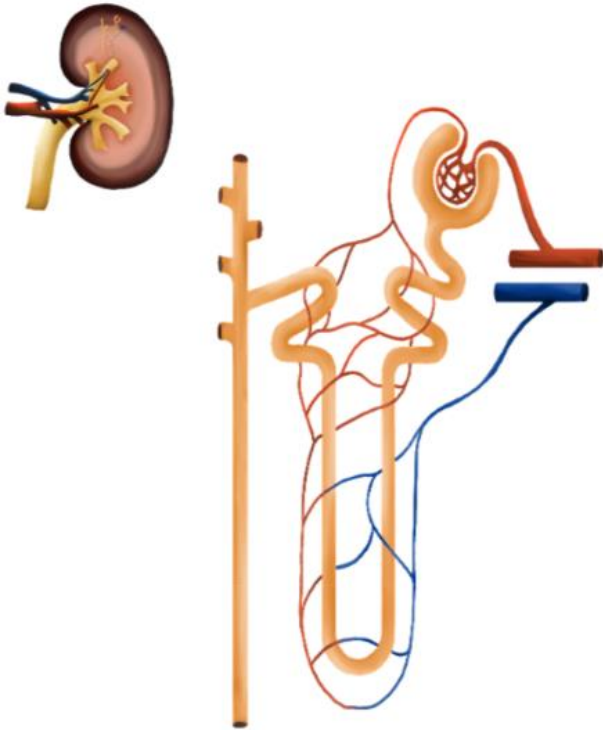
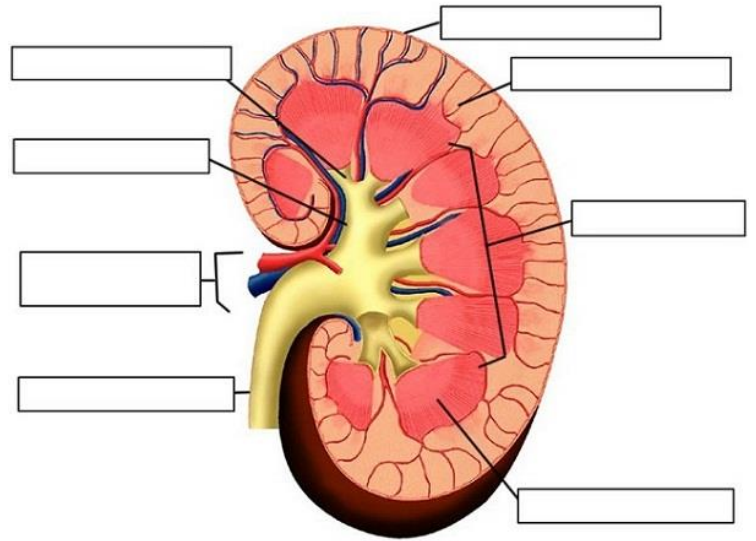
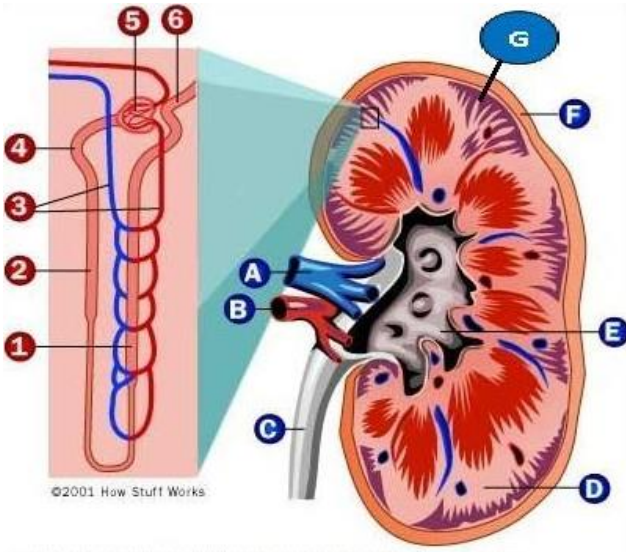
HBS 3.4 Diagrams



Physical Properties of urine			
PARAMETER	NORMAL	ABNORMAL	POSSIBLE CAUSES
Volume	0.4-2.0 L/day	Polyuria Oligouria	Diabetes, chronic renal failure Dehydration, Acute renal failure
Appearance	Clear	Cloudy	Presence of pus cells, bacteria, salt or epithelial cells
Colour	Pale Yellow	Colorless	Excessive fluid intake, uncontrolled DM, DI, chronic renal failure
		Orange	Dehydration, carotenoid ingestion
		Yellow-Green	Jaundice
		Red	Blood, drugs etc
Odor	Urineferous	Dark brown-black smoky	Methemoglobin, alkaptonuria, melanoma, black water fever
		Fruity	Diabetic ketoadicosis
		Ammoniacal	Contaminated and long standing exposed urine
Deposits	None	Mousy	Phenylketonuria
		Burnt sugar	Maple syrup urine disease
Reaction (pH)	4.6 - 7.0	Crystals, salts or cells	Blood clots, necrotic tissues and urinary stones
		Acidic	ketosis (diabetes mellitus & starvation), severe diarrhea, metabolic and respiratory acidosis, excessive ingestion of meat and certain fruits
		Alkaline	Respiratory and metabolic alkalosis, Urinary tract infection, Vegetarians

PRACTICE:

- Label the diagrams below and include functions:



- Explain how the nephron functions:

- Explain how urine can be analyzed.

- How is the water balance maintained in our bodies?