

Urinary System

Urine

- Normal
 - Water
 - Nitrogenous Waste
 - Electrolytes
 - Pigments
- Abnormal
 - Proteins
 - Ketones
 - Glucose
 - Blood
 - Pus

urethra
4cm in females
20cm in males

Functions

- Eliminate Waste
 - Nitrogenous Waste
 - Creation of peptides (short proteins) and proteins produces $\text{amonia} + \text{co} = \text{urea}$
 - Urination = Micturition
- Regulate
 - Blood contents
 - PH
 - Water = blood volume and pressure
- Manufacture
 - Renin
 - angiotensinogen + renin = angiotensin I
 - + ACE (angiotensin converting enzyme) = angiotensin II
 - + cortisone = aldosterone = kidney to urinate potassium and increase sodium to raise blood pres.
 - Erythropoietin (EPO)
 - Tells red bone marrow to make blood

kidney

functional unit of = nephron

- ureters
 - to bladder
- urethra
- internal urethral sphincter
- external urethral sphincter

