

EXCRETORY SYSTEM

Complete Notes

OUTCOMES

B11-4-01: Identify the primary metabolic wastes produced in the human body and the source of each. (GLO: D1) Include: ammonia, urea, mineral salts, carbon dioxide, and water

B11-4-02: Describe the roles of the major excretory structures in eliminating wastes and helping the body maintain homeostasis. (GLOs: D1, E2) Include: kidneys, lungs, skin, and intestines

B11-4-03: Describe the important role of the liver in the process of excretion and the maintenance of homeostasis. (GLOs: D1, E2)

EXCRETORY SYSTEM INTRODUCTION

- What is it?
 - *“The process of eliminating or expelling waste matter that is the product of metabolism.”*
 - *“It is responsible for the elimination of wastes produced by homeostasis.”*
 - *“It consists of organs that remove metabolic wastes.”*

METABOLIC WASTES

Metabolic Wastes	What is it?	Leave the body through...
Ammonia	Byproduct of the breakdown of amino acids in the liver	Kidneys
Urea	Byproduct of the conversion of ammonia in the liver	Kidneys and skin
Mineral salts	Part of food and water	Kidneys and skin
Carbon dioxide	Product of cellular respiration (breakdown of glucose in cells)	Lungs, intestines, skin
Water	Product of cellular respiration (breakdown of glucose in cells)	Kidneys, lungs, intestines, skin

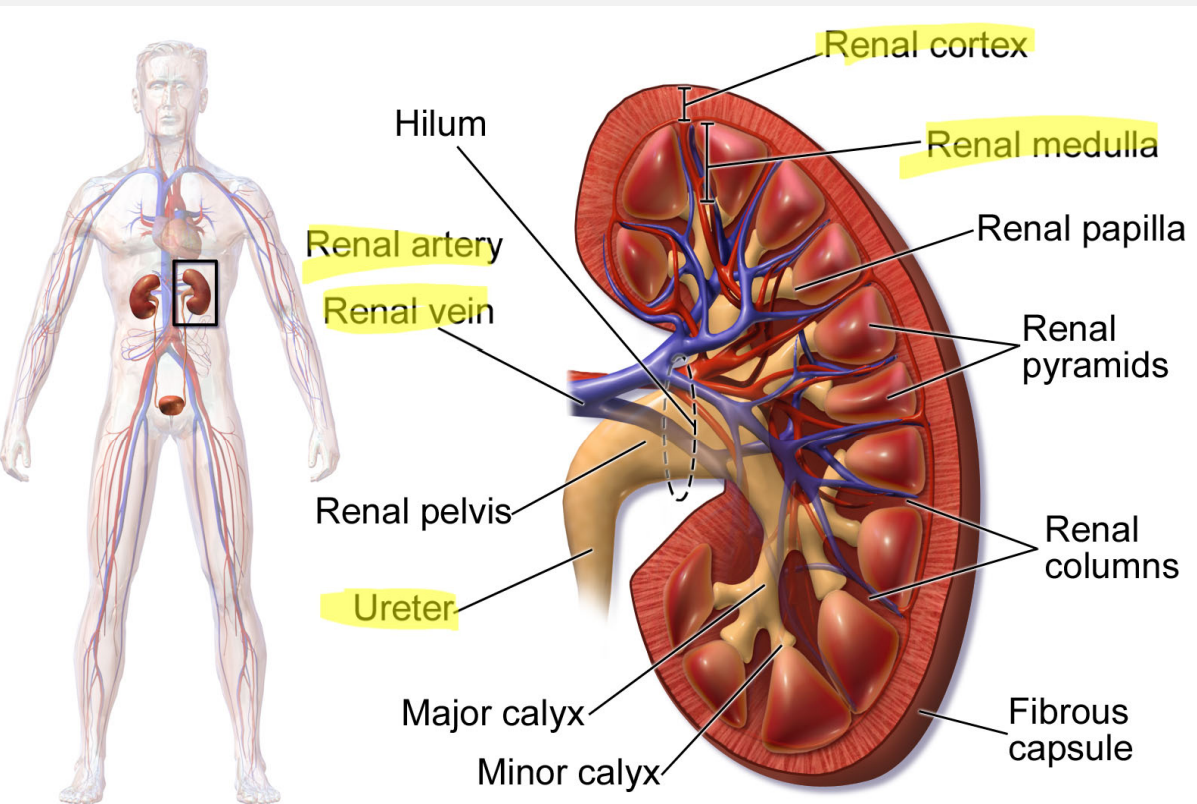
****Excrement (feces) is not included on the list because it is not a product of cellular metabolism.**

OUTCOMES

BI I-4-04: Identify structures of the human urinary system from a diagram, model, or specimen, and describe the function of each. (GLO: DI) Include: kidneys, renal cortex, renal medulla, renal pelvis, renal arteries and veins, ureters, urinary bladder, urethra, and urinary sphincters

KIDNEYS

STRUCTURE



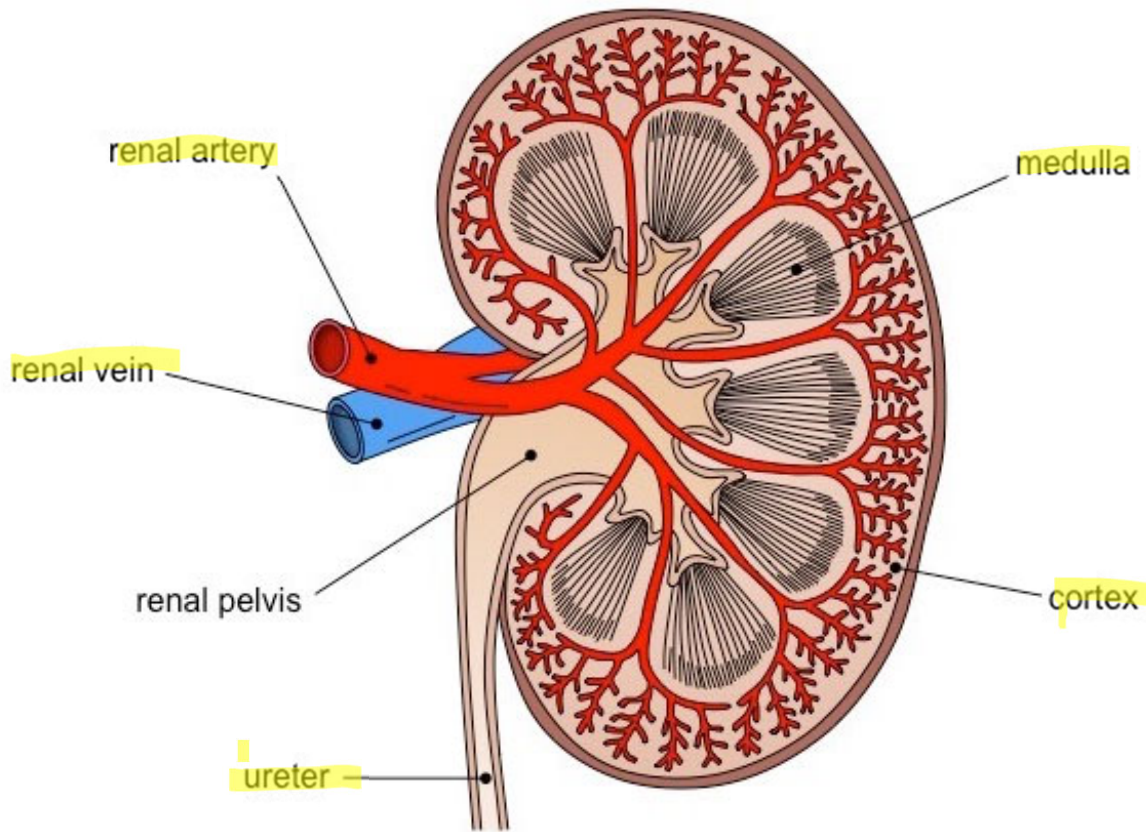
Kidney Anatomy

FUNCTION

- Regulates the volume, composition, and pH of body fluids

RENAL ARTERIES AND VEINS

STRUCTURE

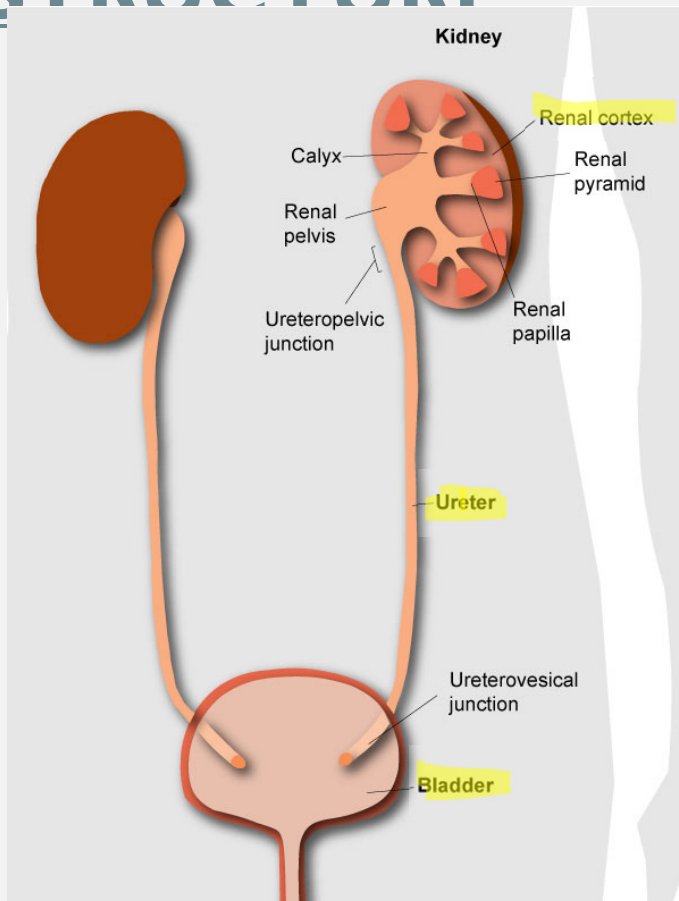


FUNCTION

- Arteries: bringing blood from the heart to the kidneys
- Veins: returning blood to the heart from the kidney

URETER

STRUCTURE



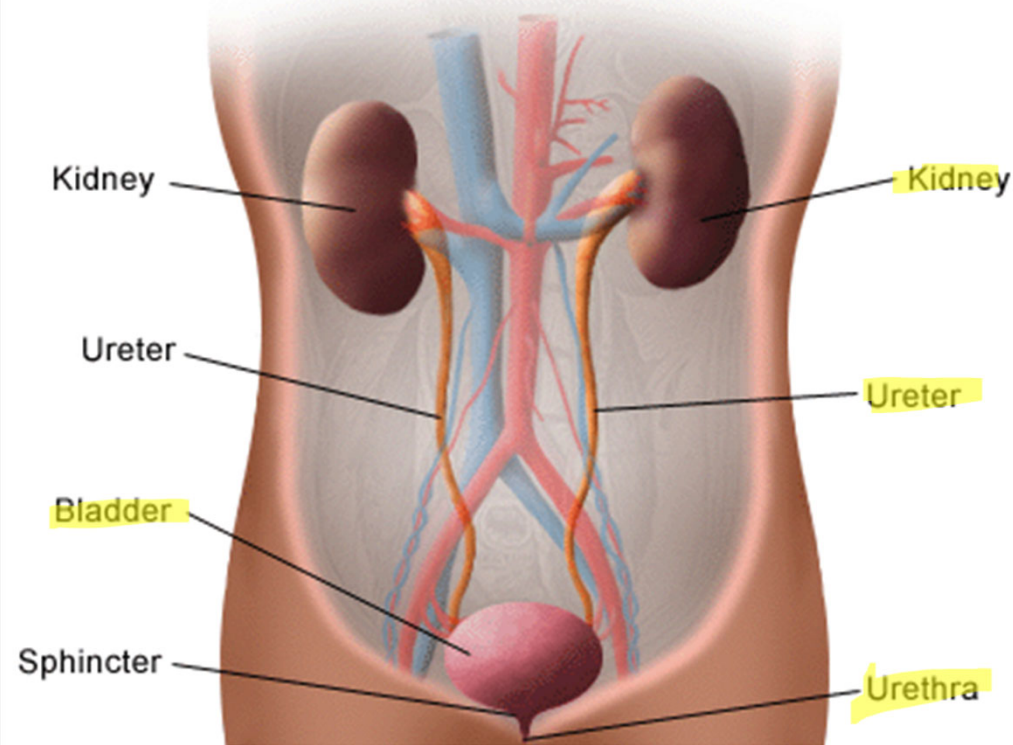
FUNCTION

- Transports wastes from kidneys to the urinary bladder

URINARY BLADDER

STRUCTURE

Front View of Urinary Tract

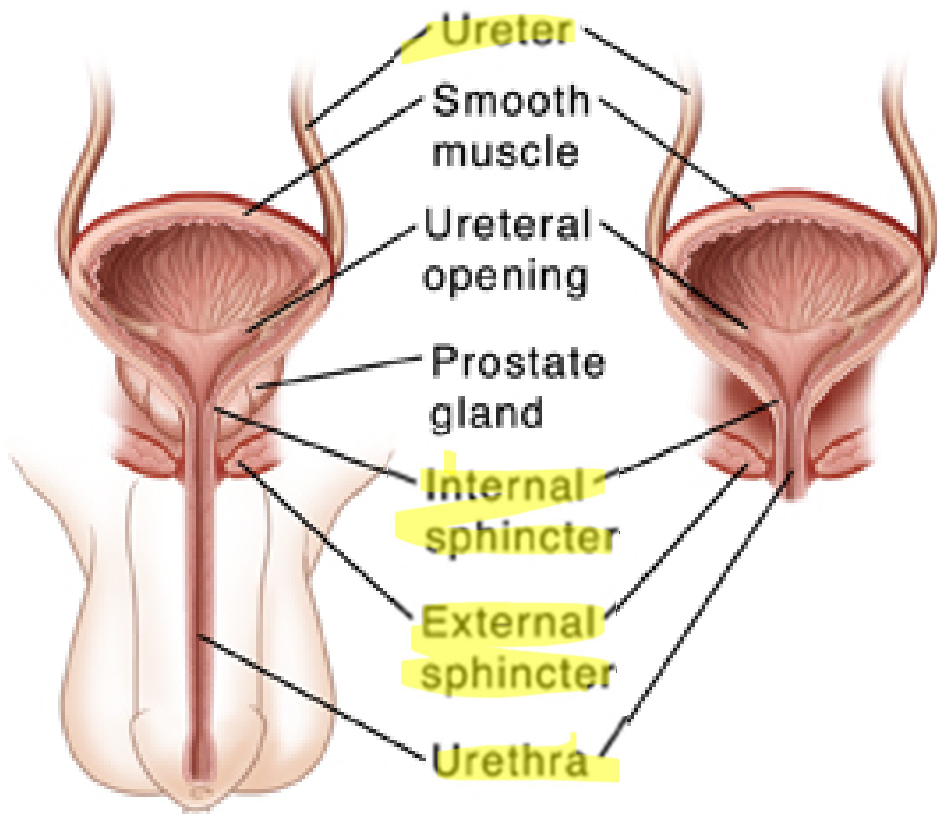


FUNCTION

- Stores wastes (urine) until removed from the body.

URETHRA

STRUCTURE

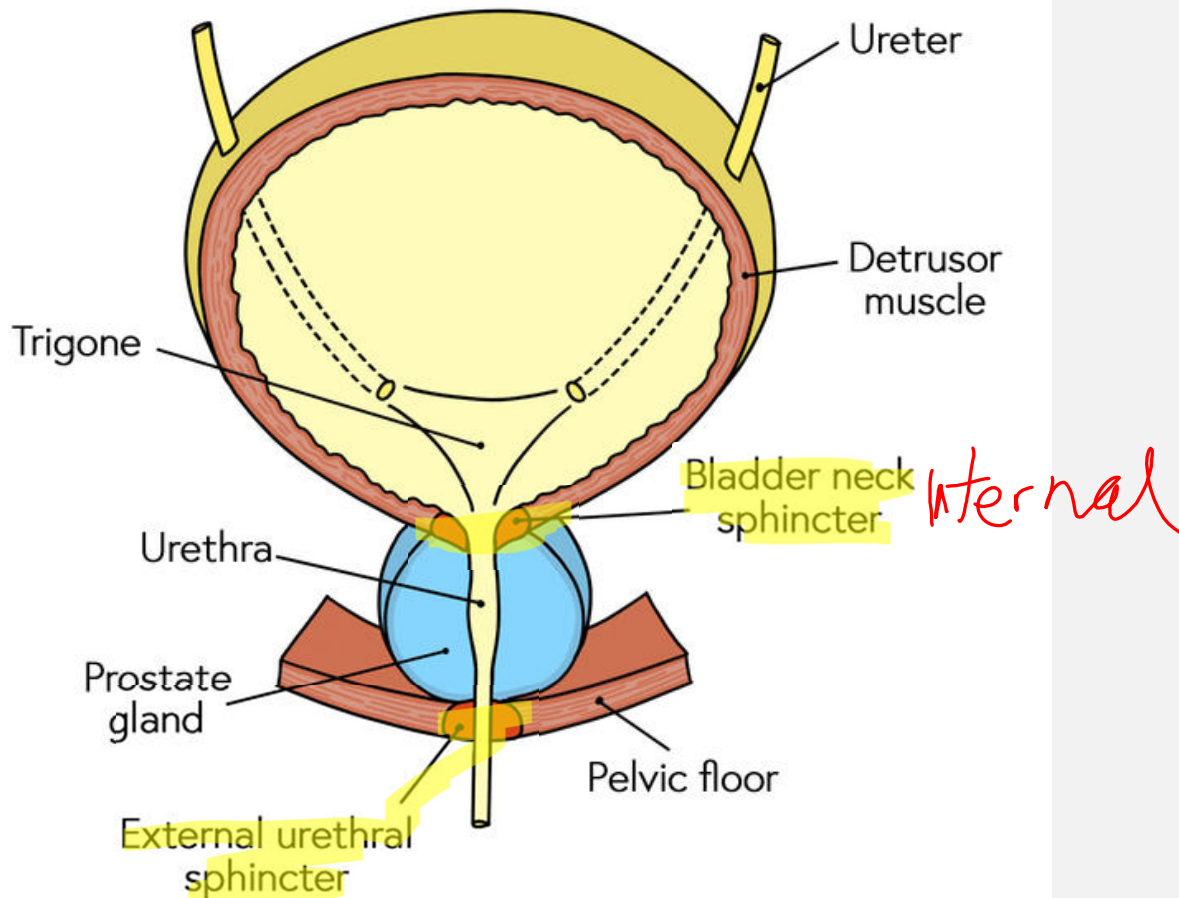


FUNCTION

- Duct in which urine is expelled from the body.
- *also part of the male reproductive system*

URINARY SPHINCTERS

STRUCTURE



FUNCTION

- Circular muscles that control the removal of waste from the urinary bladder