What is the Ureter, Bladder, and Urethra?

Worksheet

The ureters carry urine from the kidneys to the bladder via peristalsis, the bladder stores urine using its distensible detrusor muscle, and the urethra channels urine out of the body during voiding.

Questions

1. What moves urine through the ureter?

A) Gravity alone
B) Peristaltic contractions
C) Ciliary movement
D) Blood pressure

2. Which muscle allows the bladder to store urine?

A) Detrusor muscle
B) Cardiac muscle
C) Diaphragm
D) Sphincter of Oddi

3. Which structure provides voluntary control over urination?

A) Internal urethral sphincter
B) External urethral sphincter
C) Detrusor muscle
D) Ureteral valve

4. Which is longer, the male or female urethra?

A) Female urethra
B) Male urethra
C) They are equal
D) Neither has a urethra

5. An adult ureter carries urine from the kidney to the bladder. What is its approximate length and diameter?

6. The bladder fills gradually during the day. What volume typically triggers the urge to void, and what is functional capacity?

7. How does urethral length differ between sexes, and why does this matter clinically?

8. Define: What is the function of the ureters?

9. Define: What type of muscle allows the bladder to stretch?

10. Define: What keeps urine from leaking out until voiding?

Answer Key

1. B) Peristaltic contractions - Smooth muscle in the ureter wall contracts rhythmically to push urine toward the bladder, independent of gravity.

2. A) Detrusor muscle - The detrusor is a smooth muscle layer that relaxes to fill and contracts to empty the bladder.

3. B) External urethral sphincter - The external urethral sphincter is skeletal muscle under voluntary control, while the internal sphincter is involuntary smooth muscle.

4. B) Male urethra - The male urethra (~18-20 cm) is much longer than the female urethra (~4 cm).

5. Average length 25-30 cm Diameter 3-4 mm Urine moves by peristaltic contractions, not gravity alone

6. Urge to void begins around 150-250 mL Functional capacity is about 400-600 mL Beyond this, detrusor stretch receptors signal fullness

7. Female urethra 4 cm Male urethra 18-20 cm Shorter female urethra higher risk of ascending urinary tract infections

8. Tubes that use peristalsis to carry urine from each kidney to the bladder.

9. The detrusor muscle, a layer of smooth muscle that stretches as urine fills the bladder.

10. The internal (involuntary) and external (voluntary) urethral sphincters.