

# ATI TEAS Science Review

## Urinary System

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**Watch this youtube video first:**

**Anatomy and Physiology of Urinary System**

<https://www.youtube.com/watch?v=aUYciJjWe-I>

This video will help you understand the anatomy and physiology of the urinary system. Understanding the parts of the kidney as well as the anatomy of the nephrons are important!



**Function:** responsible for removing toxins, waste, and water from the body as well as maintaining the blood pressure and pH.

**Consists of:** kidneys, bladder, ureter, urethra

**Kidney:** filters blood to remove waste products and maintain fluid balance; Receive blood from renal artery (extension of the aorta); Filter blood; Reabsorb need materials; Excrete waste and water via urine

**Renal Cortex:** The outer layer of the kidney

- o Nephron- functional unit of the kidney; blood filtration and reabsorption occur
- o Renal Arteries- what kidneys receive blood from; carry blood directly from the heart via the abdominal aorta
- o Glomerulus- capillary in nephron
- o Bowman's Capsule- condenses the glomerulus


**Renal Medulla:** The middle layer of the kidney

- o Proximal Convoluted Tubule: water, glucose, ions, and other organic molecules are reabsorbed back into the bloodstream.
- o Distal Convoluted Tubule: urea and drugs are removed from the blood. pH in blood is adjusted with H<sup>+</sup> ions.

Renal Pelvis: The inner layer of the kidney

- o Materials arrive as urine from distal convoluted tubule.





**Afferent arteriole:** The blood vessel that enters the glomerulus

**Efferent arteriole:** The blood vessel that exits the glomerulus

### **Renal Problems**

- Glucose in pee is a sign of diabetes.
- Dark urine is a sign of dehydration.
- Blood in urine is a sign of hematuria, UTI or kidney infection.

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Renal arteries are connected to the abdominal aorta.

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URINARY  
SYSTEM



# About Me

Hi there! My name is Ivy and I am the founder of Petite and Soignée. I am currently a licensed physical therapist assistant, dermatology and cosmetic medical assistant, and a nursing student in an accelerated BSN program. Over the years, I have researched and learned about different skincare products, ingredients, skin conditions, diseases, and new technologies and procedures within the field. I decided to join a dermatology practice so that I could learn more about skincare within a clinical setting. This position taught me so much about the science of skin that it led me to pursue nursing. My goal is to specialize in dermatology in the future.

You may be wondering what does *soignée* even mean?

***Soignée*** (pronounced "swan-yay") is a feminine French word meaning "*to dress elegantly*", "*well-groomed*", "*sleek*" "*well maintained*" or "*elegantly designed*". The word perfectly describes the way that I like to present myself on a daily basis. On my website, I share all of my skincare and beauty tips for everyone to feel soignée.

Don't forget to follow my other social media accounts!



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