

# The Kidney and Urinary Systems | Notes

## The Urinary System

*Kidney:* Site where urine is produced

*Ureter:* Duct that connect the kidney to the bladder

*Bladder:* Where urine is stored

*Urethra:* Duct that releases urine from the body

*Renal artery:* Supplies oxygenated blood to the kidney

*Renal vein:* Carries blood away from the kidney

## Production of Urine

- Blood enters the glomerulus
- It is filtered under high pressure
- Glucose, salts and waste filter from the glomerulus
- They go through the Bowman's capsule
- Filtered blood leaves the glomerulus through the arteriole
- Filtrate goes from Bowman's capsule to the proximal convoluted tubule
- Selective reabsorption prevents the constant removal of glucose, salts and water from blood
- Nutrients and water are reabsorbed by a combination of active transport and osmosis

## Excretion

- Water is reabsorbed from the collecting duct by osmosis
- Reabsorption is controlled by a hormone called anti-diuretic hormone
- ADH increases the permeability of the collecting duct
- More water is reabsorbed, the smaller the amount of urine that is produced