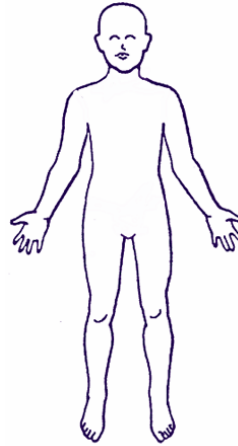


# Temperature Control



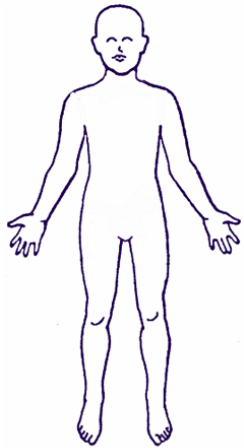
Temperature outside rises



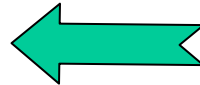
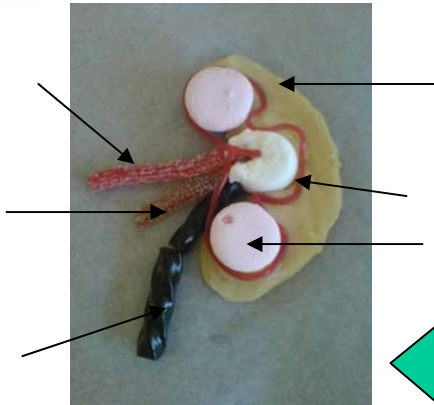
Basal body temperature rises



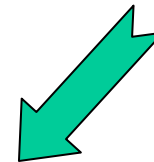
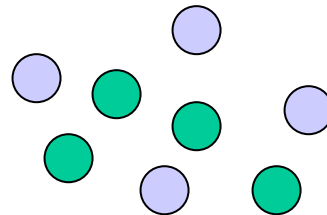
Temperature rise detected by receptors in the body



Basal body temperature returns to normal



ADH Hormone is released into the blood stream



Receptors send messages to the brain. The brain senses the need to retain water to cool down the body.

ADH causes the membrane of the kidney to become more permeable to water. Body retains water and less is lost in urine.

Medulla

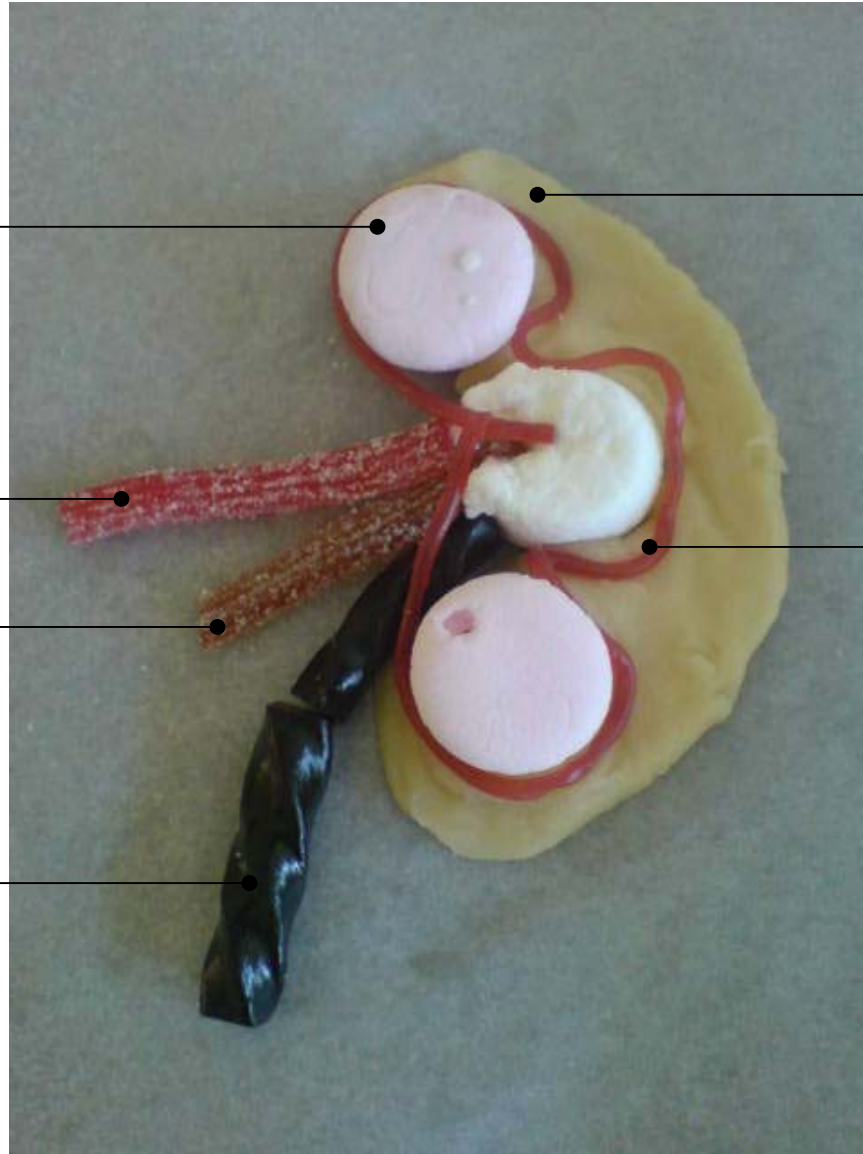
Cortex

Renal  
Artery

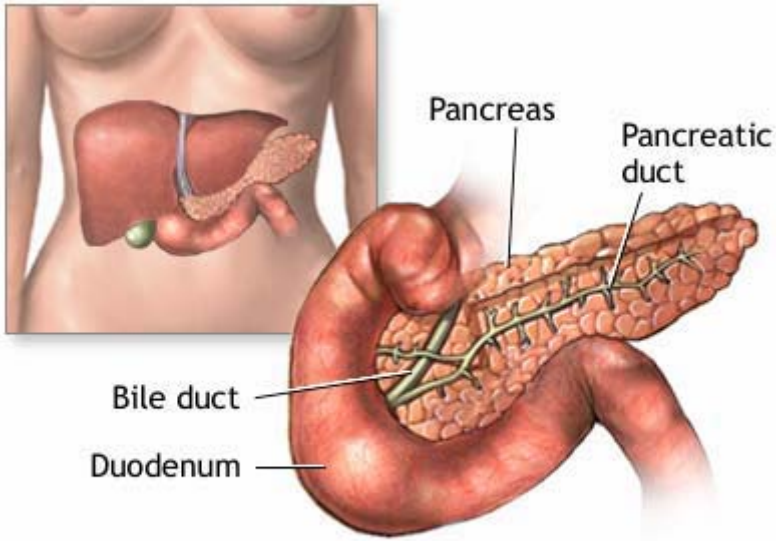
Capillaries

Renal  
Vein

Urethra



# Controlling digestion and body's energy source



The pancreas is a gland organ in the digestive and endocrine systems.

It has two major functions

**Exocrine** cells produce enzymes that aid in the digestion of carbohydrates, fats and proteins.

**Endocrine** cells produce hormones that regulate the body's main energy source, **glucose** (blood sugar). These hormones include **insulin**, which lowers glucose levels by moving it into cell.

