signal the corrective mechanism to take places. The Islets of Langerhans secrete insulin into the bloodstream. Blood transports the insulin to the liver and muscles. Insulin increases the permeability of the cell membrane to glucose and glucose is absorbed more quickly to the cells. Insulin causes the liver and muscles to convert excess glucose to glycogen, which can be stored in the liver and muscles.

- Fall below normal level- When blood glucose falls below normal, blood glucose concentration increases. This provides a feedback to the Islets of Langerhans to increase glucagon production. The Islets of Langerhans are stimulated and they secrete glucagon into the bloodstream. Blood transports the glucagon to the liver and muscles. Glucagon causes the conversion of stored glycogen back to glucose. From the liver, glucose enters the bloodstream. Blood glucose increases and this provides a feedback to the receptor to decrease glucagon production.

- Regulating Blood Water Potential-
  - Rise above normal level- When water potential of blood increases, the hypothalamus is stimulated. This stimulates the corrective mechanism, where less ADH is released by pituitary glands into the bloodstream and less ADH is transported to the kidneys. Cells in the walls of the collecting ducts become less permeable to water and less water is reabsorbed into the bloodstream. More water is excreted, urine is more dilute and more urine is produced. These cause the blood water potential to decrease and when it has decreased to the norm, a signal is sent back to the receptor.
  - Fall below normal level- When the water potential of blood decreases, hypothalamus is stimulated and more ADH is released by pituitary glands into the bloodstream and more ADH is transported to the kidneys. Cells in the walls of the collecting ducts become more permeable to water. More water is reabsorbed into the bloodstream, less water is excreted, less urine is produced and urine is more concentrated. This increases the water potential of the blood and when it has reached the norm, a feedback is sent to the receptor.

Skin forms a protective covering over the body surface and also helps regulate body temperature and excretion. Skin is composed of two parts- an outer part called the epidermis and an inner thicker part called the dermis. The upper part of the dermis is thrown into ridges or papillae. The dermis has a rich supply of nerves and blood capillaries.

Parts of the Dermis

- Blood Vessels- The constriction and dilation of the arteries is caused by the contraction of muscles in the arteriole walls. The contraction and dilation of your arterioles help to regulate the body temperature. Dilation of the arterioles is called vasodilation. When the skin arterioles dilate, more blood is sent to blood capillaries in your skin. This is shown when you blush or become flushed after vigorous activities. Skin turns red due to the numerous blood vessels dilating.