

The Endocrine System

The **endocrine system** is an integrated system of small organs that involve the release of molecules known as (1)..... The endocrine system helps to (2)..... metabolism, growth, development and puberty, tissue functions and plays a part also in what (3)..... we are in. The field of medicine that deals with disorders of endocrine glands is (4)....., a branch of the wider field of (4).....medicine. The endocrine system mainly uses blood (5)..... as information channels. Different glands are (5)..... in many regions of the body.

Adrenal Glands

The adrenal glands are a pair of glands that secrete hormones (6)..... into the bloodstream. Each gland can be (7)..... into two (8)..... organs. The outer region, the (8)....., secretes hormones which have important (9)..... on the way in which energy is stored and food is used and on characteristics (10)..... as hairiness and body shape. The hormones (11)..... here are called "steroids" and have three main (12).....: those which control the (13)..... of sodium and potassium; those which raise the level of sugar in the blood; and sex hormones. The smaller, inner region known as the (14)..... is the body's first line of defence and response to (15)..... and (16)..... stresses.

Ovaries

The ovaries are a pair of oval or almond-shaped glands which lie on either side of the (17)..... and just below the opening to the (18)..... tubes. In addition to producing eggs or (19)..... the ovaries produce (20)..... sex hormones called estrogen and progesterone.

Testicles (Testes)

The (22)..... is a sac that hangs under the penis and holds the testes. It is divided internally into two halves by a membrane. It has an (21)..... layer of thin skin over a layer of tissue which contains muscle. The testicle lies inside the scrotum and produces as many as 12 trillion sperms in a male's lifetime, about 400 million of which are ejaculated in one average intercourse. Each sperm takes about seventy-two days to (22)..... and its maturity is overseen by a complex interaction of hormones. If it becomes too cool on the outside, the scrotum will (24)..... to bring the testes closer the body.

Pancreas

The pancreas is a long gland which lies across and behind the stomach. The right-hand end lies within the (25)..... of the duodenum. This gland secretes digestive juices which break down (26)..... Some cells in the pancreas secrete hormones which regulate the level of (27)..... in the blood. The cells of the pancreas are surrounded by many blood vessels into which they secrete hormones (28)..... and (29)..... into the blood. If the pancreas (30)..... to produce insulin or secretes it in low quantities, the result is a (31)..... disease called (32).....

