

Reproductive System & Endocrine

Glands

The reproductive and endocrine systems manage reproduction, growth, metabolism, and body balance. Different species have special traits designed for survival and breeding.

Male Reproductive System

Dogs have testicles in their scrotum and a penis with a bone called the os penis. Their only accessory sex gland is the prostate. In cats, penile spines disappear after they are neutered.

The main points about animal reproductive anatomy include: horses have large testes and several accessory sex glands, with a penis that can have equine coital exanthema. In cattle and sheep, testes are pendulous and accessory glands are well-developed, while bulls are susceptible to penile injuries. Birds have internal testes and no scrotum, most lack a penis, using cloacal contact for mating.

Female Reproductive System

Dogs are monoestrous with one breeding cycle per season and a long diestrus period, often experiencing pseudopregnancy. Cats are seasonally polyestrous and require mating for ovulation. Horses are also seasonally polyestrous, with a 21-day cycle. Cattle are polyestrous year-round, whereas sheep are short-day breeders. Birds are oviparous, using their left ovary and oviduct to lay eggs.

Endocrine Glands

The pituitary gland controls several hormones including growth hormone and ACTH. The thyroid gland regulates metabolism, and issues arise with iodine deficiency. Adrenal glands manage stress with hormones. The pancreas regulates blood sugar, with diabetes common. Gonads produce sex hormones. The pineal gland in birds has a strong influence on controlling their daily biological cycles, known as circadian rhythms, and their seasonal reproductive behaviors.

Clinical Relevance

Dogs face pyometra, benign prostatic hyperplasia, and diabetes. Cats experience ovarian cysts from induced ovulation. Horses have seasonal breeding and endocrine issues like Cushing's disease. Cattle and sheep encounter infertility, retained placenta, and metabolic diseases. Birds deal with egg binding, reproductive tumors, and thyroid problems.