

SPERM



Sperm, also known as spermatozoa, are the male reproductive cells. They are crucial because they carry the genetic material needed for fertilization. Anything that impacts sperm production, such as illness or heat stress, can impair ram/buck fertility.

The **vas deferens** is a muscular tube that carries the sperm from the epididymis to the ejaculatory duct. A teaser ram/buck is created by surgically severing the vas deferens

The **epididymis** is a coiled tube at the back of the testicle. It plays a crucial role in sperm maturation and storage.

Sperm is produced primarily within the **seminiferous tubules** of the testicles. The process takes approximately 47 days.

Larger testicles (measured by scrotal circumference) are associated with greater semen volume and sperm viability.

Sperm concentrations in rams/bucks range from 1 to 5 billion sperm per mL of semen. Many factors can affect sperm concentration including individual, breed, age, season, diet, and method of semen collection.

After mating, sperm are deposited in the vagina, then navigate through the cervix, uterus, and finally into the oviducts where **fertilization** occurs. The introduction of sperm into the female reproductive tract triggers an immune response. The immune system tries to kill them. This response helps eliminate excess and dead sperm and potentially harmful microorganisms.

While the ram/buck releases millions of sperm into the female's reproductive tract, it only takes **one** sperm to fertilize an egg. Fertilization by more than one sperm is rare and usually lethal (embryo dies).



White blood cells in semen are indicative of infection, usually with *Brucella ovis*.



Abnormal sperm morphology can reduce fertility. More than 30% abnormal sperm is considered to be a red flag.



Poor sperm motility can lead to sub-fertility or infertility. Normal is when more than 40 percent of sperm are exhibiting forward progression.

