

Cat Reproductive System Student Notes - Answer Key

Cat Reproduction

A **queen**, or intact female cat may:

- Produce two or three litters of kittens a year
- Go into heat during which time they are interested in **mating** and can **conceive** (get pregnant)
- Mate with more than one male

In heat

- Periods of heat last a **few** days.
- **Rolling, stretching, rubbing, crying and yowling** characterize a female cat in heat.
- If the cat does not mate and conceive, the cycle will be **repeated** in a few weeks.
- It is **possible** to prevent a female cat from becoming pregnant.
 - Keep her in the house, isolated from any **tomcats** (unneutered males)
 - Have her spayed (**ovariohysterectomy**)

Spaying

- Is a surgical procedure which involves **removal of the female reproductive organs**
- Usually performed at age six to seven months
- Result: **no longer interested in mating and she is unable to conceive.**

Neutering

- Involves **surgical removal of the testicles**
- Results: 1) No longer shows interest in mating 2) Tends to stay home 3) Fight less 4) Live much longer

Male Reproductive Organs

The **tomcat's** (male cat) organs of reproduction are:

- **Penis**
- **Testicles**
- **Prostate gland**

A male cat has two testicles that are suspended in a sac-like structure, the **scrotum**, outside of its body. The testicles **produce and store** sperm, which is the seed that fertilizes the eggs produced by the female. **Testosterone**, a hormone that is essential to the male's sexual development and activity, is also produced by the testicles. The prostate gland **produces seminal fluid**, which transports the sperm.

Copulation

- **When two cats mate**, the male mounts the female and inserts his penis into her vagina
- Ends after the male ejaculates **seminal fluid** into the female's vagina
- Sperm in the seminal fluid then swim up through the vagina into the uterus and finally into the **oviduct**
- Oviduct where the sperm actually **fertilizes** the eggs

Female Reproductive Organs

The female cat's reproductive system consists:

- **Vulva**
 - The **external** opening of the reproductive tract
 - The lips of the vulva are located just below the anus
- **Vagina**
 - A tube just inside the vulva
 - Where the male's penis will be during **copulation**
 - The passageway for kittens being born
 - The location of the end of the urethra
- **Cervix**
 - The opening between the uterus and vagina
 - During pregnancy, it serves as a **seal or barrier** between the sterile uterus and the outside world
 - Relaxes at birth and allows the kittens to enter the vagina

- **Uterus**

- Tubular organ that is shaped like a “Y”, the body being the bottom part of the Y and the horns the top part
- Extends from the pelvis to the kidneys
- Consists of a **body and two horns**
- It is in the horns of the uterus that kitten embryos are **implanted and develop**

- **Oviducts**

- Tiny tube that connects the uterus to the ovaries
- The actual site where **fertilization** occurs

- **Ovaries**

- A peanut-sized organ located near the kidneys
- Where **ova or eggs** are produced

Ovaries and the Estrous Cycle

- **Ovaries** control the estrous cycle
- Estrous cycle is the **recurrent pattern of sexual receptivity** followed by periods of time without sexual receptivity in the female
- Most distinct period is estrus, or heat and this is the time of sexual receptivity or breeding
- Hormones **estrogen** and **progesterone** are made in the ovary during different stages
- Begins with the development of several follicles
- A follicle is a small fluid sac that will contain an **egg**
- Each follicle will grow and produce estrogen which is responsible for the “**in heat**” or estrus behaviors of the female

Ovulation

- Is the **rupture of the follicle and release of the egg into the oviduct**
- **Induced ovulators** - ovulation occurs as the result of mating
- After ovulation, the follicle changes to form a **corpora leuta** (CL)
- CL produces progesterone, which is a hormone needed to maintain pregnancy
- If the cat does not have kittens the CL will keep her “out of heat”
- When the CL quits producing progesterone, follicles will begin to grow and another estrus cycle will begin

The cat is known as a seasonally **polyestrous** animal. This means she will have many estrous cycles only during certain times of the year. It is **photoperiod**, or length of day, which controls the estrous cycle. Therefore, cats usually will not come into heat during the winter but will wait until **springtime**.