Section (11)

Sexual Behavior

Reproductive Behavior (Sexual Behavior)

- Provides an opportunity for copulation.
- Know as Reaction time (time elapsed from precopulatory stage till dismounting.
- It take about:
  - 2-5 min. in bull.
  - 10 min. in ox buffalo.
  - 15 min. in stallion.
- It divided into:
  1. Precopulatory behavior.
  2. Copulatory Behavior.
  3. Post copulatory Behavior.

1) ***Precopulatory Stage***

- Search for sexual partner
  - In female limited to estrus
  - In male can occur at any time
  - Involves all of the senses
    - Sight
    - Smell
    - Hearing
    - Tactile
- Courtship
  - Species specific events
  - Sniffing of the vulva by male
  - Urination by the female
  - ***Flehmen lip curling***:

    Sniffing the vulva of female where the male close nostrils with raising head and extend his neck → the vaccum in nasopalatine duct suck fluid into vemeronasal organ to detect any phermones.

  - Chin resting on female rump
  - Increased phonation
  - Male checks for female lordosis
  - Human - eye contact, touching, detection of pheremones

- Sexual arousal
  - Female - lordosis, present hindquaters to male
  - Male - erection, penile protrusion
  - It is endocrine and neural events in male that result in erection of penis and mounting of sexual receptive female.
  - Erection and Penile protrusion require:
    - ✓ Elevate arterial blood flow.
    - ✓ Restructed venous outflow.
    - ✓ Elavate intrapenile pressure.
    - ✓ Relaxation of retractor penis muscle.

  - ***Mechanism of erection:***
    Stimulate of nerve ending which arise from 1st,2nd and 3rd sacral nerves (have vasodialator action) → lead to marked increase in blood inflow toward the penis.
    At the same time ischiocavernous and bulbocavernous muscles press on vein between muscle and ischial arch (while thicker wall of artery resist pressing) → lead to decrease outflow of blood → cause complete filling of cavernous tissue of penis → lead to stiffiness and erection also straightness of sigmoid flexure and relaxation of retractor penis muscle.

2) *Copulatory Behavior*

It is process lead to deposition of semen inside vagina.

- ***Mounting***:
  Elevation of front leg of maleto straddle the posterior region of female & penile movement.
- ***Intromission***:
  Intrance of penis into vagina.
- ***Ejaculation***:
  Expulsion of semen from penis into female reproductive tract.

- Varies among species
  - short copulators (1 - 3 seconds)
    - bull
    - ram
  - sustained copulator (5 - 20 minutes)
    - boar
  - intermediate (20 to 60 seconds)
    - stallion

- Duration depending on amount of ejaculated semen:
  - ✓ In bull : 4-5 ml. bu ejaculatory thrust وخزي
  - ✓ In stallion: 100-300 ml. in 6-9 fraction so it called fractional ejaculation.

- ***Mechanism of ejaculation:***

  Semen ejaculated resulting to the reflex action due to intrance of glans penis in the vagina.

  Nerve impulse which primarily arise in glans penis and transmitted into lumbosacral section of spinal cord causing serious of muscular contraction in efferent ducts, epididymis, vas deference and accessory gland.

  Contraction of penile muscle which lining the urethra → forcing of semen in waves very strongly.

Erection, Emission, Ejaculation

- Erection
  - Vasodilatation, inhibit vasoconstriction, relax retractor penis muscle
- Emission
  - Contraction of cauda epididymis, vas deferens
    - Oxytocin from posterior pituitary
    - Sympathetic neurons
  - Release of accessory gland fluid
    - Sympathetic neurons
- Ejaculation
  - Contraction of smooth and striated muscles

3) Postcopulatory Behavior

- ***Male***
  - ***Dismounting***
  - ***Refractory period***
    - Period of time during which copulation will not take place
    - Dependent on:
      - Species
      - Sexual rest prior to copulation
      - Age of male
      - Degree of female novelty
      - Number of previous ejaculates
    - For semen collection try to minimize
  - ***Memory***
    - A bad experience will carry over