SEXUAL BEHAVIOR
Importance of Sexual Behavior

• Without reproduction, life would come to an end!
• In production situations, it is economically important to have “good breeders”.
• We must control both desirable and undesirable sexual behaviors in domestic animals.
Factors Affecting Sexual Behaviors

Factors include:
- Past experiences
- Light
- Visual stimuli
- Hormonal status
- Olfactory stimuli
- Environmental factors: handlers, footing, noise, location, etc.
Genetic factors

- Sex is genetically determined

- Mammals: Male - XY

- Mammals: Females - XX

- Birds?

- Without androgenic stimulation
  - Female behavior
  - No male genitalia
Perinatal hormone influences

• Sex hormones play an important role in sexual behavior

• Neonatal androgens “defeminize” males
Adult Hormonal Status

- Hormones have a permissive role in adult animals.

- Normal sexual behavior requires a certain level of hormones.
- Varying administrations of estrogen and progesterone will elicit estrous behavior.

- Sexual behaviors can be altered by castration
  - Experience affects castration effects
  - Anatomical problems
  - Inability to mate
Anatomical Factors

- Absence of spine
  - Inability of intromission
- Will not induce ovulation

Photo courtesy: http://foothillsanimalhospital.blogspot.com/2012/01/oh-yes-i-took-picture.html
Effects of Castration

Grunt & Young, 1952
Previous Social and Sexual Experience

- Lack of sexual experience can have a greater influence than hormonal imbalance
- Raised in isolation (Lack of socialization)
  - Inhibit sexual behavior
  - Dog do not mount
- No prior experience, excessive experience, homosexual only experience, or very unpleasant experience can all lead to sexual behavior problems.
- External environment
  - High temperature
  - Slippery floor
  - Time of day
  - Stress
Attractiveness of Potential Mate

- Based on innate preferences and past experience
- Direct selection
- Arbitrary mate choice
- Good Genes

Image courtesy: USDA ARS Image Library
Central Nervous System Control of Female Sexual Behavior

- In proestrus, the feedback loop is reversed from negative to positive.
- Increased estrogen is responsible for estrus behavior.
- The resulting LH surge induces ovulation.

Photo courtesy: https://embryology.med.unsw.edu.au
Central Nervous System Control of Male Sexual Behavior

Photo courtesy: https://embryology.med.unsw.edu.au

Figure 4.3
Estrous Cycle Variations

- Spontaneous ovulators: Ovulation occurs on a regular cycle (bitch, ewe, mare, sow, cow)
- Induced ovulators: Vaginal stimulation is required for ovulation (queen, rabbit)
Cattle

- Intact males = bulls
- Castrated males = steers
- Intact, breeding female = cow
- Pre-pubertal female = heifer
The Cow: Estrous Cycle

- The cow is a non-seasonal, continuously cycling breeder.
- Puberty typically occurs between 6 and 18 months.
- The estrous cycle is 18 to 24 days in length.
Cow: sexual behavior

- Increase in activity
- Increase vocalization
- Decrease food intake
- Flehmen, rubbing, leaking
- Chin resting
- Mounting
- Approach the bull
Heat detection

- Pedometer
- Heat patch
- Behavior observation
  - Vaginal secretion
  - Vulva relaxation
  - Mounting
Clinical Problems of Cattle

- Silent heats
- Nymphomania
- Freemartin
- Buller Steer Syndrome
Bull sexual behavior

- **Courtship**
  - Grazing with cow
  - Guarding the cow
  - Liking sow vulva
  - Mounting (no intromission)
  - Head on the back
  - Ejaculation within seconds after intromission

- Masturbation
Clinical Problems of Bulls

- Inadequate libido
- Bulling

Image courtesy: http://gpvec.unl.edu
Ewe sexual behavior

- Poly-estrus seasonal breeders
- Cycle is every 16 days
- Estrus 30 hours
- Puberty 4 month
- Tropical areas
- Ram effect
Ewe sexual behavior

- Starts the courtship
- Following the ram
- Sniffing males’ body and genitals
- Standing heat and tail wagging
- Occurs at night
- Preference for a Ram
Ram sexual behavior

• Social determine

• Sniffing females genitals, Flehmen

• Ritualize kicking

• **Ejaculation** occurs immediately after intromission

• Urination
Goats
Doe sexual behavior

- Short day breeders
- Tale wagging
- Vocalization
- Urination
- Male effect
Buck sexual behavior

• Kicking

• Vocalization

• Enurination

• Tail straight
Horses

- Intact males = stallions
- Castrated males = geldings
- Post-pubertal females = mares
- Pre-pubertal females = Filly
Mare sexual behavior

- Long day breeders
- Cycle 21-24
- Heat last 6 days
- Foal heat

Image courtesy: www.mofoxtrot.com/mare-reproduction.htm
Mare sexual behavior

• Ears back

• Urination

• Winking

• Have preference for a Stallion
Clinical Problems of Mares

• Estrus can be split or prolonged.

• Anestrus
  • Physiological
  • Behavioral

• Nymphomania
Stallion Sexual behavior

- 2-3 month
- Biting and nuzzling
- Flehmen
- Vocalizations
- Copulation last less than 45 seconds
Clinical Problems of Stallions

- Absence of libido
  - Lack of experience
  - Overuse
  - Used as teaser but not bred
  - Improper handling
- Injury
  - From mare
  - Self mutilation
Swine

- Intact males = boars
- Castrated males = barrows
- Intact, breeding females = sows
- Pre-pubertal females = gilts
The Sow: Estrous Cycle

- No seasonal breeders
- 21 days cycle
- 5-8 month
- Boar effect
- Olfaction and auditory stimulus

The Sow: Sexual Behavior

- Increase activity
- Mount other females
- Sniffing boar head and genitalia
- **Standing heat**
  - Immobile
  - Ears pointing up
The Boar: Sexual Behavior

Figure courtesy: Houpt 2011, Figure 4.13
Clinical Problems of Boars

- Inadequate nutrition
- Poor management techniques
- Previous unpleasant mating experience
- Lack of early socialization

Photo courtesy: http://nationalhogfarmer.com/reproduction/
Domestic Canines

- Males = stud
- Females = bitches
The Bitch: Estrous Cycle

- Non-seasonal
- Puberty varies
  - Breed
  - Size
Bitch Sexual Behavior

- Playing
- Sniffing males’ body and genitals
- Urination
- Perineum movements
Clinical Problems of Bitches
The Dog: Sexual Behavior
Clinical Problems of Dogs

- Impotence
  - Lack of socialization
  - Timidity
  - Environment
- Masturbation
- Castration
  - Do not affect some behavior
Domestic Cats

- Males = toms
- Females = queens
The Queen: Estrous Cycle

- Puberty occurs between 6 and 10 months
- Seasonally polyestrous
- Estrus lasts 9 to 10 days.
- 3 weeks
- Induced ovulatory
The Queen: Sexual Behavior

Figure courtesy: Houpt 2011, Figure 4.17
Tom sexual behavior

- Olfactory cue in female urine
- Calling the female
- Sniffing
- Holding the queen neck
- 10 seconds
- Lick his penis