The following are some suggestions as to topics to spend time studying. This list or any list like it cannot be expected to cover each and every topic possible for the upcoming exam. However, it should give you a reasonable idea as to the breadth of material. My suggestion is to use this list as a way to help you organize your notes and your reading. "***" indicates material not covered in lecture that you need to read independently in your text.

**Topic 7**

- Maintenance versus restoration of sexual behavior with androgens
- Regions of brain that exert control of sexual behavior in male rats
- The vomeronasal organ and its role in reproductive behavior in males
- The relationship of the olfactory bulbs, vomeronasal organ, and amygdala
- Various studies examining the effects of castration and replacement androgen therapies
- MPOA and testosterone
- The fos gene and sex behavior
- Dopamine effects related to male reproductive behavior
- Sex drive variances, castration and testosterone replacement therapy
- Silastic implants of testosterone in castrated rats and the return of mating behavior
- Human male sexual behavior rates related to age studies of hypogonadal males
- Parthenogenetic lizards and male behaviors
- Erectile dysfunction and viagra

**Topic 8**

- Female sexual responses related to estrus in rats
- Methods of discerning estrus cycles in various species using vaginal smears
- Be able to describe the cell change in vaginal smear, the follicular development, and be able to correlate it to sexual behavior
- Skeletal positions during lordosis
- Various studies of female initiation of sexual interactions
- Proceptivity, receptivity, and attractivity
- The "male acceptance ratio" study
- Effects of social/environmental factors and female receptivity and male-female interaction
- The breeding deme
- The female pacing of copulatory behaviors
- Human menstruation and LH, FSH, P, and E during menses, follicular and luteal phases
- Uterine lining changes during menses, follicular and luteal phases
- The rat ovarian cycle and its relationship to LH, FSH, P and E.
- The receptive fields associated with female lordosis behavior
- Neural control of lordosis
- The role of progestosterone in lordosis (as explained using knockout mice lacking progestosterone receptors)
- The Lee-Boot Effect
- The Whitten Effect
- The Bruce Effect
- The Vandenbergh Effect

**Topic 9**

- Ranges of parental care provided in species precocial, semi-precocial, and altricial young.... comparison and examples.
- Uniparental, biparental care, and assistant care the role of LH, FSH, and Prolactin in parental care
- Birds... the changes in crop contents associated with parental care and also associated with age of offspring and parental prolactin levels
- Components of rat parental care
- Maternal behavior development related to age of the female
- Placental lactogen, role and effects
- Biparental care as expressed by convict cichlids (Chelidosoma nigrofasciatum)
- Maternal contact times and primates
- Thermoregulation and huddling behavior in rat pups
- Cortisol and hedonic rankings in maternal behavior
- Estrogen/progesterone rations and maternal behavior
- Prolactin and paternal behavior
- Testosterone and paternal behavior
- Vomeronasal organ activity and paternal behavior in rodents
- Color change due to pars intermedia and MSH and/or MSH-like hormone secretion
- Albedo and effects on color change

**Topic 10**

- Developmental characteristics of the hypothalamic-pituitary axis
- The infundibulum's role(s) in the hypothalamic-pituitary axis
- Communication methods of the hypothalamus and pituitary regions
- "The commonly described hormones from the different regions of the pituitary
- Gigantism, causes, effects, ranges
- Acromegaly, causes, effects, ranges
- Dwarfism (pituitary based and genetic based), causes and effects
- Relationships of the gonadal hormones and the growth hormones in regards to the above mentioned diseases/disorders
- Polycystic ovarian disease (disorder, or syndrome)
- Characteristics of PCOS
- Myxedema, hormonal cause(s), symptoms, effects
- Graves Disease, hormonal cause(s), symptoms, effects
- Addison's Disease, alternative names, hormonal causes, symptoms, effects
- Cushing's Syndrome, alternative names, hormonal causes, symptoms, effects
- Buffalo hump
- Central (centripedal) obesity
- Metabolic syndrome
- Role of oxytocin in shaping behavior in vole monogamy and polygamy
- Testosterone levels and deer reproductive behavior aggression in hamsters

**Other Readings**

Scotti et. al., 2009. Hormones & Behavior. 56:376-381

**Know the Historically Relevant Scientists!**