Final review sheet BIOL 610 summer 2005-06-30
What are ALL the major secretions of the pancreas?
Describe the major cell types of the endocrine pancreas and their secretions.
What happens if the pancreas is removed?
Describe type I and Type II diabetes. What are the causes of each? How is each condition controlled? List major symptoms and conditions found in a diabetic.
What is the mechanism of action for insulin?
Describe the synthesis of insulin and glucagon? How are they regulated?
What are the major physiological functions of the pancreatic hormones (insulin, glucagon, SST) What are their target tissues?
What factors control the secretion of insulin, glucagon and SST? How do they regulate each other in a paracrine manner?
Recall that insulin is released in two phases after a glucose load. Sketch a graph of the blood glucose levels as they respond to a glucose level. Include a line for a diabetic and a normal person. What is the source of insulin in each phase.
Describe in detail the structure of the adrenal gland.
Describe the hormones and their origin. What is chromaffin tissue?
How are adrenal hormones metabolized?
What are the major physiological effects of adrenal hormones? What is Cushing's disease, what causes it?
Describe the general adaptation syndrome. How was it elucidated?
What are the symptoms of menopause and how are they treated?
How does stress affect memory? What hormones are involved and what areas of the brain are affected?
What are effects of stress on aging? Give an example. What would you do to a salmon to prevent it from dying?
Why don't zebras get ulcers?

Reproductive Hormone Worksheet

There are no online lectures for chapter 16-18. Instead, go thru the chapters and answer the following questions. You must post your answers on the week 8 discussion board to get credit for the discussion.

From Hadley
Ch 16
1. Describe the process of mammalian sex determination. What hormones are involved in this process and what does each one do?

2. How do the gonadal steroids influence brain differentiation?

3. How do the gonadal steroids influence puberty? Define delayed puberty, precocious puberty.

4. What is hermaphrodisim and how does it occur?

Ch 17
1. Describe the source, synthesis, chemistry and metabolism of androgens.

2. What are the physiological roles of androgens?

3. What are the physiological roles of estrogens?

4. How do GnRH and Pituitary gonadotropins influence testicular function?

Ch 18
1. How are estrogen and progesterone synthesized?

2. What is the mechanism of action for the ovarian steroids?


4. Define: inhibin, activin, uterine cycle, ovarian cycle, vaginal cycle induced ovulation, spontaneous ovulation, delayed ovulation

From Sapolski

Ch 13
1. How do stress hormones influence or create depression?

Ch 16
1. What are some strategies on managing stress?