

Bio 160: Review Guide for Exam 3
Nervous System & Endocrine

The prior nervous system material (nervous tissue) will not be specifically addressed on this exam, as it was covered on exam 2. However some of the information is still required for general knowledge on this exam. For example, you don't need to know the specific steps of action potential transmission, but you do need to know what they are used for.

For this test, the following items are important:

- Know the lobes/regions of the brain & their general functions.
- Know the structures that protect the nervous system.
- Understand the role of CSF, its formation and circulation.
- Know the cranial nerves.
- Be familiar with the different sensory and motor pathways.
- Know the anatomical features of the spinal cord (both gross and in transverse section).
- Know what a reflex is and be familiar with the different types of reflexes.
- Understand the differences between the two divisions of the ANS (sympathetic vs. parasympathetic)
- Understand the differences between the endocrine and nervous system in terms of maintaining homeostasis.
- Know the different types (classifications) of hormones and how that pertains to their production, release and action (i.e. what is different between the production, release and action of T4, vs. FSH?)
- Know the role of the hypothalamus as the “link” between CNS and endocrine & how it performs this linkage.
- Know the structure of the pituitary with regards to the differences between the anterior and posterior components and how the differences lead to different functions.
- Know the hormones produced and released by the anterior pituitary as well as their targets and general effect.
- Know the two hormones released at the posterior pituitary and what they are used for.
- Be familiar with the other glands of the endocrine system, their products and actions.
 - thyroid
 - parathyroid
 - pancreas
 - thymus
 - adrenal (both cortex and medulla)
 - gonads
 - GI tract
 - heart
 - kidneys