

Before coming to lab:

1. Go to the course website and view the Shotgun Histology videos on the following tissues:

- Nerve

There are additional nervous tissue videos available, but this is the only one that covers a slide we will use.

During the lab period (preferably complete in order):

1. Brain dissection:

- The instructions for the dissection can be found in the *Lab Manual* (pp. 292-296).
 - When it comes to dissections, there are three types of people: **cutters**, **touchers** and **lookers**.
 - Every group needs at least one cutter. Rearrange yourselves, if necessary.
 - Only cutters and touchers get gloves, and they only need one pair each.
 - Lookers should keep notes for the group and turn pages.
 - Follow the instructions, starting on p. 292.
 - Things you should be able to find:
 - On the surface:
 - dura mater
 - pituitary gland (will usually come off with the dura mater)
 - Once you've removed the dura mater (*Lab Manual* Fig. 19.11):
 - pia mater
 - cerebral hemispheres
 - cerebellum
 - pons
 - medulla oblongata
 - olfactory bulbs and tracts
 - optic nerves
 - optic chiasma and tracts
 - By prying the cerebellum away from the cerebral hemispheres (*Lab Manual* Fig. 19.12, p. 294):
 - corpora quadrigemina (part of the midbrain)
 - pineal body (pineal gland) = not always easy to find
 - On the inside, once you've made a midsagittal cut (*Lab Manual* Fig. 19.13, p. 295):
 - gray and white matter
 - arbor vitae (in the cerebellum)
 - cerebral peduncles

- midbrain
 - corpus callosum
 - fornix
 - intermediate mass of the thalamus
 - ventricles
- Zip-lock bags are available for you if you'd like to save your brain for later study.
 - Put your names on the bag and leave it on the instructor's bench.
 - If you don't want to keep your brain, toss it and any dissection waste in the large box in the back room.
 - When you clean up:
 - **Wash the dissection pans.** Leave them to dry by the sink.
 - **Wash and dry the dissection tools.** Return them to the tray.

2. For your Histology Notebook:



- neuron smear** – *Brief Atlas*: Plate 33 (p. 15); *Histology Atlas*: Fig. 10.1b (p. 86) and Fig. 10.2i (p. 87)
 - Recommended # of pages: 1
 - Draw at 400x total magnification.
 - Label the following: neuron cell body, processes, neuron nucleus, astrocyte nuclei

- nerve fibers (osmium tetroxide)** – Unfortunately, there aren't any good pictures in either book, but these slides are very easy to use.
 - Recommended # of pages: 1
 - Draw at 400x total magnification.
 - Label the following: Schwann cell, axon, node of Ranvier
 - Answer **Question 16**: Describe the role(s) of the Schwann cells.

- nerve (Masson)** – *Brief Atlas*: Plate 34 (p. 14); *Histology Atlas*: Fig. 10.18 (p. 93)
 - Recommended # of pages: 1
 - Draw a cross-sectional view at 400x total magnification.
 - A view at 100x may also be helpful.
 - Label the following: nerve, epineurium, fascicle, perineurium, axon, endoneurium
 - Answer **Question 17**: Is this structure part of the CNS or PNS?

★ **Note:** These are your last entries for the semester!

Before the next lab period:

1. Complete the cranial nerve chart (p. 231).
 - The information can be found in the *Lab Manual* (Table 19.1, pp. 290-291).
 - This won't be collected, but they are on Lab Exam 2.
2. Keep studying the muscles.
3. The next lab (Lab 11) is our last before Lab Exam 2.

There are twelve pairs of cranial nerves, described in detail in your text, and summarized in the Lab Manual. Please learn their names, in addition to their numbers (in Roman numerals), function or type, fiber origin, and fiber destination. This information can be found in Lab Manual Table 19.1 (pp. 290-291). You will be tested on this during Lab Exam 2 from both this table and brain models. This chart is to help you with the exercise. Two examples have been provided.

Name	Number	Type	Fiber Origin	Fiber Destination
	I			
Optic	II	sensory	eye (retina)	thalamus
	III			
	IV			
	V			
	VI			
	VII			
	VIII			
	IX			
Vagus	X	mixed	medulla oblongata	organs of thorax and abdomen
	XI			
	XII			