NAME _____ PERIOD ___

Senses Lab
Anatomy and Physiology

General Sensation

The Sense of Touch

Use calipers or two dissecting needles to perform the following test. The subject should have his/her eyes closed. The examiner should apply the two points to various areas of the skin, continually adjusting the points to the minimum distance apart at which the subject can distinctly feel two separate points. This is called two-point discrimination. Determine the two-point discrimination distance for the areas listed below.

Skin Area	*Two-Point Discrimination (mm)*	*Skin Area*	*Two-Point Discrimination (mm)*
Fingertip		Ear	
Palm of hand		Back of neck	
Back of hand		Cheek	
Inside of wrist		Lip	
Nose		Tongue	

QUESTION

1. Compare the distribution of these receptors in the different body regions tested and hypothesize why these differences might have occurred.

Pain

Repeat the procedure described above, except this time press the points into the skin with just enough force to produce a slight sensation of pain. Fill in the following table and compare the results with those of the light touch test.

Skin Area	*Two-Point Discrimination (mm)*	*Skin Area*	*Two-Point Discrimination (mm)*
Fingertip		Ear	
Palm of hand		Back of neck	

Back of hand		Cheek	
Inside of wrist		Lip	
Nose		Tongue	

QUESTIONS

1. What does this tell you about the distribution of touch receptors as compared to pain receptors?

2. Compare the distribution of light touch receptors vs. pain receptors. Hypothesize- provide a possible explanation for any differences.

Proprioception: Balance, posture, and an awareness of where your body parts are:

Finger Touch:

1. Close your eyes, spread your arms wide apart, and attempt to bring the tips of your index fingers together rapidly and without hesitation. Try this several times. Are you more accurate after you have had some practice?

2. Repeat this exercise but this time try to quickly touch the tip of your nose with your right index finger. Repeat with your left index finger. Can you do this better with one hand than with the other?

Static Equilibrium

1. Have the subject stand with feet together and arms outstretched for at least 30 seconds. Describe body movements.

2. Repeat this procedure with the eyes closed. Describe the body movements.

3. Repeat this procedure standing on one foot with the eyes open. Describe body movements.

4. Repeat this procedure standing on the other foot with eyes open. Describe body movements.

5. Repeat steps 3 and 4 with the eyes closed. Describe body movements.

QUESTIONS

1. List all the senses that help in sensing body position and balance.

2. List all the body parts that you believe would have proprioception

3. Name the brain part primarily responsible for balance.

Reaction Time

The subject should rest his or her elbow on the table, with the arm extending over the side. The experimenter should hold a meter stick in the air, with the 0-cm line between the subject's thumb and index finger. The experimenter should drop the meter stick and the subject should catch it between the thumb and index finger. Note the reaction time.

Write a paragraph comparing the distribution of light touch nerve endings vs. pain nerve endings. Compare distribution in various body parts. Hypothesize on why these differences occur.