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Lab 6/7

Sensory Physiology

Purpose:

For this lab my partner and I will be doing several labs to be exact we will be performing 12 labs. The purpose of these labs will be testing our cutaneous, olfactory, gustatory, phonoreceptors, proprioceptors, and photoreceptor. Each of these receptors generate graded potential which will be strong enough which will depolarize a connection sensory neuron.

Procedure:

Lab A-1 was a two point discrimination, my partner and I used caliper pinpoint as closely together when back and forth on our palms, back, of the hand, fingertip, cheek, and back of the neck until we could feel the two separate caliper point.

Lab A-2 is accommodation of thermoreceptors we had three separate water tubs one finger will be placed in 15C temp. water and right finger in warm water 37C and then recorded the sensation of each.

Lab B Olfactory adaption we will be blocking our left nostril holding the bottle of

camphor oil under our nose until we can no longer smell the camphor, and record how long it took us to no be able to smell the camphor. Then we will place the bottle of cloves, then peppermint oil under our nose and be able to smell each one, then once again hold the bottle of camphor under our nose until the smell is no longer recognized and record the second adaptation time. Then we uncovered our left nostril to see if we could smell the camphor.

Lab C-1 Turning fork test, these tests utilize the direct vibration the cochlear hair cells. So, each of us plugged our left ear with our hand to test the right ear. We held the handle of the vibrating turning fork to the right mastoid process, when the sound disappeared; we moved the fork near our inner ear. Basically, if we can hear the sound there is no middle ear damage.

Lab C-1 Audiometry, we will be measuring hearing acuity by presenting pure tones to each ear through a set of color- coded earphones, red is for the right ear and blue is for the left ear. We both conducted the test on each other and then recorded our results .

E-1 Demonstration of the blind spot, we covered out left eye and focused the right eye on the center of the cross. We slowly had to bring the page closer to our eye until the spot disappeared and then measure the distance from our eye to the page where the spot disappeared.

E-2 The Snellen test, we used the standardized eye chart to evaluate visual acuity . we stood 20 feet away from the Snellen chart, covered our left eye and attempted to read line 20. If we would not read line 20, we attempted 30,40,50 ect. Until the line was legible and recorded our results.

E-4 Color vision so we had to stare at different colored objects for 30 seconds each, and then shift your glance to a white sheet of paper. Basically looking at a specific color for too long will bleach out visual pigment of that color.

E-5 Perimetry is using objects of different colors that will map the location of the cones in your retina for one eye. We used the perimeters board into your field of vision.

Results:

The results for the Two-point discrimination were testing palms, back of the hand, finger, outer edge of cheek, and back of the neck. Within 18 seconds I felt the two point, 31 second back on the finger, 6 second of the finger, 33 seconds of the outer cheek, and 23 seconds of the neck.

A-2 Accommodation after placing my fingers in all three temp. of water, and after two minutes I could not feel my finger that was in the warm water, but still feel the left finger that was placed in the 15 Celsius. When both fingers where placed in the 25 Celsius where immediately cold and felt numb.

6/7 Olfactory adaptation after unlocking my left nostril I was not able to smell the camphor, of course after a while I was but took a minute.

C-1 turning fork test, I had not ear damage because I was there was reappearance of the sound which would indicate no ear damage.

E-1 Demonstration of the blind spot, at 22 inches the spot disappeared visual functions is why I was not able to see the spot.

E-2 Snellen test, my partner and I evaluated our visual acuity, my vision was 20/30 and Ester my partners was 20/100 and she does wear glasses.

E-4 Color vision, after staring at the colored objects, the colors were vibrant.

E-5 Perimetry, regards to the con placement vertical was 50/50 left and right, horizontal 29/70 up to down.

Discussion:

We were able to understand the three components of our sensations. Testing out the basic receptors and how they operate. All labs that were performed today are all pretty interesting, sensation to the temperatures of water can have on our body and how the mind reacts.

Conclusion:

This lab we were able to do a few experiments that would test out our sensory physiology which would include touch, smell, taste, hearing, equilibrium, and

sight. So, we can get a better understand how each receptor work, each of these receptors generate graded potential, if strong enough will depolarize a connection sensory neuron.