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Lab 6/7

11/30/2023

Title: Sensory Physiology

Purpose: To monitor sensations from environmental stimuli using various methods.

Procedure:

6/7-A: Tests of cutaneous sensation

A-1: Two-point discrimination

1. With your partner's eyes closed, apply two caliper pinpoints as closely together as possible on your partner's skin on the palm of his/her hand.

2. Remove the pins and move them 1 millimeter apart. Reapply the caliper points to your partner's skin. Repeat this procedure until your partner can discriminate two distinct points.

3. Record this distance between pins at which your partner can discriminate two separate caliper points.

4. Compare results obtained from the following areas: a. palm of hand

b. back of hand

c. fingertip

d. outer edge of the lips e. back of neck

5. Have your partner repeat this experiment on your skin.

6. Interpret the results you have obtained.

A-2: Accommodation of thermoreceptors

1. Place your left fingers in 15□C water and your right fingers in warm water (37□ C) and record the sensation of each. Keep hands immersed for 2 minutes.

2. After two minutes, describe the sensation in each hand.

3. Remove hands and promptly place them both in 25□ C water. Describe the immediate sensation in each hand.

6/7-C: Auditory measures

C-1: Turning fork tests

1. Plug your left ear with cotton or hold your hand over it and test the right ear.

2. Hold the handle of a vibrating tuning fork to the right mastoid process.

3. When the sound disappears, move the fork near the external auditory canal. 4. Reappearance of the sound indicates no middle ear damage.

5. Repeat the test with your left ear

6. Record the results for each ear.

6/7-E: Visual Measurements

E-2: The Snellen test

1. Stand 20 feet away from the Snellen chart. Cover your left eye.

2. Attempt to read the line designated “20”.

3. If you cannot read line 20, attempt line 30, 40, 50, 70, 100 or 200 until a line is legible. Perform these attempts with your left eye, covering your right eye.

4. The Snellen chart is analyzed in the following way:

Visual acuity = Distance you read the letters Lowest line read clearly at 20 feet

Examples:

Nearsightedness (myopia) = 20/30

Normal = 20/20

Farsightedness (hyperopia) = 30/20

E-3: Astigmatism

1. Stand approximately 8 – 10 inches away from the radial astigmatism eye chart so that it fills your field of vision. Cover your left eye.

2. Focus on the lines in the vertical plane with your right eye.

3. If a blur appears in the lateral lines or the lines converge into one, you have an astigmatism in this plane of your eye.

4. Record the results of this test and repeat with the left eye.

Results:

A-1:

	Lily	Myself
Palm of hand	9mm	15mm
Back of hand	8mm	10mm
Fingertip	5mm	4mm
Back of neck	50mm	12mm

A-2:

	15 degrees celsius	37 degrees celsius
Lt hand	Cool	Cool
Rt hand	Warm	Warm
Both hands	Cool in 25 celsius	Cold & tingly in 25 celsius

C-1:

Right and left ear and no damage. I was able to hear vibrations on both left and right side. I did not have my lab partners results to do a table for this activity.

E-2:

	Lily w/ glasses	Myself
Rt eye	20/15	20/30
Lt eye	20/20	20/30

E-3: My right eye saw blurry lines and my left eye none. I did not have my lab partners results to do a table for this activity.

Discussion: I thoroughly enjoyed lab 6/7. There were lots of different activities for my lab partner and I to complete in order to see sensations through environmental stimuli.

Conclusion: In the sensory physiology my lab partner and I were able to see how receptors, sensory neurons, and interpretation centers are affected by different stimuli. We learned how our

body reacts to different stimuli by cutaneous sensation, and thermoreceptors. We also used a test called turning forks to check for middle ear damage, the Snellen test to check our vision, and checked for signs of astigmatism.