: The Field Sobriety Test Lab

**BUSTED**

Directions: You will take turns being the ‘suspect’, the police officer, and the observer during a field sobriety test at a DUI checkpoint. If you are the ‘suspect’ during the first experiment, you will be the police officer during the 2nd, etc. ANSWER THE QUESTIONS IN COMPLETE SENTENCES. Record observations immediately in your observation chart.

Pre-Lab:

1. Using your background knowledge on the subject, describe the effects of alcohol on the nervous system (especially the brain):

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Question: (What effect does [this] have on [that]?)

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Hypothesis: (If [this is the situation / this happens], then [this will happen])

Example: If I don’t follow directions, then I will get a bad grade on this lab.

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Variables: Independent = what you’re \_\_\_\_\_\_\_\_\_\_ Dependent = what you’re \_\_\_\_\_\_\_\_\_\_\_

Independent =

Dependent =

THE LAB:

The One Leg Stand:

1. Instruct the suspect to stand with feet together and arms at the sides
2. Explain and demonstrate the test -
   1. Raise one leg approximately six inches off the ground with the toe pointed out
   2. Hold the position while counting out loud for 30 seconds saying, "One thousand and one, one thousand and two..."
3. Remind the suspect to keep arms down and keep watching the raised foot
4. Ask the suspect if he or she understands and wait for a response, then tell them to begin
5. Observe the test from three feet away, while not moving. Record observations (swaying, pace of counting, # of times they put their foot down, overall appearance, etc.)

Following directions integrates the 3 types of neurons. First, sensory neurons hear the officer giving the directions. Second, thinking / processing is done by the interneurons. Third, the motor neurons give messages to the muscles to do whatever the brain has decided it heard / understood.

The Walk and Turn Test:

1. **Instruct the suspect to walk along a straight line for nine steps, heel to toe with their hands at their sides.**
2. **Suspect - walk heel-to-toe along a line for nine steps**, turn at the end and return the same way.
3. Record your observations (swaying, # of missteps, ability to follow directions, etc.)

Observations of balance are particularly important in this test. The part of the brain called the cerebellum is responsible for balance and movement. Alcohol intoxicates this area of the brain rapidly, causing the characteristic “stumbling” and swaying associated with being under the influence.

The Rhomberg Test

1. **Instruct the suspect to stand with feet together, head tilted back, eyes closed, estimate the passage of 30 seconds IN YOUR HEAD, tilt head forward, open eyes, and say “Stop” to the officer.**
2. **Suspect – follow the directions exactly as described by officer.**
3. **Officer – watch the clock for 30 seconds to pass and observe suspect.**
4. Record your observations (swaying, ability to follow directions, the amount of time passed etc.)

Horizontal Gaze Nystagmus (HGN) Test:

1. **Instruct the suspect to follow the pen with their eyes as it moves back and forth.**
2. **The officer will slowly move the pen back and forth from left to right (and repeat).**
3. The observer will look for any jerky / bouncing motions in the eyeballs.

Observations should be recorded in the chart. The movement of the eyeballs during an attempt to focus on another object is something called “nystagmus.” It is typically involuntary, but can be controlled by those not under the influence.

Alphabet Backwards! – police don’t use this anymore, but it’s still fun !

1. **Instruct the suspect to repeat the alphabet, starting with Z and ending with A, while standing feet together and hand at the sides.**
2. **Officer will observe overall appearance of suspect, number of mistakes, etc.)**
3. Observer will record the time it takes for the suspect to get through the whole alphabet without a mistake.

|  |  |  |  |
| --- | --- | --- | --- |
|  | *Quantitative* Observations | *Qualitative* Observations | Anything else! |
| One Leg Stand |  |  |  |
| Walk and Turn |  |  |  |
| The Rhomberg |  |  |  |
| The HGN |  |  |  |
| Alphabet Backwards |  |  |  |

Conclusion Questions:

1. Why are these tests useful for police officers to use in the field?
2. Were any of the tests difficult to perform, even while sober? In what ways / why?
3. What other conditions might cause someone to perform poorly on these tests? Explain…

4. As you saw, the 3 types of neurons in the body have to work together to follow directions. How are the 3 types of neurons working together right now, as you answer this question?

5. What do you think could be some consequences of driving while under the influence, taking into account what you know from the pre-lab and what you learned in these tests?