***Balance: Testing the Inner Ear***

Aim: To see how long it takes for people to recover the equilibrium by observing their nystagmus.

Hypothesis: I hypothesize that the name and age of the Independent Variable will affect how long the nystagmus lasts.

Variables:

Independent Variable: The variable that the scientist changes.

Dependent Variable: The variable that the scientist monitors.

Controlled Variable: The variable that the scientist keeps the same.

Materials:

* 4 x participants
* 1 x source of sound
* 1 x timer
* 1 x quiet room

Method:

1. Take one participant into the room with you.
2. Spin the participant around on the spot until they are dizzy.
3. When they stop spinning, start the source of sound and start the timer immediately. The participant should feel a twitch in their eye; if not, you should be able to see it.
4. Ask the participant to tell you when they feel the nystagmus stop because the twitch may become so minimal that you cannot see it.
5. Press the stop button on the timer when the nystagmus stops and record results.
6. Stop the source of sound.
7. Repeat the same for the other participants.
8. Enjoy!!

Table of Results:

|  |  |  |  |
| --- | --- | --- | --- |
| NAME OF PARTICIPANT: | GENDER:(F/M) | AGE:(BIRTH DATE) | RECOVERY TIME:(SECONDS) |
| Megan | F | 44 (10/6/68) | 25 |
| Julia | F | 44 (8/6/68) | 24 |
| Tony | M | 44 (1/8/68) | 21 |
| Thomas | M | 8 (2/8/04) | 12 |

Discussion of Results:

My results show that the differences in age affect how long it takes for the participant to recover. As a result of the close age differences, I cannot conclude whether the gender of the individual affects their balance but according to my research, gender doesn’t usually affect balance whereas age does (as a result of a loss of nerve endings in the vestibular system.) I had some difficulties keeping the noise levels the same for every participant because the ‘quiet room’ wasn’t sound proofed. An improvement for this would be to use multiple materials to block up the bottoms of doors etc.

Conclusion:

In conclusion, my hypothesis was correct in saying that age affects how long it takes for an individual to recover their equilibrium. However, as seen in my discussion of results, the results do not conclude whether the gender of the participant affects how quickly they recover. I can generalize that age does affect an individuals’ balance as a result of long periods of time recovering the equilibrium.