Angeles City Science High School

Science 10

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## Activity 3: Homeostasis Exercise

**Materials:**

- Stopwatch or timer
- Ball pen and paper

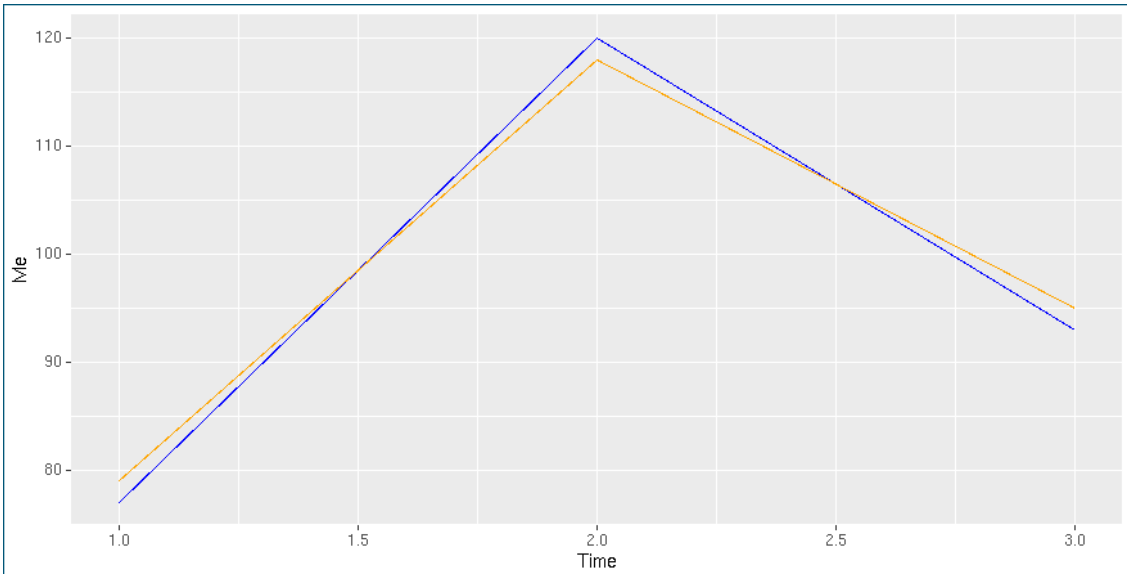
**Objective:**

To experience how the body can make an adjustment when we engage in physical activities that may lead into homeostasis.

**Procedure:**

1. Create a data table with older member of the family and record your data together.
2. Have your resting pulse, while sitting in the chair doing nothing, record it on your data table.
3. Have three minutes of physical activity. It can be as simple as walking around your backyard doing laps. You could even have your get up and dance. Whichever physical activity you chose, it should be for atleast three minutes.
4. Take your pulse again, using the same method and make a record again.
5. Sit quietly for another three minutes, then record your pulse again.
6. You may even have them repeat it for a third time in another three minutes.
7. For your reference, you can create a simple bar graph or line graph of the data gathered.

| Participants | Time: 3 minutes | | |
|---|---|---|---|
| | Pulse rate (bpm) at rest | Pulse rate(bpm) after exercising | Pulse rate at rest |
| Me | 77 | 120 | 93 |
| Sister | 79 | 118 | 95 |




**Discuss homeostasis based on your activity:**

After doing the exercises with another member of my family, I realized that, homeostasis is important in warm-blodded animals like us, mammals. It tells us if something is wrong, uncomfortable, or is not suited in the environment. In the activity, our pulse rates had speed up during the exercise and slowed down, this is because of homeostasis. This is also similar when we are in a cold place, our muscles contracts to produce heat in our body and balance things out. When the temperature is high or hot, our muscles relaxed so that it doesn't produced that much heat. Without homeostasis, our bodies wouldn't survived much longer and possibly shutdowns.