

### **Laboratory 14: Respiratory Physiology**

#### **Purpose:**

The purpose of Laboratory 14 Respiratory Physiology was to record and understand the vital capacity and the forced expiratory volume and what they represent and to compare the different of measurement between males and females using incentive inspiratory devices and a portable spirometer to measure.

#### **Procedure:**

##### **14-C Portable spirometry:**

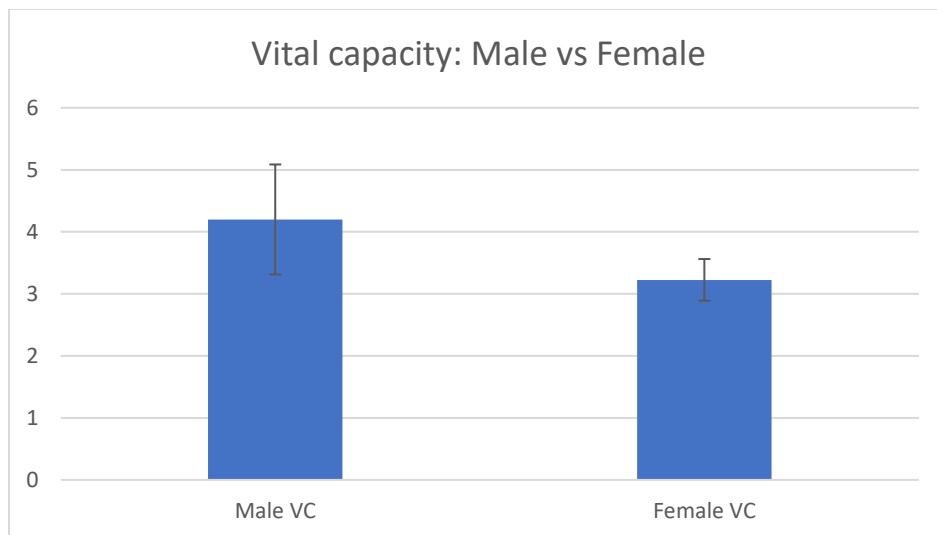
- Open spirometry and read instructions on how to use properly.
- Insert mouthpiece and make sure measurement indicator is at the zero position before beginning.
- Only exhale in spirometer do not inhale.
- After exhaling, record measurement.
- Compare and understand the values measured.

##### **14-D Incentive inspiratory devices:**

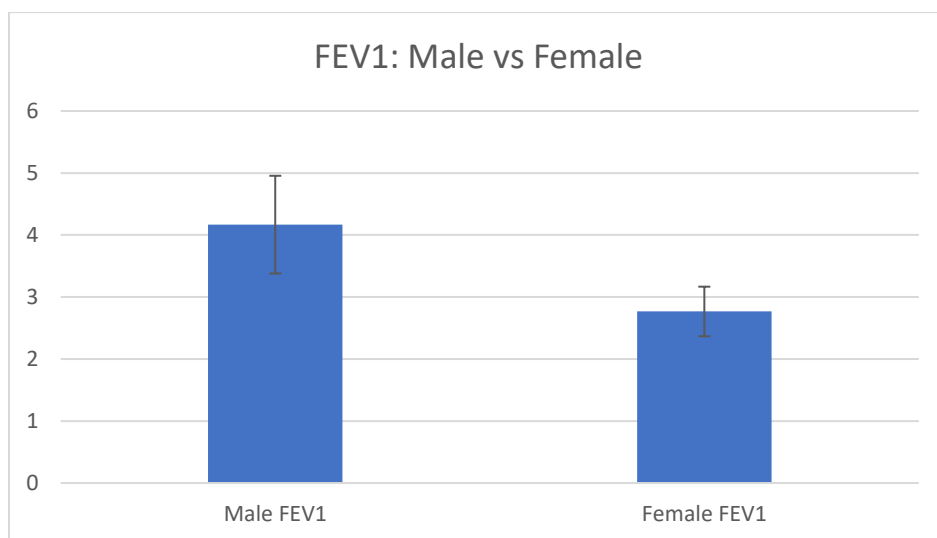
- Obtain an incentive device and attach cardboard mouthpiece and filter to breathing tube.
- Breathe in very deeply and record the measurement that appears on the device.
- Record values.

## Results:

### 14-C Results:



### 14-D Results:



## Discussion:

In this lab a few students volunteered to have their vital capacity and forced expiratory volume in order to compare the differences between the capacity and volumes of males and females. I was one of the students that volunteered and my vital capacity was 3.2 and my FEV was 3.87 . Based on the results for vital capacity it appears that the males had a larger capacity compared to the females. The average vital capacity for the males was 4.2 and for females it was 3.225, I feel as though the difference isn't too drastic. For the forced expiratory volume results again the males had a larger volume than the females did. The males had an average of 4.167 and for females it was 2.767. The difference seems a bit more significant. According to research, the average vital capacity for men is 4.6 and for women it is 3.1.

Understanding vital capacity and forced expiratory volume is important because it helps evaluate one's lung function to make sure everything is working the way it should.

Conclusion:

In conclusion, this lab showed how to understand and use the portable spirometry and incentive inspiratory device in order to receive measurements. I thought this lab was a very interesting one and my levels appeared to be normal. My understanding of what vital capacity is and the importance of it was made better as well as my knowledge of forced expiratory volume.