Laboratory 14 – Respiratory Physiology

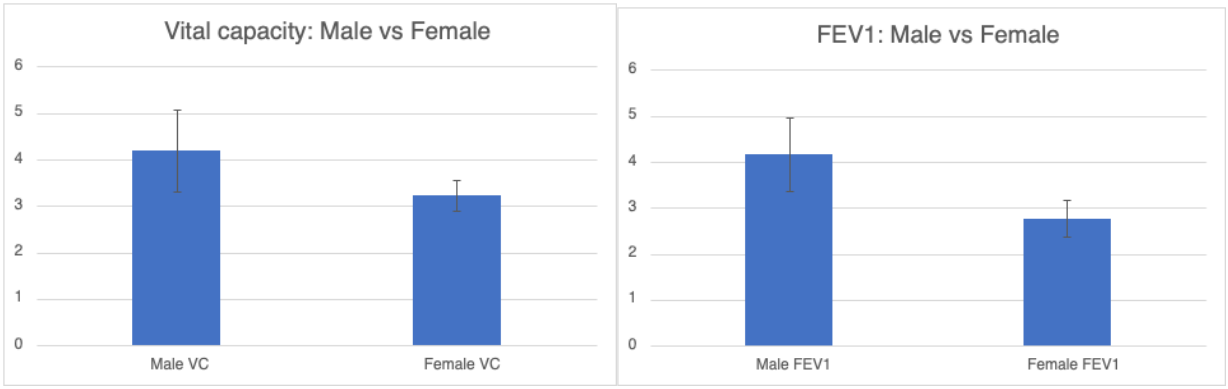
Purpose:

This lab is mainly to get a better understanding of the rhythmic inflation and deflation of the lungs. Getting a better idea of the structure and function of the lung, the mechanics of breathing, and measuring the vital capacity and forced expiratory volume of the lungs.

Procedure:

1. The Morgan Supercomputer program has already calculated and factored in the BTPS (Body Temperature Pressure Saturation) correction factor
2. Fully insert the Pneumotracfilter/mouthpiece, If you have difficulty keeping air from leaking through your nose, you may need to wear a nose clip, as air leakage will result in inaccurate results.
3. Be sure the correct student information is loaded up before you start the FVC test.
4. After starting the FVC test, follow the verbal instructions of your instructor: begin with your mouth off the mouthpiece so the pneumotach can equilibrate; after getting a good seal with your mouth, start with tidal breathing; when you are ready, take in the deepest breath possible, then forcefully blow it out as fast as you can and keep squeezing until instructed to stop.

Results:



Discussion:

In this we compared the forced vital capacity (VC) and forced expiratory volume (FEV) between and female and a male. For a forced vital capacity to be considered heathy, you should be able to forcefully expel at least 80% of the vital capacity within one second and about 95% within three seconds. Which in our results we were able to observe that both female and male had healthy lungs. As we could also see is that males have a higher vital capacity and forced expiratory volume compared to females.

Conclusion:

To conclude, I now have a better idea of what the vital capacity and forced expiratory volume is. Testing the health of your lungs helps you and your doctor checks for any abnormal results to make sure you don’t end up with any health complications like asthma.