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BIO 182 -- Lab

Respiratory Physiology Lab

The lungs are massively impactful in the goings on of the body. Without them, there would be no efficient way to either consume Oxygen or get rid of CO_2. However, it is abundantly clear that the lungs undergo a significant amount of stress when the body is at idle, and even more so when the body is under any stress (such as exercise). As a result, our team has tried to answer the question, “What will happen to the Oxygen intake of a subject when they exert work in some form?”. Taking into consideration normal human behavior the team came to the consensus that the lungs would take in considerably more air and get rid of as much, if not more CO_2, when dealing with any kind of stress.

Our team tested the subject in 4 different trials; Idle, Heavy breathing, Physical Activity, and Rest. Using idle as a constant, we were able to test the respiration rate and the amount of respiration each cycle when undergoing the different activities. Our independent variable being the activity done and the dependent variables being subject health, and respiration cycles. Our Positive control was our idle, as it acts as a baseline for the rest of our testing with our negative being physical activity. This is due to our background knowledge of physiology and an understanding that under stress the body will breathe harder and faster. Our sample size for team based information was a single run on a single subject, while the class sample size was a single run on about 4 other subjects and our team’s subject.

The data reflected our hypothesis,