

Project Report: “Know your body”
Class BIO2312 Lecture/Lab Spring 2020

My name is Oumou Diallo. I am 19 years of age, I stand at 5 feet and 2 inches and weigh 100 pounds and am a female. My ethnicity is Guinean. My BMI is 18.3. The only underlying health condition that I have is sickle cell trait, which will be thoroughly explained later on. The purpose of this lab report is to know more about our body and see if there are any relations dealing with our family history, sleep and the food we intake on a daily basis. What we take from this is to see if we can take steps to better improve our life and be healthy.

Pulse

The first thing I will be talking about is my pulse. From my experiences in class, my pulse rate is around 68 pulse per minute when I was at a resting heart rate. My pulse when I became active came up to 90 beats per minute. So what is a pulse? A pulse, also known as a heart rate is the amount of times your heart beats per minute. Also is the difference between systolic and diastolic blood pressure (120/80). Places to find your pulse can be your wrists, inside your elbow, side of neck or on the top of your foot. Normal heart rate is between 60-100 beats per minute. There are also factors that affect heart rate such as body position. Body position affects heart rate because if you're sitting, standing, resting, your heart rate is usually the same, but if you stand longer than 20 seconds, your heart rate can increase. Emotions play a huge role because if you're stressed, sad, angry your sympathetic nerves which give a flight or fight reactions can raise your pulse. Medication use that blocks your adrenaline can slow down your pulse and some meds with too much dosage use will increase your pulse.

Next we will be discussing Blood pressure. In class we took 3 different readings of our blood pressure and these were the results. My first reading resulted in 120/80, second reading, 120/80 and the third reading after I ran a flight of stairs is 140/80. What we did to achieve is we

Project Report: “Know your body”
Class BIO2312 Lecture/Lab Spring 2020

applied the sphygmomanometer around our arm then we would pump until there's no circulation and slowly turn a nozzle until it is fully released. Blood pressure is where the heart pumps blood through the arteries. The blood puts pressure on the artery walls. So as the blood squeezes and pushes blood, the blood pressure goes up. As your body relaxes, the blood pressure goes down. This is why when your blood pressure is taken, there are maximum and minimum levels. This is also known as systolic pressure(maximum level) and the diastolic pressure (minimum level). Blood pressure is really important because if it's too high then there is a higher risk for your health in the future. If the blood pressure is high then it is putting more pressure on the arteries and heart which can make them weaker. If this happens, then the arteries will become narrow and clogged up. If they clog up then this can lead to a stroke, heart attack or even kidney disease. On the bright side there are many medications to regulate blood pressure , also exercising and making better food choices definitely make a huge difference.

EKG

In class we did a lab on EKG also known as electrocardiogram. My results were .047 MV and I got this answer from counting in between the small boxes. The electrocardiogram is where it records the electrical activity of your heart at rest. It also provides information about your rhythm and heart rate and what this does is it shows any sign of hypertension. EKG's are needed because if you have heart risk factors, the ekg can help detect those issues. Ways to lower the risks of heart disease is being active, eating a healthy diet and visiting health care providers on a normal basis.

Lung Capacity

Project Report: “Know your body”
Class BIO2312 Lecture/Lab Spring 2020

Lung capacity is the maximum amount of air that your lungs can hold. According to the lung institute, it states “Typically, men have a greater lung capacity than women. At rest a man’s lungs can hold about 1.5 pints of air, while women’s lungs can hold around 0.6 to 0.8 pints. However, most of us do not use our full lung capacity.” Lung capacity is important because it can predict health and longevity. As you get older, your lung capacity declines which means that it will make it harder for you to breath in and hold air. This will cause the heart to work overtime because, with less oxygen coming in, this forces the heart to work harder in order to pump oxygen throughout the body. This can lead to heart failure, however there are symptoms that show reduced lung capacity such as respiratory infections and shortness of breath. The disease that this can lead to is called Chronic obstructive pulmonary disease (COPD) which is a group of lung diseases that blocks airflow, making it difficult to breathe. Lung capacity is affected by COPD because it affects the amount of air that can move in and out of your lungs. If the COPD is advanced, it will make it harder for your lungs to breathe in and to exhale air. The more severe the stage of COPD, the lower the lung capacity. There are also four stages of COPD which determines which is severe to the least. For example, Mild COPD: 80 percent or higher ,Moderate COPD: 50-70 percent, Severe COPD: 30 to 49 percent , Very Severe COPD: Less than 30 percent. Luckily, there are ways to improve lung capacity. Such as, taking more vitamin D, keeping a clean home, exercising frequently and practicing breathing exercises.

Food Diary

Monday	Tuesday	Wednesda y	Thursday	Friday	Saturday	Saturday
--------	---------	---------------	----------	--------	----------	----------

Project Report: “Know your body”

Class BIO2312 Lecture/Lab Spring 2020

Breakfast: eggs Pancake Coffee	Breakfast: Bread and coffee	Smoothie: Banana strawberry	sardine	N/A	N/A	Cereal
Snack: Apple	No snack	Protein bar/water	chips/water	N/A	N/A	Oranges
Lunch: rice(ethnic food	Lunch Ramen noodles/ water	Lunch Rice	Lunch Mcdonalds :big mac and fries	Lunch Chipotle Chicken bowl	Lunch Strawberri es and grapes	Lunch Fish and Plaintain/w ater
Dinner: Pasta	Sardine and bread/ water	Macaroni with chicken	Caramel Frappe	Chips and Guac/water	Noodles/w ater	Bread and Coffee
Total Calories: 1368	519	716	2496	379	804	1091

As you can see the results have significant differences in the total calories throughout the week. It shows that I eat more on some days and other days I barely eat. This depends on what time I would wake up. For instance, the days that I don't have breakfast are the day I wake up in the afternoon or when I have work. The days I would have school I would be able to eat breakfast because I would be up in the morning. Also seen from the food choices, I need to choose healthier options because this can affect my body or the way I function, the way my skin reacts or even my health overall. The app that I used is called lifesum and what this did was it gave me the option to put in the food that I had for breakfast, lunch and dinner. I would then search up the item and it will show many different ones , the calories and where I might have gotten it from.

Project Report: “Know your body”
Class BIO2312 Lecture/Lab Spring 2020

For example, if I put a big mac it will then show options like mcdonalds or other places. Once I am finished putting all the items in their category, it will add up all the calories and show how many carbs, fibers and things of that sort.

Sleep Record

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Wakeup: 12:00 am	12:30 am	1:00 am	2:45 am	3:05 am	3:00 am	2:30 am
Bedtime: 8:30 am	7:00 am	8:30 am	10:00 am	10:30 am	12:15 pm	10:15 am

Total Hours:	6 hrs	6 hrs	7 hrs	6 hrs	8 hrs	7 hrs
--------------	-------	-------	-------	-------	-------	-------

These are the results of my sleeping schedule for one week. As you can tell my sleeping schedule is all over the place but I still get a decent amount of sleep. The days of Monday- Friday are the days that I have school, but work on tuesday's and sunday's. I have a habit of going to bed really late mostly because I have to catch up on assignments. I like to sleep in because Saturday's the only day I have off and to myself. However, I sometimes try to wake up early on Saturdays to get a certain sleeping schedule but I'm usually exhausted. The app that I used is called sleepwatch. The app was pretty straightforward and easy to use because all I had to do was enter the time that I would go to bed and wake up. It will then show the hours and even suggest times to go to bed to get that 8 hour sleep.

Project Report: “Know your body”
Class BIO2312 Lecture/Lab Spring 2020

Family History

My family has a history of sickle cell anemia. Both my parents and I have traits and both my siblings aged 21 and 10 have sickle cell anemia. Sickle cell anemia is where the red blood cells are too weak to carry oxygen throughout the body. The red blood cells are shaped like a sickle or a crescent moon. This can make the blood cells get stuck in the small blood vessels, which slows down the blood flow to the parts of the body. The Mayo Clinic states “Sickle cell anemia is one of a group of disorders known as sickle cell disease. Sickle cell anemia is an inherited red blood cell disorder in which there aren't enough healthy red blood cells to carry oxygen throughout your body. The Mayo Clinic states “Sickle cell anemia is one of a group of disorders known as sickle cell disease. Sickle cell anemia is an inherited red blood cell disorder in which there aren't enough healthy red blood cells to carry oxygen throughout your body.” These are the symptoms of sickle cell anemia. The first symptom would be anemia. This means your body isn't getting enough oxygen, which can cause fatigue. The second symptom is having episodes of pain. This is also known as a crisis. The pain can occur in the chest, bones, and stomach. Another symptom is frequent infections. It is common for doctors to give infants vaccinations and antibiotics to prevent this from happening. These are the causes of sickle cell anemia. Sickle cell anemia is caused by a mutation in a gene and the abnormal hemoglobin causes the red blood cells to misshape and become rigid. Both parents have to have the disease or the trait in order for the child to have sickle cell. These are the treatments. Those with sickle cell anemia have to take Hydroxyurea. This helps reduce the painful crisis and the need for a blood transfusion. Blood transfusions help increase their red blood cells, which helps reduce complications and symptoms. The bone marrow transplant is replacing the bone marrow with a healthy bone marrow by a

Project Report: “Know your body”
Class BIO2312 Lecture/Lab Spring 2020

donor. Seeing what both my siblings go through has made me want to learn more about sickle cell. When my brother gets pain, he usually gets it in his lower back and when he does he is unable to walk or move. My sister has a high risk of getting a stroke, which is why every month she has to get a blood transfusion. Seeing what they go through motivates me to become a nurse because knowing that I can help them and others brings joy to my life.

Conclusion

Based on all the data that I have collected, I see myself becoming a nurse, having a family, owning a home, having a better sleeping and eating schedule and being the healthiest that I can be 10/20 years from now. The way that I will ensure all of these goals is to first believe in myself, stay motivated and determined in every aspect of my life. This also means being very focused in school, making a sleep schedule that I need to follow, exercising and making healthier food choices. The good thing about this day and age is that there are many resources such as youtube, blogs, articles and apps that can actually help me achieve all of these things. This lab report has made me realize that the human body is very fragile and needs to be taken very care of. Overall, I know that I would want my future children to learn from me that can assist them in the future and make sure that they're at their healthiest and happiest too.