

## **Know Your Body**

### **Background information:**

Sex: Female  
Age: 23  
Ethnicity: Ecuadorian  
Height: 5' 4''  
Weight: 142  
BMI: 24.4 (.5 away from being overweight)

**Underlying health conditions:** None

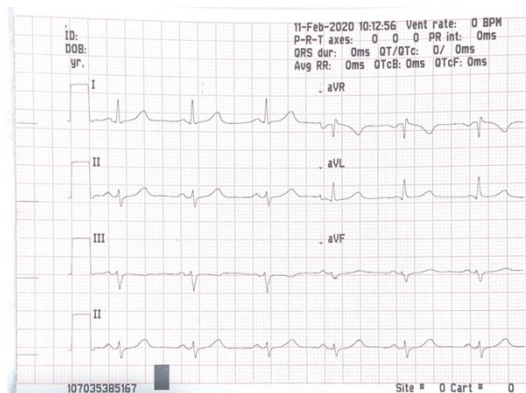
**Pulse:** 72 bpm

A pulse is the expansions and contractions of the arterial wall as a result of pressure waves traveling from the heart due to ejection of blood during systole. Pulse is measured by heartbeats per minute. A heartbeat is the simultaneous work of the right and left ventricle pumping blood into the pulmonary circuit and systemic circuit. There are nine different pulse points and a couple of them are the temporal artery, carotid, apical, brachial, and radial. The most common would be the radial being that it's the least invasive. Nevertheless, the strongest most significant expansions and contractions of an artery can be felt in the carotid. This is because the carotid artery is closest in distance to the heart and as a result the pressure is felt more evidently. A normal pulse ranges from 60 to 100 bpm. This may change depending on age, health problems, and level of activity. The significance in knowing one's pulse is to be aware of any health issues or perhaps even mental issues that have a direct correlation. In my personal experience I've realized that my pulse elevates to about 120 when I get agitated. It's interesting to see how our mental health affects our heart rate. This is why we are told to breathe and relax when under stress because it can cause a direct impact to our bodies if we are feeling such emotions frequently and for extensive periods of time.

## Blood Pressure:

Blood pressure is the measure of force of blood pushing against the walls of vessels. It is measured in millimeters over mercury. The top number refers to the pressure when the heart is in contraction, and the bottom number is the pressure when the heart is getting filled with blood. The standard set of measurements for a normal blood pressure is anything under 120/80 mm Hg. Knowing one's blood pressure is significant because it can tell us if anything suspicious is afoot within our body. When the blood pressure is elevated this results in extra strain on arteries and the heart. This strain will cause decreased flexibility, narrowing, and clogged arteries ending up in heart attacks, strokes, and arterial bursts. Low blood pressure on the other hand can deprive the body of enough oxygen leading to damage of the heart and brain. As a result, it is important for one to keep a close eye on our readings and maintain a healthy lifestyle to keep it within a fit range to avoid complications.

## EKG:



An EKG is a test conducted to monitor the electrical events of the conducting system of the heart. Medical professionals use this recording to see the functions of pacemaker, conduction, and contractile cells. The significance of this recording is that it can show cardiac arrhythmias, previous heart attacks, as well as heart rate and rhythm. Knowing my heart health is extremely important especially because little over a year ago I went through a tough time with infidelity, divorce, and legal matters. I was emotionally and economically distraught to a point where my body took a harsh toll. There were times where my heart rate was

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at 120/130 just sitting on the couch. I lost a large amount of weight drastically and mentally I was unstable. Consequently, knowing that my heart condition is at a good stance despite all that makes me feel better and more certain that I will be able to provide for my daughter as long as my body keeps me going.

### **Lung Capacity:**

Lung capacity is the maximum amount of air that one's lungs can hold. The flow and volume of air is measured through a spirometer. Total lung capacity is calculated as the sum of all four lung volumes which are total volume, inspiratory reserve volume, expiratory reserve volume, and residual volume. This number will be different in each patient, and that's because of different factors that can alter one's lung capacity such as gender. Typically, men have greater lung capacity than women, but this generally declines through age. Certain habits such as smoking will have a harmful effect on lungs as well. Smoking causes the walls of alveoli to break, resulting in large ineffective sacs. Similarly, the process of inhaling oxygen and expelling carbon dioxide become challenging due to the reduced elasticity in the alveoli. In return this can lead the heart to over beat as it is trying to compensate for the failure of getting enough oxygen to the rest of the body. Despite all this, not all is lost because lung capacity can be improved. This can be done by taking more vitamin d, breathing exercises, home cleanliness, physical exercise, and quitting. I do not smoke, nor do I live with anyone who does. As a result, I do not feel too concerned about this aspect of my body.

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**Food Diary:**

	MEAL		BEVERAGE	CALS	EXERCISE
	Mon. April 6th	Breakfast	Oatmeal		152
Lunch		Breaded chicken, guacamole, kale almond cranberry salad	Water, 1 cup	737	
Dinner		Greek salad with feta, grilled chicken		716	
Snack		Fruit salad	Honey ginger tea, 1 cup	177	
TOTAL CALORIES				1,782	Walk, 20 min
Tues. April 7th	MEAL		BEVERAGE	CALS	EXERCISE
	Breakfast	Oatmeal, blueberries and honey		320	
	Lunch	Ceviche, Kale almond and cranberry salad, steak	Tomato juice, 1 cup	789	
	Dinner	Broccoli and cauliflower sauté, feta cheese, frozen mix veggies, salad, sautéed onions and peppers		594	
	Snack	Grapes	Water, 2 cups	124	
TOTAL CALORIES				1,827	
Wed. April 8th	MEAL		BEVERAGE	CALS	EXERCISE
	Breakfast	Oatmeal		152	
	Lunch	Breaded chicken, guacamole, kale almond cranberry salad	Water 1 cup	737	
	Dinner	Greek salad with feta, grilled chicken		716	
	Snack	Fruit salad		118	
TOTAL CALORIES				1,723	
Thurs. April 9th	MEAL		BEVERAGE	CALS	EXERCISE
	Breakfast	Banana and honey flavor instant oatmeal, Pão de leite		360	
	Lunch	Cucumber, quinoa, mushroom, pepper and onion sautéed	Water 1 cup	323	
	Dinner	Fava beans, potato soup		285	
	Snack	60% cacao bittersweet chocolate chips, banana, blueberries, Greek yogurt, peanuts date bar, raspberries, sliced apples and peanut butter	Water, 2 cups	911	
TOTAL CALORIES				1,879	
Fri. April 10th	MEAL		BEVERAGE	CALS	EXERCISE
	Breakfast	Oatmeal, apples	Water, 1 cup	268	
	Lunch	Baby arugula, breaded chicken, mozzarella cheese, fried plantains	Water 1 cup	418	
	Dinner	Potato soup		235	
	Snack	60% cacao bittersweet chocolate chips, blueberries, Greek yogurt honey, raspberries		255	
TOTAL CALORIES				1,176	
Sat. April 11th	MEAL		BEVERAGE	CALS	EXERCISE
	Breakfast	Avocado, whole wheat bread x2, scrambled egg	Coffee, 1 cup	335	
	Lunch	Beef stew, cucumber, quinoa		553	
	Dinner	Breaded chicken, pasta		422	
	Snack	60% cacao bittersweet chocolate chips, blueberries, Greek yogurt honey, raspberries, French macarons	Water, 1 cup	357	
TOTAL CALORIES				1,667	
Sun. April 12th	MEAL		BEVERAGE	CALS	EXERCISE
	Breakfast	Egg, American cheese, mayonnaise, whole wheat bread x2	Coffee, 1 cup	301	
	Lunch	Gluten free cheese pizza with cauliflower crust	Water 1 cup	1519	
	Dinner				
	Snack	Fruit salad		118	
TOTAL CALORIES				1,938	

For my food diary I used the app called “Lifesum”. The average calorie intake for a 23-year-old is about 2,000 calories. However, being that I want to lose about ten pounds my average

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calorie intake should be roughly 1,500. In order to lose weight, I should have a negative calorie deficit every day. To find this, I calculated my basal metabolic rate (BMR), which is the number of calories your body burns at rest with activities like your heartbeat or breathing. It requires a special equation that takes into consideration your height, weight, and age. My BMR was 1,1646.6. After that, the BMR must be subtracted from my average calorie intake which is about 1,700. Then I must subtract the calories burned through exercise. The result is either a calorie deficit, meaning fat cells getting used for energy, or a calorie surplus, meaning fat cells storing excess fat leading to weight gain. Unfortunately, this week I was storing fat.

I tried to make my best attempt to eat healthier considering my pantry was in reach at every minute. This was done by cutting down sweets which has been my weakness in the past. My habit used to be milk and cookies before bed. I did this about four times a week, and this app as well as learning more about healthy foods has steered me into making more thoughtful choices. Now, instead of having sweets throughout the day I have a fruit or yogurt with granola, or carrot sticks with humus. Along with this I also engaged in high intensity interval training three to four times a week for forty-five minutes. As a result of the coronavirus it's been impossible to make it to the gym especially when I also have a four-year-old at home. Nonetheless, I did not want to use this as an excuse and began this at home weight loss challenge. In this combination of better food choice and exercise I feel proud about myself especially since I have lost about five pounds. I plan to continue a healthy food and exercise habit for the rest of my life since it has been showing me results. Not only have I lost weight, but I am also performing better in my daily activities as being mom.

**Sleep Record:**

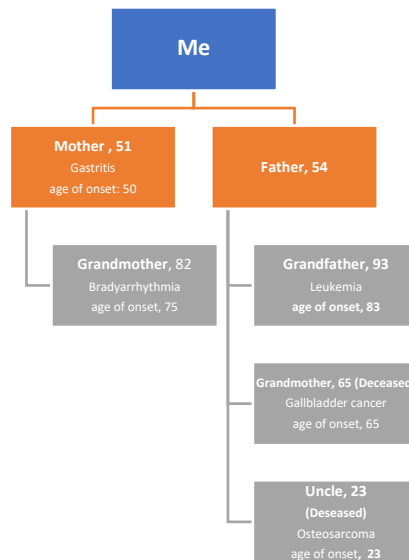
Sleep Log																				Total					
Mon	9PM	10	11	12AM	1	2	3	4	5	6	7	8	9	10	11	12PM	1	2	3	4	5	6	7	8	10
Tues	9PM	10	11	12AM	1	3	3	4	5	6	7	8	9	10	11	12PM	1	2	3	4	5	6	7	8	10
Wed	9PM	10	11	12AM	1	2	3	4	5	6	7	8	9	10	11	12PM	1	2	3	4	5	6	7	8	7
Thurs	9PM	10	11	12AM	1	2	3	4	5	6	7	8	9	10	11	12PM	1	2	3	4	5	6	7	8	8
Fri	9PM	10	11	12AM	1	2	3	4	5	6	7	8	9	10	11	12PM	1	2	3	4	5	6	7	8	8
Sat	9PM	10	11	12AM	1	2	3	4	5	6	7	8	9	10	11	12PM	1	2	3	4	5	6	7	8	5
Sun	9PM	10	11	12AM	1	2	3	4	5	6	7	8	9	10	11	12PM	1	2	3	4	5	6	7	8	8

Sleep  
Nap

Sleep for many people is not top priority and we don't get enough of it especially during the hustle and bustle of living in NYC. We are constantly running to catch a bus/train to get to work, school, pick up the kids, and everywhere else which can sometimes be across town. Science shows however that adults should sleep roughly 7-9 hours a night. Serious effects could follow if this is not obeyed. Lack of sleep can affect our short and long-term memory, weaken the immune system, weight gain, accidents, amongst other detrimental consequences. Sleep plays an important role on mental and physical health. Being well rested helps us make cognitive decisions, retain information, allows our creativity to flourish, helps in our emotional behavior, heals and repairs the heart, balances hormones, the list goes on.

During these weeks of being off work and doing online schooling, my internal clock has changed drastically, and I can't say for the better. During normal times I get about five to six hours of sleep a night. However, being in quarantine has done me some justice in the sense that I've been getting more sleep. Nonetheless my bedtimes have not been consistent and have been much later than usual. There have been days where I go to bed at three four in the morning and wake up at eleven, which isn't a step in the right direction.

## Family History:



The above chart shows only family who currently has or has had serious health conditions, and my relationship to them. My mother has six siblings and my father has five. Out of my eleven uncles and aunts none of them have any serious conditions to this day. My mother has been suffering from gastritis for a little over a year. She has been able to control it for the past three months through limiting her diet and exercise. My grandmother from my mother's part has had high blood pressure since her late fifty's and about a year ago her heart started showing signs of bradycardia. It got so bad to the point where a pacemaker had to be implanted in her chest. My grandfather from my father's side has had leukemia for ten years now. We've heard from multiple doctors that he won't make it another year, yet we keep celebrating his birthday since he was diagnosed at age 83. His wife, my grandmother passed early on, and it was quite sudden. I was too young to remember but from what my parents tell me it started from abrupt abdominal pain. At the point it was detected the cancer had already spread to the liver and other organs. She was gone about two months after that. Her son, my uncle, at the early age of twenty-

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three developed osteosarcoma. His doctors recommended amputation of the leg because chemotherapy was not helping. From my parent's anecdotes, they stated he refused to amputate because he did not want to be a burden to his family. He was an illegal immigrant, and he only had my father and my mother here in the country. Going back to Ecuador to his elderly parents was not an option for him either.

**Conclusion/Take home message:**

Based on all the data collected in twenty years, health wise I am standing at being overweight, with diabetes, heart conditions, sleep deprivation, and mood swings. My food was lacking nutrition and consisted of mostly empty calories. My sleep schedule during that week if prolonged will be extremely detrimental to my health. Consequently, I will be changing this aspect of my life to set a more consistent bedtime/wake up time to better tackle my day. Having all of these conditions would affect my self-esteem and lead to depression, anxiety, mood swings and dangerous self-deprecation.

There is an alternative to that and if I continue progressing like I have over the past three weeks I have a chance at being a healthy forty-year-old and even fifty-year-old like my father. I may be genetically predisposed to cancer and high blood pressure however, with routine checkups, a healthy diet, and exercise I can beat those odds. Being that I don't smoke and hardly drink I can set myself up for success in my later years.

The body works as a machine with many parts, and this observation and data collected have made me realize that if one of those parts are faulty then I won't be able to deliver to my full extent. From the biggest organ in our body to the smallest cells, they all require maintenance and fuel. If I continue to provide poor maintenance and poor fuel I will shut down before my



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soul is willing to. My goal is to see my daughter chase her dreams both now and when she grows older, and making these changes brings me closer to that goal.

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## Resources

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