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Cardiovascular diseases

Academic report

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Introduction

What is the cardiovascular system? How does the cardiovascular system function? We have come across these questions throughout human history. According to antique times, the heart and blood circulation been associate to the divine intervention of the gods. Later, William Harvey in his book “Anatomica de Motu Cordis et Sanguinis in Animalibus” explains how the circulatory system works in the body anatomy (Bolli, 2019). When we talk about cardiovascular systems and diseases, the first organ that comes to mind is the heart. To understand how the heart works can be associated with an engine that works 24 hours a day to keep the human body running. But the cardiovascular system is much more complex and besides the heart, we also have veins, arteries, capillaries (LEVER, 2005). So, for the proper functioning of the human body, this complete structure must be healthy and free from risk factors. Cardiovascular disease can occur from various causes. A range of physical and mental conditions can guide to malfunction of the cardiovascular system. Here, we can mention diabetes, obesity (Piché, Tchernof and Després, 2020). As well, other major risk factors that can lead to cardiovascular disease are excessive stress (Beckerman, 2021)

The purpose of the report is to examine positive and negative aspects of the individual's lifestyle, also to analyze the risk factors that lead to cardiovascular disease. However, based on our health and lifestyle questioned, she will perform a health assessment of patient A to determinate her level of well-being and health. Likewise, according to data collection, we will find the best holistic recommendations under the patient's needs.

Cardiovascular disease risk factors

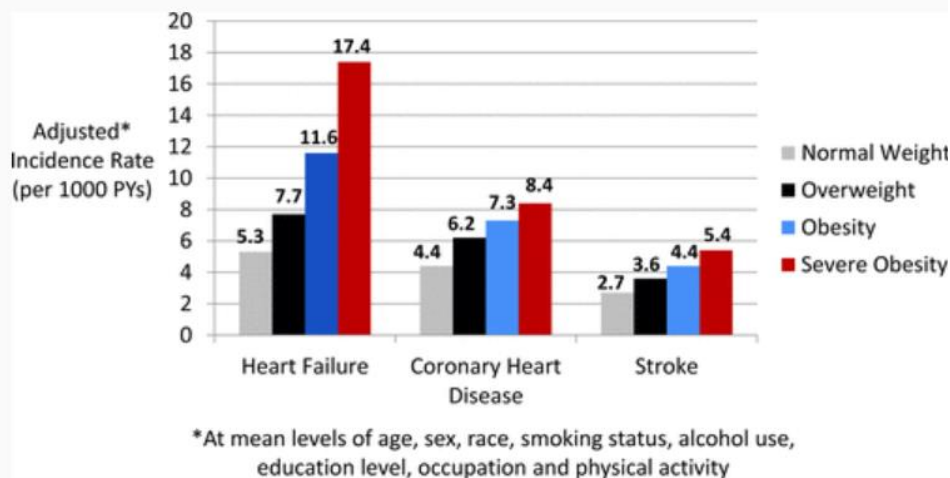
The cardiovascular system is the key component for maintaining life in the body. Every cell needs oxygen and nutrients in order to survive. Through the veins and arteries, it carried oxygenated blood and nutrients to every cell in the body and took the deoxygenated blood back to the lungs. When for distinct reasons the blood no longer feeds the cells, we can say that we are dealing with a cardiovascular system disease.

According to the NHS, any condition that affects the heart and blood vessels falls into the category of cardiovascular disease (NHS, 2018). The primary cause of uncontrolled cardiovascular system diseases spread is associated with the environment we live in.

Things in society change and the need to adapt most of the time makes us to neglect our lifestyle. Inadequate food, lack of physical activity and daily stress are risk factors that lead to disease conditions that endanger the proper functioning of the cardiovascular system.

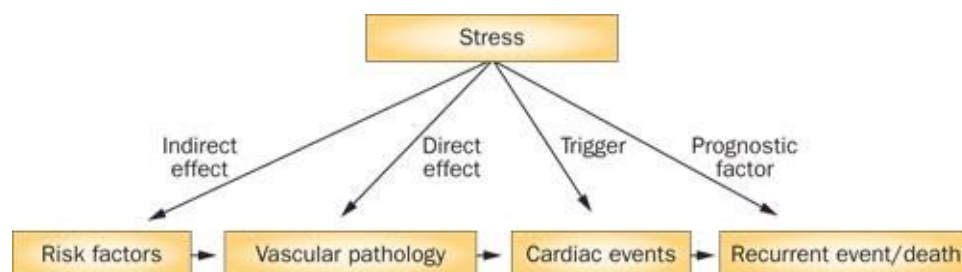
If in 2000 vascular diseases killed about 2 million people a year and in 2020, there was an increase of up to 8.9 million. Ischemic heart disease and stroke are at the top of the list in terms of causes of death (Brunier, 2020). The cause of cardiovascular disease may differ from case to case. The most common disease of the cardiovascular system is heart disease. Angina, arrhythmia, congenital heart disease, coronary artery disease, heart attack and heart failure, are just a few well known diseases of the cardiovascular system. But besides heart disease, there are also diseases that affect the arteries, veins, or capillaries in our bodies. Some diseases can be caused by pathological reasons and others can be caused by risk factors we are or subjected to daily. Leaving aside risk factors you cannot control, such as age or family history, we can focus on reducing the risk factors that can be controlled. Here we can refer to alcohol, smoking, overeating and quality of life (Felman, 2019).

The root of cardiovascular disease most times is linked to other physical or mental disorders. Obesity is one of these conditions. The research shows us obesity is one of the major risk factors that leads to diabetes and to circulatory system diseases. Obesity is a growing phenomenon that seems out of control. In 2020, the estimated number of obese people is 2.1 billion, representing about 30% of the global population. The effects of obesity are determined as risk factors for heart and blood diseases. High cholesterol and high blood pressure can cause damage at all levels of the cardiovascular system. (WHO, 2021)



<https://www.ahajournals.org/doi/10.1161/JAHA.116.003921>

Stress is another major condition that impacts our daily lives. High levels of cortisone can lead to increased blood pressure, triglycerides, and cholesterol, and all these risk factors can cause cardiovascular disease (Dimsdale, 2008).



<https://www.nature.com/articles/nrcardio.2012>

Health assessment

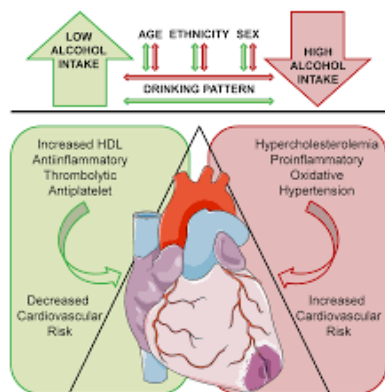
Any of us can have health conditions of structures or body organs without knowing it. To figure out if a person has health problems, the early fundamental step is to do a health assessment. It will make following to evaluate a conclusion and we will draw a statement up with recommendations for combating various diseases. In our case, Mrs. A, a 46-year-old woman who

seems to have a messy lifestyle. Running a health assessment, our goal is to determine if she is prone to cardiovascular disease. The health assessment is based on health and life questioned (see appendix). Considering the age of the patient and the fact that there is a history of cardiovascular disease in the family, we can deduce she faces the risk of developing cardiovascular disease. However, if cardiovascular disease has a history in the patient's family, medicine cannot do much to reduce risk factors. It is known that patients with cardiovascular disease in the family are up to 40% more likely to develop the same disease (Kolber and Scrimshaw, 2014).

However, if we look at the patient's height and weight, we can determine the patient's BMI. With a height of 1.65 m and a weight of 86 kg, we have a BMI of 31.57, which classifies the patient as obese (Higgins, 2021). That the patient is classified as obese can lead to complications such as developing type 2 diabetes and to cardiovascular diseases. Diabetes is one of the undisputed enemies of the cardiovascular system, along with obesity. High cholesterol and high blood sugar levels can damage both hearts and blood vessels. Veins and arteries thicken, lose elasticity, and may suffer partial or total blockages. Because of blocking blood flow to the heart or brain, the patient may suffer a heart attack or stroke. In both cases, the patient's life is in danger. (Luo, 2018)

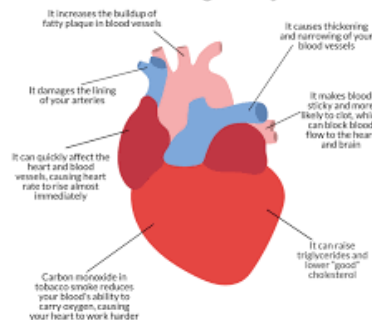
Also, if we analyze the patient's lifestyle, we can realize it is conducive to obesity, type 2 diabetes, and cardiovascular diseases. As well, the fact that patients have a diet based on junk food is a total disadvantage for their health (Renee, 2021). We all love fast food, but that does not mean it is healthy. In fact, as tasty as it is, it is just as harmful and can be classified as a drug because it is addictive. Research has shown that more is invested in making people addicted than in its nutritional component (O'Riordan, 2021).

As well excessive alcohol consumption and smoking are also risk factors. Smoking causes the blood vessels to narrow, which affects the proper functioning of the heart. Smoking also reduces the level of oxygen in the blood, so it forces the heart to work extra to oxygenate all the cells in the body. When the heart muscle is forced to work at a higher intensity than normal in order to pump blood, it can damage the cardiovascular system. Excessive alcohol can also have effects on blood pressure, which can lead to stroke or heart attack. The good part is that alcohol in moderate amounts can benefit the cardiovascular system while smoking is useless, bringing only harm (Kenneth J. 2006).



[Cardiovascular Disease ...mdpi.com](https://www.mdpi.com)

What does smoking do to your heart?



[Quit smoking ...publichealthinsider.com](https://www.publichealthinsider.com)

Sedentary lifestyle can also increase the risk of developing cardiovascular disease. Paradoxically most of the time, we find an excuse not to improve our physical condition. According to our patient, the physical exercise being absent from her daily routine. Lack of physical activity in the daily routine can lead to cardiovascular disease. That can happen also to people who are not affected by other risk factors. Also, lack of exercise can increase the chances of becoming obese or diabetic, and this can be life threatening (CSATARI, 2020). Cardiovascular disease is not something we can negotiate, and therefore, all these risk factors listed above can have unfortunate consequences. Because of the health assessment, we can conclude that patient A is at considerable risk of developing heart disease or other diseases of the cardiovascular system. Considering all the risk factors to which the patient is subjected daily, the next step is to create a plan based on holistic recommendations to prevent the occurrence of unwanted events in the cardiovascular system.

Holistic Recommendations

We all know that cardiovascular disease can have an unhappy end. And to avoid this is to take a few steps to improve our lifestyle. We all know that cardiovascular disease can have an unhappy end (WHO, 2021). And to avoid this is to take a few steps to improve our lifestyle. Based on the health assessment made on patient A, we will highlight the need for lifestyle changes in order to prevent the occurrence of cardiovascular diseases. They are things we can do not control like

age or disease family so the first step in the fight against cardiovascular disease is to take our cardiovascular disease family history (Chacko et al., 2020). A good relationship with the doctor can reduce the risk. So, the first recommendation for patient A is to make regular GP visits to monitor cholesterol, blood sugar levels, and blood pressure.

As we pointed out above, obesity is the number one ally in the development of heart disease. An improper diet increases the risk of diabetes, bad cholesterol, and high blood pressure. So, looking at the patient's diet, it has been considered impetuous to adopt a healthy diet based on protein, unsaturated fats, and good carbohydrates as soon as possible. Sugar, excess salt, and products high in bad carbohydrates should be avoided as much as possible. Improving the diet will lead to weight loss and this will lower the BMI (Jindal, Whaley-Connell, Brietzke, and Sowers, 2013).

Another important aspect is the zero physical activity of our patient. "Healthy men in healthy bodies" has been the motto of a life full of well-being and health since antiquity. Incorporating physical exercise into her daily routine can reduce the risk of cardiovascular disease (Raph, Bhatnagar and Nystoriak, 2018).

Smoking is a useless habitat for the body, with only negative "benefits". Smoking these days plays a key role in the development of cardiovascular atherosclerotic disease (ASCVD). As well Smoking, whether active or passive, is associated with over 30% of coronary heart disease (CHD) mortality (Banks et al., 2019). So, it is impetuous for Mrs. A to quit smoking. Alcohol also seems to have positive parts if consumed with limitation. It is proven that only 14 units a day does not produce harm (NHS, 2021). So, the recommendation for our patients is to give up alcohol or, in the worst case, to reduce it to the limit recommended by the NHS. So, balancing all the physical risk factors of our patient is subjected to daily life. We cannot just think that she has a stressful life. As we know, stress, even if it seems "innocent", is as harmful as physical risk factors. That is why it is recommended to take care of the soul and not only the body. Complementary therapy like yoga, massage, aroma therapy is a wonderful stimulant against stress (Prasad et al., 2013). Also, in the case of advanced stress symptoms, it is advisable to consult specialists. So, the recommendation for our patient is to exploit the spiritual side to reduce daily stress.

Conclusion:

Cardiovascular diseases have been and will be a problem for humanity, but as long as it is in our power, we will fight them by all means. Throughout the report, we highlighted risk factors and how they can influence the occurrence of cardiovascular disease. It is unfortunate that, despite the

evolution of technology and science, more and more people are dying from cardiovascular disease. Lack of information and neglect of push us towards unhealthy living habits. A better understanding that it is harder to repair than to prevent would be a starting point in combating cardiovascular disease. If we compare the case of our patients with the general population, we can realize it is not a singular case. Over 50% of the UK population is overweight or obese (Baker, 2021). Obesity, diabetes, and healthy habits are linked and to prevent cardiovascular disease, we must break this chain. A healthy diet mixed with exercise for body and soul can lead to a life full of well-being and health. So, in conclusion, it is up to us how we want to live. We can continue to degrade our body and mind by subjecting it to risk factors daily, or we can choose a healthy lifestyle. The choice is ours alone.

Appendix

Appendix- Health and Lifestyle Questionnaire

LIFESTYLE QUESTIONNAIRE

Introduction:

To help us focus our Health Promotion activities in the practice, we would be grateful if you could fill in this short questionnaire. If you have already completed one on a previous visit, please return this questionnaire to the receptionist.

Name Patient A Date of Birth
01/01/1973

Do you smoke?	Yes	[] Yes	No	[]
If Yes, do you --				
smokeless than 1	cigarette/day	[]		
1 - 9	cigarettes/day	[]		
10-19	cigarettes/day	[] Yes		
20-39	cigarettes/day	[]		
more than 40	cigarettes/day	[]		
smoke a pipe		[]		
smoke cigarets		[]		

If No, have you --

never smoked	[]		
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given up smoking in the last year not smoked for more than 1 year	[]	[]	
Do you have high blood pressure?	Yes	/yes	No []
Have you ever had a heart attack or suffered from angina?	Yes	[]	No []

Have you ever had a stroke, "stroke" or any weakness down one side? Yes [] No [] Have any of the following -- mother, father,

brothers or sisters had --			
a heart attack below the age of 60	Yes	[]	No []
a heart attack above the age of 60	Yes	[]	No []
a stroke-yes	Yes	[]	No []
the trouble with very high (hyperlipidaemia)	Yes	[]	No []

Practice Use Only

Health Education Smoking
BP 180..... / 90.....
Height 165cm.....
Weight 86kg.....

EXERCISE

Healthy exercise usually involves activity that lasts for at least 20 minutes, raises your pulse and produces hard breathing. In younger people this might be running, cycling or sport, or brisk walking for older people.

Do you take this type of exercise --

daily []
3 times weekly []
once weekly []
once monthly []
seldom [] yes

I cannot take exercise because of disability []

DIET

Please tick the one category which is closest to your usual eating pattern.

I eat no meat, fish or dairy produce []
I eat no meat []
I eat a mixture including daily fruit and vegetables [] I eat a mixture including regular chips and fries [yes] I eat frozen meals (eg TV dinners) 3 or 4 times/week [] I eat mainly snacks []
I eat a special medical diet []

Please specify

ALCOHOL

Please tick the statement which most closely describes your usual average alcohol intake. (1 unit is 1 glass wine, 1/2 pint beer or a single measure of spirit.)

I never drink alcohol []

I drink less than 1 unit per day []
I drink between 1 and 2 units a day []
I drink between 3 and 6 units a day [] yes
I drink between 7 and 9 units a day [] I drink more than 9 units a day on []
day []

Practice Use Only

Health Education Alcohol []
Alcohol Brief Intervention []

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