

INTRODUCTION TO PHYSIOLOGY

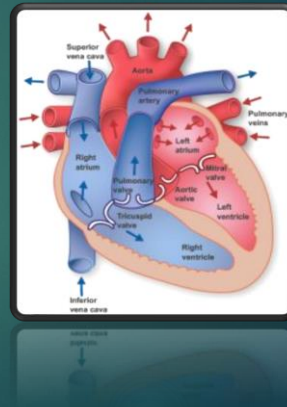
BMHP5003

ASSESSMENT 1

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INTRODUCTION

► This research aims at

- Interrogating the possibility risks of patient A experiencing cardiovascular complications due to various evident factors.
- To achieve the intended goal, a questionnaire targeting relevant areas was administered to the patient. The interrogated areas concerning the patient include:
- Drugs intoxication
- Family history on heart complication
- Patients heart complications history
- Race or ethnicity
- Physical activities



Introduction

The research in interrogating the factors leading to cardiovascular risks in humans examined patient A who seemed at risk of experiencing heart complications due to various factors discovered.

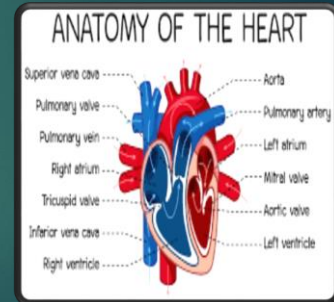
To achieve the study aim, a questionnaire was administered to patient A with various outcomes. Among the outcomes were, was the patient A at risk of cardiovascular complications due to drugs intoxication like alcohol and cigarette, family background due to genetic make up, medical history related to a previous attack in the past, race as other ethnic group are more susceptible to heart complications more that others or lack of physical fitness.

ANATOMY AND PHYSIOLOGY OF THE HEART

- ▶ Chosen health condition of Patient A is cardiovascular complications (heart disease)

- ❑ **The human heart anatomy and physiology**

- ▶ The heart is the size of one's fist and is situated in the chest cavity
- ▶ The heart has four chambers (a pair of atria and ventricles)
- ▶ The heart has valves separating the four chambers
- ▶ The heart is divided into two halves by tissues called a septum
- ▶ Pericardium protects the heart from expanding



(Mahandevan, 2018)

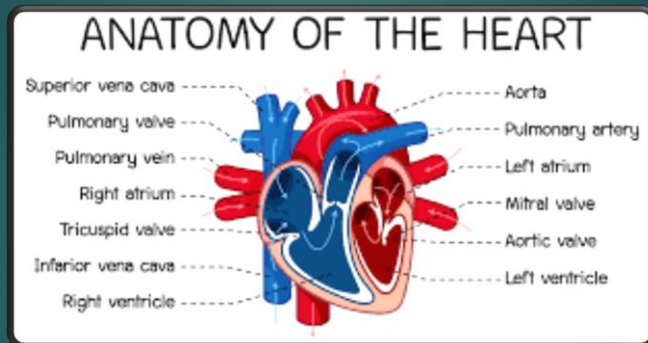
Anatomy and physiology the heart

Cardiovascular complication refers to heart diseases, and therefore anatomy and physiology of the heart are essential in understanding how heart complications emerge.

The heart is believed to be the size of one's fist found in the chest cavity of the human body. The heart is divided into four chambers (atria and ventricles, each a pair). The four chambers are divided by cardiac muscles called valves which prevent the blood from mixing up in the chambers. The heart is divided into two tissues called the septum. The right atria and ventricles receive deoxygenated blood and then pumped to the lungs to pick oxygen and comes in through the left atria and left ventricles which pumps it to the rest of the body through the aorta through the veins and capillaries.

The smooth functioning of the heart is hampered due to blockages of the veins and arteries, and therefore cardiovascular complications may occur.

THE DIAGRAM OF THE HEART



Anatomy of the heart.

The heart is the size of one's fist.

The heart has four chambers; Right atrium, right ventricle, left atrium, and left ventricle (Mahandevan, 2018).

It has various valves to prevent blood from various chambers from mixing

The left ventricle is strong to facilitate pumping of the blood all over the body

QUESTIONNAIRE

- ▶ The main aspects of the questionnaire are factors believed to cause heart complications. These factors are:
 - ▶ Substance abuse
 - ▶ Genetic make up (DNA)
 - ▶ Medical background
 - ▶ Race: black, indigenous, and people of color(BIPOC) are prone to heart diseases compared to whites (Kohli and Villiness, 2021)



Questionnaire

The main aspects of the administered questionnaire to Patient A are the factors believed to cause cardiovascular complications. This factors included Commonly abused substances such as alcohol and cigarette smoking. Chemicals in Tobacco cause damage to the heart tissues and thicken blood, causing clots in the veins and capillaries. Consequently, veins reduce in size, causing high blood pressure (sigh et al 2018)

Heart diseases may be hereditary caused by the genetic makeup referred to as the DNA.

Heart complications may reoccur if the Patient has a medical history of cardiovascular complications.

Some races, like the blacks, are more prone to heart diseases than white, making race a contributing factor to cardiovascular diseases. Cardiovascular risk varies by race. Black, indigenous, and people of color(BIPOC) are at high risk of heart complications compared to white Americans (Kohli and Villines, 2021)

LIFE STYLE HEALTH-RELATED INFORMATION OF THE PATIENT

- ▶ Patient A quit smoking and drinking 15 years ago. However he still chews and sniffs tobacco products.
- ▶ The patient history doesn't show any incident of heart complication, genetically or medically.
- ▶ patient A is of black origin.
- ▶ The Patient is inactive due to his age.

(sigh et al 2018)



Lifestyle health-related information of the Patient

Patient A quit smoking and drinking a decade and a half years ago. However, the Patient hasn't quit the use of tobacco products which still risk the health of the individual

Luckily, the Patient's historical background both medically and genetically is promising as known of the kinsmen are victims of cardia vascular complications. Neither has the Patient been a victim of the heart attack.

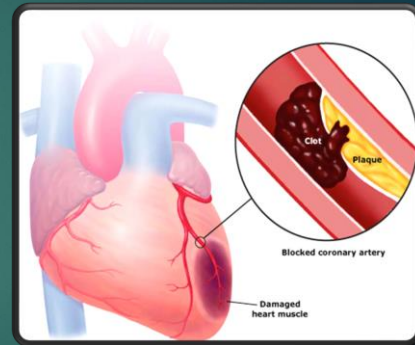
However, being of a black race, the Patient is exposed to heart-related risks.

The Patient is past the active age involvement in exercise, work, and other duties, thus increasing the risk of heart disease.

HEALTH RISKS

- ▶ The Patient (A) persistent use of tobacco products risks getting plaque conditions blocking the veins leading to the heart complications
- ▶ Persistence consumption of Tabaco by the Patient (A) may lead to blood clots that may lead to heart complications
- ▶ Lack of exercise by Patient (A) may lead to obesity, a recipe for cardiovascular complication.

(Williams et al, 2019)



Health risks

Patient A risks developing plaque in the arteries. Plaque refers to the build-up of harmful substances in the arteries, limiting blood flow to and from the heart. The consequences of plaque are that it can cause heart attack, stroke, or even death(Williams et al, 2019)

Persistence consumption of Tobacco also releases a chemical that causes thickening of the blood, resulting in a blood clot which could reduce the size of and hence difficult in blood flow. The consequence blood clots may result in hypertension causing cardiovascular complications.

Lack of enough exercise due to age exposes the Patient to cardiovascular complications. Exercise helps burn calories in the body that could otherwise coagulate in the arteries, resulting in plaque formation of plaque thus essential in managing lifestyle-related diseases.

RECOMMENDATIONS

- ▶ According to the response from patient A in the questionnaire, it is evident that the Patient is at risk of cardiovascular complications.
- ▶ Two Ways of managing the condition:
- ▶ Patient A to undertake regular check-ups to manage cardiovascular complication triggers such as BP.
- ▶ Patient A to incorporate in eating schedule a healthy diet eating plan to avoid obesity and other heart diseases triggers.

(Robert et al., 2019)



Recommendations

Judging from the response in the questionnaire, patient A is at risk of cardiovascular diseases if the following intervention is not taken seriously.

The Patient needs to take regular check-ups of blood pressure. The health system has made this possible by integrating pharmacists and other social care workers in the community health system to try and manage the triggers of cardiovascular complications like BP. Some of these organizations that provide heart care services and interventions are: The British Heart Foundation, London Hearts, Heart UK and many others.

Secondly, the Patient should have a healthy eating plan schedule comprising of fruits, vegetables, dairy products with low fats content, reduce salt and sugar consumption (Robert et al., 2019)

CONCLUSION

- ▶ Anatomy and physiology of human body studies reveal that all body organs depend on each other to carry out their functions.
- ▶ Therefore there is a relationship that exists between body functioning and relevant organ and body anatomy.
- ▶ Collecting information on health is essential as it provides information on the health status, quality of life in the health system, and performance of the health sector



Conclusion

The study of the human body is important as it reveals how these organs are related to each other in carrying out their functions. No organ is an island as it depends on the other. For example, the heart depends on the lungs oxygen and releases carbon dioxide and the kidney for detoxification.

Therefore there exist a relationship between how the body structure was created and the functions it carries. For instance, strong muscles left ventricle of the heart enables it to pump blood to the furthest point of the body to distribute oxygen and other minerals.

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