



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Introduction to Physiology

Assessment 2

Written Report

By: ELizabeth Molineros

Student Number: 2020078

Introduction

In this report, I will analyze the many aspects of Coronary heart disease. I have decided to take on this topic as it is one of the diseases that takes the most lives around the world and I think it is very interesting to write about this and about how it can be avoided and managed. I will describe both the anatomy of the parts of the body that are affected and the physiology of the disease. I will also go through the health and lifestyle routines that can be taken to cope with the disease as well as the health and social care practices and lastly I will give my recommendations.

The Anatomy and Physiology of Coronary Heart Disease

When fat starts to build up inside the artery that takes blood to your heart, this is known as coronary heart disease. Your arteries become narrow, preventing your heart from receiving adequate oxygen. Chest pain and breathing difficulties are caused by this. This condition can often raise your chances of suffering a heart attack later on. Blood clots form over a plaque if it explodes. As a result of this, a total block of your artery happens which turns into a heart attack.

CHD can cause the heart muscle to weaken, resulting in the failure of the heart. When the muscle isn't pumping blood to the various parts of the body as efficiently as normally does, it means you have this condition. As you become old, you become more susceptible to get this condition. It seems to be a lot more common in Males than in Females, and it is one of the most common causes of death in both men and women in the United Kingdom and around several parts of the world. However, there are several measures you may take to lower your risk of coronary heart disease which I will mention later on.

The organ that is mainly affected is the Heart which is among the most vital organs in the body, as it is responsible for keeping us alive. It's a four-chambered muscular organ. The human heart is one of the most powerful and hardest-working muscles in the body, and it works throughout a person's life. This is why this condition is one of the most dangerous to have and should be treated with extreme caution.

Circulation is the process of your heart continually circulating five liters of blood around your body. Your heart, blood, and blood vessels make up your cardiovascular system. The right side of the heart receives oxygen-deficient blood since the brain and body have used up most of the oxygen. It transfers this to your lungs, where your oxygen supply is replenished. The blood then returns to the heart's left side, where it is pumped to the brain and the rest of your body.

The main symptoms of coronary heart disease are;

- chest pain aka angina
- Breathing difficulties
- Dizziness
- Heart palpitations

Although these symptoms can be caused by Coronary heart disease, they can also be a sign of other diseases so it is always important to check with your GP.

There is no definite cause of this but many of those can include;

- Smoking and drinking heavily
- Being overweight
- Family history
- High cholesterol
- Having unhealthy diet
- Having a high blood pressure

Health and Lifestyle routine measures

There are many ways in which heart disease can be prevented, I have gone over a few of the life style routines that one can take to do so;

1. **Change your diet:** Certain foods protect your heart whereas others aid in the damage and development of the plaques that clog the arteries. Fruits, vegetables, healthy grains, lean protein, nuts, and olive oil are all good sources of antioxidants which will help protect the body. Sweets, fried meals, red and processed meats, and dairy items should be minimized and otherwise eliminated.
2. **Exercise:** The cardiac muscle is strengthened by cardio. It also reduces body fat, decreases blood pressure, and raises levels of beneficial HDL cholesterol. Working exercise can help you lose weight while simultaneously lowering your Bad cholesterol otherwise known as LDL cholesterol.
3. **Lose weight:** Your heart and blood arteries are put under additional strain as you gain weight So, losing weight is a major step in reducing your risk of Heart Disease.
4. **Keep your blood pressure under control:** The force of blood pushing against the artery walls while the heart beats is known as blood pressure. The greater force is applied against those barriers as your blood pressure rises. High blood pressure can start to damage arteries over a long period of time, making them more susceptible to atherosclerosis.
5. **Limit alcohol consumption:** While a glass of red wine with supper may help reduce HDL cholesterol, excessive alcohol use can be harmful to the heart. Excessive use of alcohol can lead to excessive blood pressure, obesity, and heart failure.
6. **Avoid stress:** In today's fast-paced world, some stress is unavoidable. However, if you're stressed out every day, your blood pressure will rise and your artery walls will be damaged.

Multiple prospective investigations have demonstrated a consistent, independent connection with a family history of coronary heart disease but lifestyle measures are always recommended in order to reduce your risk.

Health and Social Care practice

There are many things that your health and social care practitioners can do to help this condition such as;

- Giving a patient medicine such as Beta blockers which will prevent the body from having another heart attack if you have already had one, it does this by lowering your blood pressure as well as moderating your heart rate, lowering your heart's oxygen requirement.
- Calcium channel blockers which are drugs that prevent calcium from coming inside the body. These types of medications can be used in conjunction with beta blockers if they aren't working or in place of beta blockers if you are not able to take them. These will help ease the symptoms of angina.
- Ranolazine. This drug may assist patients who are suffering from Angina. If you are unable to take a beta blocker, it may be administered in addition to or instead of one.
- Medications that lower cholesterol. These drugs work by reducing the amount of primary material that builds up in the coronary arteries. Cholesterol levels fall as a result. Statins, niacin, fibrates, and bile acid sequestrants are among the drugs that your doctor can prescribe.
- Aspirin. Your GP could also recommend you taking some aspirin or another drug like it. This is done as it may help avoid an artery blockage, it reduces the possibility of your blood clotting. Once you have had cardiac arrest, drugs like aspirin can assist you from having another one. However, if you have a bleeding issue or are currently using another blood thinner. It is always best to contact your doctor before taking any drugs.

These are the usual treatments which are administered to the patient but it all depends on their specific condition and treatments may vary. Education is always key in order to prevent diseases, there are many factors that

contribute to this disease and I think that by teaching people to take care of their bodies we would avoid the many deaths that are a result of this disease. The NHS has launched many campaigns to help inform and fight this disease such as the one they did in february 2022 where they encouraged people to call 999 at any sign of symptom of a heart attack. This campaign “Help us, Help you” run on tv and is the first of many campaigns dedicated to heart disease.

Recommendation

The best advice which could be would be to switch to a diet based on plants, this type of diet based on whole plant foods now are becoming much more prominent as a result of the health benefits they can bring. A large number of studies have related a diet based on plant diets to a decreased risk of heart problems events and intermediate risk factors, particularly when being a whole foods plant based diet, high in quality plant foods such whole grains, fruits, vegetables, and nuts. This would be my recommendation to anyone who wants to reduce the risk of developing heart disease.

Regular exercise is another recommendation that I would give. Even doing something as little as a 30 minute cardio can be helpful when trying to prevent heart disease. For someone coping with heart disease I would recommend low intensity workouts, where the heart doesn't have to work too hard.

Conclusion.

I will conclude my record by mentioning that this disease can be prevented and we can all take steps to do so. With cardiovascular diseases being one of the top killers in the UK it is vital that both health organizations such as the NHS and us as individuals take bigger steps to prevent this. It is always better to prevent diseases than to treat them and this is the case with this disease. We are fighting a problem that we have created ourselves. We need more information about the food we eat and the activities we do in order

to show people the damage they are doing to themselves in hopes that they will change.

References

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