

Student Name: Shalma Begum

Student Number: 1813709

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Lecturer Name: Adesewa Ajayi

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Introduction

The purpose of this report is to identify the normal and abnormal physiological conditions in my patient whom I conducted a Lifestyle Questionnaire on. I will give recommendations on how they can improve their health so that they do not go on to develop any cardiovascular diseases in the future. Cardiovascular disease (CVD) is the prominent effect of non-transmissible disease fatalities worldwide (WHO, 2020). The World Health Organisation estimates that the number of fatalities caused by CVD will be nearly 23.3 million by 2030. CVD is an umbrella term that covers a cluster of conditions of the heart along with blood vessels. A few of these diseases are high blood pressure, coronary heart disease, stroke as well as heart failure.

Case Study

Patient A is a 50-year-old female who lives in London and is of Black African ethnicity. Her current weight is 103kgs and her height is 163cm and her BMI is 40.5. She does not smoke but has adequate knowledge in why smoking is bad for one's health. Patient A is an occasional drinker who consumes around 1 or 2 units of alcohol a day when drinking. Patient A said that she has gained weight during lockdown and believes this is the reason for her flare ups of her Neurogenetic Rheumatoid Arthritis, her arthritis is hereditary as her maternal grandmother had this from childhood. Patient A is currently taking Hydrochloric sulphate to manage the arthritis, the medication has affected her eyesight and she developed cataracts which she then needed surgery to correct. Patient A is also a pre diabetic, on examination her blood pressure (BP) was recorded as 128/100. She has never had a heart attack or a stroke but has a family history from her maternal side of stroke. Patient A does not have high cholesterol or high blood pressure. She exercises once a week for at least an hour but mentioned that she does get breathless when walking and is easily more tired now. Patient A has a balanced thyroid level and is getting check-ups for this regularly. Patient A has reached menopause and has also had a hysterectomy for medical reasons.

Health Assessment

Normal Physiological Conditions

Based on the based on the data gathered from the health and lifestyle questionnaire, the following normal physiological conditions were identified in Patient A. Patient A does not smoke, smoking is seriously damaging to one's health. Smoking tobacco causes serious harm throughout the whole cardiovascular system. Present tobacco smokers are twice as likely to progress most significant types of CVD, like heart failure, as well as being over 4 times at risk of forming peripheral vascular disease (PVD), contrasted to individuals who have not smoked in their life, (Banks E., et al., 2019). Patient A is on the right path as she knows very well what damage smoking does.

Patient A leads a relatively healthy life; however, she has mentioned she is an extremely busy person. She makes the time to exercise once a week for at least an hour. Patient A also lives an extremely high stress lifestyle, she is a single mum with a full-time job as well as a Minister of Religion at her local church. To manage her stress she enjoys playing golf, however, due to the current pandemic she has not been able to go out as much as she is working from home.

Patient A mentioned that she fasts regularly for religious reasons, drinking only water. A vast amount of animal studies as well as human experimental tests have revealed that fasting can have an advantage in bettering health conditions such as obesity, diabetes, as well as cardiovascular disease. Fasting has been linked with a decreased risk of coronary heart disease and may possibly assist in lowering blood pressure and cholesterol levels, (Anton, et al., 2017).

Patient A has reached menopause, she is not on any medication for this as she is managing relatively well with this physiological change. She has no heart palpitations but reports that she does get tired more now when walking, Patient A has a balanced thyroid level but has not been able to keep her weight down for many reasons one of these reasons is due to the lockdown in the current pandemic.

Abnormal Physiological Conditions

Patient A has never had a stroke but has a family history of stroke as her maternal grandmother has had a stroke. This may put her at risk of having a stroke, the chances of having a stroke increase more when genetics is combined with unhealthy lifestyle selections, such as eating an unhealthy diet as well being overweight, (Stroke.Org. Uk 2020). Patient A is a pre diabetic, this means she is at risk of getting diabetes soon if she does not control her eating habits. She mentioned that she skips breakfasts and sometimes does not get the chance to eat for the whole day. People who are pre diabetic have blood sugar levels that are higher than the average range, but not enough to be deemed as diabetes. Individuals with pre-diabetes are at bigger risk of having type 2 diabetes as well as cardiovascular disease like heart attacks or stroke further in their life.

Being diabetic raises the risk of death from a heart attack by over fifty per cent, as stated in an extensive study. Scientists in a University in Leeds traced down seven hundred thousand individuals who have been to hospital because of a heart attack in the middle of the years January 2003 and June 2013. Out of this, one hundred and twenty-one thousand individuals were also diabetic. The individuals were sorted out by the influences of age, sex, any other conditions, and variations in the medical care taken, the researchers discovered severe variations in continued existence rates. Individuals who were diabetic had a fifty six percent of dying if they had experienced a heart attack, then those without the condition., (Science Daily, 2020), there was a thirty nine percent chance of them dying from a heart attack. This is a huge difference; it clearly highlights the increased risk factor of developing a CVD due to other health conditions.

Patient A has a body mass index (BMI) of 40.5 which places her on the obese scale. Overweight and obesity are categorised by a person's (BMI). BMI is calculated by separating an individual's weight by their height squared in metres, (World Heart Federation.org, 2017). According to, NHS (2020) an individual with similar height as Patient A should have a BMI of no higher than 27.5. Patient A also stated that she exercises once a week for at least an hour which is very good however, during lockdown she has gained some weight and as she is working from home due to the pandemic and lockdown preventing her from going out as much.

Obesity can lead to many other conditions that could affect the way one leads their daily life; obesity contributes to the risk of cardiovascular disease (CVD).

It is believed to be an individual risk factor for CVD. According to calculations by WHO (2020), they in the year 2016 approximately above 1.9 billion people 18 years and above were greater than the average weight for their age. Out of these more than 650 million adults were obese. This clearly indicates that obesity is a problem in most parts of the world, it can lead to other complications then even result in death if changes are not made.

Patient A has said that her Neurogenetic Rheumatoid Arthritis has flared up because she has gained weight, it is genetic as she said that her maternal grandmother had this in her childhood. Rheumatoid arthritis (RA) patients have an increased risk of CVD like heart attack or stroke, (Solomon, D. H et al., 2015). She is currently on Hydrochloric sulphate to manage the arthritis, due to this medication she developed cataracts and had to have surgery to remove this. However, she has reported that her eyesight is now much better.

Recommendations

I will be proposing some lifestyle changes for my patient, for her to improve her quality of life and live a better and healthy life

As women mature and reach menopause near to the age of 50, the risk in developing any CVD is greater. Hence why, menopause commemorates a crucial point in a woman's life to propose preventative approaches in lowering a woman's chance of CVD. Menopause is a risk element of CVD as estrogen removal has a negative impact on the functioning of the cardiovascular system as well as digestion, (Rosano, G et al., 2007). Adjustments in lifestyle such as healthy eating, cutbacks of excessive alcohol consumption as well as maintaining a slender physique have indicated to play a part in CVD prevention. Daily life factors influence the probability of developing CVD equally in male and female, (Colpani, V et.al., 2018).

Being overweight is a major risk factor for CVD and is a rising problem in the UK, therefore, my first recommendation for my patient would be to change her eating habits. Starting off with small steps can help improve health. Patient A skips breakfast as she said she has no time for breakfast due to her busy lifestyle. According to S, Gall et al., (2018), evidence indicates that routine breakfast intake is linked with reduced BMI and cardiovascular risks, along with improved intellectual function.

Although the UK authority have been enthusiastically encouraging breakfast eating as part of a sensible diet via the "Change4Life" campaign, it is projected that 31% of adults consistently miss out breakfast. Nutritional suggestions in the UK recommend that a healthful breakfast must provide about 20–25% overall day-to-day energy as well as nutrient consumption and foods should be chosen from five key food sets, specifically: like cereal, pasta, fruit and vegetables, milk as well as other dairy products, proteins and low-fat oils and spreads. Patient A should aim to make time for a light breakfast, this could even be just a piece of fruit or boiled egg and toast.

Patient A is recommended to consume a daily calorie intake of around 1717 calories. This has been calculated by using her weight, height, age as well as other risk factors. Staying in a daily calorie deficit will help my patient come to a healthy weight for her age.

It has been identified that the Black African population is the swiftest increasing minority group in the UK, in comparison with the overall UK population, the problem of chronic diseases such as obesity, hypertension, type

2 diabetes besides stroke is much bigger for individuals of Black African and Caribbean ethnicity, (Hamer M, et al., 2014). As Patient A is from a Black African background it places her more at risk in developing CVD and other health conditions. Although she does not have high cholesterol or high blood pressure she may still be at a greater risk of developing these as her BMI is high. According to Mayo Clinic, (2018) if an individual's BMI goes over 30+ range—which is considered obese—then they are at a greater risk of high cholesterol. This could then lead to other health conditions like CVD.

Individuals in this ethnic group also have a bigger chance of developing type 2 diabetes, which is known to raise the risk of any CVD. Although there is not a sure answer to why they may be at heightened risk, genetics could be one reason; however, lifestyle preferences can play a part too (BHF, 2020).

Ethnicity is sometimes known as a non-changeable risk factor – which means it is a risk factor that cannot be changed; however, diet is something that can be changed. Consuming a healthy diet will assist in controlling weight, blood glucose, cholesterol, and blood pressure. Lots of staple foods in the traditional Caribbean and African diets are good for your health, like sweet potatoes, leafy green vegetables, yams, as well as beans. But a few traditional dishes like saltfish and ackee, jerk chicken or soups made with palm oil, can have a high level of salt content, sugar, as well as saturated fat, (BHF, 2020).

I would recommend that Patient A tries to swap palm oil for coconut oil or even rapeseed oil to make her meals healthier. Making a simple change like grilling chicken instead of frying is already a massive improvement. As a replacement for salt adding herbs, spices, ginger, or chilli to add flavour will also help reduce salt intake.

Regular exercise is not only good for your body but also your mind, even with compelling scientific proof backing the advantages of regular exercise for the avoidance and management of CVD, physical inactivity is extremely common globally. In addition to simply altering obvious risk factors for CVD, frequent exercise can increase cardiovascular health, (Fiuza-Luces, et al., 2018).

When an individual is physically active it helps them sustain a healthy weight plus decreases the risk of type 2 diabetes, high blood pressure and high cholesterol. Moving more in day-to-day life is a free way to stay active, activities like housework, gardening, cooking, as well as walking will all

improve a person's health. When a person combines exercise with a healthy diet, it can significantly reduce the risk of CVD. Patient A should try to make more time for light exercise, if exercising is too painful due to her arthritis she could go for short walks resting in between.

Lastly, the NHS offer a free Health Check every five years to individuals amongst the ages 40 to 74 years of age. Patient A should ensure that she attends her health check every five years. The health check is very important as a nurse or doctor will check your heart health, then they will carry out tests on your vascular or circulatory health which will then work out your possibility of forming a few of the generally disabling but avoidable ailments, (NHS, 2020).

Conclusion

To summarise, Cardiovascular disease is the prominent reason of death globally, 17.9 million lives lost every year and 31% of all worldwide deaths., (GOV.UK 2020). Being overweight, diabetic, or even pre diabetic puts a person more at risk in developing CVD. In this report I have made recommendations for my patient that will aid her into living a healthy life. These few changes will benefit my Patient A in the long run, simple steps into living a better healthier life will decrease the risk of CVD.

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LIFESTYLE QUESTIONNAIRE

Introduction:

In order 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 ..26.10.70..

Do you smoke? Yes ☐ No ☒

If Yes, do you –

smoke less than 1	cigarette/day	☐
1 – 9	cigarettes/day	☐
10-19	cigarettes/day	☐
20-39	cigarettes/day	☐
more than 40	cigarettes/day	☐
smoke a pipe		☐
smoke cigars		☐

If No, have you –

never ever smoked	☒
given up smoking in the last year	☐
not smoked for more than 1 year	☐

Do you have high blood pressure? Yes ☒ No ☒

Have you ever had a heart attack or suffered from angina? Yes ☐ No ☒

Have you ever had a stroke, "shock" 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 ☐	No ☐
trouble with very high cholesterol (hyperlipidaemia)	Yes ☒	No ☒

– Grandma had stroke & HC

Practice Use Only

Health Education Smoking Yes

BP 128 / 100

Height 5' 3"

Weight 103 16.5 stones

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 | ☐ |

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 | ☐ |
| 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, ½ 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 | ☐ |
| I drink between 7 and 9 units a day | ☐ |
| I drink more than 9 units a day on average | ☐ |

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Practice Use Only

- | | |
|----------------------------|-------------------------------------|
| Health Education Alcohol | ☐ |
| Alcohol Brief Intervention | ☒ |