

Patient A's Lifestyle-Related Health Disease: Ischemic Stroke



Introduction to Physiology

Module Code: BMHP5003

Assessment 1 Practical Test (Presentation)

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Submission Date: 1st April 2022

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Introduction

Aim: To explore the lifestyle-related health issues of Patient A that could cause an Ischemic Stroke through understanding the anatomy and physiology of the brain and Central Nervous System (CNS).

Lifestyle-related health information in health and social care is measured to look at the populations changes in health and lifestyles and monitor their effects.

Overall, a healthier lifestyle helps all body systems function better which help build stronger immunity.

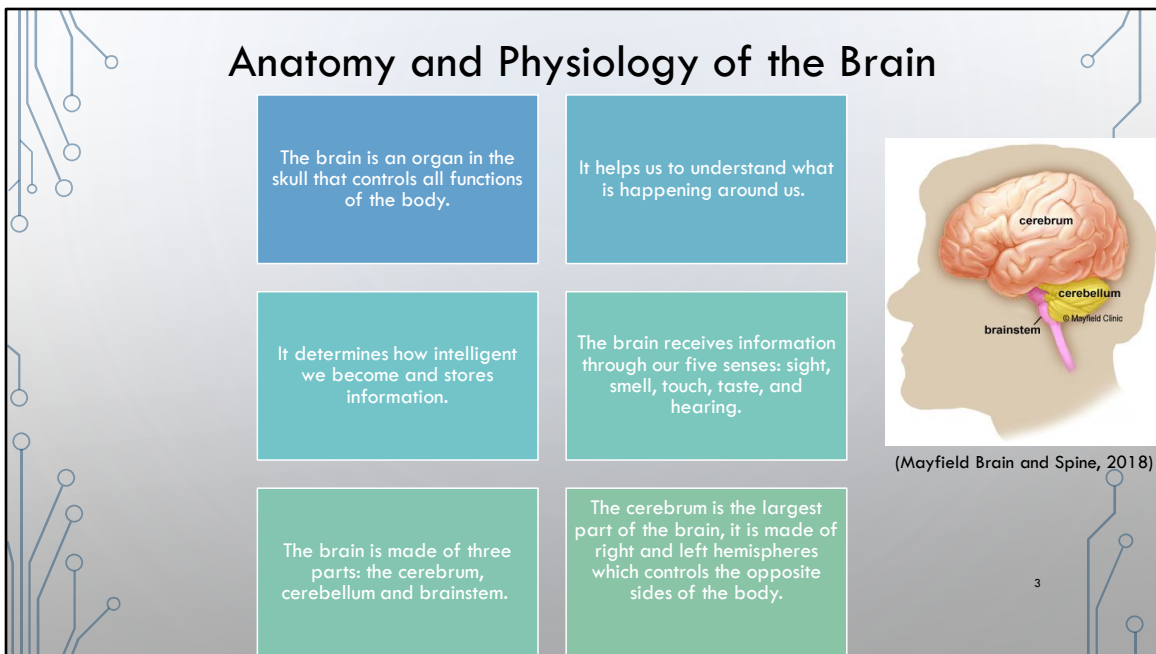
Measuring lifestyle helps build a healthier population as public health policies are created for prevention along with developing cures.

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The aim of this assignment is to explore the lifestyle related health issues of Patient A that may cause an Ischemic Stroke through understanding the central nervous system (CNS).

It has been recognised that a healthy life style has an extremely important benefit and is constantly being improved and researched by Public Health England. WHO have declared 60% of health issues relate to a person's health condition and quality of life in comparison to their lifestyle. It is said over a million people follow an unhealthy lifestyle globally. This leads to serious illnesses, cause severe disabilities and fatally reduce lifespans (Farhud, 2015).

Lifestyle related health information in health and social care is measured to look at the populations changes in health and lifestyles and monitor the effects of these. These are looked at to help improve and monitor not only each individual patients but the population as a whole lifestyles according to their health issues. From these research can be carried out to help improve global health and policies can be introduced, along with medicines and vaccines for prevention and cures to be produced through studies of diseases, through studying lifestyle effects and behaviours.



The brain controls many of the body's functions including sensation, thought, movement, awareness, and memory.

Frontal lobes are help good cognitive responses, movements, and language.

Occipital lobes help with sending signals to the eyes.

Parietal lobes are for processing sensory information.

Temporal lobes help people with hearing and storage of memories.

All hemispheres of the brain are for different functions. The left hemisphere helps control speech, helps with understanding, arithmetic, and writing. The right hemisphere controls creativity, spatial ability, artistic, and musical skills. The left hemisphere is stronger to help with movements of the hands and language in approximately 92% of people (Mayfield Brain and Spine, 2018).

Physiology of the Nervous System

The Nervous System is made of two main parts:

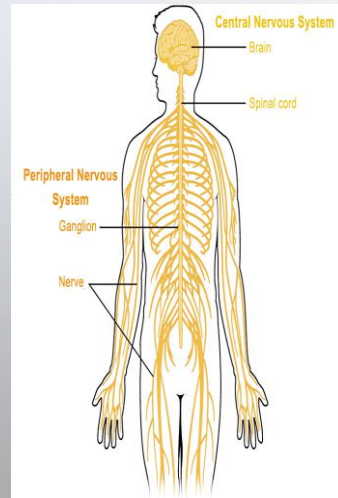
- The Central Nervous System (CNS), which is the centre of processing information is made up of three parts: the brain, the spinal cord and the neurons (Cherry, 2022)
- The Peripheral Nervous System (PNS), consists of nerves that branch out from the spinal cord into the rest of the body (NIH, 2018).

The three components of the CNS collaborate with one another, by sending and receiving messages to control the responses within the body.

The main function of the PNS is to send messages through neurons to the CNS to the body's organs, limbs and skin.

The PNS sends and receive signals and centrally process them to help the body's organs, skin and limbs to function and react.

The PNS's major role is to control motor and sensory nerves, which send the messages to breathe, as well as keep the blood circulating and pumping.



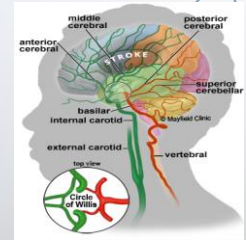
(Donato, 2018)

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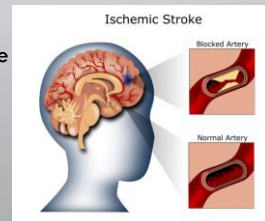
The nervous system is made up of the brain, spinal cord, and a network of nerves and neurons in the body, sending and receiving signals to the brain. When the brain is damaged, it can no longer function like before. (NIH, 2018).

Physiological Effects of the Nervous System During an Ischemic Stroke

- Strokes are lifestyle diseases of the nervous system.
- The blood circulates from the heart to the brain through the internal carotid and vertebral arteries.
- During an ischemic stroke, the arteries of the brain build-up from plaque over time, forming a blockage and causing the blood supply to stop flowing.
- The middle cerebral artery is the artery most often blocked during a stroke.
- Without oxygen, brain cells die then the signals can no longer be sent and affects the person's ability accordingly E.g. Loss of; speech, movement, sight, thinking, sense of touch.
- If a stroke occurs on the right side of the brain, your left arm or leg may be affected or paralysed.
- The results can be permanent, and even lead to death.
- It is one of the most important neurological diseases that can affect anyone but mostly the elderly (Mayfield Brain and Spine, 2018).



(Mayfield Brain and Spine, 2018)



(Acharya, 2019)

A stroke is often caused by existing poor life style choices. These are most often related to high cholesterol, high blood pressure, smoking, and diabetes. A stroke can be due to internal brain bleeding, known as a hemorrhagic stroke, or blocked blood flow in the artery, known as an ischemic stroke. The most common factors causing strokes are nearly 90 percent of all strokes.

Strokes also put you at a higher risk of having a second stroke or heart attack. To prevent further strokes, you should make healthy lifestyle choices, like eating healthy and being more physically active (Mayfield Brain and Spine, 2018).



Questionnaire

- Name determines gender
- Date of birth determines age factor
- Smoking history
- Alcohol consumption
- Family history
- Medical history
- Ethnicity
- Physical activity at work
- Outdoor physical activities
- Usual walking pace

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(UWTSD Moodle, n.d)

A Lifestyle Questionnaire calculates and measures through lifestyle-related information the risk of developing heart disease and stroke over a period of ten years. The reason this is carried out is to help prevent future lifestyle-related health issues, which could prove fatal to a person's health. According to the Data Protection Act 2018, ethically, the patient is informed their information will remain confidential and be recorded in the GP records and be used by the Department of Public Health.

Lifestyle Health-Related Information of the Patient

Patient A (Female)

51 years old

Smoking 10 cigarettes daily for the last 30 years

Consuming more than 6 alcoholic beverages daily

Mother suffered from angina from the age of 55, and stroke at age 58, father had a heart attack at the age 45 and passed away

Suffer from angina pain occasionally

Belongs to ethnic group of Black African

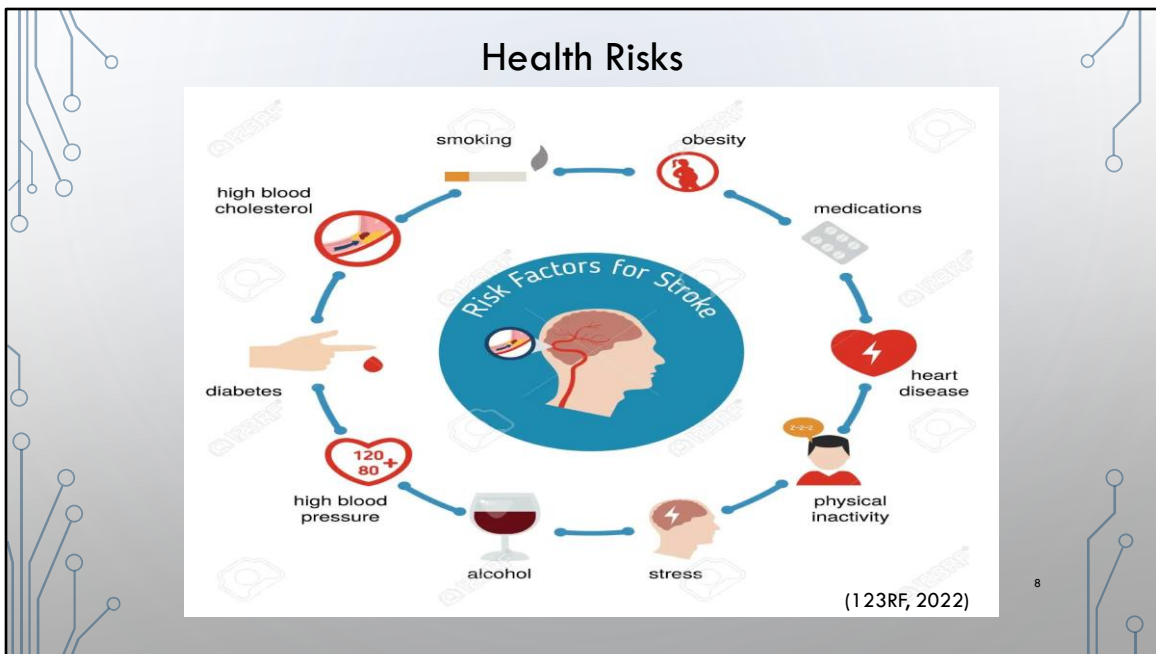
Spends most of the time sitting at a desk at work

Does no outdoor physical activities

Walks at a brisk pace due to breathlessness

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Patient A (Female) is at a higher risk of suffering from a stroke as women are at higher risk of suffering from a stroke due to living longer compared to men (Wyller, 1999). Since the past year Patient A has experienced angina pain, the Dr has recommended attending healthier lifestyle alcoholic and smoking groups due to binge drinking and chain smoking and to start to introduce and follow a brisk exercise regime due to physical inactivity.



There are many lifestyle risk factors Patient A is taking which are suggesting she may suffer from a serious illness such as a stroke. She has a high BMI therefore she is suffering from obesity, and is also suffering from depression, resulting in her being a binge drinker, and chain smoker. She works very long hours in the office, so suffers from high levels of stress and doesn't have time for any physical activities due to a busy lifestyle. All these risk factors put her at high risk of suffering from a stroke.

Recommendations

NHS UK spend 14% of the social care budget on those suffering from neurological related conditions

NHS UK recommend reduce the risk of suffering from a stroke by:

Eating a healthy balanced diet

Regularly exercising

Quit smoking

Not consuming more than 14 units of alcohol per week

Stroke Association offer more information and a support helpline to help reduce your risk of a stroke, especially if you have a condition that increases your risk.

7 WAYS YOU CAN PREVENT A STROKE

A stroke is a disruption of blood flow to certain areas of the brain. Eighty percent of strokes can be prevented if people know the risk factors and follow their doctor's orders.

Here are seven ways you can prevent a stroke:

- 1 Exercise** - Regular exercise helps keep blood pressure, heart, arteries, diabetes and energy.
- 2 Follow a healthy diet** - If you're a vegetarian, get your body's blood levels down.
- 3 Take your medicines as prescribed** - Know the warning signs, check in regularly, use medication and alcohol smart.
- 4 Have regular check-ups with your physician**
- 5 Know the warning signs** - Check in regularly, use medication and alcohol smart.
- 6 Know the warning signs** - Check in regularly, use medication and alcohol smart.
- 7 Know the warning signs** - Check in regularly, use medication and alcohol smart.

Josephs/Candler
Live smart.
sichs.org/stroke

Conclusion

- A persons' lifestyle is significantly affected by their physical and mental wellbeing (Farhud, 2015).
- People with neurological conditions have a low health-related quality of life of any long-term condition (NHS England, 2012)
- Risks of strokes can be reduced significantly by living and following a better quality of a healthier life-style.

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Therefore, according to the existing studies, it can be said that: lifestyle has a significant influence on physical and mental health of human being (Farhud, 2015).

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