

BSc Health and Social Care Introduction to Physiology BMHP5003

Assessment 1 Poster Presentation

Hypertension

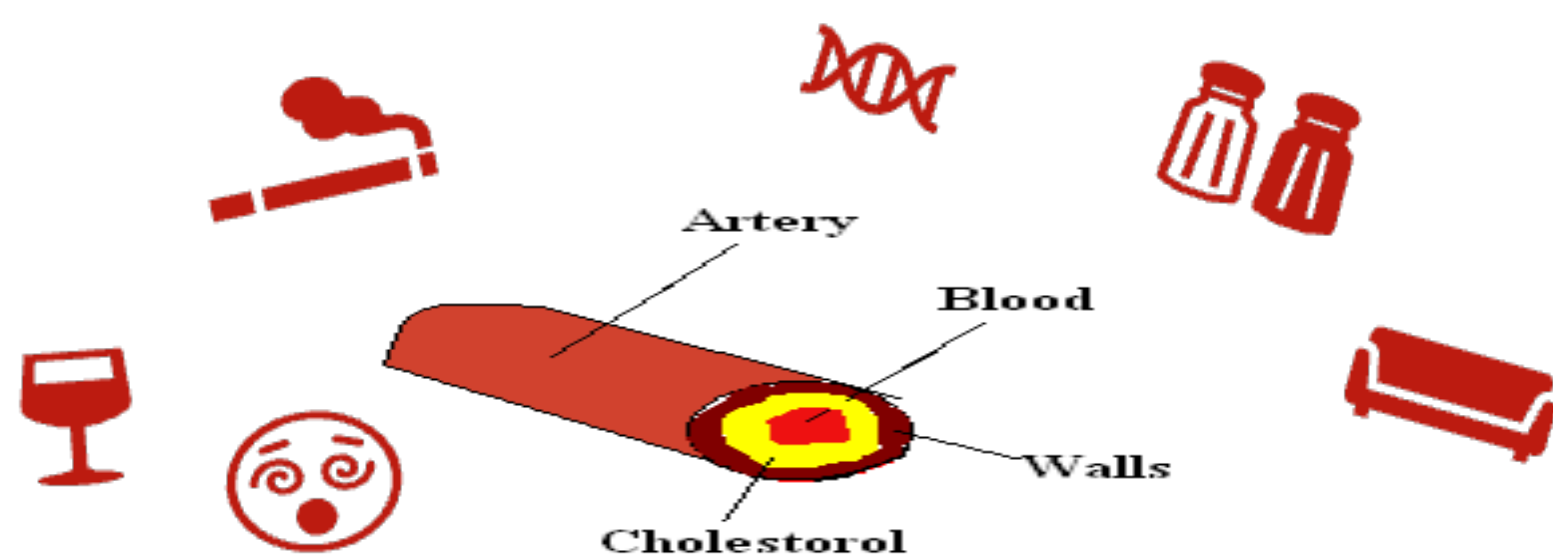
Maryam Malik
(1919971)

Lecturer: Noura Mohamed

HYPERTENSION

Blood Pressure

- The force that the human heart exerts the blood in order to supply it to the rest of the body.
 - Blood pressure reacts to human physical and emotional behavior by going up and down during the day.
 - **Systolic** pressure is the top number that indicates the highest level of blood pressure while heart contracts.
 - **Diastolic** pressure is the lower number that indicates the lowest level of blood pressure while heart relaxes between the contractions.
- (Tucker et al. 2015)



This Photo by Unknown Author is licensed under CC BY-SA

Causes / Risk Factors

- **Smoking** makes the artery walls sticky and easy for cholesterol to stick on.
- **Alcohol** can cause blood vessels to become narrower.
- **Stress** links human to unhealthy habits that cause long-term high blood pressure.
- **Genes** can pass on high blood pressure and high cholesterol.
- Obesity gives extra load to human heart in order to supply blood around the body
- **Salt** is important nutrient but too much salt can contribute to high blood pressure.
- **Low physical activity** increases amount of cholesterol that clogs the arteries.

(British Heart Foundation, 2018)

Healthy living reduce high blood pressure

- Good night sleep keeps mind and body healthy.
- Being active keeps heart and blood vessels in good shape.
- Drinking less alcohol and coffee improve mood and help sleep better.
- Stop smoking gives immediate effect on overall health benefits.

(Blood Pressure Association, 2020)



This Photo by Unknown Author is licensed under CC BY

Healthy habits



High blood pressure
140/90mmHg

Elevated 121-
139/81-89mmHG

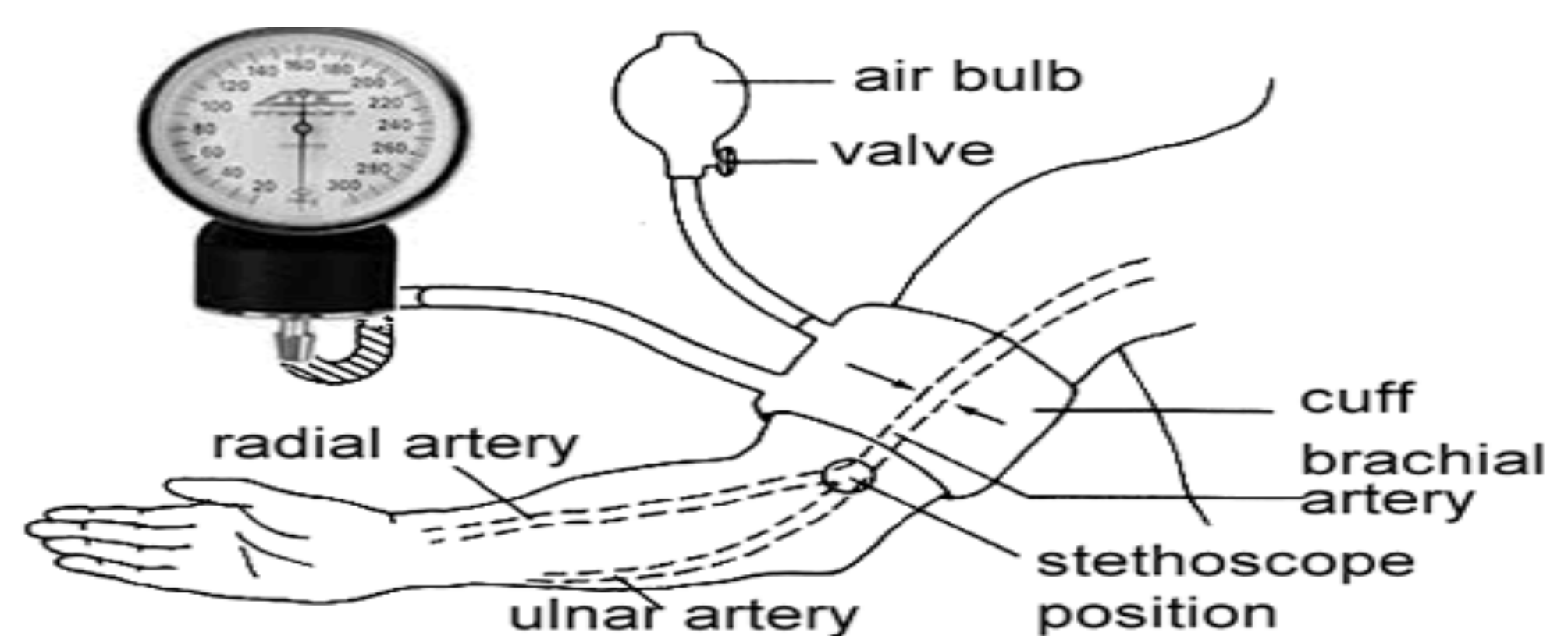
Normal 120/80mmHg

Low blood pressure 90/60mmHg

“High blood pressure **silent killer**”

- Arteries lose their elasticity and become narrow
 - Cholesterol clog the arteries and restrict the flow of blood
 - Clogged arteries can lead to a **Stroke**
 - Damaged arteries can cause **Heart attack**
 - Cardiovascular diseases kill 1 in 4 people in the UK
 - There is only one way to know by measuring blood pressure
- (NHS, 2019)

Check your blood pressure regularly



This Photo by Unknown Author is licensed under CC BY-SA-NC

- Blood pressure test could save a **Life**
- Adults over 40 should test every 5 years
- At local GP surgery
- At some pharmacies
- At home

(National Health Service, 2019)

Patient A

- 45 years old female in a healthy weight category
- Family history of very high cholesterol
- Lives considerably unhealthy lifestyle
- Smoking, drinking more than 20 units a week
- Relying on fast food most of the days, maintaining low physical activity
- Patient A has a high blood pressure 140/90mmHg
- Healthy eating prevents **Hypertension** (British Dietetic Association, 2019)
- NHS advice drinking less than 14 units of alcohol a week and minimizing daily consumption (2018)
- Tips to quit smoking (Johnson & Johnson, 2020)
- Introducing healthy habits in Patients A lifestyle

Speaker Notes

Blood pressure is the force that heart uses to pump the blood around the body through the Circulatory system. In other words, without the pressure blood would not move, therefore humans' body would not be able to function. It's natural for blood pressure to go up and down during the day while person obtains different physical or mental activities. If individual exercise blood pressure goes up if one worries or have anxiety blood pressure would go up, on other hand when human body rests blood pressure maintains lower levels. Blood pressure is measured in 2 numbers the highest level of blood pressure while hearts contracts is called systolic pressure and lowest number that indicates the lowest level of blood pressure while hard relax between the contraction called diastolic pressure. Normal blood pressure is 120 systolic pressure by 80 diastolic pressure in millimetres of mercury (Tucker et al. 2015). Low blood pressure 90/60mmHg is less common and have less impact on human body. Individual with low blood pressure could feel dizzy or in some cases faint. Therefore, hypertension a high blood pressure 140/90mmHg is sometimes called a "silent killer" it's so dangerous that can cause stroke, heart attack, kidney failure and many other serious illnesses. High blood pressure puts extra strain on arteries making them lose elasticity and become narrow. Therefore, is very easy for fatty substance also called cholesterol to build and stick to artery walls that may cause blood clotting that could lead to other cardiovascular diseases. I must underline that one in four people in UK is killed from a cardiovascular disease (NHS, 2019). Is very important to understand what causes and what factors urge high blood pressure. One of the most dangerous factors is smoking, chemicals makes the artery wall sticky an easy for cholesterol to stick on. Consuming big amount of alcohol cause high blood pressure, therefore can cause blood vessels to become narrower. Stress may not be a direct link to a high blood pressure, but it definitely encourages unhealthy habits that may link to a hard and cardiovascular diseases. People with family history of high blood pressure and high cholesterol levels have a much higher risk in having a stroke or a heart attack. Obesity is becoming national problem and worries, fat excess force hard to work harder in order to move blood around the body. We all know that salt is important nutrition unfortunately using big amount of salt can contribute to a high blood pressure. Being less active can lead to a fatty material building up in arteries that may cause blood clotting (British Heart Foundation, 2018).

There is only one way to know about individuals blood pressure and that is by measuring. Checking blood pressure regularly could save a life. In fact, every adult over 40 should be encouraged to measure blood pressure every five years. it is very simple procedure it can be done at your local GP surgery same as many pharmacies would also offer this life saving services, moreover one can purchase a device and measure blood pressure at home (NHS, 2019). Everyone can maintain normal blood pressure by introducing healthy lifestyle in them daily routine. Everything in life starts with a good night's sleep that keeps minds and body healthy as well as being active keeps heart and blood vessels in a good shape in particular aerobic activities encourages whole body to work in strength and harmony. Drinking less alcohol and coffee improves mood and helps to sleep better and while our sleep improves, we are more likely to maintain a healthier lifestyle. Stop smoking gives immediate effect on overall health benefits. It is not easy but there is much help available out there that will support in such important step forward (Blood Pressure Association, 2020).

By analysing patient (A) lifestyle questionnaire, I find out that she is a 45 years old female. According to NHS her BMI 24.2 and that suggests that patient (A) belongs to a healthy weight category. However, she has a risk factor off family history of a very high cholesterol in addition to that patient (A) live considerably unhealthy lifestyle. She is smoking, drinking more than 20 units a week of alcohol, most of the days of the week she does rely on a fast food that is high in salt and don't exercise regularly. Patient (A) has a high blood pressure of 140/90mmHg and by maintaining unhealthy lifestyle she is in the high risk of developing a stroke or a heart attack. Therefore, I advise patient (A) urgently to take action by improving a lifestyle in a few easy steps. Healthy eating prevents Hypertension by replacing fast food to fruits and vegetables would help to control blood pressure (British Dietetic Association, 2019). Patient (A) drinks more than 25 units of alcohol a week, therefore she must follow the NHS advice drinking less than 14 units of alcohol a week and for the best result minimizing daily alcohol consumption (NHS, 2019). Smoking is a very harmful habit therefore patient (A) should be encouraged to seek help and support to stop smoking as soon as possible. Stop smoking support is widely approachable and free of charge in the United Kingdom (Johnson & Johnson, 2020).

Reference

Blood Pressure Association (2020) *Healthy living*. Available at: <http://www.bloodpressureuk.org/your-blood-pressure/how-to-lower-your-blood-pressure/healthy-living/> (Accessed: 25 July 2021).

British Dietetic Association (2019) *Hypertension and Diet*. Available at: <https://www.bda.uk.com/uploads/assets/2854d087-6b4b-4561-8fd49dd74b6bb649/Hypertension-food-fact-sheet.pdf> (Accessed: 26 July 2021).

British Heart Foundation (2018) *Risk factors*. Available at: <https://www.bhf.org.uk/informationsupport/risk-factors> (Accessed: 25 July 2021).

Johnson & Johnson Limited (2020) *10 Tips to quit smoking*. Available at: <https://www.nicorette.co.uk/getting-ready-to-quit/10-tips-to-stop-smoking> (Accessed: 2 August 2021).

NHS (2018) *BMI healthy weight calculator*. Available at: <https://www.nhs.uk/live-well/healthy-weight/bmi-calculator/> (Accessed: 2 August 2021).

NHS (2018) *Alcohol units*. Available at: <https://www.nhs.uk/live-well/alcohol-support/calculating-alcohol-units/> (accessed: 2 August 2021).

National Health Service (2019) *High blood pressure*. Available at: <https://www.nhs.uk/conditions/high-blood-pressure-hypertension/> (Accessed: 25 July 2021).

Tucker, L. et al. (2015) *An introductory guide to anatomy & physiology*. 5th edn. London: EMS Publishing.