

BMHP5003

Introduction to Physiology

Assessment 1

Poster Presentation

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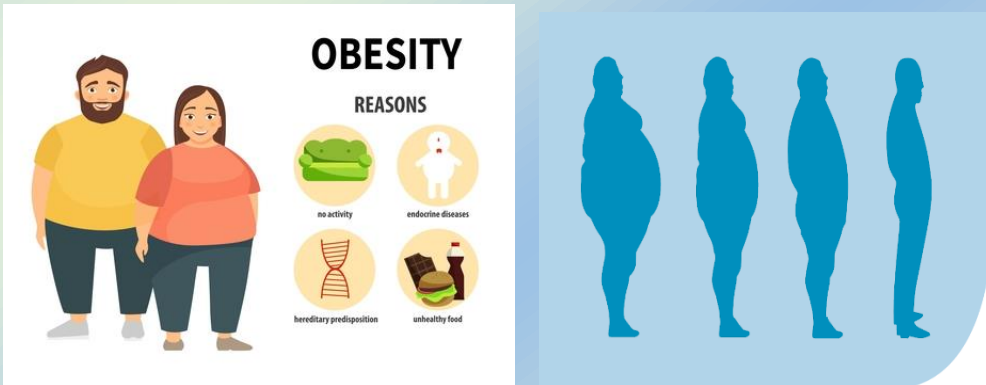
CASE STUDY OF PATIENT A WITH OBESITY

Introduction

A study from the WHO presented that around 28% of the total global population do not exercise. Calories do not burn on its own. As a matter of consequence, these are stored in the body and causes obesity of Patient A

Definition

Obesity is defined by World Health Organisation, the excessive accumulation of fat which increases health risks and damage is called obesity (WHO, 2021).



Risk Factors

Patient A

a) Working at a desk without breaks: Physicians suggest taking rest after every 20-35 minutes and make physical movements, otherwise the body keeps being tired and fatigue increases (O’Brien, 2013).

b) Deep fried foods: Fast foods are mainly prepared by deep frying them in oil. While dipping the food in the oil, it creates mono-saturated fatty acid (O’Brien, 2013).

c) Sugary items: Sugar is the white poison for people, as it is synthetically prepared. White sugar is a major reason to cause obesity, it is hard to burn the calories prepared by sugar. Also, it creates obstacles in the body from being active (Meyer, 2016). Thereby, the body is consistently tired and bored. The lack of activity raises the risk of obesity.

d) Endocrine diseases: Obesity is often caused by the imbalance in endocrine system. The hormonal imbalance may raise the weight.

This is where the Patient A starts feeling inactive, calories remains unburnt, and fatty acids keep building layer after layer. The weight increases and exceeds above normal.

Physiological effects of Obesity/Physiology

Patient A

a) Hypoventilation syndrome: The first effect of obesity is the complication of inhaling. Hypoventilation syndrome is caused by creating excessive fat in the internal respiratory system. Obese patient cannot breathe properly, and it severely reduces their energy levels.

b) Stroke: An obese patient is more at risk of having a stroke. The blood pressure remains high, and it is the reason for brain stroke. There are certain areas where the obese patient cannot access the right health benefit due to weight, that in turn creates tension. Tension brings inactivity in muscles. The consequence is loss of blood in the brain and the result is a stroke (Wittert, 2011).

c) Metabolic syndrome: Acidity and ineffective metabolism are two main effects suffered by obese patients. The metabolism is significantly hampered; therefore, the patient cannot take proper food. Hunger increases and it creates a cycle of storing fat in the body (Pietilainen, 2019).

d) Body fat abnormality: Fat in the body is highly disliked by people around the world. Abnormality reduces the energy and pace. When body fat keeps increasing, physical inactivity enhances. As a result, the body becomes ineffective for any type of physical work.

e) Diabetes: A reason for obesity is sugar consumption. The consequence of sugar consumption is type-2 diabetes. When the patient increases sugar intake and reduces physical movement, it hampers the entire body. The pancreas cannot release enough insulin to process the eaten part. The sugar level increases, and it causes diabetes.

f) Cardiac disease: When heart’s arteries and veins are jammed with cholesterol, it causes chest pain. Cardiac arrest and failure are the severe results from obesity.



Intervention

The first option includes identifying food items which are obsessive to the patient. For example, cake and fried chicken can be two major parts of every meal of the person. After identifying the hampering ones, the person will need to eliminate them from the entire meal plan. This is to ensure that the fat will not return after burning the calories. The diet plan must include vegetable and protein in a balanced approach. Both are required, following an inappropriate diet may reduce the person’s energy (SHRAPNEL, 2010). It has further consequence such as eating disorder. Therefore, the diet will need all options with a balanced amount.



Case Study

In our Case Study, completed on Patient A, shows she can develop obesity if she continues this lifestyle. She is 48 years old, weighs 86 kg, height 165cm and her BMI 31.5-Obese. Her Blood Pressure was 180/90(out of normal). Patient A doesn’t exercise because of work, she smokes between 10-19 cigarette a day, she drinks alcohol between 3-6 units a day. In her family, the father had a heart attack at 68 and her sister have high cholesterol. Patient A eats fish and chips daily.

Interventions/Management for Patient A(WHO)

- regular physical activity
- plan her meal
- reduction of salt from diet
- eat more vegetables

References

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Speaker's Notes

Introduction

Welcome to the poster presentation on the Introduction to physiology on Case Study of Obesity. I selected obesity as the main topic to discuss. The poster presentation will begin with defining the concept with the definition from the World Health Organisation.

Definition

Obesity is referred to as the excess accumulation of fat that increases the risk for one's health. When the excessive accumulation of fat increases the patient's weight, and the deterioration of physical performances. When the physical performance keeps deteriorating, it will enhance the health risk (WHO, 2021). Therefore, obesity causes some health risks. And therefore, WHO included both factors in the definition.

I have introduced obesity and will now continue to focus on three areas. The first is the risk factors of Patient A. The second is the Physiology Effects of Patient A. The final is the Intervention of Patient A.

Risk Factors of Patient A

Patient A may increase the fat accumulation due to a variety of reasons. The first reason is a daylong desk job. In the 21st century the corporate world is limited inside a particular office environment. There is not much scope for traveling around or wandering around. While working from 9am to 5pm, a person does not get much time to roam around. This reduces physical movements (O'Brien, 2013). Though doctor suggest breaks during jobs, majority of workers in the corporate world neglect to take a break and causes the patient to remain inactive. As a result, the outcome increases the chance of obesity.

The next reason for Patient A is deep-fried food items or fast foods. Fast foods are generally kept frozen; therefore, the cook has to repeatedly dip the food in hot oil. The mono-saturated fatty acid in the oil keeps creating bad cholesterol. When an individual consumes the food, it increases the amount of calorie intake. However, there is not enough scope to burn the calories, therefore the calories remain unburnt. Fatty acid in the body reduces energy. Calorie creates fat. Obesity in the patient increases at a high pace.

Similar to the deep-fried foods, sugary food items are reasons for obesity of Patient A. Sugar is known as white poison for the body. When someone consumes sugar, the calories remain unburnt like the mono-saturated fatty acid. Therefore, the body weight increase. At a particular point, the body starts expanding in size and overweight is caused (Meyer, 2016).

Patient A may have endocrine issues. These diseases are often reasons for causing obesity. However, new treatments such as laser technology are highly effective for reducing the aftermath of endocrine diseases.

Physiology effects on Patient A

. The WHO announced it as a global epidemic. There are several reasons for such a declaration. The aftermath of obesity is severely affecting majority of patients. If not treated timely and properly, death is imminent. The complications from obesity are as follow. But they are not limited to these consequences only.

a) Hypoventilation syndrome: Firstly, the breathing system gets severely affected when someone acquires weight. Hypoventilation syndrome affects the body system and energy flow in the body (Wittert, 2011).

b) Stroke: The patient may not get a balanced blood pressure. The brain cannot handle the lack of oxygen and blood supply due to the fat stored in veins and arteries. It causes stroke more often and paralysis due to obesity is a result from a stroke.

c) Affected metabolism: Metabolism and digestion are severe effects for obese patients. Acidity is also a common factor. By taking plenty of antacid to reduce acidity, a patient reduces the normal digestion capacity (Pietilainen, 2019). The metabolism gets seriously affected due to such factor. As a matter of fact, the patient loses the strength to overcome metabolism. Large amount of food intake hampers the digestion system and metabolism.

d) Abnormal body fat: Obesity is physically effected by body fat. In every corner of the world, abnormal body fat is considered as unfit. When a person is unfit, it gets hard to blend in a specific lifestyle. Bullying and other consequences are also possible in such situation. Excessive body fat reduces the chance to gain a better life. Also, osteoporosis and arthritis are two diseases caused by abnormal body fat.

e) Diabetes: Large amounts of food consumption hampers the metabolism as well as the acidic reaction. Type-2 diabetes is a common aftermath of obesity.

f) Cardiac diseases: The most lethal outcome from obesity is cardiac disease. The body does not burn calories, as a result, the heart's arteries and veins get jammed. Cholesterol and body fat reduces blood flow. Cardiac arrest and cardiac failure are major consequences resulting from obesity.

Management for Patient A

Obesity can also affect quality of life and lead to psychological problems, such as depression and low self-esteem (NHS)

For any patient suffering from obesity, there are two options to consider. The first option is to change the diet plan. The second option is to do freehand exercise. The obesity management and prevention will be successful when the patient will understand that obesity did not cause overnight. Therefore, it will take time to remove fat from the body.

Diet plan change: The food habit is easy to change. Therefore, it will require focusing on the harmful foods such as fried and sugary items. Cakes and similar items are needed to be eliminate it completely. Oily and spicy foods are harmful for the body in the long run. This is also needed to be changed. When the bad ones are removed, it is necessary to introduce the good ones. Green vegetable and colourful veg items must be enriched in the diet chart (SHRAPNEL, 2010). Also, it requires some protein and good cholesterol items. By changing the diet plan, the patient can prepare him/herself for a healthy lifestyle.

Freehand exercise: The next change is to use freehand exercise. This should be regular and efficiently applied. When freehand exercises are practiced, the patient will start using the focus to remove body fat. The obesity/weight will gradually decrease with daily work out.

Conclusion: Obesity is harmful and bad for health. Any young person will need to bring control on tongue and lifestyle. Regular activity is the biggest prevention technique for obesity management.