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Introduction to Physiology

**“Assessment 2
Written Report**

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Module name: Introduction to Physiology

Module code: BMHP5003

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Assessment: 2 (Written Report)”

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Topic: (Diabetes)**Introduction**

The report will discuss the topic of Diabetes and required care and support to prevent it. Diabetes is a most vulnerable disease that includes drop down of sugar level in body that can be results in most dangerous deceases. Most people all over the world are now suffering from diabetes. At first the report will explain anatomy and physiology of diabetes. It will demonstrate health and lifestyle routines for diabetic patients. The report will carry out health care practices and principles of the UK for diabetes care. It will also provide recommendations for improvement of care service.

Anatomy and Physiology

“Anatomy and physiology” are the two basic terms and approaches of studying bio science. “Anatomy is the internal and external structure of people’s bodies and their physical relationship, while Physiology is the study of the function of human body structures”. Anatomy is categorised into three subdivisions as Surface Anatomy, Regional Anatomy and Systematic Anatomy (Prudencio et al., 2019). Physiology is also divided into several groups such as “Medical Physiology”, “Animal Physiology”, “Plant Physiology”, “Cell Physiology” and “Comparative Physiology”.

Diabetes occurs if there is an imbalance between demand and production of insulin in the human body. Anatomies of diabetes are in this health condition the immune system of a person attacks and exploits beta cells of pancreas which produce the required insulin of the body. There is a huge deficiency in producing insulin in Diabetes type 1. In type 2 Diabetes there is approximate deficiency of insulin that is much general. It reveals that the body will not be able to produce the required insulin to meet the body. At this stage there are great difficulties related with peripheral rate of insulin resistance (Swedberg, 2019). In diabetes various body parts are involved so it is most important to have an effective grasp about these parts to get a better knowledge about diabetes. Pancreas is the most connected organ with diabetes. It is most important to study about situations that happen when a patient suffers from Diabetes.

The Physiology of “diabetes” engages control of plasma inflation in blood glucose indicating nervous system of the body to power up the strengths for fighting with decease of cells. Brain requires a continuous supply of glucose to function properly. Physiology of diabetes is maintaining proper balance between insulin of body and body’s capability to utilize the insulin. The main physiology of diabetes is “insulin-producing β -cells” and “glucagon-producing α – cells” of the “pancreas” of langerhans. Due to path physiology of diabetes blood glucose level is decreased by a large rate. Low plasma glucose is the cause of surge in autonomic body activity. This can result in hypoglycemia that requires identification of low plasma glucose level. The immediate and effective treatment of Hypoglycemia is inhalation of glucose to maintain the body glucose level. “Diabetes mellitus is a syndrome with metabolism disorder and inappropriate hyperglycemia due to lack of insulin secretion or for a match of insulin resistance and insulin secretion”. Type 1 diabetes is occurred due to pancreatic isolation of B cell destruction predominantly by autoimmune process. Persons affected by Diabetes type 1 are prone to ketoacidosis. While type 2 diabetes is a more common issue that has a result in insulin resistance with a defective compensatory insulin secretion. Diabetes is very complicated and effective that results in multiple diseases that affect the deactivation of multiple body organs. It can lead to incurable diseases and disabilities of important body organs.

Health and Lifestyle routine measures

Clinical suggest to diabetic patients that maintaining a proper health routine and effective “lifestyle activities” could help to maintain “blood pressure” and healthy “blood sugar level” in the body. By maintaining proper restrictions and routines help to keep diabetes in control and live a healthy life. Maintaining proper exercise and health tips suggested by doctors will help people to avoid difficulties of diabetes and improve the body's immune system.

Eat Healthy Food: Diabetic patients should eat healthy and fresh food that will boost up their immune system. The diabetes food plan is a list of foods that are good for health and help to avoid the disabilities of organs that are affected by Diabetes. It is most important to eat healthy and fresh vegetables, fruits, and grains based on the different body immune systems of different people. Eating healthy food will help people to maintain and stay in a proper body weight that is good for their health and immune system. It also helps to control blood sugar levels, which is most important for fighting diabetes. Healthy food helps to avoid and reduce heart and blood vessel disease. Heart disease has a huge impact on stroke, heart attack, cardiac failure and other several diseases that can be the reason for sudden and immature death. Diabetes patients should consult with a dietitian who can provide them with a eating plan with proper timing and food ratio (Deans *et al.*, 2020). Dietitians will help patients to plan a diet chart with proper protein, calorie, carbohydrate and fat based on the body metabolism rate of the person.

Maintain Well Balanced Diet: Diabetic patients should be more concerned about maintaining a well balanced diet that does not include sugar, reduced carbohydrate, fat and calorie that is required to keep body sugar level in control. Patients should maintain the same time for eating food every day. Diabetic patients should not skip their meals as they take insulin or diabetic pills so their blood sugar may be too low that will affect their health. They can take several small meals after some time all day. It will be much better than eating one or two huge meals.

Get Regular Exercise: Maintaining regular exercise would help to keep blood sugar at proper rate to avoid various difficulties of diabetes. Diabetic patients should be involved in several daily exercises and activities such as walking, swimming, playing sports, yoga and so on. Regular exercise is most important for maintaining a better blood sugar level as it helps to reduce body weight, make blood sugar lower more easily, makes better activities of heart and lungs, exercise helps to give more energy to people to complete their everyday activities (Graz *et al.*, 2018). Before starting exercise, patients should consult with their doctor.

Take medicine Regularly: Patients should be more careful about taking pills and insulin to keep their blood sugar at control. Skipping pills or insulin will result in an imbalance of glucose level of the body (Whicher *et al.*, 2020). They have to maintain taking pills and insulin timely and with the proper guidance of doctors.

Test Blood Sugar Regularly: Blood sugar level fluctuates due to change in eating timing, food plan and amount of food. Patients who are suffering from diabetes should know their blood sugar level so they have to test blood sugar regularly. If there is some change in sugar level they should immediately consult with doctors and change their food plan. They also need to change their medicine and exercise routine with doctor's suggestions. People also ask their doctors about how many times and when they should check their blood sugar.

“Health and Social Care practice”

“Health and social care practice” is the treatment for patients in hospitals, health centres and in the community to help them to cure and live a better healthy life. Social care is the care and support for vulnerable people of the community.

Diabetes primary and community care in the United Kingdom is increasing its demand day by day as most people suffer from diabetes. They need better care and support to maintain their health and fight with several disabilities of diabetes. Diabetes care UK provides information, suggestions, peer support and provides them diet and health plans, diagnosis checkup that help people to maintain their health condition and live a healthy life. This organisation also consults with family members, friends and care providers so they can support patients to survive from their health condition.

Helpline

The Diabetes UK helpline is the best diabetes helpline in the UK that provides a better concern and developed service and continuous support to patients and their family members. Diabetes UK has many trained staff and advisors with outstanding counseling skills that help to make consultation with patients and solve their problems or queries in an effective way. **Helpline** service helps to provide support and suggestion to people continuously 24*7 (Pradhan *et al.*, 2022). Diabetes UK clears queries of patients and gives suggestions by call or by email. It helps to provide better treatment to people.

Advocacy Service

Diabetes UK also provides advocacy services that help to provide latest diabetes related statistical data and information of the country. It also gives information about legal rights and entitlement of patients and helps them to understand it.

Local Diabetes Support Groups

Diabetes UK provides all diabetes related information and aspects to patients, their family members and care providers through printed documents or online service (Bartys *et al.*, 2019). Diabetes UK provides specialist suggestions and information to people and health professionals. People can cover printed materials by calling on 0800 585 088 or going to the online store of Diabetes UK.

Care Events

Diabetes UK provides opportunities to connect with other diabetes affected patients all over the UK through more than 300 local diabetes groups across the UK. Diabetes UK provides campaigns and awareness to aware diabetes affected patients to get a better knowledge about the disease (Hodgson *et al.*, 2022). They also held popular community campaigns, telephone communication and online peer to peer support (Ratnaraja *et al.*, 2021). The

organisation makes diabetes support awareness events for providing children and their family members to live a relaxed and enjoyable environment who suffers from diabetes 1.

Principles of Diabetic care Treatment in UK

NHS UK follows several principles and strategies for preventing diabetes rates all over the country. They have adopted several strategies such as insisting people to **visit 2-4 doctors** every year and collecting suggestions from them to avoid their difficulties and disabilities faced by the disease. They have planned a **balanced diet and routine checkup** for patients that help to keep the blood glucose level in control. They encourage people to **exercise** a minimum of 30 minutes every day. They set rules for patients to **gain a healthy body weight** and stay on it. According to NHS UK principles diabetes affected people should **not smoke**. Patients should **check their eyes and feet every year** as diabetes mainly affects eyes, hearts, and feet and so on (Igiri *et al.*, 2019). Patients have to take their yearly vaccination to maintain the balanced ratio of blood sugar.

Process of inform care to individual and the community

Diabetes related information and suggestions for body functioning can be informed to individuals through telephone communication, face to face meeting with experts, email, chatting and other digital communication and collaboration tools. Health care organisations also can provide printed documents and health checkup materials.

NHS provides Diabetes related information and care support in a local community through health care volunteers, care providers, suggestive experts through care campaigns in a local area to spread awareness among people about diabetes and how it can be prevented. They can also make health education to spread the knowledge of the disease among children also.

Recommendations

The NHS should be more concerned with making a more developed and well structured treatment facility for providing better care to patients. The NHS should make plans for diabetic patients. They should provide better aspects of the disease and its impact on people's life also how it can be controlled or prevented. They also provide a list of medicines which can control diabetes and an eating plan for maintaining a well balanced diet (Kerr et al., 2019). They should spread awareness among people for stop smoking for prevent the possibility of diabetes. The NHS should provide more awareness among people using self care campaign, community awareness thus people will be able to take care of their health on their own.

Conclusion

After analyzing the report it has extracted the overall learning on Diabetic Mellitus and its several aspects. In this report everyday lifestyle of diabetic patients and steps to prevent the decease has demonstrated. The report has evaluated various aspect of health care service to people and its impact on individual and community. After persuading the report it has examined about the health care service provided by NHS UK. NHS can use more developed strategies and concepts to make successful work in health service providing platform.

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