



ASSESSMENT 2 – WRITTEN REPORT

BMHP5003

BSc Health and Social Care
Introduction to Physiology

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1. Introduction

In this report, an overview of the importance of anatomy and physiology of the human body will be analysed by looking at a chosen health condition and describing routine health and lifestyles measures for gathering the right information about the body functioning of the patient.

The chosen health condition for this report is Diabetes. Diabetes is a chronic health condition that affects the body which turns food into energy. Blood sugar is essential to release and save energy that comes from our food. Sometimes our pancreas doesn't release appropriate insulin or sometimes our cells don't work properly. For that, the cell does not get its necessary blood sugar, this called diabetes and it occurred an anatomical and physiological problem in the human body. Diabetes is a common disease in the world especially in the UK, spread like a pandemic. In 2035, it is expected that around 6.3 million diabetes patients will rise, and it will induce significant pressure on the social and health care system. (*Hart and Bond, 1995*).

For this reason, the UK provide health and social care practice for diabetes patients. As a home care practitioner, the author advises diabetes patients who can reduce their diabetes level to maintain some rules and regulations.

2. Anatomy and Physiology

2.1 Anatomy

2.2 Physiology

A dis-balance between the demand and production of the hormone insulin is occurs Diabetes. Diabetes attacks and destroy the beta cells. After that, insulin is a deficit in the pancreas. Beta-cell is situated in the pancreas which produces and releases insulin. For diabetes, the beta cells are destroyed. So, it can't produce and release insulin in the pancreas. There are 2 types of diabetes that are type-1 diabetes and type 2 diabetes. There is a lack of insulin to provide glucous in our cells which happened for type-1 diabetes. In our body, when beta cells produce insulin, it doesn't work properly for type-2 diabetes. The high level of sugar (glucose) in the blood is also known as type-2 diabetes. It is the most common form of diabetes in the world (Nair,2007). The pancreas is behind and below the stomach. Insulin produces hormones by beta cells in the pancreas. To move sugar in the blood insulin is needed.

Blood brings sugar to cells. Sugar(glucose) is stored and used for the energy of cells. When the liver, muscle, and fat cells do not respond properly to insulin because of type-2 diabetes.

Aftermath, this organ's cells cannot get blood sugar to store for energy. For these reasons, a high level of sugar builds up in the blood. It's called hyperglycaemia. Then the body can use glucose to properly provide energy. It is the symptoms of type-2 diabetes or diabetes.

Without these two types of diabetes, another diabetes occurs in the human body and that is called Gestational diabetes. To sustain pregnancy placenta produces more hormones by insulin which makes it resistant to one's cells. On the other hand, the pancreas produces more hormone to overcome this resistance but sometimes it does not work properly and for that, cells get a little glucose and most of the glucose stay in the blood which is called Gestational diabetes. It's too much harm to the mother and upcoming baby. It makes a genetic disorder for the upcoming baby and the baby also falls into the disease.

3. Anatomical and Physiological problems due to diabetes

Due to diabetes, many changes and problems can occur to a sufferer, these are explained below-

People who fall into the disease, gradually gain weight, and they cannot get enough insulin to provide glucose in cells and they cannot lack sugar(glucose)

Without this, some anatomical and physiological problems are created for diabetes such as:

- Extreme hunger
- Frequent urination
- Increased thirsty
- Fatigue
- Unexplained weight lost
- Irritability
- Slow-healing sores
- Blurred vision
- Frequent infections, such as vaginal infections and skin infections.

4. Health and lifestyle routine during diabetes

NATO is a UK based diabetes care home where treatment and care of diabetes patients to improve their health conditions is provided. As a care home practitioner, many routines, care to advice are provided to a diabetes patient which is described further below.

Diabetes is the most common disease nowadays in the world, and it is spread so fast among people worldwide. To know the health and lifestyle routine of diabetes one should know how diabetes is diagnosed.

One's average blood sugar level over the past 3- or 2-months measured by an A1C test. If A1C is below 5.7%, it's normal. Between 5.7% to 6.4% means you have prediabetes and 6.5% or higher than this percentage of A1C indicates you have diabetes.

If one's falls into diabetes a home care practitioner suggests he changes 6 types of lifestyles to control diabetes. If you maintain these types of routines, it hopes to reduce your diabetes gradually.

Eat healthy food

Your's eating habits affect your blood sugar when you have diabetes. So don't eat very much and must be limited to eating as your body needs. You must eat plenty of vegetables and whole grains. Choose non-fat food and must avoid types of fatty foods such as meat, poultry mutton etc. These have carbohydrates which turn into high sugar and fat. Try your best to keep it as same in your meal to meal. To control your blood sugar, taking insulin and drug are more important.

Get check-ups

You must be going to the doctor every month to check your health condition and take insulin to produce hormones. Check your heart condition to learn your cholesterol and blood pressure. Get a full exam in every to know your whole-body condition. To check problems such as nerve damage and foot ulcers, visit the doctor at least 1 time in every year.

Exercise

To active your body, you must do exercise regularly. You don't want to go to the gym. If you just walk, ride a bicycle, or play games like cricket, football, badminton etc. 30 minutes to 1,3 hours a day, your body makes sat and increase breath which is very important to keep diabetes in control. Bringing down your blood sugar, your diabetes keeps under control by an active lifestyle. It also keeps away heart disease.

The blood sugar level increase due to stress and diabetes is not managed are not managed by increasing stress. For these reasons you forget to take the right food, exercise, or take

your medicines to get relax or relieve stress, you must do yoga, through deep breathing which reduces your stress.

Stop smoking

As we know smoking is very injurious to health and it became much more harmful for diabetes patients. Because diabetes occurred heart, kidney, eye, disease food problems, nerve damage. If you smoke, the possibility to fall into this disease is higher. So, as a diabetes patient, you must avoid smoking.

Take less alcohol

If you have a habit to drinks, don't overdo it because taking beer, wine and liquor increases the blood sugar level. The UK Diabetes Association says that men should take alcohol twice a day and women should take only one time a day. It is advisable that diabetes must test blood sugar levels before drinking.

To control your blood sugar level or diabetes you must obey these 6 types of lifestyles. Without these lifestyles, you must lead a healthy life such as:

- Take a bath every day
- Sleep early and rise early
- Sleep at least 6-8 hours a day
- Wash your teeth every day
- Keep neat and clean your bedroom, your house, and your workplace
- Watch a movie, hear a song, having a laugh with friends (which helps reduce mental health problems)

If you maintain these rules and regulations in your life, it is very much possible to control your diabetes gradually.

5. Health and Social Care Practice

The UK provides a service that is related to health care for different types of disease patients including diabetes which is called Health and Social Care Practice.

Nowadays diabetes is not a challenge to the NHS, but to the health and social care system and 3 million people in the UK are affected by diabetes currently (*Grumbach and Bodenheimer, 2004*).

Every year, the NHS spend \$9.8 billion on diabetes patients in the health and social care system. (*Price et. al., 2011*). Health and social care under NHS, this organisation provide many types of privileges who are diagnosed with diabetes. Health and social care under the NHS provide information, peer support and advice on their condition effectively for people who are affected by diabetes. For diabetes patients' family members, friends and others, this service is also available for them.

Helpline - NHS

NHS provide a helpline so that callers get any kind of help by phone or email. So, people easily get better service stay at home from the health and social care system.

Advocacy service

To understand legal rights and entitlements, health and social care services provide advocacy services for diabetes patients.

Online service

The NHS provides online help services for diabetes patients to get help in any condition, wherever located. This service is especially for Type-2 diabetes affected people because Type-2 diabetes is a very dangerous type of diabetes, and its treatments are very essential for reducing intense rapidly. So, the UK government provides online services accordingly to the health and social care practice (*Price, 2010*).

Clinical care of young people with diabetes

If young people and children are affected by diabetes, it must be needed to ensure they don't get any fear and give them normal pressure and give pleasure, emotional and social development (*Tao, 2015*). It is known to everyone that children's and young people's growth rates are very high. So, those who are affected by Type 1 diabetes must need to take insulin replacement therapy for this whole life? To develop normal growth, blood glucose is very essential and to reduce the acute long-term complexity of diabetes, taking insulin is very much needed (*Johnson and Rand Huang, 2010*). On the other hand, during this period children and young people face pressure and sexual norms. So, it should be needed to give them encouragement and social community ensure to help them.

Management of diabetic emergencies

For effective and rapid treatment of diabetic emergencies, NHS implement proper step so that a diabetes patient gets better treatment (*Nathan, 2014*).

6. Recommendations

As a home care practitioner, give some advice to diabetes patients to reduce blood sugar levels.

Those are described below –

High blood pressure increases for eating lots of salts which increases various heart disease and stroke. If you are affected by diabetes, you almost stay at high risk of taking lots of salt. So, diabetes patients should avoid eating salt a lot. (Etzwiler and Frainkel, 1976)

Diabetes patients must eat fruits, vegetables such as oranges, berries, bananas, grapes, greens, broccoli, carrots, beans, lentils, etc. which have carbohydrates and it's better for diabetes patients.

A diabetes patient should be eating as less as possible because overeating increases glucose in the blood. (Zhang, 2010)

Fats are very essential to our body to keep energy, but overeating fats are very harmful not only for everyone but especially for diabetes patients. So, diabetes patients should eat fewer fats. (Cahill and Etzwiler, 2017).

Physical exercise is very important for people who suffer from diabetes because if the person is active for 30 minutes to 1 hour a day, glucose in the blood will reduce gradually. (Cobelli, *et al.*, 2009).

Every month, diabetes patients should take a test for blood sugar and take appropriate medicines as the test reports.

7. Conclusion

Nowadays, diabetes is a very common disease in the world, and 24.000 people who are affected by diabetes in the UK die each year. For diabetes many people in the UK become blind and they fall into various heart diseases and strokes, as mentioned before. Diabetes patients cannot produce insulin as their body needs. For these reasons, diabetes patients do not get enough glucose for serving and saving enough energy in their bodies. So, to lead a better and healthy life, a person who suffers from diabetes must be maintaining his food

habit moderate, exercise regularly, eat fewer fats, etc. which are recommended in the above as a care home practitioner.

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