



**BSc Health and social care level 5
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Introduction

Type 2 diabetes is a disease of lifelong which keeps the body of a patient from using insulin properly. Individuals who are suffering from type 2 diabetes are called insulin resistant. Older or middle-aged people have the most chance to have this kind of disease. But this disease also can be seen in teens and kids because of childhood obesity (Barnett, 2019). This report will discuss the physiology and anatomy of the health condition of type 2 diabetes patients. Lifestyle routine and health measures will be explained in this report. Moreover, the practices of social care, as well as health, will be described in this report. At the last of the report, some recommendations will be explained for type 2 diabetes patients.

Anatomy and physiology of the health condition

Physiology, as well as anatomy, are the most two basic areas and terms of study in social and healthcare practices. Anatomy discusses external as well as internal human **body structure** as well as their **physical relationships** (Marder, 2020). On the other hand, physiology discusses those body **structures' functions** (Costanzo, 2022). The body of a human can be divided into two important regions such as appendicular as well as axial. The parts of the axial consist of the neck, abdomen, head, pelvis, and abdomen. On the other side, the parts of the appendicular are consisting of the lower and upper extremities. The lower extremities involve the thighs, hips, ankles, feet, and lower legs whereas the upper extremities involve the forearms, upper arms, shoulders, hands, and wrists. Further, the abdominal region is divided into four quadrants or nine regions. Anatomy as well as physiology helps a learner to understand some different points. Such as the body parts framework, the human body function, different organs location, location of tissues and cells, and proper knowledge about body systems such as the respiratory system, nervous system, reproductive system, digestive system, etc. They also help to understand different joints and bones. Anatomy, as well as physiology, are very important in social and healthcare practices in different ways.



Figure 1: Human anatomy

Sources: (Marieb et al., 2020)

When a patient has type 2 diabetes, his/her **muscle, fat, and liver cells** don't respond properly to insulin. This is also known as the **resistance of insulin**. Therefore, blood sugar cannot get into these cells for storing energy. When sugar fails to enter cells, sugar levels increase in the blood. This process is known as **hyperglycaemia**. The body

becomes incapable of using glucose for energy which direct to type 2 diabetes symptoms. The development of type 2 diabetes is very slow. It usually takes time. Most of the individuals with the symptom of type 2 diabetes are **obese or overweight** when these individuals are diagnosed. Too much **fat** makes it difficult for the human body in using insulin in the proper way (Hofer, 2021). Type 2 diabetes can be also developed in those individuals who are **not obese or overweight**. It is generally seen in older adults. In type 2 diabetes, **genes and family history** play a great role. Excess body weight, poor diet, and low activity levels can enhance the chance of getting type 2 diabetes.

Lifestyle and health routine measure

Type 2 diabetes has a great effect on the lifestyle as well as the health of the patients. Type 2 diabetes changes the total lifestyle of a patient. For type 2 diabetes, people cannot eat specific foods. Such as **high-fat meat** (beef, pork fatty cuts, poultry skin, dark meat chicken, lamb), **full-fat dairy** (butter, whole milk, sour cream, cheese), **sweets** (cookies, desserts, candy, ice cream, baked goods), **sugar-sweetened beverages** (soda, juice, sports drinks, sweet tea), **sweeteners** (brown sugar, table sugar, molasses, maple syrup, honey), **processed foods** (microwave popcorn, chips, convenience meals, processed meat), and **trans fats** (fried foods, vegetable shortening, hydrogenated oil partially, dairy-free coffee creamers) (Fox & Kilvert, 2019). However, when a patient suffers from types 2 diabetes, he/she has to follow a routine lifestyle as well as do some health-related activity. Such as:

Physical activity: When patients are suffering from type 2 diabetes, they are recommended to do regular 2 to 2 ½ hours of physical activities (Schneider, 2022).

Physical activities include water aerobics, brisk walking, cycling on a flat area, rollerblading, hiking, as well as using a manual lawnmower. Besides, activities of vigorous physical include swimming lengths, jogging, football, skipping gymnastics, etc. Several people have to supervise or structure exercise sessions.

Dietary Changes: People who are suffering from type 2 diabetes must change their diet (Royston, 2020). Type 2 diabetes patients must reduce their extra fat as well as dietary fibre intake. Type 2 diabetes patients cannot eat a large amount. They have to eat a smaller part for consuming fewer calories as it is very for type 2 diabetes diseases. People

with type 2 diabetes maintain a healthy diet as well as consume more fruits, vegetables, lentils, and beans.

Work for losing weight: People with type 2 diabetes must work to lose their extra weight. They regularly work for it. It becomes a part of their regular life. Type 2 diabetes patients do it to achieve a healthy **BMI**. The range of a healthy BMI is between 18.5 as well as 24.9. People who are over this range must lose weight (Nita, 2019). In general, they set a target of reducing weight by 5 to 10% in a year. Losing weight assists in reducing the developing diabetes risk as well as allowing individuals to control blood glucose levels. People become able to lead a healthy life by reducing extra weight.

Stress: It is considered a major factor for type 2 diabetes. When people are stressed, their body responds automatically (Gould et al., 2016). The body of a human undergoes several changes. Among them, stress is a major change. The hormones of stress are released which enhance levels of **blood glucose, and blood pressure**, as well as the **immune system** activities. People who are suffering from type 2 diabetes always try to become free from stress.

Health as well as social care practices

Type 2 diabetes is one of the major diseases from which people suffer the most. There are some ways are using in health as well as social care practices which help a person who is suffering from type 2 diabetes. These ways are discussed briefly in the following.



Figure 2: Practices of social care and health

Sources: (Reed, 2020)

Insulin Therapy: Insulin therapy plays a great role in curing type 2 diabetes. Although this therapy was utilised as a last effort in the past, it is prescribed, today, sooner when targets of **blood sugar** do not meet with the changing of lifestyle as well as other

medications (Yuwiler, 2015). Various insulin types differ on how fast they start to work as well as what is their longest effect. For example, **long-acting insulin** has been designed for work throughout the day or overnight for keeping the level of blood sugar stable. At mealtime, **short-acting insulin** is widely used. In general, the doctor identifies the types of insulin which are effective for the patients as well as when should take insulin. Levels of blood sugar can change the insulin type, schedule, and dosage. Most of the insulin is taken by using injection. Hypoglycaemia or low blood sugar, high triglycerides, and diabetic ketoacidosis are the insulin side effects.

Healthy eating: There is no diabetes diet. Whatever, it is very essential to centre diet around: smaller portion sizes, a daily schedule for healthy snacks and meals, fewer refined grains, sweets, and starchy vegetables, and more high-fibre foods like whole grains, fruits, and nonstarchy. Besides, some other diets can be low-fat dairy modest servings, low-fat fish and meats, fewer calories, and healthy cooking oils like canola oil or olive oil (Pelkki, 2017). **Physical Activity:** Physical activity plays an important role to maintain a healthy weight or lose weight. It also assists to control the levels of blood sugar. There are different kinds of exercise programs which can help patients with type 2 diabetes diseases. They are

Aerobic exercise: There are many kinds of aerobic exercise such as swimming, walking, running, and biking that a patient with 2 types of diabetes can choose. 150 minutes a week or at least 30 minutes a day that patients need to perform in controlling the diseases (Marsico, 2019). Children should exercise daily for more than 60 minutes. **Resistance exercise:** It can enhance the **balance, capability, and strength** of 2 type diabetes patients to perform daily activities. This type of training involves **yoga, weightlifting, as well as callisthenics**. Adults who aim for 2 to 3 sessions of this exercise every week who are suffering from 2 type diabetes. Children engage in different activities which help them to build flexibility and strength 3 days a week. It includes sports, resistance exercises, as well as climbing on playground materials.

Limiting inactivity: Interrupting extended periods of inactivity helps patients with type 2 diabetes. They are sitting in front of the computer and can **control the levels of blood sugar**. Patients take some minutes for walking around, standing, or doing several light activities every 45 minutes.

Recommendations

Although there are many various types of diabetes, two individuals' diabetes types are not the same. Therefore, one solution will not be able to solve everyone's problem. But there are some tips which can help an individual in preventing type 2 diabetes. These tips can assist in managing blood glucose, cholesterol levels, and blood pressure. They are also able to assist in managing weight and reducing the type 2 diabetes complications risk. These ways are discussed in the following.

- **Choosing healthier carbohydrates:** The levels of blood glucose are affected by all carbs. Therefore, it is very necessary to know which foods are **carbohydrates**. Becoming aware of portion sizes as well as choosing healthy foods is important. Several carbohydrate sources are Fruits, Whole grains such as buckwheat, brown rice, whole oats, vegetable, Dairy like milk and unsweetened yoghurt, and Pulses like beans, chickpeas, and lentils (Patel, 2019).
- **Eating less salt:** Eating too much salt can enhance high blood pressure risk which can enhance the stroke and heart disease risk. And when a person is suffering from type 2 diabetes, it becomes too much risk for leaving life.
- **Committing to managing diabetes:** Every person in the world should learn about type 2 diabetes. Everyone should do regular **physical activities and healthy eating**.
- **Working with the team:** Individuals should make a strong relationship with the **educator** of type 2 diabetes, as well as ask the diabetes treatment team for assistance when they need it.
- **Scheduling for daily eye exams and a yearly physical exam:** Diabetes check-ups regularly do not mean to replace routine eye exams or regular physical exams.
- **Taking care of teeth:** Diabetes can leave gum infections in the teeth. Flossing and brushing teeth daily and scheduling a recommended dental are very necessary. Consulting with a dentist is important if gums bleed or swollen or look red.
- **Keeping cholesterol and blood pressure under control:** Regular exercise and eating healthy foods can **control cholesterol and high blood pressure**.

Controlling cholesterol and proper blood pressure can reduce the risk of type 2 diabetes.

Conclusion

The diseases of type 2 diabetes are seen in many people nowadays. They are suffering greatly from type 2 diabetes diseases as there is no specific medicine for this disease. The physiology and anatomy of the health condition of type 2 diabetes patients are discussed in this report. This report has described the lifestyle routine and health measures. Besides, the practices of social care, as well as health, are explained in this report. Some recommendations for type 2 diabetes patients have also been stated above for controlling such kind of diabetes.

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