**Diabetes and Drug Treatments**

**Introduction**

Diabetes is described as a chronic and metabolic illness that is deemed to be characterized by elevated levels of blood sugar or blood glucose(World Health Organization, 2017)**.** Relevant statistics about diabetes included the fact that 422 million adults have been diagnosed with diabetes as of 2017 where 1.6 million deaths were apparently attributed to unmanaged diabetes (World Health Organization, 2017). The current discourse hereby aims to present an explanation of the different types of diabetes, a description of one type of drug used to treat type 1 diabetes, and an explanation of the short-term and long-term impact of this type of diabetes on patients, including effects of drug treatments.

**Explanation of the differences between types of diabetes including type 1, type 2, gestational, and juvenile diabetes**

The three (3) types of diabetes were noted as follows: (1) type 1, (2) type 2, and (3) gestational diabetes. As learned, type 1 diabetes is described as an autoimmune illness where patients afflicted with the disease are found to have their pancreas as incapable of producing insulin, or it if does, it produces very little amount. Individuals with type 1 diabetes were noted to have manifested the illness prior to the age of 20. As such, type 1 is usually also categorized as juvenile diabetes for having been diagnosed during youth. On the other hand, type 2 diabetes was learned to have been contracted through lifestyle where the pancreas is not able to produce insulin or the body exemplifies incapacities to use insulin efficiently. The difference between type 1 and type 2 diabetes is that the latter type is noted to have been triggered due to lack of exercise, improper diet, and living a sedentary life ( Medtronic, Inc., n.d.). Finally, the gestational diabetes type is contracted by women during the second term of their pregnancy when hormones apparently block the action of insulin (Diabetes S. A., 2018). For gestational diabetes, unlike types 1 and 2, the disease will apparently disappear after the baby has been born ( Medtronic, Inc., n.d.).

**Description of one type of drug used to treat the type of diabetes selected including proper preparation and administration of this drug. Include dietary considerations related to treatment.**

The selected type of diabetes is type 1 diabetes. One type of drug used to treat type 1 diabetes is a life-long administration of insulin (Mayo Foundation for Medical Education and Research (MFMER), 2018). Accordingly, the proper preparation and administration of insulin would depend on the person’s weight in pounds; and the formula that is followed is shown herewith: “Total Daily Insulin Requirement (in units of insulin) = Weight in Pounds ÷ 4” (Collective work Martha Nolte Kennedy, The Regents of the University of California., 2018, p. 1)**.** In addition, the insulin level should adjusted depending on whether the body is significantly resistant to insulin; as such, higher levels might be needed. On the other hand, if the body is allegedly sensitive to insulin; lower levels might suffice (Collective work Martha Nolte Kennedy, The Regents of the University of California., 2018).

 In terms of dietary requirements, it was noted that the objective is maintain the daytime blood sugar levels as shown in the following table:

|  |  |
| --- | --- |
| **Before meals** | **Two hours after meals** |
| between the range of 80 and 130 mg/dL (4.44 to 7.2 mmol/L) | no higher than 180 mg/dL (10 mmol/L) |

Source: Mayo Foundation for Medical Education and Research (MFMER), 2018

As such, people with type 1 diabetes are advised to count daily consumption of carbohydrates, fat, protein, as well as recommended to engage in regular physical activities to maintain a healthy weight, as well as to observe eating healthy and balanced food (Mayo Foundation for Medical Education and Research (MFMER), 2018). As recommended, the amount of carbohydrates that should be consumed is only two to four servings per meal or one to two servings per snack. In addition, the other food groups consumption recommendation are shown below:

|  |  |
| --- | --- |
| **Food Group** | **Recommended Serving Per Day** |
| Grains, beans, starchy vegetables | 6 or more  |
| Vegetables | 3 to 5 |
| Fruits | 2 to 4 |
| Milk  | 2 to 3 |
| Meat and fish | 2 to 3 |

Source: UF Diabetes Institute, 2018, p. 1

**Explanation of the short-term and long-term impact of this diabetes on patients including effects of drugs treatments**

The short-term complications of type 1 diabetes and insulin treatment were noted to include hypoglycemia or low blood sugar level and potential development of Diabetic Ketoacidosis (DK) (where blood becomes too acidic) (Smith-Marsh, 2018). The development of DK is most preponderant to patients who do not effectively monitor the levels of blood sugar regularly, as well as the level of ketones. As such, after insulin treatment, regular monitoring of blood sugar and ketones must be undertaken.

 Concurrently, the long-term complications of type 1 diabetes include microvascular complications where the eyes, kidneys, and nerves would be potentially jeopardized; and development of macrovascular complications which expose the patient to potential heart attack (Smith-Marsh, 2018). Moreover, the effect of long-term use of insulin included weight gain over time (Lebovitz, 2011).

**Conclusion**

 In retrospect, the current discourse successfully achieved its objective of presenting explanations of the different types of diabetes, a description of one type of drug used to treat type 1 diabetes, and an explanation of the short-term and long-term impact of this type of diabetes on patients, including effects of drug treatments. Following the recommended diet and treatment would assist patients diagnosed with diabetes to live happy and productive lives.

**References**

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