

## World Health Organization

**Topic A: The discussion and new regulations on candies and sugar products in order to combat the diabetes**

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### **INTRODUCTION**

Throughout the years, an existing health problem has been increasing. The overuse of substances or products containing high quantities of sugar are leading for the society to acquire diseases such as diabetes and overweight. Diabetes is known as the inefficiency of the pancreas being able to produce insulin (substance that allows the absorption of glucose in the blood) or the lack of use of the insulin that is being produced. Through time, diabetes can cause several damage in important organs such as the heart, eyes, kidneys, between others. Diabetes can be an essential factor when overweight and obesity is exposed. It is estimated that in the year of 2014 1 of every 3 adults (39%) had problems with overweight, in comparison of the year of 1980 when a study was made, demonstrating that approximately 25% of population had overweight. This issue has been causing troubles and controversies in several countries such as The United States, Mexico, China, India and Egypt with more than 10% of their population between 20-79 years presenting diabetes; Finland, Norway, Canada, Russia, Brazil and Japan with more than 5%; Sweden and United Kingdom with less than 5%. At an International Conference on Nutrition that took place on 2014, several governments engaged to the policy of the modification of food systems. The United Nations has establish this agreement as its main purpose in the Decade of Action of Nutrition 2016-2025.

## **HISTORICAL BACKGROUND**

Diabetes has existed since the beginning of times, but it became popular on 1910, when the English physiologist Sir Edward Albert Sharpey-Schafer made a study of the pancreas, leading him to the discovery of a substance that would normally be produced in non-diabetics: insulin. In the year of 1919 Dr. Frederick Allen who belonged to the New York Rockefeller Institute published the "Total Dietary Rules in the Treatment of Diabetes" which introduced a therapy of strict treatment of diet or introducing hunger as a way to manage diabetes. In 1921 Sir Frederick Grant Banting and Charles Herbert relaunched the work of Von Mering and Minkowski. They continued to demonstrate that they could reverse induced diabetes in dogs by giving them an extract of the islets of pancreatic Langerhans from healthy dogs.

In 1775, Dopson identified the existence of insulin in urine. Frank, around that time also, classified diabetes into two types: mellitus diabetes and insipidus diabetes, changing the Health's world history. Another key event was when Claude Bernard in 1848 discover the liver glycogen.

The previous scientists and Collip purified insulin from the cow pancreas hormone at the University of Toronto. This made the effective treatment for diabetes available in 1922. In the year of 1936 Sir Harold Percival Himsworth in his published work distinguished type 1 and diabetes 2 as different.

A descriptive study was made to know the initial and evolutive treatment in a group of non-insulin-dependent diabetics during 15 or more years of follow-up and to identify the chronic complications dependent on diabetes. The clinical histories of type 2 diabetics treated at the Diabetic Care Center during the five-year period from 1974 to 1975, were used continuously for 15 or more years after the diagnosis. Diabetics treated with insulin initiation were excluded and the clinical characteristics were specified at the beginning of the follow-up and after that, every 5 years, to evaluate the therapeutics and the presentation of chronic complications. In 1982 the first human biosynthetic insulin, identical in chemical structure to human insulin was discovered, this could be produced in series approved for commercialization in several countries.

If there is not enough insulin we can not take this energy and then the

glucose builds up in the blood. Besides, as we can not take this energy, our body becomes weak and symptoms like tiredness or excess sleep become frequent. All this is due to candies and sugar products that thought the time and evolution are containing more and more sugar. Worldwide, there are public health problems that threaten the state of complete physical and mental well-being of people. For this reason, every 7th of April, the World Health Organization (WHO) seeks to raise awareness and make real conscience on population about this issue. The deficiencies, needs and advances of a specific problem or ailment are some important factors to be discussed. Type 1 Diabetes affects 20% of diabetics, and 80% of diabetics are affected by Type 2 Diabetes. In Mexico, diabetes is the second cause of deaths. It is a worldwide problem that affects 400 million people around the world.

Súsruta, the father of Indian medicine described mellitus diabetes and even differentiated a diabetes that occurred in young people who led to death and in people of a certain age.

Diabetes cases have doubled in the last 20 years. In the 1950s, about one in five people died on or before 20 years after the diagnosis of type 1 diabetes. One in three people died within 25 years of diagnosis. But also, since then, people have been looking for solutions. The first insulin injection in humans was given to a 14-year-old boy named Leonard Thompson on January 11, 1922 at the Toronto Hospital in Canada. Leonard's improvement scientists offered the formula of free insulin to companies. In 1923 it was already possible to obtain this injection in all the world, saving plenty of lifes, reason why Banting and MacLeod received the Nobel Prize of Medicine.

About 193,000 Americans under age 20 are estimated to have diagnosed diabetes, approximately 0.24% of that population. In the years 2011 to 2012 it was estimated that 17,900 youths presented type 1 diabetes and 5,300 youths had type 2 diabetes.

The number of people with diabetes has increased from 108 million in 1980 to 422 million in 2014. The global prevalence of diabetes in adults (over 18 years of age) has increased from 4.7% in 1980 to 8.5% in 2014. The prevalence of diabetes has increased more and more in middle and lower income countries. Diabetes is a major cause of blindness, kidney failure, myocardial infarction, stroke, and lower limb amputation. 2.2 million deaths were attributable to hyperglycemia in 2012. Approximately half of the deaths attributable to hyperglycemia happen before 70 years of age. According to WHO projections, diabetes

will be the seventh cause of mortality in 2030. Healthy diet, regular physical activity, maintenance of a normal body weight and avoiding the take in of tobacco can prevent type 2 diabetes or delay its onset.

Diabetes can be prevented or delay its consequences with diet, physical activity, medication and periodic examinations to detect and treat its complications.

## **CURRENT RELEVANCE**

Diabetes is considered as the chronic condition with the fastest worldwide growth. The amount of people with type 2 diabetes is constantly growing. In 2013, diabetes caused 1.5 million deaths globally. Higher blood glucose levels also caused an additional 2.2 million deaths, by increasing the risks of cardiovascular and other kind of diseases.

A patient that gets diagnosed with diabetes has to be constantly taking medications, have more doctor visits and perform blood sugar analysis on a regular basis. Some need to take insulin injections. Most need to go on a special diet and are told to exercise more regularly.

Diabetics have a higher risk of problems in eyes, heart, brain, feet, kidneys and nerves. The best way to prevent or delay these problems is to control your blood sugar and take good care of yourself, as well as controlling the way you consume sugar, candies beyond more.

It is estimated that patients US that have diabetes problems have the highest healthcare costs, reckoning between \$283,000 dollars. These costs are higher than in others countries with comparable per capita income levels. Unfortunately people with lower economic income are the ones that get most affected by this illness. Two thirds of all the cases of diabetes are commonly happening in low and middle income countries such as China, India, Mexico, and Egypt.

In Europe, between 35-40% of people will develop diabetes mellitus over their lifetime, accounting for up to 10% of all funds spent on healthcare. Diabetes control is important and with current relevance because out-of-control blood sugar levels can lead to problems like hypoglycemia, hyperglycemia, or diabetic ketoacidosis. Also, not controlling diabetes can damage the vessels that supply blood to

important organs, like heart, kidneys, eyes, and nerves. Chronic organ problems don't usually show up in kids or teens who have the disease, commonly these happen to adults with unattended diabetes.

In 2015, diabetes was the direct cause of approximately 1.6 millions of deaths and in that same year, and a big percentage due to mellits diabetes. In that same year, arterial hypertension was the cause of 424 deaths, affecting several countries. According to estimates, 422 million adults worldwide had diabetes in 2014, compared to 108 million in 1980. The global prevalence of diabetes has almost doubled since that year, increasing from 4, 7% to 8.5% in the adult population.

## **INTERNATIONAL ACTIONS**

The good news is that associations and foundations all around the world are doing it's best in order to combat this problem. World Diabetes Foundation, American Diabetes Association, The Division of Diabetes Translation, Centers for Disease Control and Prevention are some of these trying to combat all around the world.

There are some non governmental organizations whose purpose is to eradicate and fight against diabetes such as: World Diabetes Foundation, it is an independent foundation for diabetes. WDF was founded by Novo Nordisk A/S in 2002. It has the mission to empower and encourage the governments, they create partnerships and act as a catalyst to help others. For every dollar received it raises approximately 2 dollars in cash for this cause. From 2002 to 2017, it has provided 137 million USD in funding to 535 projects in 116 countries for diabetes.

American Diabetes Association is a clear example of foundations, that is not directly associated with UN. They help with medicinal treatments and medicines for people affected by this sickness. Australian National Diabetes Strategy is an Australian Governmental action for updating and prioritise the national response to diabetes across all levels of government. Is a high level document which contains a range of ideas, strategies and actions for achieving the goal; reduce the impact of diabetes in the community.

## **UN ACTIONS**

United for Diabetes "is the campaign of the IDF and the UN, which seeks to call attention to the population, so that all join together to fight together, against Diabetes. The UN has campaigns to promote a healthy lifestyle among the population, so they can improve their life. The UN has also improved diabetes diagnosis and access to essential medicines such as insulin. The UN has Sustainable Development Goals [SDGs], which reduce premature deaths, including those caused by diabetes, the UN is trying to decrease this sickness around a 30% less by 2030. WHO's Diabetes Programme has the mission of preventing type 2 diabetes and to avoid complications, also make quality of life better for all people with diabetes. To oversee the development and adoption of internationally agreed standards and norms for the diagnosis and treatment of diabetes, its complications and risk factors. To promote the surveillance of diabetes, its complications and mortality, and its risk factor, contribute to building capacity for the prevention and control of diabetes are goals of the United Nations. Raising awareness about the importance of diabetes as a global public health problem is really important for WHO, and the prevention of it in places where it is most frequent. Diabetes Action Now is a joint of WHO, working globally with countries for the reduce of impact socially of diabetes. It is also being supported by IDF. The diabetes problem is increasing fastly in many countries, and impressively in low and middle income countries, despite the fact that a large proportion of diabetes cases are preventable. The WHO campaign will focus on the prevention and treatment of diabetes. The mission of the WHO Diabetes Program is to prevent this disease whenever possible and, when it is not, minimize its complications and improve the quality of life.

## **POINTS TO DISCUSS**

- Problems that arise from the excess of sugars and sweets-

Eating sugar gives your brain a surge of dopamine, and this also causes overweight, because the more sugar you eat, the more you'll weigh.

- How to reduce them?

- Regulations-

- Regulation policies
- Diabetes mortality rates (also possible cases) and how to make them decrease.
- Population decline and its consequences within the economic sector
- Drinks and energizing products
- How they are intended to be regulated to avoid future cases
- How regulations will be imposed on companies
- Nutrition programs
- Subsistence allowance
- Expenses and main drugs to try to counteract the effects
- Treatment
- Treaties and cooperation of countries to reduce diabetes levels

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