International
Journal of
**Health
Science**

INFLUENCE OF FOOD IN THE OCCURRENCE OF DIABETES MELLITUS

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Abstract: Diabetes mellitus (DM) caused a global crisis for public health, with its high prevalence, it ended up causing an increase in mortality, comorbidities and high health costs. This prevalence occurs in parallel with the increase in obesity, the reduction in physical exercises, a sedentary lifestyle and unhealthy eating habits. Thus, this study aimed to explain how diet influences the increase in the occurrence of diabetes mellitus. For this, a literature review was carried out using national and international journals published in Pubmed, Scielo, Science Direct and Google Scholar databases, using the descriptors: diabetes and diet and causes of diabetes. As a selection criterion, we sought articles that portrayed how eating habits lead to an increase in the occurrence of diabetes. The results showed that higher consumption of red meats, processed meats and sugar-sweetened beverages, along with poor nutrition and excessive carbohydrate intake were associated with a higher risk for DM. In view of the above, we conclude that the option for a healthy diet, prevention strategies such as the diet and exercise in addition to controlling the consumption of carbohydrates are essential to reduce food interference in the incidence of diabetes.

Keywords: Diabetes Mellitus, Food Habit, Public Health.

INTRODUCTION

Diabetes mellitus (DM) has led to a global crisis for public health, with its high prevalence, it ends up causing an increase in mortality, several comorbidities and high health costs (WHO, 2016). The forecasts are alarming, the expectation is that 1 in 10 people will have this disease by 2030 (ALKHATIB et al., 2017; IDF, 2015). In addition, this prevalence occurs in parallel with the increase in obesity, the reduction of physical exercises, sedentary lifestyle and unhealthy eating behavior (SCHWINGSHACKL et al., 2017). It is already a fact that people with DM are considered a group susceptible to several comorbidities, such as retinopathy and diabetic neuropathy, in addition to an average reduction of 6 years in life expectancy (SESHASAI; KAPTOGE; THOMPSON et al., 2011; MARTÍN-PELÁEZ; FITO; CASTANER, 2020). It also contributes to the risk of death for a variety of diseases including liver, pancreas, ovarian and colorectal cancers (TSENG; TSENG, 2014), cardiovascular diseases (TANCREDI; ROSENGREN; SVENSSON, 2015), and renal failure. (SESHASAI; KAPTOGE; THOMPSON et al., 2011), making this subject the subject of important research, especially regarding its relationship with eating habits (AGÜERO; PIÑA; PÉREZ, 2012; UNITED KINGDOM PROSPECTIVE DIABETES STUDY GROUP, 2000). Nutrition is essential to prevent diabetes and obesity, but there is no data or evidence to establish a better dietary approach to this disease (BOLLA; CARETTO; LAURENZI et al., 2019). influences the increase in the occurrence of diabetes mellitus.

METHODOLOGY

For this work, a literature review was prepared between May and June 2021, for this, national and international journals published in Pubmed, Scielo, Science Direct and Google Scholar databases were used. Journals were selected according to the fulfillment of eligibility criteria using the descriptors: diabetes and diet and causes of diabetes. No language or time restrictions were applied. As a selection criterion, we sought articles that portrayed how eating habits lead to an increase in the occurrence of diabetes.

RESULTS AND DISCUSSION

Prospective studies showed that higher consumption of red meats, processed meats and sugar-sweetened beverages were associated with a higher risk of getting DM (CHANSON-ROLLE; MEYNIER; AUBIN et al., 2015; GREENWOOD; THREAPLETON; EVANS et al., 2014; ROHRMANN; LINSEISEN, 2016; SCHWINGSHACK; HOFFMANN; LAMPOUSE et al., 2017). Another factor is that a large part of the population does not consume nutrients, but a mixture of individual foods, often without nutritional value (PROENÇA, 2010). Several studies link low-fat or low-carb, vegan, and Mediterranean-type diets (consisting of fish, unsaturated fats, whole grains, fruits, vegetables, nuts, and pulses) as the standard, relative to Western ones, or cafeteria (BLOOMFIELD; KOELLER; GREER, et al., 2016; WIDMER; FLAMMER; LERMAN et al., 2015). The Mediterranean diet is able to reduce central obesity and consequently reduce obesity-related chronic diseases such as DM (BENDALL; MAYR; OPIE. et al., 2018). However, with the advent of globalization, one of the most evident issues is the process of distancing man from adequate food, intensifying the risk factors associated with malnutrition (PROENÇA, 2010). Therefore, the ideal selection of foods and dietary factors have been recognized as playing an essential role in the early prevention of DM (ALKHATIB; TSANG; TISS et al., 2017; SCHWINGSHACK; MISSBACH; KONIG et al., 2015) In this sense, the control of carbohydrate consumption is essential, since they determine 50% of the variability of the glycemic response (AGÜERO; PIÑA; PÉREZ, 2012; WOLEVER; BOLOGNESI, 1996; SHEARD; CLARK; BRAND-MILLER et al., 2004;). Despite this, studies report that the quality and not the quantity of carbohydrates is the key point for their influence on DM, Kaplan et al. (2017), studied the population of Tsimane in South America and observed that even though they ingest a diet with approximately 72% of carbohydrates, this population is one of those with the lowest levels of chronic diseases. However, it is known that low- and middle-income countries consume a diet rich in carbohydrates, especially refined carbohydrates, further increasing the risk of DM, myocardial infarction and general mortality (HOOGEVEEN; GAUBATZ; SUN et al., 2014; MA; SU; WANG et al., 2019).

CONCLUSION

It is concluded that poor diet is essential in increasing the incidence of DM and that a programmed diet is one of the bases for the treatment of this disease, without it it is difficult to achieve adequate metabolic control even if hypoglycemic drugs are used. Adequate prevention strategies involve physical activities and diets focused mainly on balance in carbohydrate intake, in addition, always valuing the natural in relation to processed foods and adequate food moderation for each body need.

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