



**EVALUATION OF RISK OF TYPE 2 DIABETES IN PRIMARY HEALTH CARE
 AVALIAÇÃO DO RISCO DE DIABETES TIPO 2 NOS CUIDADOS DE SAÚDE PRIMÁRIOS
 EVALUACIÓN DEL RIESGO DE DIABETES TIPO 2 EN LA ATENCIÓN PRIMARIA DE LA SALUD**

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ABSTRACT

Objectives: to know the risk factors for type 2 diabetes of users of 45 and older and structuring a project oriented to the prevention of type 2 diabetes mellitus. **Method:** a descriptive and correlational study, of quantitative approach. Sample of 200 users were included in the Functional Unit of Loulé, Portugal. This study was conducted according to the Declaration of Helsinki, which establishes the basic rules for international research ethics. **Results:** 49 subjects were detected with high risk and 4 individuals at very high risk of developing type 2 diabetes. There were diagnosed four new cases of diabetic people. **Conclusion:** it was drawn up the project "Decrease the Risk, Prevent Type 2 Diabetes", in order to reduce risk factors and increase health gains. **Descriptors:** Diabetes Mellitus Type 2; Risk Factors, Nursing, Health Promotion, Prevention & Control.

RESUMO

Objetivos: conhecer os fatores de risco para a diabetes tipo 2 dos utentes com 45 e mais anos e estruturar um projeto orientado para a prevenção da diabetes mellitus tipo 2. **Método:** estudo descritivo e correlacional, de abordagem quantitativa. Amostra foi de 200 utente, inscritos na Unidade Funcional de Loulé, Portugal. Este estudo foi realizado de acordo com a declaração de Helsinque, que estabelece as normas fundamentais para a ética em pesquisa internacional. **Resultados:** foram detectados 49 indivíduos com alto risco e 4 indivíduos com risco muito alto de desenvolverem a diabetes tipo 2. Foram diagnosticados 4 novos casos de pessoas diabéticas. **Conclusão:** desenhou-se o projeto "Diminua o Risco, Previna a Diabetes Tipo 2", de modo a diminuir os fatores de risco e aumentar os ganhos em saúde. **Descritores:** Diabetes Mellitus Tipo 2; Fatores de Risco; Enfermagem; Promoção da Saúde; Prevenção & Controle.

RESUMEN

Objetivos: conocer los factores de riesgo para la diabetes tipo 2 con usuarios de 45 y más años y estructurar un proyecto dirigido a la prevención de la diabetes mellitus tipo 2. **Método:** un estudio descriptivo y correlacional, con enfoque cuantitativo. La muestra era de 200 usuarios y fue ingresada en la unidad funcional de Loulé, Portugal. Este estudio se llevó a cabo con arreglo a la Declaración de Helsinki, en el que se establecen las normas básicas para la ética en la investigación. **Resultados:** se detectaron 49 individuos con alto riesgo y 4 individuos con muy más alto riesgo de desarrollar diabetes tipo 2. Fueron diagnosticados 4 nuevos casos de diabéticos. **Conclusión:** diseñó el proyecto "Disminuir el riesgo, Prevenir la Diabetes Tipo 2", con el fin de reducir los factores de riesgo y aumentar los beneficios en salud. **Descriptor:** Diabetes Mellitus tipo 2; Factores de riesgo; Enfermería; Promoción de la salud; Prevención & Control.

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INTRODUCTION

Diabetes Mellitus (DM) is a chronic disease, increasingly common in Portuguese society and its prevalence increases with age, affecting both genders. It is characterized by hyperglycemia due, in some cases, to inadequate production in other insufficient insulin action and often a combination of these two factors.¹

Chronic diseases are defined as cardiovascular diseases, cancer, chronic respiratory diseases and diabetes mellitus. These diseases have some risk factors in common and thus may rely on a common approach to prevention. Interventions for prevention of Chronic Non-Communicable Diseases (NCDs) are cost-effective in all regions of the world, so it is important to invest in those stocks that cost very little and have great results.²

Transitions demographic, nutritional and epidemiological occurred in the last century led to a risk profile that chronic diseases such as diabetes and hypertension increased alarmingly. Both conditions are prevalent and important public health problem in all countries, regardless of their level of development.³

In Portugal, a study conducted in 2010 found that the prevalence of diabetes in the Portuguese population was 12,4%; there are significant differences in men 14,7% and women 10,2%. These figures become even more alarming are joining the numbers of Pre-Diabetes. These data reinforce the importance of risk assessments in the early diagnosis of DM.⁴

Worldwide, the direct costs of diabetes range from 2,5% to 15% of national expenditure on health, depending on the local prevalence of diabetes and the complexity of treatment available. Individuals with diabetes require at least 2-3 times more resources for health care than non-diabetics. In addition to the financial costs, diabetes also causes other costs associated with pain, anxiety, inconvenience and lower quality of life for patients and their families. Diabetes is also an additional burden to society due to lost productivity at work, early retirement, and premature mortality.⁵

The increasing prevalence of diabetes is largely due to overweight, obesity and physical inactivity. Diabetes and its complications can be prevented by a healthy diet, regular physical activity, maintaining a normal body weight and avoiding tobacco. We need a coordinated action at the national and

international policy to reduce exposure to known risk factors for diabetes, to improve access and quality of care.⁶

The main risk factors (RF) for the development of non-communicable diseases are physical inactivity, obesity, hypertension, dyslipidemia, smoking and eating high calorie.⁷ RF today are absolutely paramount in clinical practice, particularly in the preventive area.⁸ RF Non-modifiable include a set of elements on which the man has no action: heredity, age, gender, race, ethnicity.⁹

The promotion and health education educate the public and raise awareness of their health situation, are important because only in this way it can interfere in modifiable risk factors and to reduce the risk of developing diabetes type 2.

It appears that when there is change in eating habits and patterns of physical activity it produces a rapid change in risk factors and in turn the relative burden of chronic diseases. Scientific evidence shows that regular physical activity contributes to many benefits, mental, physical and social to people and that healthy eating and regular exercise are powerful means to prevent chronic diseases.¹⁰

You can only gain health through policies that promote health when privileging citizenship, ie, when citizens are primarily responsible for their own health, individual and collective, and the duty to defend and promote, should the State provide information and means to enable citizens to actively participate in their health.¹¹

It is necessary to develop studies to a greater understanding of the risk assessment of type 2 diabetes, each person of the population, in order to raise awareness to reduce the risk factors that lead to the onset of type 2 diabetes, for that it is necessary in becoming increasingly effective interventions for health professionals.¹²

Thus was created the project "Risk Please, Prevent Type 2 Diabetes" in order to achieve awareness and awareness of the target population of users with high and very high risk for the adoption of healthy lifestyle habits, so to decrease the risk factors of diabetes, and increase physical activity and adopt healthy eating, balanced and diverse.

OBJETIVES

- To know the risk factors for type 2 diabetes of users of 45 and older and structuring a project oriented to the prevention of type 2 diabetes mellitus.

- Knowing the risk factors for diabetes mellitus type 2, users aged 45 and older, enrolled in the Functional Unit Loulé (headquarters).
- Designing an intervention project targeted for the prevention of type 2 diabetes mellitus.
- To aware the users of the importance of reducing risk factors to prevent type 2 diabetes.

METHOD

Diagnoses of situation, characterization of socio-demographic and clinical variables; this study is descriptive and correlational, with quantitative approach. Aiming not only to describe and examine the variables, as well as analyze the relationships between variables, ie know and relate some risk factors of contracting type 2 diabetes in individuals aged over 45 years.

The sample selected for this study was a non-probability sample, intentional (the rejection of all users who were less than 45 years old and diabetic users), for a total of 200 users, drawn from the population of 9.377, with 45 of users and more years to resort to consultation on Adult Functional Unit Loulé (seat), Portugal.

The instrument for data collection was based on the Evaluation Sheet Risk Type 2 Diabetes, which is part of the National Plan for Prevention and Control of Diabetes,¹³ which contains 8 items and which were included sociodemographic variables (marital status, education, occupation) and clinical variables (blood pressure and blood glucose) and in total 13 items under evaluation. Was also used, the evaluation table of Body Mass Index (BMI). The data collection instrument was applied between 7th November 2011 and 2nd December 2011.

This tool enables to evaluate the following parameters: age, weight, height, BMI, Waist circumference, a measurement of blood glucose and blood pressure, dietary survey on the frequency of consumption of vegetables and/or fruit. Physical activities take medication for Hypertension, hyperglycemia previous relatives with diabetes, and attribute sociodemographic variables: marital status, education and profession.

Any research takes into consideration the moral and ethical issues.¹⁴ Thus, there was a concern in this study having always presented respect for the person, the guarantee of anonymity and protection of their right to live in freedom and dignity as human beings. All subjects were informed that all data

collection instruments were anonymous and confidential. In the present study the "informed consent" was obtained through the request for individuals to participate in the study and to sign who agreed to participate in the study after explaining the same and your goals.

After applying the instrument, the data processing and analysis was done using computer programs Statistical Program for the Social Sciences (SPSS) version 17.0.0 and Excel 2007. Later, he became a characterization of the population and their needs.

RESULTS AND DISCUSSION

The results are shown in percentage data, followed by discussion.

For this study, we considered a set of variables necessary and fundamental to the statistical treatment of data. The definition of the variables of this study is governed by calculating the risk of developing diabetes in a timeline of 10 years, based on the SCORE; we derive a set of data in a risk assessment for type 2 diabetes.¹³

The study population consists of a sample of 200 users of a functional unit of Loulé. Regarding the gender distribution of the study subjects is heterogeneous, 64,0% are women and 36,0% men. The distribution of individuals according to their marital status, it can be seen that the majority (67,5%) are married or living in de facto unions. Note that 17,5% are widowed and 10% divorced / separated and only 5% are single.

With regard to age, it was observed that the majority (49%) of users in a study has aged 65 years, followed by 27% between ages 55 and 64 years. It should be noted that 24% of users belonged to the age group of 45 to 54 years.

Regarding the education of users in the study, it was found that the majority (65%) had schooling at or below the 4th year, followed by 15,5% with schooling at the 3rd cycle (7th to 9th grade). Note that only 3,5% of study subjects are licensed.

Relation to the profession of the users in the study, grouped according to the groups of the national classification of occupations, it can be seen that the majority (32%) are retired, followed by 19,5% who work in services or are sellers and 18% that professions have workers, craft and related trades. Noted that only 3,5% of individuals have an occupation area of intellectual and scientific professions, on the other hand, 11% are domestic.

With regard to clinical (blood pressure: Systolic and diastolic), it appears that the majority of subjects (64,5%) in the study are hypertensive, and only 35.5% have values of blood pressure within the normal parameters (systolic \leq 139mmHg and diastolic \leq 89mmHg). The mean systolic blood pressure was 145,57 mmHg, varying values between a minimum 84 and a maximum of 213 mmHg. In relation to diastolic values ranged from a minimum of 49 and a maximum of 114 mmHg, the average being 79.25.

Regarding blood glucose values of the individuals, the vast majority (72.0%) had normal values, whereas 24.0% had values of hyperglycemia (\geq 126 mg / dl) and only 4% had values of hypoglycemia ($<$ 80 mg / dl), the average of 115.69 mg / dl, and the minimum value of 69 and a maximum of 341 mg / dl.

Regarding the anthropometric characteristics of the study subjects, shows that, in relation to weight, this ranged from a minimum of 42Kg and a maximum of 120 kg, the average being 67.49 Kg. As the height of the users in the study, this ranged from a minimum of 143 cm and a maximum of 189 cm, and the average 159.33 cm.

The combination of weight to height of study subjects allowed to calculate the body mass index and its categorization. Thus, the majority (47%) was overweight, and 16.5% are obese. Note that only 36.5% were normal weight.

The waist circumference is the best anthropometric measure that assesses the amount of visceral adipose tissue of individuals. The majority (47.5%) of the subjects had a circumference of waist high ($>$ 102 cm for men and $>$ 88 cm women). However, this figure was 58.6% in women and

only 27.8% in men. It should be noted that the majority of men had a waist circumference less than 94 cm (low risk), this value being in women only 13.3% ($<$ 80cm).

The study subjects when asked about the practice of daily physical activity, duration of at least 30 minutes at work or during free time (including activities of daily living), the majority (57%) responded affirmatively. And when asked if vegetables and / or fruit are present in daily meals, a large majority (77.5%) responded affirmatively. When asked if they regularly take or have already taken some medication for high blood pressure, the majority (51%) responded affirmatively.

The vast majority (87%) of the individuals in the study, said that was never reported to have high levels of glucose (eg a health examination, during a period of illness or during pregnancy). When asked about, if you have any family member or other close relatives who have been diagnosed with Type 1 or Type 2 diabetes, the majority responded negatively (69%). Note that 24.5% reported having immediate family (parent, sibling, and child) who was diagnosed diabetes.

Regarding the risk of individuals have come to study in type 2 diabetes mellitus (Figure 1) within 10 years, assessed by evaluation sheet risk of diabetes mellitus type 2.13 the vast majority (81.5%) of individuals with risk of developing type 2 diabetes mellitus in a timeline of 10 years, noted that 24.5% of those at high risk (it is estimated that 1 in 3 will develop the disease).

Table 1. Distribution of individuals according to their risk of having type 2 diabetes within 10 years. Loulé. Portugal, 2011

Total Risk Level	n°	%
Low ($<$ 7): it is estimated that 1 in 100 will develop the disease	37	18.5
Significantly high (7-11): it is estimated that 1 in 25 will develop the disease	70	35.0
Moderate (12-14): it is estimated that 1 in 6 will develop the disease	40	20.0
High (15-20): it is estimated that 1 in 3 will develop the disease	49	24.5
Very high ($>$ 20): it is estimated that 1 in 2 will develop the disease	4	2.0
Total	200	100,0

During the implementation of the evaluation form found 4 users, who were not medically diagnosed with diabetes. This finding reinforces the importance of screening, in order to access, as early as possible to people with diabetes.

◆ Relation between the variables

Throughout this article were described which risk factors that contribute to the onset of type 2 diabetes, its influence also in the appearance of other diseases and the importance of reducing these factors as well as the correlation between variables and the

onset of diabetes with data global and national level.

Although the sample size was 200 people, a population of 9.377, it was thought interesting to know whether there is also the same correlation that is described by various global organizations and national health, example of which is the Annual Report of the National Observatory of Diabetes in Portugal.

It was used to assess adherence to normal, by using the test Kolmogorov-Smirnov statistic (where $p > 0.05$ variables under study have a normal distribution). This analysis and the values found by the Kolmogorov-Smirnov Test with Lilliefors correction (Figure 2), shows

	Kolmogorov-Smirnov	Significance level
Risk of type 2 diabetes	0,057	0,200

Figure 1. Results of normality tests (Kolmogorov-Smirnov) Questionnaire for assessment of risk of type 2 diabetes. Loulé. Portugal, 2011

◆ Relation between gender and risk to have type 2 diabetes

Regarding the comparison of the risk of type 2 diabetes and its relation to gender, it was found that men had an average lower (9.79) than women (12.02), then a lower risk for having type 2 diabetes.

In order to test and, thus, verify whether there is a significant difference between groups, we used Student's t test for difference of means, with independent groups, which identified the existence of very significant difference ($p = 0,001$), which concluded that there is a relationship between gender and risk for having type 2 diabetes.

◆ Relation between age and the risk for type 2 diabetes

In assessing the risk for type 2 diabetes have from individuals, taking into account their age group, we found that depending on age of individuals increases the greater the risk for having diabetes type 2 (average values over high). Therefore, individuals aged over 65 years are at greater risk for having type 2 diabetes.

The statistical test (Anova) have revealed that the difference is highly significant ($p < 0.001$). Once it is accepted that age has predictive value regarding the risk for having type 2 diabetes.

◆ Relation between marital status and risk to have type 2 diabetes

Crossing the information on the marital status of individuals and their risk for having type 2 diabetes, it was found that those who are unmarried have the lowest mean value (8.70), on the other hand, those who are widowed are those where checks whether the

that the sample follows a normal distribution, so elected to study the use of parametric statistical tests.

We applied the following tests: Student's t test for difference of means, with independent groups, and analysis of variance ANOVA. The interpretation of statistical tests was based on a significance level of $\alpha = 0:05$ with a confidence interval of 95%. As criteria in testing statistical hypotheses were defined: for α significant ($p \leq 0.05$), we observe differences / associations between groups. For $p > 0:05$ no observed differences / associations between groups.

highest mean value (13.74). Note that those who are divorced or separated have greater risk for having diabetes type 2 (11.55), than those who are married or living in de facto unions (10.70).

In order to check whether these differences are statistically significant, we used the test of analysis of variance ANOVA, which identified the existence of statistically significant differences ($p = 0,002$) between the groups. Which leads to accept that marital status has a predictive value regarding the risk for having type 2 diabetes.

◆ Relation between education and the risk for type 2 diabetes

The relatedness of the risk for having type 2 diabetes with education of individuals, and the results of ANOVA, there is a value of "p" much higher than the significance level set ($\alpha = 0.05$), immediately rejects is a relationship between education level and risk for having type 2 diabetes;

◆ Relation between blood pressure and risk for type 2 diabetes

In order to test this relationship, we used ANOVA to see if there is a statistically significant difference between the blood pressure and the risk of individuals having type 2 diabetes within 10 years. The test revealed highly significant differences ($p < 0,001$). After an analysis of the descriptive statistics that supported the test, you can check depending on the severity increases blood pressure the greater the risk of individuals likely to have type 2 diabetes. Which leads to accept that there is a relationship between blood pressure and risk

of individuals likely to have type 2 diabetes within 10 years.

Women have increased risk, compared to men, of developing diabetes due to the fact that the BMI is higher. The prevalence of diabetes is higher in men than in women. More than a quarter of its population in the age group of 60-79 years has diabetes.⁴ This situation diagnosis also shows that with increasing age increases the risk, with higher risk in people over 65 years as is reported by several authors.^{4,13,15-6} The single people have a lower risk compared to other marital status. The school has not been demonstrated that influenced the onset of diabetes in this sample, as described in the literature.^{1,4} Also notes that, depending raises blood pressure the greater the risk of individuals come to have diabetes type 2.^{1,13-7}

It is important to know if the study population because sometimes the variables that influence diabetes in this population are not the same as another, which makes the existing guidelines at national level, have to be adapted to regional situations and locations. For this reason, a project was created in order to change the risk factors high and very high in the study population.

There is a need to reverse the growing trend of diabetes and its complications in Portugal and the need to increase health gains obtained however, created the National Program for Prevention and Control of Diabetes (PNPCD), which is in force, and based on the primary prevention of diabetes, by reducing the known risk factors, focusing primarily on risk factors vulnerable disease etiology.

For these reasons, after the description of the results of the diagnostic status of the study population, it can be seen in Figure 1, the distribution of individuals according to their risk of having type 2 diabetes within 10 years. Since the sample of 200 individuals, only 37 individuals have low risk and 70 individuals significantly elevated. To follow up on this project is important to work together with the other 49 individuals who have high risk (it is estimated that 1 in 3 will develop the disease), and 4 patients with very high risk (it is estimated that 1 in 2 will develop the disease), come to have type 2 diabetes within 10 years. Individuals with high and very high risk should be motivated and influenced to reduce risk factors.

This study allowed to draw a diagnosis of population health on the risk of developing type 2 diabetes within 10 years paving the way for future projects that are interconnected, thus making an innovative

contribution in the promotion of health and prevention of disease. It is hoped, through the implementation of this project, "Please Risk, Prevent Type 2 Diabetes", reduce risk factors, prevent diabetes in people, and raise awareness of risk factors and on their situation in relation to health, in order to get the option of healthy lifestyles, promoting obtaining health gains.

Health gains can be achieved by less absenteeism from work, and reducing the incidence and prevalence of disease, since other diseases (such as cardiovascular disease, hypertension, obesity, dyslipidemia), present with identical risk factors. Consequently will be less spending on drugs and lower the number of queries for the treatment of diseases and their complications.

Identified priority areas that will contribute to the minimization across the majority of risk factors found; education and health promotion, increase physical activity, improve eating habits.

Nurses should promote health, especially clarifying the population and it raising awareness of their health status, so as to interfere in modifiable factors, reducing the risk for having type 2 DM.¹²

The modification of lifestyles, with the purpose of acquiring the proper body weight and regular physical activity, should be implemented as provide health benefits that go beyond the prevention of DM.

You can only improve the health of the population if citizens are interested, concerned and motivated to change. These changes are not easy, given that exist on paper for quite some time and remain a public health problem. The health professionals themselves must be informed and motivated so that they can convey the required information timely, in each health situation.

Several studies of prevention of diabetes by changes in lifestyle have proven the benefits of changes in lifestyle to prevent or delay diabetes, individuals with high risk results achieved quite favorable.¹⁸ Making a change of style healthy lives, reduce 58 % of diabetes incidence in three years.¹⁹

Been described in various project activities, with their activity indicator, goals and strategies also was found necessary. Should involve lawsuits organizational and professional practice and should be developed with a view to continuous improvement of quality, not just the whole process of identification and tracking of users with risk factors high and very high for developing type

2 diabetes, but the results, quantified in terms of health gains.

The main purpose of each team of primary health care is to elevate to the highest level the health of their community. For this, you need a set of concerted interventions that meet your needs. The success of a health intervention, especially if the purpose of changing behaviors and lifestyles, depends on the adequacy and sustainability of these strategies.

The information on the epidemiology of the various risk factors and diabetes are essential for more effective intervention based on a real knowledge of the situation of this population on this disease and the risk of developing, enabling monitoring and proper evaluation of the project through indicators defined in PNPCD.

It is very important to demonstrate the need to change eating habits and to encourage physical activity. Is also necessary that national policies should encourage and provide opportunities to increase physical activity and improve the availability and accessibility of healthy foods.

It is up to health services and all agents informational and educational population, clarify it and influence it the way you can choose, adapt and take the healthier options and desirable within the own lifestyle of each from the perspective of continuous quality improvement and control of the risks associated with the onset of type 2 diabetes.

With this project we intend to achieve the goal proposed. A goal / objective operational, this is a statement of a technically feasible and desirable result of the activities of health services, translated in terms of indicators of activities.

For evaluation of this project with the aim of preventing diabetes, had as guidance implementing the PNPCD that is assessed by the following indicators of process and outcome in relation to the universe national diabetic patients identified.

It is expected that the proposed guidelines for the implementation of this project will bring an added value to this community, to provide better eating habits, promote physical activity and healthy lifestyles. Should be an annual assessment to users who are under evaluation in order to determine whether there was an improvement in relation to their health, decrease in BMI, PC, HTA and glucose.

Health professionals should make an assessment at the end of three years, with annual reports in order to disseminate the results achieved, and thus consolidate the

objectives and or amendments that may enhance positive.

Countries with better organized primary care achieve better health outcomes, lower costs and greater equity. We conclude also that the active participation of citizens and community health care is critical, however, for this to happen it is necessary that they are informed and enlightened, to be able to make the right decisions and engage with professionals' health, in order to obtain a significant improvement in their health.²⁰

During the presentation of the annual report of the National Diabetes 2011, the Prevention was the watchword. The Health Minister said that diabetes is "one of the biggest challenges today" and was concerned with the "impact associated with this epidemic," including the costs in the budget of Health.²¹

According to the data revealed that the annual report, the direct costs of diabetes accounted, in 2010, between 1150 and 1350 million, an increase of 100 million in the previous year. The Health Minister also stressed that prevention programs are not words, are effective screening. The number of people with undiagnosed diabetes is very worrying. For the governor, diagnose the matter that has not been diagnosed and prevent disease in cases where this is possible, by changing eating habits and exercise. Thus states that the fight against this epidemic lies not only in the ministry, but to the whole society, it is a fight that everyone has to take.²¹

Reinforcing this concern with the data of the European Parliament in March 2012, it is estimated that diabetes affects 900,000 Portuguese and over 32 million citizens of the European Union, almost 10% of the total population of the member states. Every two minutes a citizen dies European Union due to diabetes.

CONCLUSION

The DM is a chronic disease that currently affects much of the world's population continues growing expansion. Nurses cannot remain indifferent to a problem with social significance as relevant as it is considered one of the important causes of morbidity and mortality. The prevention of risk factors is a challenge in order to gain a better health and a better quality of life.

The technological development we are witnessing in society leads the population to adopt less healthy lifestyles. This trend has been observed, particularly in terms of diet

and exercise. We live in a very competitive society and bustling, the population uses immensely "fast-food" at the expense of a relatively healthy diet and physical activity, there has been a more sedentary lifestyle, which has increased, with certainty, the obesity, considered now a burdensome public health problem worldwide. Effectively has been an increased incidence of diabetes globally, related to changes in lifestyle and environment brought about by industrialization.

In every century nutritional standards are altered, resulting in changes in the diets of the population, correlating changes also economic, social, demographic and health-related. The twentieth century was strongly influenced by a diet rich in fats (mostly animal), sugar and refined foods, and low in complex carbohydrates and fiber and that the predominance of this diet has contributed to the rise in obesity, together the progressive decline in physical activity of the population.

When there is a significant weight loss in an obese person and maintained long-term benefits for the user are different and can manifest itself in overall health, improved quality of life, reducing mortality and improving related chronic diseases. Small weight loss of about 5% to 10% of initial weight, improve glycemic control, decrease blood pressure and cholesterol levels.

There is concrete evidence that maintaining a healthy body weight and moderate physical activity can help prevent the development of type 2 diabetes. In primary prevention, the educator has an important role in helping people to understand the risks and set realistic goals to improve your health. It is recommended a target of at least 30 minutes of daily exercise, such as brisk walking, swimming, cycling or dancing. Hiking for at least 30 minutes a day, for example, has been shown to reduce the risk of type 2 diabetes 35 to 40%.

The progressive aging of the population and the consequences arising out of the same, give greater responsibility to health professionals, social service and the community in general, which should outline intervention strategies articulated meet the most pressing problems of this group. As described previously, the incidence of type 2 diabetes is higher after 45 years of age, so it is essential that nurses know what are the users who have higher risk for getting type 2 diabetes, and working together with the user so that the risk is reduced.

The health promotion is defined as a combination of educational and environmental

supports that aim to achieve actions and conditions of living conducive to health. Combining this definition refers to the need to connect the multiple determinants of health (genetic, environmental, health and lifestyle) with multiple sources of assistance or support.²⁴

Any intervention in the sense of working health habits and healthy lifestyles always implies a change in individual behaviors, cultural, social and community. For this change to occur it is essential that learning. What will be the result of the interaction of information that the individual has with their own personal dimensions, and the emotions and feelings the main responsible of this interaction?

Education programs aimed at health promotion and lead people either individually or as a group, to account in relation to their health problems.²⁶ For the occurrence of health education is necessary to "create conditions for people to turn, knowing the why of things, show them that they can learn and sensitize them to the importance of knowledge related to their health. This requires dynamic work. "

The public should be informed about diabetes, the consequences, and implications, social, economic and family, in order to take preventive actions in health and the need for changes in lifestyle to develop quality strategies in people's lives.

It is through the advice that health teams have the opportunity to give their clients clear and specific recommendations about modifying unhealthy behavior and only then get personal motivation for change.²⁷ Effective communication is a means facilitator in changing health behaviors, but there are still barriers, it is necessary to create conditions facilitating the implementation of these same behaviors promoting quality. It is essential to equip health professionals and cultural communication skills enabling them to develop strategies to overcome these barriers and influence individual behavior, giving opportunity to its users to acquire skills to develop an environment suitable health.

Nurses must reflect on the use of their resources and obtaining appropriate means to identify the needs of groups at risk of developing diabetes in a timeline of 10 years. In order to go to meet these needs and assist people in raising awareness and changing behaviors with healthy lifestyles. The interventions aim to achieve health gains by reducing mortality and morbidity and the possible appearance of premature disability caused by chronic diseases such as diabetes.

The participation of health professionals, health promotion, should be intense, reaffirming that the meaning of health care, is beyond mere assistance to the wearer. Life should not be seen in a compartmentalized, there can be moments of care and other promotion. Health education thus becomes a key strategy of health promotion. Health education is to equip the individual powers to allow it to be an active participant in your health. Behaviors are affected by factors communicational, cultural, social and economic.

The Regional Health Administrations and Sub-Regions Health and Primary Health Care have a fundamental obligation on the education of the nursing staff, both in motivation and in the establishment of departmental structures able to meet this requirement, and to streamline awareness among nurses and their own directions that the technical and scientific progress is needed in order to respond effectively and efficiently to provide health care to the individual, family and community.

Nursing in complementarity with other health professionals and community partners is responsible for identifying the needs of individuals/families/groups given geographical area. Developing strategies for the promotion and maintenance of healthy lifestyles and disease prevention from the perspective of improved quality of life.

The realization of this project "Risk Please, Prevent Type 2 Diabetes" which includes the identification of the group of people who have higher risk for having type 2 diabetes will develop actions of health education and vigilance, keeping in regard to its specificity, the risk factors and needs, in order to obtain health gains. It is currently accepted that the screening strategies in populations most at risk for developing diabetes, should then be carried out in an integrated manner, with the identification of new cases of diabetes and implementation of primary prevention activities in the same population.

In diagnosis of the situation with a sample of 200 users, 49 users were detected at high risk and 4 users at very high risk of developing type 2 diabetes in a 10-year timeline. 4 new cases were diagnosed in people with diabetes who did not know so.

It was found in the diagnosis of the situation, there is a relationship between gender and risk for having type 2 diabetes, and women have a greater risk than men. The higher age the person has the higher your risk for having diabetes. Depending on marital status has predictive value regarding the risk

for having diabetes. Singles have lower risk than widowers, and those who are divorced have higher risk than those who are married. Depending on the severity of the increase in blood pressure greater risk of people coming to have diabetes. The relationship between education and the risk for type 2 diabetes have been rejected.

It is important to perform screening the population to assess the risk of diabetes and especially in high-risk groups (people with direct family and women with diabetes during pregnancy had gestational diabetes). Nurses must take every opportunity to make education/health promotion in order to empower users to make informed decisions and health-conscious.

Each health unit must thoroughly know the health status of its population, in relation to risk factors and strategies and priorities based on community resources, intervening in partnership with influential bodies, in order to diagnose and reduce the prevalence of risk factors and hence prevent and reduce mortality and morbidity from diabetes.

Modifying behavior and adopting healthier lifestyles, by citizens, such as diet, physical activity, has not been easy, you must provide all the necessary information explicitly so, to motivate and encourage. It is critical linkage with the various health professionals motivated also available and clarified so that together, it can reduce the risk factors for developing type 2 diabetes.

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