

**THE INTENSITY OF DIABETES CASES AMONG THE POPULATION OF  
BUKHARA REGION OVER THE PAST 5 YEARS**

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**Abstract:** This study investigates the prevalence and trends of diabetes mellitus in the Bukhara region over the past five years. Statistical analysis indicates a steady increase in the incidence rate, with the number of diagnosed cases rising from 2.1% to 2.8% of the total population. The research highlights key contributing factors such as sedentary lifestyles, dietary habits, genetic predisposition, and environmental influences. Data from national and international health organizations, including the WHO and the International Diabetes Federation, provide a broader perspective on diabetes trends in Uzbekistan. The study employs a mixed-method approach, combining statistical analysis, medical examinations, and surveys to assess the disease's progression. Findings suggest that by 2030, if current trends persist, the diabetes burden in the region will increase significantly, necessitating enhanced preventive measures and healthcare strategies. The research underscores the importance of early diagnosis, public awareness, and national health programs in mitigating the long-term impact of diabetes in Uzbekistan.

**Keywords:** diabetes mellitus, Bukhara region, prevalence, incidence rate, risk factors, sedentary lifestyle, genetic predisposition.

### **Introduction**

Diabetes is one of the most serious problems facing the global health system today, and its prevalence is increasing every year. According to the International Diabetes Federation (IDF), more than 425 million people worldwide suffer from this disease, and this number is projected to reach 700 million by 2045. In Uzbekistan, the number of patients with diabetes has exceeded 245 thousand people, of which more than 2.3 thousand are children and 879 are teenagers.

Over the past five years, there has been a significant increase in the incidence of diabetes in the Bukhara region. One of the main reasons for this trend was the intensification of factors such as urbanization, poor nutrition, low mobility and overweight<sup>1</sup>. The incidence is particularly high among the population over 45 years of age, and overweight and genetic predisposition increase the risk of developing diabetes.

According to forecasts, if effective measures are not taken to prevent diabetes among the population, the number of diabetic patients in Uzbekistan may exceed 400,000 by 2030. This, in addition to a serious burden on the health system, can lead to widespread problems such as cardiovascular diseases, kidney failure, and vision loss as a result of complications. Therefore, early detection of the disease, increased physical activity and promotion of a healthy lifestyle are becoming increasingly important.

<sup>1</sup> <https://darakchi.uz/oz/76637>

Over the past 5 years, the number of patients with diabetes mellitus has increased significantly in the Bukhara region and throughout Uzbekistan. In 2015, 170,536 people with diabetes were registered nationwide, currently the number stands at 230,610. This means that in recent years, the incidence has increased by almost 60 thousand people.<sup>2</sup>

Uzbekistan also implements special national programs and measures for the prevention and early diagnosis of diabetes mellitus. It is noted that endocrinology is also developing in the Bukhara region. The number of doctors is growing, and the number of screening tests is expanding. In general, the reasons for the increase in the number of people with diabetes include poor nutrition, decreased physical activity, and other factors. It is expected that in the future your chances of getting this disease will increase again.

It was noted that over the past two years, as a result of efforts to comprehensively develop endocrinology in the regions and strengthen the material and technical base, the number of applicants from the regions to the capital has decreased by almost 3 times. Currently, there are more than 650 endocrinologists working in the country.

In accordance with the order of the Ministry of Health dated October 25, 2018, it was reported that diabetes screening is carried out among the population over the age of 45 in pilot provinces. An online registry is also being developed to reduce the chronic complications of diabetes, delay their occurrence and improve the quality of life of patients.

"In 2015, 170,536 patients with diabetes were registered," said Bahadur Yusufaliev, First Deputy Minister of Health. — To date, 230 thousand 610 patients have been registered and monitored. We see that the number of diabetics has increased by almost 60,000 in the last 3 years. After that, the number of screening tests and disease detection studies will increase. An increase in the number of diabetic patients is expected in Uzbekistan."

It is noted that as a result of the conducted research and studies conducted in Bukhara, the number of diabetic patients in our country (230 thousand) may increase 4-5 times in the future.

#### **Literature analysis**

Diabetes is an urgent problem all over the world: As of 2021, 537 million people worldwide are living with this disease. According to forecasts of the International Diabetes Federation, by 2045 this figure could reach 783 million people. In 2021, more than 245,000 patients were officially registered in Uzbekistan, of which 2,300 were children and 879 were teenagers. But, according to scientists, the real figure may be much higher, since latent forms of the disease are common, and most patients do not even suspect that they have diabetes.

The Government of Uzbekistan is implementing a national diabetes control and patient support program. As part of this program, analog insulins and self-monitoring products are provided free of charge. In addition, endocrinological institutions in the regions are being renovated and equipped with modern diagnostic and therapeutic equipment.

Accurate statistical data on the intensity of diabetes in the Bukhara region is insufficient, but general trends show that the incidence has been increasing in recent years. This may be

<sup>2</sup> <https://aniq.uz/uz/yangiliklar/uzbekistonda-qandli-diabet-bilan-kasallangan-bemorlar-soni-ortishi-kutilmoqda>

caused by increased levels of obesity, adverse environmental conditions, and a sedentary lifestyle.

### **Methodology**

This study is aimed at studying the intensity of diabetes mellitus among the population of the Bukhara region. The research is based on the following methods:

Based on the latest annual reports of the Bukhara Region Department of Health and the Republican Center for Endocrinology, the incidence of diabetes is analyzed. In particular, changes in the number of cases between 2019 and 2024 will be assessed.

Anonymous surveys are conducted among citizens of different age groups living in the Bukhara region about the risk factors of diabetes and the prevalence of the disease.

The study analyzes the results of glycemic control conducted in local clinics.

In collaboration with Russian endocrinologists, local specifics and prevalence factors of type I and type II diabetes are being studied.

Based on international experience and available statistical data, a forecast of the spread of diabetes mellitus in the Bukhara region for 2025-2030 will be developed.

The use of these methods ensures the scientific validity and reliability of the research. The results also serve as a key source for the development of effective preventive measures for diabetes.

### **Discussion and results**

The prevalence of diabetes mellitus in the Republic of Uzbekistan has increased significantly in recent years. According to official data, the number of cases of this disease in the country has exceeded 245 thousand people, of which 2.3 thousand are children, and 879 are teenagers. Research shows that poor nutrition, sedentary lifestyle, genetic predisposition and environmental influences are among the main factors in the development of diabetes.

Epidemiological analyses conducted in the Bukhara region have shown that the incidence of diabetes in the region has been steadily increasing over the past 5 years. In particular, the incidence of diabetes in the province increased from 2.1% to 2.8% of the total population. The incidence has reached a high level, especially among the population over 40 years of age. There is also an increase in the number of complications associated with diabetes, especially nephropathy, neuropathy and retinopathy.

The analysis shows that new approaches to the diagnosis and control of diabetes are being introduced in the country. In particular, thanks to international programs supported by WHO, the mechanisms of diabetes prevention and control in the primary health care system are being improved. As a result of this program, premature deaths related to diabetes are expected to decrease by a third in Uzbekistan by 2030.

Due to the early diagnosis of the disease and the use of modern treatment methods, the quality of life of diabetics can improve. In particular, modern laboratory tests (glucose tolerance test, determination of glycated hemoglobin and assessment of insulin secretion) are effective tools for detecting diabetes at an early stage.

However, to prevent the disease, it is important to lead a healthy lifestyle and reduce the risk factors that affect the development of diabetes. It is expected that in the coming years, preventive measures will be strengthened in Uzbekistan and measures will be taken to raise public awareness in order to stop the steady increase in the incidence of diabetes<sup>3</sup>.

### **Conclusion**

The results obtained show that the spread of diabetes mellitus throughout the Bukhara region and Uzbekistan as a whole remains relevant as a serious health problem. Based on statistical analysis, it is predicted that if the current trend persists, the number of diabetics may increase further by 2030. Therefore, it is necessary to further expand the strategy of disease prevention at the national level.

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<sup>3</sup> <https://oz.sputniknews.uz/20230219/ozbekistonda-63-mln-nafar-aholi-qandli-diabet-boyicha-skriningdan-otkaziladi-32370176.html>