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# The Role of Environmental Factors in the Occurrence of Early Menopausal Osteoporosis

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**Abstract:** In recent years, due to environmental degradation, many chronic diseases have begun to progress. Including the menopause over the years "gets younger", this is due not only to the hormonal background of the woman, but also from the influence of external factors as well. In this article, we analyzed retrospective data over the past 10 years, women with menopausal manifestations and their complications.

**Keywords:** environmental factors, menopause, osteoporosis.

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## Introduction

Menopause, like many diseases, depends not only on the internal state of the body, but also on external factors [1, 2, 4, and 6]. Such as pollution of the environment and air, reduction of natural food products and associated metabolic disorders [3,5,7,9]. For example: obesity, diabetes, metabolic syndrome, allergic diseases, and the like. We pursued the goal of studying the role of external factors on the female body in menopause [8, 10, 11].

## Materials and methods of research

To study their impact on the female body, we studied 120 retrospective data for 2010 to 2020 of women aged 35-50 years with menopause and its consequences, such as menopausal osteoporosis in the Bukhara region, the Republic of Uzbekistan. All patients were treated for menopausal disorders in the Bukhara Regional Perinatal Center in the Department of Gynecology. Studying the data of menopausal patients, we paid attention to comorbidities, place of residence, working conditions and living conditions [8,10].

## Results and discussion

During the examination, we analyzed the anamnestic data of patients regarding the onset of age, menstrual irregularities leading to menopause, and later to its complications, such as osteoporosis. At the same time, out of 120 patients, early menopause occurred in 35 women (29.16%), with an average age of 34.12 years. In 30 patients (25%)  $\pm$  at 40.09 years, 29 women (24.16%) at  $\pm$  45.32 years, the remaining 26 patients (21.67%) at  $\pm$  50.1 years. Based on this, we divided all patients into 4 groups according to age characteristics. I-group 35 women aged  $\pm$  34.12 years, II-group 30 patient's  $\pm$  40.09 years, III-group 29 women  $\pm$  45.32 years, IV-group 26 observed  $\pm$  50.1 years.

According to the anamnesis of the I-group of 35 women, at 34.12 years old, in 73.09% of cases they were unemployed or with heavy physical exertion, education was secondary or below average, the social level was below average, they lived near plants or factories. In

26.91% of patients with higher education, average social standard of living, living in a village or outskirts of a city. 3 women from this group already had a fracture, 4 had different localization of pain in the joints of a chronic nature.

II-group 30 patients, age  $\pm$  40.09 years, in 63.01% of cases were unemployed or with heavy physical exertion, education was secondary or below average, the social level was below average, they lived near plants or factories. 46.99% of patients with higher education, average social standard of living, living in the city, but far from factories. 2 women from this group already had a fracture, 3 had different localization of pain in the joints of a chronic nature.

III-group 29 women  $\pm$  45.32 years old, in 51.21% of cases they were unemployed or with heavy physical exertion, education was secondary or below average, the social level was below average, they lived near factories or factories. 49.79% of patients with higher education, average social standard of living, living in the city or on the outskirts, but far from factories. IV-group 26 observed  $\pm$  50.1 years, 48.09% of cases were unemployed or with heavy physical exertion, education was secondary or below average, the social level was below average, they lived near plants or factories. In 52.91% of patients with higher education, average social standard of living, living in a village or outskirts of a city. 6 patients from this group already had a fracture, 3 had different localization of pain in the joints of a chronic nature.

Normally, menopause should have come after 45 years. Comparing the women of the four groups, we can say that the menopause that occurred after 45 years in groups III and IV is associated more with a decrease in the level of estradiol in the blood, which leads to menopause and a decrease in bone mineral density. Which in turn leads to menopausal osteoporosis and fractures. And in groups I and II, they are more connected with household, social and place of residence, which influenced the onset of early menopause and its consequences, osteoporosis.

## Conclusions

Based on the foregoing, we can argue that environmental factors can affect the state of a woman's body. Household, social and living in close proximity to air and soil pollution has an impact on the onset of early menopause and its consequences of osteoporosis.

## Literature

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