

**HYGIENIC ANALYSIS OF OBESITY AMONG MIDDLE-AGED WOMEN****Ortiqov Bobomurod Baymamatovich****Tangirova Mukhlisa Farhod qizi****Institution:** Tashkent State Medical University**Department:** Department of Hygiene of Children, Adolescents and Nutrition.<https://doi.org/10.5281/zenodo.18459481>

**Abstract.** Today, obesity is considered one of the most pressing public health problems on a global scale. In particular, the high prevalence of obesity among middle-aged women significantly increases the risk of cardiovascular diseases, type 2 diabetes mellitus, arterial hypertension, and other chronic conditions. This article analyzes the hygienic aspects of obesity among middle-aged women and examines its association with dietary habits, lifestyle, and social factors. The study results indicate the need to improve healthy nutrition practices and hygienic preventive measures.

**Keywords:** obesity, middle-aged women, hygienic analysis, nutrition, public health.

**Introduction**

Obesity has emerged as one of the most serious public health challenges of the 21st century. According to international health statistics, the prevalence of overweight and obesity is increasing across all age groups, with particularly rapid growth among middle-aged women. This life period is characterized by physiological, hormonal, social, and behavioral changes that significantly affect body weight regulation. In middle-aged women, a slowdown in metabolism, redistribution of adipose tissue, and endocrine changes associated with perimenopause and menopause increase susceptibility to excess weight [1,6,7].

From a hygienic and public health perspective, obesity is not only an individual medical problem but also a multifactorial condition related to environmental, nutritional, occupational, and social determinants. In many societies, including developing and transitional economies, modernization, urbanization, and changes in dietary patterns have led to increased consumption of energy-dense foods and reduced physical activity. These trends disproportionately affect women, especially those balancing professional responsibilities with household and caregiving duties [3,5,8].

Hygienic analysis of obesity focuses on identifying modifiable risk factors associated with nutrition, lifestyle, and living conditions. Understanding these factors among middle-aged women is essential for reducing the burden of chronic diseases, improving quality of life, and enhancing public health outcomes through effective preventive strategies [2,4,9].

**Aim and Objectives of the Study**

The aim of this study is to conduct a comprehensive hygienic assessment of obesity among middle-aged women by analyzing dietary habits, physical activity levels, lifestyle, and socio-economic risk factors. The main objective is to determine the prevalence of obesity among middle-aged women and to develop scientifically grounded recommendations for its prevention.

The specific objectives include:

**Assessment of obesity prevalence and severity:** Determining the prevalence of overweight and obesity among middle-aged women using BMI, waist circumference, and body composition indicators.

**Analysis of dietary habits and nutritional imbalance:** Evaluating hygienic aspects of diet, daily caloric intake, macronutrient distribution, and consumption of fruits, vegetables, and fiber-rich foods.

**Physical activity and sedentary lifestyle:** Assessing daily movement, occupational and leisure-time physical activity, and identifying factors related to sedentary behavior.

**Socio-economic and occupational factors:** Examining the influence of education level, employment status, household responsibilities, and living conditions on obesity development.

**Development of hygienic recommendations:** Proposing practical, evidence-based recommendations to prevent obesity and improve nutrition and lifestyle.

### **Materials and Methods**

The study employed a descriptive and analytical design. The target group consisted of middle-aged women aged 35–55 years. Data were collected using the following methods:

**Questionnaires:** Information on personal, family, and occupational characteristics, dietary habits, physical activity levels, and health status was obtained.

**Anthropometric measurements:** Body weight, height, waist circumference, and body mass index (BMI) were measured. BMI was calculated using the formula:  $BMI = \text{body weight (kg)} / \text{height}^2 (\text{m}^2)$  and evaluated according to WHO criteria. Waist circumference was used to assess abdominal obesity, which is associated with increased metabolic risk.

**Dietary assessment:** A 24-hour dietary recall and food frequency questionnaires were used to analyze daily caloric intake, macronutrient composition (proteins, fats, carbohydrates), consumption of fruits, vegetables, fiber-rich foods, and processed products. Dietary hygiene was assessed by comparing actual intake with recommended standards.

**Physical activity assessment:** Participants self-reported daily movement, occupational activity, leisure-time activity, and exercise. Activity levels were classified as low, moderate, or high intensity.

**Socio-demographic data:** Information on education, employment, household duties, and family conditions was collected to identify factors associated with obesity and hygienic practices.

These combined methods enabled identification of key risk factors contributing to obesity and formulation of preventive hygienic recommendations.

### **Results**

#### **1. Prevalence of Obesity**

The analysis showed that a large proportion of middle-aged women had BMI values exceeding normal limits. Overweight and obesity were more common among women engaged in sedentary occupations. Waist circumference measurements indicated a high prevalence of abdominal obesity, which was associated with increased risk of metabolic disorders.

#### **2. Dietary Habits**

Dietary analysis revealed several hygienic problems:

- Daily caloric intake often exceeded recommended levels.
- High consumption of fats and refined carbohydrates.
- Frequent intake of fried foods, fast foods, and sweets.
- Insufficient consumption of fruits, vegetables, and fiber-rich foods.
- Irregular meal patterns, including skipping breakfast and late-night eating.
- Inadequate water intake and high consumption of sugar-sweetened beverages.

These dietary patterns disrupt metabolism and contribute to weight gain. Poor adherence to dietary hygiene principles further exacerbates obesity among middle-aged women.

### **3. Physical Activity and Lifestyle**

Most participants reported low levels of physical activity. Prolonged sitting at work, extensive use of motorized transport, and insufficient exercise during leisure time were common.

Household responsibilities and lack of time were identified as major barriers to regular physical activity.

### **4. Psychosocial Factors**

Psychosocial stress related to occupational and family responsibilities contributed to unhealthy eating behaviors and reduced motivation for physical activity. Stress activates the hypothalamic–pituitary–adrenal axis, increasing cortisol levels, which promotes fat accumulation. Therefore, stress management is an important component of hygienic prevention strategies.

### **5. Overall Analysis**

The findings indicate that obesity results from a combination of biological, behavioral, and environmental factors. In middle-aged women, hormonal changes, particularly decreased estrogen levels, lead to increased fat accumulation and altered fat distribution. When combined with unhealthy dietary habits and insufficient physical activity, these changes significantly increase obesity risk.

### **Conclusion**

Obesity among middle-aged women represents a significant public health concern. The study demonstrates that unhealthy dietary habits, low physical activity, socio-economic factors, and psychosocial stress play a major role in obesity development. Effective prevention requires a comprehensive approach that integrates individual behavior change, community-level preventive measures, and supportive public health policies.

### **Practical Recommendations**

1. Implement nutrition education programs tailored to middle-aged women.
2. Promote regular physical activity in community and workplace settings.
3. Encourage balanced diets and adequate water intake.
4. Develop and apply stress management strategies.
5. Strengthen hygienic awareness through public health campaigns.
6. Promote adherence to dietary hygiene principles.
7. Encourage active leisure time alongside household responsibilities.

### **REFERENCES**

1. Ermatov N.J. et al. Hygienic analysis of the nutritional condition of the employees of textile enterprise. 2024.
2. Malik V.S., Hu F.B. Obesity prevention: evidence and challenges. American Journal of Clinical Nutrition. 2021.
3. Nizom E. Et al. Hygienic Analysis of Educational Process in Primary Classes. – 2025.
4. Obesity: global epidemiology and pathogenesis. Nature Reviews Endocrinology. 2019.
5. Ortiqov B.B. Hygienic requirements for nutrition of workers in potassium production enterprises. Medical Journal of Young Scientists. 2025; 13(03):194–200.
6. Ortiqov B.B., Bakhtiyorova G.R., Tugilova S.N. Analysis of the main risk group products in the daily diet of textile enterprise employees. 2024.

7. Popkin B.M., Adair L.S. Global nutrition transition and the pandemic of obesity. *Nutrition Reviews*. 2020.
8. Popkin B.M., Ng S.W. The nutrition transition to a stage of high obesity and noncommunicable disease prevalence dominated by ultra-processed foods. *Obesity Reviews*. 2021.
9. The obesity transition: stages of the global epidemic. *Obesity Reviews*. 2019.
10. World Bulletin of Public Health. Prevalence of Obesity and its Prevention. 2024.
11. World Health Organization. Obesity and overweight. Geneva: WHO; 2021.
12. Саидова Г. Т., Мирсадикова Н. М. Питания и качественный анализ нутриентов в рационе женщин климактерического периода //journal of new century innovations. – 2025. – Т. 90. – №. 3. – С. 213-217