

THE IMPACT OF HOT CLIMATE, AGRICULTURAL PRODUCT DIVERSITY,
AND OPEN-AIR TRADE ON FOOD HYGIENE IN SURKHANDARYA REGION

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Abstract: This article highlights the importance of nutritional hygiene in the Surkhandarya region, particularly under the conditions of a hot climate, open-air trade, and the diversity of agricultural products that pose hygienic risks. The paper analyzes issues such as ensuring food safety, maintaining sanitary conditions, and shaping a culture of healthy eating in local market environments.

Keywords: nutritional hygiene, Surkhandarya, open-air trade, climate, food safety, fruits and vegetables.

Relevance of the Issue:

Surkhandarya region is located in the southern part of Uzbekistan, where a subtropical climate prevails. The hot, dry, and sunny weather throughout the year creates favorable conditions for agriculture. Fruits, vegetables, melons, and other agricultural products are widely grown in the region. These products are often sold openly in local markets without full compliance with sanitary requirements. This increases the risk of foodborne infectious diseases, especially among children and individuals with weakened immune systems. Therefore, adherence to nutritional hygiene, especially in open-air markets and hot climates, becomes one of the most pressing public health issues. Studying this problem is crucial for raising public awareness of sanitary practices and preventing illnesses.

Introduction:

Nutritional hygiene is one of the key factors in ensuring human health. It includes observing hygienic rules and standards in the preparation, storage, transportation, and consumption of food products. In regions with hot climates, food spoilage occurs more rapidly, creating a favorable environment for the proliferation of bacteria and viruses. As a result, the risk of

foodborne

infectious

diseases

increases.

Соғлом овқатланиш

- **Овқат рациониди куйидаги озик моддалар: оксиллар, ёғлар, углеводлар, витаминлар ва минерал моддалар етарли даражада бўлиши керак.**



In densely populated areas especially during summer open-air markets, street food vendors, and informal trade stalls may not fully meet hygiene standards, which can lead to mass food poisoning and the spread of epidemics. Therefore, raising public awareness, strengthening preventive measures, and improving control mechanisms in the field of nutritional hygiene are among today's most important tasks.

Main Body

Climatic Conditions and Food Safety:

Hot climates directly affect food safety. The high temperatures observed in Surkhandarya, particularly in summer, cause rapid spoilage of food, especially perishable items like meat, dairy products, fish, and pastries. These conditions provide a suitable environment for the rapid multiplication of microorganisms such as Salmonella, Escherichia coli (E. coli), and Shigella. These pathogens can cause intestinal infections and foodborne toxic infections. Thus, products sold outdoors without observing hygienic conditions can pose serious health risks.

Diversity of Agricultural Products and Storage Issues:

Surkhandarya is rich in agricultural products such as tomatoes, cucumbers, watermelons, melons, pomegranates, grapes, peaches, and more. While these products are known for their natural quality, taste, and abundance, improper storage after harvest or failure to wash them before consumption may lead to various infections due to enterobacteria, parasitic eggs, or pesticide residues. Therefore, strict adherence to hygiene during food storage, transportation, and consumption is essential.

Hygiene Conditions at Open-Air Trade Points:

Hygienic conditions at markets and street vendors in the region often do not meet sanitary standards. Vendors may not wear gloves, food may be exposed to dust, or may not be stored at appropriate temperatures.

This negatively impacts food quality, especially during hot summer days, when bacterial and fungal growth accelerates, increasing the risk of mass food poisoning. Cleanliness, proper waste disposal, and the hygienic state of water sources are also important factors.

Preventive and Hygienic Recommendations:

1. Wash fruits and vegetables thoroughly before consumption.
2. Avoid giving unprocessed foods to children.
3. Be cautious when purchasing food from street vendors or markets.
4. Strengthen hygiene monitoring in markets by local authorities and sanitation services.
5. Conduct public awareness campaigns on nutritional hygiene.

Conclusion:

The climatic and economic conditions of Surkhandarya demand special attention to food hygiene. The hot climate, widespread open-air trade, and the variety of food products have made ensuring food safety a pressing concern. Particularly during summer, failure to comply with hygiene standards increases the risk of foodborne infections and poisoning. Therefore, raising public hygiene awareness, strengthening sanitary oversight at trade points, and carrying out systematic preventive and promotional activities should be among the top priorities of the public health system. These measures can help foster a healthy eating environment and significantly reduce disease risks in the community.

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