

ORGANIZING HEALTHY AND SAFE NUTRITION FOR POPULATIONS WITH CARDIOVASCULAR DISEASES IN UZBEKISTAN: A PUBLIC HEALTH PERSPECTIVE

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Abstract

Cardiovascular diseases (CVDs) remain the dominant cause of mortality globally and represent a major public health challenge in Uzbekistan. While pharmacological interventions are widely used, dietary modification remains a cornerstone of both prevention and management. This study aims to develop a context-specific, evidence-based framework for organizing healthy and safe nutrition among populations affected by cardiovascular diseases in Uzbekistan. Using a narrative synthesis of international guidelines and regional data, the paper evaluates dietary risk factors, identifies gaps in current nutritional practices, and proposes culturally adaptable solutions. The findings indicate that excessive sodium intake, high consumption of saturated fats, and increasing reliance on processed foods significantly elevate cardiovascular risk. Conversely, adherence to balanced dietary patterns rich in plant-based foods, whole grains, and unsaturated fats contributes to improved cardiovascular outcomes. The study concludes that integrating public health policies with culturally sensitive dietary interventions can substantially reduce the burden of cardiovascular diseases.

Keywords

cardiovascular diseases, Uzbekistan, nutrition policy, dietary risk factors, prevention, food safety

1. Introduction

Cardiovascular diseases (CVDs), including ischemic heart disease, cerebrovascular disease, and hypertension, are responsible for a substantial proportion of premature mortality worldwide. In Uzbekistan, the epidemiological transition toward non-communicable diseases has intensified the burden of cardiovascular conditions.

Unlike non-modifiable factors such as age and genetics, dietary behavior represents a controllable determinant of cardiovascular health. However, rapid

urbanization, changes in food systems, and persistence of traditional high-fat and high-salt diets have contributed to unfavorable health outcomes.

This paper seeks to bridge global scientific evidence with national dietary realities by proposing practical and sustainable nutritional strategies tailored to Uzbekistan's population.[1,2,3,4,5]

2. Materials and Methods

2.1 Study Design

This study employs a narrative review combined with contextual analysis. It synthesizes international scientific literature with region-specific dietary and epidemiological data.[6,7]

2.2 Data Sources

Data were obtained from:

- Peer-reviewed journals indexed in Scopus
- WHO and FAO reports
- Regional health statistics

2.3 Analytical Approach

The study integrates:

- Comparative evaluation of dietary models
- Risk factor analysis
- Contextual adaptation of global recommendations

3. Results

3.1 Cardiovascular Disease Burden in Uzbekistan

Available evidence suggests that cardiovascular diseases account for more than half of total mortality in Uzbekistan. Hypertension prevalence is estimated to affect approximately one-third of the adult population.

A critical contributing factor is excessive dietary sodium intake, often exceeding recommended limits by two to three times. Additionally, widespread use of animal fats and cooking oils contributes to dyslipidemia.[8]

3.2 Dietary Risk Factors: A Contextual Analysis

3.2.1 High Sodium Consumption

Salt intake in Uzbekistan is significantly above international recommendations due to:

- Traditional bread consumption
- Salt-rich dishes
- Preserved foods [9]

3.2.2 Excessive Saturated Fat Intake

Common dietary practices include:

- Frequent consumption of fatty meat

-Use of animal-based oils

These habits contribute to elevated LDL cholesterol and vascular damage.

3.2.3 Increasing Processed Food Consumption

Urban populations increasingly consume:

- Fast food
- Packaged snacks
- Sugary beverages

This shift exacerbates obesity and metabolic disorders.

3.3 Protective Dietary Strategies

3.3.1 Adaptation of Traditional Diets

Rather than eliminating traditional foods, healthier preparation methods should be encouraged:

- Reducing oil in plov
- Increasing vegetable portions
- Using lean meat

3.3.2 Promotion of Plant-Based Foods

Higher intake of legumes, fruits, and vegetables improves:

- Antioxidant status
- Vascular health
- Lipid metabolism

3.3.3 Inclusion of Healthy Fats

Replacing animal fats with:

- Vegetable oils
- Nuts
- Fish

leads to better cardiovascular outcomes.

3.4 Evidence-Based Dietary Models in Local Context

Mediterranean Diet Adaptation

Although geographically different, its principles can be localized:

- More vegetables and legumes
- Less red meat

Use of plant oils

DASH Diet Implementation

Effective for hypertension control:

- Lower salt
- Balanced minerals
- Easily adaptable in clinical settings

3.4 Food Safety Considerations

Safe nutrition is not limited to nutrient composition. It also includes:

- Hygiene in food preparation
- Avoidance of contaminated products
- Proper storage conditions

Foodborne risks can worsen inflammatory processes linked to CVDs.

4. Discussion

The analysis demonstrates that improving dietary habits in Uzbekistan requires a multifaceted approach. While global dietary recommendations are well-established, their success depends on cultural acceptance and economic feasibility.

Key Barriers

- Limited public awareness
- Economic constraints
- Cultural attachment to traditional high-fat foods

Strategic Solutions

- Gradual dietary modification
- Community-based education
- Government-led food reform policies

5. Public Health Implications

5.1 Policy-Level Interventions

- Regulation of salt content in bread and processed foods
- Elimination of industrial trans fats
- Mandatory food labeling

5.2 Educational Interventions

- School nutrition programs
- Public awareness campaigns
- Training healthcare providers

5.3 Healthcare System Role

- Integration of dietary counseling
- Preventive screening programs
- Long-term patient monitoring [10]

6. Conclusion

Addressing cardiovascular diseases through improved nutrition requires coordinated action across multiple sectors. In Uzbekistan, culturally adapted dietary strategies combined with strong public health policies can significantly reduce disease burden.

Sustainable change will depend on aligning scientific recommendations with local practices, ensuring accessibility, and promoting long-term behavioral change.

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