OBJECTIVE REPORTS: GLOBAL HEALTH

NUTRIENT INTAKE AND LIFESTYLE FACTORS BY DIABETES STATUS OF CIRCASSIANS AND CHECHANS IN JORDAN

Objectives: Diabetes is one of the most prevalent diseases in Jordan. However, little is known about nutrient intakes of minority groups in Jordan with and without diabetes. Our study aimed to examine if the intake of energy, macronutrients and some micronutrients differed between normal and diabetic adults among Circassians and Chechans in Jordan.

Research Design, Setting, Participants: This cross-sectional study was conducted among 437 Circassians (160 males and 277 females) and 355 Chechans (119 males and 236 females aged ≥18 years. They were recruited from the Chechan and Circassian communities living in Jordan.

Main Outcome Measures: A participant was defined as affected by type 2 diabetes mellitus if diagnosis was known to patient or if his or her condition complied with the American Diabetes Association definition. One 24-hour dietary recall for each participant was collected by face-to-face interview.

Results: Most of the measured anthropometric and biochemical parameters showed a significant difference between normal individuals and those with impaired fasting glucose or diabetes. Intakes of nutrients involved in the pathogenesis of diabetes including protein, fat and fiber did not differ between stratified participants according to blood glucose status for both Circassians and Chechans.

Conclusions: Intake of nutrients did not differ in participants with normal blood glucose from those who had impaired fasting glucose or diabetes in the two studied populations. These two populations may need genetic studies to identify the risk factors other than dietary and lifestyle factors for type 2 diabetes. (Ethn Dis. 2014;24(2):200–206)

Key Words: Nutrients, Diabetes, Obesity, Circassians, Chechan

INTRODUCTION

Diabetes mellitus is considered a major national and international health problem.1–3 Obesity often is associated with vascular-damage diseases such as diabetes mellitus. Epidemiological studies in different populations around the world have shown variation in the prevalence of diabetes among different ethnic groups.4,5 Diabetes is a genetically complex disease in which genetic variants predispose individuals to develop the disease.7 However, environmental factors play a major role in the development of the disease as the rapid rise of diabetes prevalence over the last few decades suggests.

The majority of the populations of Jordan are of Arab descent.10 The Chechans and the Circassians are two minority groups in Jordan; both populations are among the largest indigenous nationalities of the North Caucasus.11–13 As a result of the Russian-Circassian War, a large group of Chechans and Circassians immigrated to Jordan 140 years ago.14 Estimates of the Circassian and Chechan populations in Jordan vary from 20,000 to 80,000 and 12,000 to 30,000 respectively, out of a total population of 5.6 million people.10 Both populations remain endogamous and relatively isolated in terms of culture and tradition.11 Thus, providing an excellent opportunity to study risk factors associated with a disease in populations with limited genetic variability. A study by Dajani et al showed that the prevalence of impaired fasting glucose (IFG) among Circassians (16.7%) and Chechans (12.8%) is higher than in the Jordanian population (10.5%).15 Unhealthy dietary pattern and lifestyle factors as well as genetic predisposition were found to play a role in developing IFG and hence type 2 diabetes.8,9 On the other hand, diet, medications, and lifestyle changes are the most important factors in preventing diabetes and its complications.6–9

To the best of our knowledge, no study has been conducted to estimate nutrient intake among Jordanians or the Circassian and Chechan populations in Jordan or elsewhere. Therefore, the main objective of our study was to explain the main objective of our study was to describe the nutrient intake and lifestyle factors by diabetes status of Circassians and Chechans in Jordan using the study sample in the Dajani study.15,16

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