

DIFFERENCES IN FOOD INTAKE AND DISPARITY IN OBESITY RATES BETWEEN ADULT JEWS AND BEDOUINS IN SOUTHERN ISRAEL

Objective: The goal of this study was to compare eating patterns of Jews and Muslim Bedouins and investigate possible dietary causes for discrepancy in obesity rates.

Methods: We pooled two surveys that included data from 793 Jews and 169 Bedouins aged 35–64 years recruited from 1998 through 2003 in southern Israel. For the Jewish sample, we used a proportional geographic cluster random sample of persons aged ≥ 35 years. For the Bedouins, a convenience sample of 519 participants was used. Participants were interviewed at home, using modified 24-hour food questionnaires with additional questions regarding health and eating habits.

Results: The Jewish group was older and better educated than were the Bedouins. The Bedouins had a higher age-adjusted body mass index than did the Jews ($P=.03$), and the rate of obesity was higher among Bedouins than Jews (27.9% vs 20.0%, respectively). Compared to Jewish men, Bedouin men reported lower intake of fat, cholesterol, total saturated fat, and protein and fat as a percentage of total energy, but they reported higher intake of carbohydrates, fiber, and carbohydrates as a percentage of total energy. Bedouin women reported lower intake of total saturated fat, percentage of protein and fat, and higher intake of carbohydrates and fiber than did Jewish women.

Conclusion: The Bedouin population is adapting Western eating patterns that appear to be associated with increased obesity. To address this problem, culturally sensitive intervention programs will have to be developed. (*Ethn Dis*. 2008;18:13–18)

Key Words: Obesity, Bedouins, Jews, Dietary Intake, Lifestyle

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INTRODUCTION

The shift from acute infectious diseases to chronic, noncommunicable health conditions is a complex and dynamic epidemiologic process.¹ Nutritional transition is one of the components of such processes and is associated with changes in lifestyle factors such as physical activity, use of alcohol and tobacco, increased stress, and changes in dietary patterns. These factors, in turn, are related to the rapid increase in prevalence of overweight and obesity, resulting in chronic and degenerative diseases.^{2,3}

The Negev region in southern Israel is the home of two subpopulations, Jews and Bedouins, each with its own culture and socioeconomic and educational systems. The Jewish population in Negev is mostly urban and of lower socioeconomic status than Jews in Israel as a whole; a high percentage of the Jewish population are new immigrants from the former Soviet Union.

The Bedouins are a Muslim population in transition from a nomadic to a settled lifestyle and are at the lowest socioeconomic level of all population groups in Israel. These residents, who account for $\approx 25\%$ of the Negev population,^{4,5} are on average younger than Jewish residents in the region and in the country as a whole. The Negev Jewish population has a higher educational level than does the Bedouin population, and Bedouins also have higher rates of unemployment and lower monthly incomes than do the Jewish population.^{4,5}

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The main goal of this study was to compare the eating patterns of two populations that live side by side—Jews and Muslim Bedouins—to investigate possible causes for the discrepancy in obesity rates

Vital statistics on the Negev population have not been published; however, national data show that while death rates from acute myocardial infarction and cardiovascular disease decreased during the past four decades in both Jewish and Arab populations, the age-adjusted rates are higher in Muslims, which cannot be attributed to differences in healthcare access.⁶ Age-adjusted prevalence of diabetes is substantially higher in Arab populations, and the difference is even more prominent in women.⁷ Arab ethnicity was shown to be an independent risk factor for obesity in women in a national survey.⁸

Nutrition is recognized as a key lifestyle factor in the development of obesity and chronic diseases.^{9–12} Since the last comparison between diets of Jews and Arabs was published in 1964,¹³ this study was undertaken in view of the lack of current dietary information on Jews and Muslims. The main goal of this study was to compare the eating patterns of two populations that live side by side—Jews and Muslim Bedouins—to investigate possible causes for the discrepancy in obesity rates, with the intention of