

Dietary polyphenol intake and socioeconomic status in adult russian/siberian population

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Background:

Polyphenol consumption from polyphenol-rich foods (tea, coffee, fruits, vegetables at all) is inverse associated with the risk of cardiovascular- and other noncommunicable chronic diseases and varies in different regions due to dietary habits, as well as by socioeconomic factors.

Methods:

Participants: the Siberian urban population (Novosibirsk, HAPIEE study, 9324 (4,249 men and 5,075 women) aged 45-69 years. Dietary data collected using a 141-item food frequency questionnaire. Data on the polyphenols were taken from the Phenol-Explorer database (version 3.6). Total polyphenols (TPH) were considered as a sum of all individual classes: flavonoids, phenolic acids, stilbenes, lignans and other polyphenols and their food sources. Socioeconomic status included gender, educational, occupational and marital status.

Results:

The main sources of TPH were tea, coffee, fruits, vegetables and rye bread. Average total polyphenol consumption was 1273 (647) in men and 1203 (626) mg/day in women ($P < 0,05$). By occupational status, consumption of TPH in unemployed men was lower - 1139 (442) mg/day vs 1282 (648) in employed, working pensioners and unemployed pensioners ($P < 0,05$). The consumption of TPH in women: in unemployed pensioners: 1176 (613) vs 1220 mg/day in employed and working pensioners. The main polyphenols intake in all occupational groups were flavonoids (66,1-67,6 % total polyphenols), followed by phenolic acids (21,4-22,3%). TPH consumption in groups with less education than primary in men was lowest: 1052 (476) mg/day vs 1273 (646) ($P < 0,05$ vs

men with higher education). In men and women with high education was highest consumption of lignans. The maximum consumption of polyphenol compounds was established in groups of married men and women: 1279 (646) and 1231 (632) mg/day, respectively, $P < 0,05$ vs single individuals.

Conclusions:

The consumption of polyphenol compounds in the Siberian urban population is determined by the socioeconomic status.

Key messages:

- The main individual classes of polyphenols consumed in all educational and marital status groups were the same as in the employment group: flavonoids, followed by phenolic acids.
- Recommendations for consumption of polyphenol compounds for the prevention of chronic non-communicable diseases in Siberia should consider the socioeconomic status of the population.