

FOOD PREFERENCES IN THE POPULATION OF UKRAINE

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Human food choice is conditioned by a number of factors. A human being has genetically deterministic systems underlying the taste evaluation of innate preferences for sweet, salty and fatty food. Sweet food is a fast and easily accessible source of energy. Taste sensitivity to sweet food is an evolutionary advantage for all kinds of animals. A certain amount of a table salt is necessary for normal functioning of the body, particularly for functioning of excitable tissues and maintenance of buffer properties of a blood. Less obvious, but still consistently present innate preferences for fatty food may be explained by the necessity of lipids for a myelination of nerve fibers, ensuring the synthesis of sex hormones and sexual behavior, formation of cell membranes, solubility of a number of vitamins, elevation of the organoleptic properties of the food. In a modern society these initially useful food preferences have moved beyond their adaptive borders, promoting the development in the population of a number of metabolic disorders, such as diabetes mellitus, obesity and mental disorders. The lack of genetic and population studies in the field nutrigenetics in the population of Ukraine, as well as overburdenness of a population by the genetic load on the “diseases of civilization” dictates the need for these studies.

Food preferences were studied in 288 Ukrainian inhabitants, mainly from Kharkiv and Kharkiv region. Food preferences were studied by special interviewing, which places the examinees under the conditions of the equal accessibility of food, lack of hunger and an opportunity to choose several food categories. As the food groups seven following groups were chosen: sweet (high-calorie carbohydrate group), meat (protein group), fruit (cellulose and vitamins), salty food (the source of NaCl), first vegetable courses (cellulose and vitamins, “healthy” food), fast food (“junk” food containing food additives, colorings, preservatives), fatty food (the source of essential fatty acids, high-calorie food).

45.5% of examinees detected the compatible food preferences. According to the relative order by individual food preferences, the examined groups were allocated in this way: sweet, fruit, meat, “fast food”, fatty food, first vegetable courses, salty food. The comparisons were carried out in preferring and non-preferring groups, which were called “testers” and “not testers” accordingly. It was shown that with an

age there was a decrease in preferences for sweet and fruit for males and “fast food” group for females (Table).

Table

The correlation coefficients (r) between food preferences and age

Food group	Males (n = 66)	Females (n = 222)
Sweet	-0.25* ± 0.12	-0.10 ± 0.12
Fruit	-0.30* ± 0.12	-0.07 ± 0.12
Meat	-0.02 ± 0.12	0.03 ± 0.12
Fast food	-0.06 ± 0.12	-0.33** ± 0.11
Fatty food	-0.08 ± 0.12	-0.04 ± 0.12
First vegetable courses	-0.08 ± 0.12	0.10 ± 0.12
Salty food	-0.20 ± 0.12	-0.06 ± 0.12

Note. - n – the number of examinees, $r \pm Sr$ – the biserial correlation coefficient and its statistical error. The difference between the correlation coefficients of people of the opposite sex is not significant in all cases.

It is obvious that in the population sample under study there is a tendency of decreasing of food preferences for sweet with age. It can be considered as a risk-reduction factor of obesity in this age group. The studies in the field of the obesity correction by the opiate antagonists, naloxone and naltrexone, selectively reducing the consumption of chocolate, are known. The age-related decrease in food preferences for fruit, the source of vitamins and cellulose, appears as the unfavorable trend among Ukrainians. It is known that many fruits and vegetables, for example, grapefruit, green tea, brussels sprout and soy products contain phytochemicals with the oncoprotective activity. These particularly include citrus flavonoids, green tea and red wine polyphenols, cruciferous vegetables glucosinolates and soy products isoflavones. The statistically significant differences in preferences for fruit and first vegetable courses between persons of different sexes were found. Thus, every fifth male and only every fifteenth female in the absence of tangible hunger prefer first vegetable courses, which we referred to the category of “healthy” food. At the same time the sex differences concerning fruit testify that half of all females and a third of males prefer this food category.

Thus, in general, in the population of Ukraine the highest preferences for sweet food, fruits and meat has been revealed. A negative correlation between the age and preferences for sweet food and fruit among males and “fast food” group among females have been found out. More evident preferences for fruit among females and for first vegetable courses among males has been shown.