

RISK FACTORS OF HEALTH IN LIFESTYLE OF ADULTS

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Abstract

The article presents partial results which follow on the results of the article „The selected health determinants of adults“. In the adults lifestyle, smoking with higher percentage of men than of women, but also coffee and sweets, occur in the context of risk factors which threaten their health. In nutrition they absent at a higher rate a higher intake of fish, cereals, fruit and vegetables. Among adults mostly sedentary nature of the work prevails as well as lower capacity of utilization of sports and recreation activities among women compared to men.

Key words: adults, food, health, physical activity

Introduction

Unfavorable mortality rate from „civilization diseases“, such as circulatory system diseases in the population of the European Union (EU) and non-decreasing incidence on their severe acute conditions, reflects high prevalence of multifactorial acting risk factors. There belong tobacco, increased blood pressure and blood cholesterol level which are directly related to lifestyle as well as to eating habits or level of physical activity (Barengo et al., 2005; Pupiř & Polgár, 2005). Besides to the physical activity there is another limited factor of population's health – psychological side. Nowadays we mean sleep disorders which are caused by extreme work-load which results in biological rhythms' disorders. Chronotype's problem, psychological features and physical activity are solved and researched by Vančová & Pivovarniček (2013), Palovičová & Vančová (2013) and Vančová (2014, 2015). Other factors connected with cardiovascular diseases are overweight, obesity, diabetes mellitus, excessive alcohol consumption and psychosocial stress (Blair & Brodney, 1999; Dorn et al., Hlúbik, 2002; Korčok & Pupiř, 2006; Videmšek et al., 2009). Moynihan & Peterson (2004) add that etiology of dental caries is connected mainly with increased consumption of sweetened beverages. One of the conclusions in the report of the Dutch National Institute for Public Health and the Environment is the finding that excessive intake of „inappropriate“ types of fats, such as saturated fats and trans fatty acids, increases probability of the growth of cardiovascular diseases by 25% whilst food intake consisting of fish once or twice a week reduces this risk by 25%. In Netherlands, 38 000 occurrences of cardiovascular diseases among adults aged over 20 years can be subjoined to unfavorable dietary composition. In comparison with our neighboring countries and with the average of the EU countries, in 2005 in Slovakia, there was 1,5 times higher mortality from ischaemic diseases than in the Czech republic, 2,5 times higher mortality than in Austria. In comparison with Hungary, we were on the same level. Eurobarometer (2012) state that currently is smoking about 28% of Europeans.

Most people smoke in Greece - 40% while in Spain, Austria, Latvia and Bulgaria in the average of 33% - 36%. On the contrary, at least smoking is decreasing in Sweden (13%), Portugal and Slovakia (23%). Czech Republic belongs to the average. Smoking was in 2012 admitted by 29% of population. The problem of smoking is among unemployed (49%), manual working people (38%) and businessmen (34%). Typical Slovak smoker consumed about 12 cigarettes a day in 2012 which was the lowest in the European Union. Compared to the survey which was three years ago there was a tendency of falling about two cigarettes a day. Eurobarometer (2012) ad that the diseases related to tobacco has results of dying about 695 thousand Europeans every year. It is estimated that smoking costs EU countries at least 100 trillion euros. According to the WHO (2011), excessive alcohol consumption participates in more than 60 diseases and health damages. In Slovakia in 2010, there were 5 868 people with alcohol abuse diagnosis, therefrom 4 528 men and 1 340 women. It is estimated that cardiovascular diseases cost €169 millions within the EU. The total annual costs per capita are 372€. Within individual member states, per capita costs differ in up to 10 times, from less than 50€ in Malta up to more than 600€ per capita in Germany and in the United Kingdom of Great Britain and Northern Ireland (EHHC, 2005).

Aim

The aim of this study was to find out and to widen knowledge from the sphere of selected risk factors which are in lifestyle of adults in terms of their health.

Methods

In accordance with aim and size of processed material, test group consisted of 239 people of younger and middle-aged adults from Liptovský Mikuláš, 121 of them were men and 118 were women (table 1) who were employed, married and lived with unprovided children. (None of the respondents have been on disability annuity).

Table 1 Characteristics of the group (n = 239)

Factors	Women (n = 118)	
	Body height	Body weight
	168.9 ± 3.2 cm	67.3 ± 6.8 kg
Age	43.3 ± 2.3 years old	
BMI	23.9 ± 1.9	

Factors	Men (n = 121)	
	Body height	Body weight
	180.6 ± 6.3 cm	89 ± 7.9 kg
Age	44.2 ± 1.6 years old	
BMI	24.9 ± 2.1	

Deliberate survey was conducted within two months (January – February) in 2014, we achieved 100 % returnability on the basis of voluntary participation of adults in compliance with the law of privacy. To obtain pilot survey data we used interrogative method – anonymous standardized questionnaire CINDI, which was based on six primary monitored determinants of the quality of life and lifestyle of monitored group. Our qualitative and quantitative data was processed by frequency analysis and chi-squared test ($p < 0.01$ and $p < 0.05$ level of significance), with which we monitored examination of significance of response differences on questionnaire questions. Simultaneously, we processed data in a graphic form, we used methods of logical analysis, synthesis and mental actions for interpretations of results.

Results

Eating habits create an integral part of lifestyle and they affect men's health significantly. Therefore, we are interested about the issue of breakfast which we studied on the group of adults. According to the findings only 66% of men and 72% (Chi = 26, 762; $p < 0.01$) women are eating breakfast regularly. For the assessment we of eating habits we analysed selected issues of concerning the usage of fat for cooking and especially for coating pastries (bread and rolls) where we found the following. The most commonly used fats for preparing meals used equally men and women vegetable oil, lard and butter (table 2).

Table 2 Fat used for preparing meals (n = 239)

Factors/sex	Women (n = 118)	order	Men (n = 121)	order
vegetable oil	72 %	1.	1	1.
margarine	8 %	4.	4	4.
butter or product consisting mainly of it	7 %	3.	3	3.
lard or other animal fat	12 %	2.	15 %	2.
no fat at all	1 %	5.	1 %	5.

One of the favorite coating of pastries (bread and rolls) is butter which is equally used by women (48%, Chi = 13, 061; $p < 0.01$) and as well as men (41%, Chi = 11, 993; $p < 0.01$). In the second place is ranked buttery coating with different tastes. In third place is placed low-fat margarine (table 3). Only 2% of women and 1% of men do not use any fat although lard is used by 3% of women and 10% of men.

Table 3 The most common used fat for coating pastries (n = 239)

Factors/sex	Women (n = 118)	order	Men (n = 121)	order
no	2 %	5.	1 %	5.
the low-fat margarine	18%	3.	11 %	3.
butter or product consisting mainly of it	29 %	2.	37 %	2.
lard or other animal fat	3 %	4.	10 %	4.
butter	48 %	1.	41 %	1

An important component of the diet belongs to drinking milk (table 4) where we found that 19% of women and just less than 3% men (16%) do not drink milk at all.

Table 4 Milk in eating regime (n = 239)

Factors/sex	Women (n = 118)	order	Men (n = 121)	order
whole milk (without treatment)	6 %	6.	8 %	5.
whole milk (3,6%)	10 %	5.	14 %	3.
semi-skimmed milk (2,0%)	36 %	1.	48 %	1.
the skimmed milk (1,5%)	18 %	3.	9 %	4.
skimmed milk (0,05%)	11%	4.	3 %	6.
do not drink milk	19 %	2.	16 %	2.

Among the components of our diet which are harmful respectively are not harmful have been discussions with great intensity even today include coffee. In the studied group of adults coffee do not drink only 11% of women and 25% men which is more than 14% of the difference between men and women. Daily up to 89% (Chi = 36, 933; $p < 0.01$) of women drink 3 cups of coffee while 63% of men drink two cups a day. Similarly, women consume more tea (78%, Chi = 26, 396; $p < 0.01$) than men (66%) which is the difference of one cup per day for women. In the studied group of adults 44% of women do not use sugar in coffee and 62% of men do not use as well ($p < 0.01$). While women use 2-3 cubes of sugar into the coffee men use only one sugar cube. Similarly, tea is drank by women (59%) more with usage of sugar (2 sugar cubes) than men (45%). 12% of men and three times less of women (4%) use salt in all meals even before tasting meal (table 5). Meanwhile, 24% of women and 19% men do not use any salt. Moreover, food is flavored by salt 72% of women ($p < 0.01$) and 69% of men ($p < 0.01$) only if the food is not enough salted.

Table 5 Salt used in meals (n = 239)

Factors/sex	Women (n = 118)	Men (n = 121)
never ever	24 %	19 %
only if the food is not enough salted	72 %	69 %
always even before tasting food	4 %	12 %

Consumption of bread is varied which in terms of quantification most respondents to daily consumption of 2- 5 slices of bread in favor of men.

Preference to different types of bread is about the same. Whole wheat bread is preferred by 58% (Chi = 15, 133; $p < 0.01$) of women and 46% ($p < 0.01$) of men. White bread favors 32% of women and 41% of men. 10% of women and 13% of men prefer other forms of bread which are offered by the market (table 6).

Table 6 Consumption of bread (n = 239)

Factors/sex	Women (n = 118)	Men (n = 121)
whole wheat bread	58 %	46 %
white bread	32 %	41 %
another bread	10 %	13 %

Another meals which eat the studied group we found that men and women like to eat potatoes and rice which is prepared in different ways, most often cooked. Cereals are consumed less and are more likely preferred by female (43%) than men (22%) at a frequency of 1 to 2 times a week. Consuming of cheese indicated to 87% of men and 85% of women with a frequency of 2 times a week. When comparing the consumption of poultry, fish and meat products we found the highest frequency of consumption of pork and beef ($p < 0.01$) but the poultry as well which is preferred more by women than men. In contrast there is a very low consumption of fish which is preferred more by men (48%) than women with a frequency of at least once a week. Fresh fruit and vegetables is consumed more by women (75%; Chi = 9, 333; $p < 0.01$) than men (42%) with a frequency of 3- 5 times a week, while 8% of men and 5% of women do not consume it at all. Consumption of sweets was more typical for women (39%, $p < 0.01$) than for men (18%). Approximately 35% of men and women eat sweets 1- 2 times a week. Eating habits for health reasons tried to change 39% of men and 46% of women ($p < 0.01$) by limiting fat, sweets and sweeteners which were often recommended by doctors and family members. Calorie diets insistent 4 times more women than men (8%). One of the risk factors that threaten the health state of adults which we found in studied group was that a higher percentage of smoking was represented by men (49%; Chi = 13,931; $p < 0.01$) than women (43%) who belong to the currently active smokers. Passive smokers are represented by 29% of men and 18% of women. The consequences of smoking and health are more interested women (38%) than men (18%) while 16% of men and 11% of women would like to quit smoking. Daily average of smoking for men and women is 15 cigarettes. Another risk factor that occurs in adulthood of our studied group is also consumption of alcohol. Though only occasional or irregular form which showed higher levels of men than in women who prefer wine (82%; Chi = 33,096; $p < 0.01$) while men prefer beer (89%; Chi = 36, 933; $p < 0.01$). The following factors may adversely affect the organism equality and contribute to the development of disease symptoms. The use of sports and recreational activities for the purpose of fixation of health and conditioning is inadequate among the vast majority of women of reference file.

Totally 2/3 of women surveyed realized that lack of physical activity (in all its forms) in their regime is a significant risk factor of accompanying health problems, which are caused by: working busyness, family care and weak volitional conviction. While 56% ($p < 0.01$) of men try to regularly realize sports and recreational activities, 28 % irregularly and only 16 % either not at all or just occasionally. Only 19% of men and 12% of women go to work by walk and 10% of men and 8% of women do not exercise walking at all. The intensity of sports and recreational activities is low in representation of 69 % ($p < 0.01$) for women, 22% of them states medium intensity in 9 % is the intensity of sports and recreational activities high. This very moment of low frequency and intensity of physical activities can be a starting point for removal of adults hypokinesia as well as for spread of offers for regular physical activity. 11% of men and 2 % of women stated highly demanding work. 15% of men and 13% of women stated moderate work. Physically light work was stated by 26 % of men and 32% of men. 48% of men and 53% of women stated very easy work from the physical point of view, where they mostly sit. In both sexes the most common initiators for increasing physical activity are family members (Chi = 6, 133; $p < 0.05$) and doctors ($p < 0.01$).

Discussion

Fat is an energy richest source of energy in which its value is compared with proteins and carbohydrates more than twice bigger. Moreover, over-consumption of high fat in food increases the risk of overweight and high levels of cholesterol. Calcium is an essential component of the human body where more than 99% is located in bones and only 1% is disposed outside of the skeleton. It is important for neuromuscular excitability that there is a proper function of the myocardium, blood clotting, hormone secretion, nerve conduction affect cell membranes. It is important to state that a significant source of calcium is milk and dairy products which are one of the essential elements of rational nutrition. Besides the essential nutrients and energy it provides to human beings many substances (minerals, enzymes, proteins) which are characterized not only by nutritional, functional but also as health benefits. What is more, milk contains vitamins A, D, B12, B1 and selenium which slows the aging process and contributes to the protection of the immune system. Milk intake in childhood and adulthood causes to increase of bone mass and density in adulthood (Kalkwarf et al., 2003) and this relationship is significant (Bonjour et al., 1997). Inhabitants of Slovakia drink less milk. In 1992 the average Slovak consumed annually up to 90 liters while in 2012 the average annual milk consumption was dropped to 53 liters. Salt or sodium chloride (NaCl) is naturally found in all food and is used for the preservation and flavoring food. According to rough estimates 2.5 g of salt represents 1 g of sodium. Sodium and chlorine help to regulate blood pressure, control balance of liquids as well as maintain the good condition of the

muscular and nervous system. It also facilitates the absorption of nutrients such as glucose and amino acids. Adult body has an average of 90 g of sodium which half of it is in the blood and other body liquids, bones and a third of the residue is in the cells of the body. The average sodium intake is between 2- 6 g a day. Healthy adults have sufficient income less than 0.5g. Increased requirements are in the periods of major losses (e. g. during menstruation, breast-feeding or intense sweating). It should be important for public health that priority is reducing the intake of salt which is associated with hypertension. In that connection although fish consumption in recent years in Slovakia has increased it does not reach the minimum recommended dose. Nevertheless, the supply of fish is several times wider than it was 10-20 years ago. Fish consumption per inhabitant in Slovakia is about 4- 5 kg per person a year.

While the recommended consumption of fish is minimal of 6 kg and consumption in the EU is between 25 kg a person (Eurobarometer, 2012). It is further stated that, while two decades ago the average of annual consumption of roasted coffee was 1.5 kg while last year it was almost doubled. It is further noted that vegetables and vegetable products were consumed 5% less in 2012 than in 1992 by citizens of Slovakia. What is more, they eat less fruit which annual consumption was reduced by 15%. WHO (2009) estimates that insufficient consumption of fruits and vegetables worldwide causes about 14% of deaths from cancer of the stomach and intestines, 11% of deaths from ischemic heart disease and about 9% of death due to stroke. Epidemiological studies have shown that a high consumption of fruits and vegetables is associated with a lower risk of chronic diseases, especially cardiovascular diseases (Mirmiran et al.,

2009) and the diabetes of second type (Harding et al., 2008) and certain types of cancer such as cancer of the mouth, pharynx, larynx, esophagus, stomach and lung (WCRF, 2007). Eurobarometer (2012) states that for the past two decades it increased the interest of people in Slovakia of the consumption of sweets. Increased consumption of honey, chocolate and chocolate confectionery (in 2012 Slovak people ate an average of 5.3 kilograms of chocolate). Consumption of honey in 1992 has even risen twice.

Conclusion

Eating habits and the content of various meals in the diet of adults with relation to health shows the usage of vegetable oil ($p < 0.01$) in cooking. Popular coating of bread - whole wheat bread is butter of animal nature. Milk is not consumed by 19% of women and 16% of men. The dominant consumption belong pork and beef meat equally in both sexes. In contrast, there is a low consumption of fish and cereals. Fresh fruits and vegetables are consumed more by women (75%; $p < 0.01$) than men (42%) and more coffee and tea is daily drank by women ($p < 0.01$) than men. Sweets are consumed more by women (39%, $p < 0.01$) than men (18%). The lifestyle of adults of the risk factors which threaten their health in smoking prevalence with a higher percentage is more typical for men ($p < 0.01$) than to women. Furthermore, we found that sports and recreational activities are in order to improve health and conditioning especially of women compared to men. The above findings indicate the need for lifestyle changes in the monitored indicators. And the adoption of personality measures in the studied group of adults with intentions to improve health lifestyles and health prevention.

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ČIMBENICI RIZIKA PO ZDRAVLJE U ŽIVOTNOM STILU ODRASLIH

Sažetak

Članak predstavlja djelomične rezultate koji slijede iz rezultata članka "Odabrane zdravstvene odrednice za odrasle". U načinu života odraslih, pušenje je s većim postotkom kod muškaraca nego kod žena, ali i konzumacija kave i slatkiša, pa se pojavljuju u kontekstu čimbenika rizika koji ugrožavaju njihovo zdravlje. U prehrani je odsutan po višoj stopi unos ribe, žitarica, voća i povrća. Među odraslima uglavnom prevladava sjedeća priroda posla kao i niži kapacitet iskorištenosti sportskih i rekreacijskih aktivnosti među ženama u odnosu na muškarce.

Ključne riječi: odrasli, hrana, zdravlje, tjelesna aktivnost

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