

## Eating and Drinking Habits in Patients with Hypertension in Prizren

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### Abstract:

*The aim of the present study is to describe eating habits and drinking specially alcohol consumption in a sample of patients with hypertension in region of Prizren. **Methodology** Participants were 233 patients diagnosed with hypertension in the region of Prizren, Kosovo. In terms of gender composition there were 109 men and 124 women, aged over 18 years old. **Results:** From all participants 3 (1.4%) had normal BP, 26.5% had hypertension stage 1, 34.4% of participants had hypertension stage 2 and 37.7% had hypertensive crisis. In terms of eating habits, results showed that 59.5% of the sample rarely added salt to their food, and 40.5% often added salt to their food. Most of the participants were non consumers of alcohol. **Conclusion** In this study findings are quite problematic in terms of health behaviors displayed by patients with hypertension. Patients seem to have unhealthy eating and drinking habits. According to patients BMI results most of them were overweight or obese, this result is related to another question (fig 2.) where 82.3% eat three or more meals per day and most of them use oil, margarine or butter for cooking. This life style seems to be high risk for developing the incidence of hypertension in our population, also this growing epidemic of obesity as major risk factor for development of hypertension and other serious health problem was observed during literature review. The implications are clear for health professionals dealing with these patients, especially in providing life-style advice and support.*

**Key words:** Lifestyle, eating habits, drinking habits, hypertension, Prizren.

## **Introduction**

Food consumption behavior and dietary habits of people have considerably changed during the last years; fast foods, high calorie diets, pre-cooked foods represent only some of the examples of how modern life has affected eating habits.[1] An unhealthy diet is also an independent risk factor for several chronic diseases; for instance there are estimated 2.7 million deaths due to low fruit and vegetable intakes annually worldwide.[2, 3] Increasing consumption of food rich in saturated fats and sugar are primary reason for growing epidemic of obesity globally [3], which is also a major risk factor for development of hypertension and other serious health problems like diabetes mellitus and heart diseases.[4]

Adequate nutrition is important for a variety of reasons, including optimal cardiovascular function, muscle strength, respiratory ventilation, protection from infection, wound healing and psychological well-being (Martin, 2006). Adequate nutrition entails a diet that contains the constituents (carbohydrate, fats, proteins, vitamins and minerals) that are required for body building, energy supply, body defense and regulatory functions in quantities commensurate with the body need. Malnutrition refers to either inadequate intake of nutrients due to lack of food, ignorance, socio-cultural factors, and diseases among other causes, resulting in underweight and other nutrient deficiency diseases; or intake of nutrients in excess of body requirements due to poor dietary habit (erroneously perceived as a sign of affluence), resulting in overweight and obesity. Poor diet (high consumption of sugar, salt, saturated fat, etc) and unhealthy lifestyle (smoking, alcohol consumption and physical inactivity) have been identified as major risk factors of cardiovascular disease and

other non-communicable diseases (NCDs). Central to the aetiology of diet induced cardiovascular disease is atherosclerosis, and the factor most important in causing atherosclerosis is a high blood plasma concentration of cholesterol in the form of low density lipoproteins (LDLs).

A highly saturated fat diet increases blood cholesterol concentration by 15 to 25%. This results from increased fat deposition in the liver which then provides increased quantities of acetyl-CoA in the liver cells for production of cholesterol. It is therefore important to maintain a diet low in saturated fat as to maintain a diet low in cholesterol in order to decrease the blood cholesterol concentration (Arthur and John, 2000).

This fact is corroborated by the findings in 'the strong heart study' that reported total fat, saturated fat and monounsaturated fatty acid intake as strong predictors of coronary heart disease (CHD) mortality in American Indians aged 47 to 59 years independent of other established CHD risk factors. Reports from several studies also show very strong association between diet and development of non-communicable diseases. In a study among female nurses, overweight or obesity was the single most important predictor of diabetes mellitus; also, lack of exercise, a poor diet, current smoking and abstinence from alcohol were all associated with a significant increased risk of diabetes, even after adjustment for the body mass index [12].

Ironically, overweight and obesity are linked to more deaths worldwide than underweight. For example, 65% of the world's population live in countries where overweight and obesity kill more people than underweight (this includes all high-income and most middle-income countries). Once considered a high-income country problem, overweight and obesity are now on the rise in low- and middle-income countries, particularly in urban settings. In 2008, more than 1.4 billion adults, 20 years and older, were overweight. Of these, over 200 million men and nearly 300 million women were obese.

35% of adults aged 20 years and over were overweight in 2008, and 11% were obese. Overweight and obesity are the fifth leading risk for global deaths. At least 2.8 million adults die each year as a result of being overweight or obese. In addition, 44% of the diabetes burden, 23% of the ischemic heart disease burden and between 7 and 41% of certain cancer burdens are attributable to overweight and obesity [14].

Although tobacco deaths rarely make headlines, tobacco kills one person every six seconds. Tobacco kills a third to half of all people who use it, on average 15 years prematurely. Today, tobacco use causes 1 in 10 deaths among adults worldwide – more than five million people a year. Tobacco will kill over 175 million people worldwide between now and the year 2030 and by 2030, unless urgent action is taken, tobacco's annual death toll will rise to more than eight million. If current trends continue unchecked, it is estimated that around 500 million people alive today will be killed by tobacco [11, 14].

Drinking alcohol regularly in large amounts increases blood pressure. It means consuming more than one drink daily for females and more than two drinks daily for men. In this case a low blood level of potassium will also be present. The correlation of alcohol intake with blood pressure depends on age and gender. Study's results showed that alcohol was significantly associated with blood pressure in women above 49 years, and men above 74 years of age. [3, 5]

Alcohol consumption is the world's third largest risk factor for disease and disability; in middle-income countries, it is the greatest risk. Alcohol is a causal factor in 60 types of diseases and injuries and a component cause in 200 others. Almost 4% of all deaths worldwide are attributed to alcohol, greater than the deaths caused by human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS), violence or tuberculosis. Alcohol is also associated with many serious social issues, including violence, child neglect and abuse, and absenteeism in the workplace. The harmful use of

alcohol is a particularly grave threat to men. It is the leading risk factor for death in males aged 15 to 59 years, mainly due to injuries, violence and cardiovascular diseases.

Globally, 6.2% of all male deaths are attributable to alcohol, compared to 1.1% of female deaths. Men also have far greater rates of total burden attributed to alcohol than women – 7.4% for men compared to 1.4% for women [11].

Globally, the overall prevalence of raised blood pressure in adults aged 25 years and over was around 40% in 2008. Across the WHO regions, the prevalence of raised blood pressure was highest in Africa, where it was 46% for both sexes combined. Worldwide, raised blood pressure is estimated to cause 7.5 million deaths, about 12.8% of the total of all deaths. This accounts for 57 million disability adjusted life years (DALYS) or 3.7% of total DALYS (WHO, 2013c). Identification of these major risk factors and the implementation of control strategies (for example, community education and targeting of high risk individuals) have contributed to the fall in NCDs mortality rates observed in industrialized nations (Ford et al., 2007). In addition, dietary regimen (often combined with regular moderate intensity physical activity such as brisk walking, cycling etc, lasting for at least 30 min, to be observed at least thrice weekly) are now available for the prevention and/or treatment of many non-communicable diseases. One of such regimen is the Dietary Approach to Stop Hypertension (DASH) eating plan, which has been found to be more effective in lowering blood pressure if combined with reduced salt intake (National Institute of Health (NIH)/National Heart, Lung and Blood Institute (NHLBI, 2006).

Lifestyle modification is a suitable primary therapy for patients with mild hypertension (i.e., blood pressure greater than 140/90 mm Hg) and is a suitable adjunct to pharmacologic therapy. Furthermore, lifestyle modification may prevent increases in blood pressure and the development of

hypertension in people at risk, and such changes may be applicable to population-based interventions. [13]

To summarize unhealthy diets along with physical inactivity are two of the main risk factors of many chronic diseases, including hypertension.[1, 2] According to National Institute of Public Health of Kosovo (NIPH) 77% of the overall population in Kosovo suffers from hypertension; this disease also represents 57% of causes of deaths in the country [8]. Although a healthy diet and moderate physical activity are related to better management of hypertension, very little attention is being paid to these two aspects.[9, 10]

## **Purpose of the Study**

The purpose of the present study is to describe eating habits and drinking specially alcohol consumption in a sample of patients with hypertension in region of Prizren.

## **Methods**

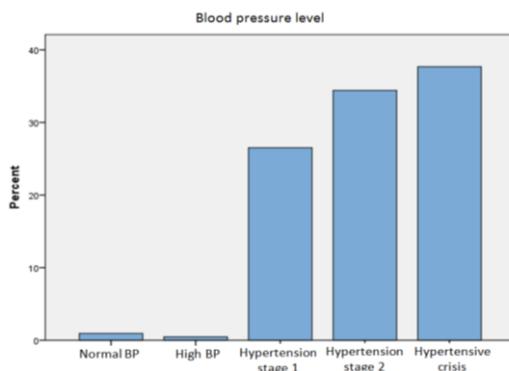
Participants were 233 patients diagnosed with hypertension in the region of Prizren, Kosovo. In terms of gender composition there were 109 men and 124 women, aged over 18 years old. In terms of education level, 4 (1.7%) of them were without any year of school, 21 (9.0%) of them with 4 year school, 158 (67.8%) of them completed elementary education (7, 8 or 9year school), 24 (10,3%) of them secondary school, 21 (9%) held a university degree, 5 (2,1%) master or doctoral degree. Also as regards marital status, 181 of patients were married, while 1 (0,4%) was unmarried, 4 (1.7%) were divorced, and 47 (20.2%) were widowed.

**Data collection and Design:** This study was cross sectional and descriptive in nature. The methods of data collection comprised of personal interview and physical assessment (anthropometric and blood pressure measurements). A

standardized, semi-structured, interviewer administered questionnaire (modified Life Style Questionnaire from Institut de recherches cliniques de Montreal, 2008) was used to obtain information on the socio-demographic characteristics of the study participants, dietary pattern and lifestyle. The questionnaire included 24 questions on eating habits; examples were ‘Which of the main meals you eat’, ‘How much you eat meat, fish, cheese’ etc. The questionnaire also included questions on drinking habits; examples were ‘How often do you smoke?’, ‘What is your average alcohol consumption?’ etc.

**Data analysis:** Data was analyzed using the statistical package for social sciences (SPSS) version 21 computer statistical software package. Frequency distribution tables were constructed; cross tabulations were done to examine relationship between categorical variables. The Chi-square test was used to compare differences between proportions. Logistic regression analysis was used to determine the variables that predict nutrition status and hypertension among the participants. All statistical analysis was set at 5% level of significance ( $p < 0.05$ ).

## Results



**Fig. 1 Blood pressure level**

From all 233 participants 18 (7.7%) were without answer and weren't included in analysis. 3 (1.4%) had normal BP, 26.5% had hypertension stage 1, 34.4% of participants had hypertension stage 2 and 37.7% had hypertensive crisis.

**Tab 1. Gender \* BMI Crosstabulation**

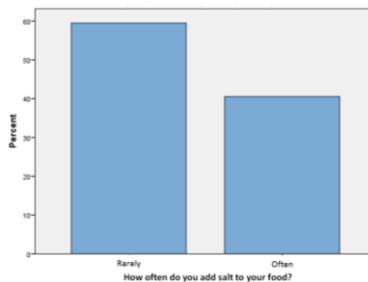
		BMI			Total
		Normal	Overweight	Obesity	
Gender	Male	21	37	49	107
	Female	25	55	36	116
Total		46	92	85	223

From all 233 participants, 10 didn't answer to the value to tell us the BMI, from 107 males 21 were in normal weight, 37 were overweight and 49 were obese, while from 116 females 25 were in normal weight, 55 were overweight and 36 obese.

**Tab 2. How many meals do you eat a day?**

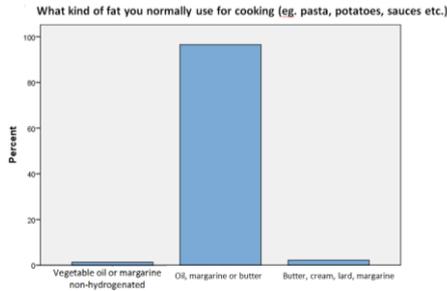
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.4	.5	.5
	2	35	15.7	16.3	16.7
	3	130	58.3	60.5	77.2
	4	48	21.5	22.3	99.5
	5	1	.4	.5	100.0
	Total	215	96.4	100.0	
Missing	99	6	2.7		
	System	2	.9		
	Total	8	3.6		
Total		223	100.0		

In question "How many meals do you eat a day?". Most of them 130 (60.5%) eat three meals per day.



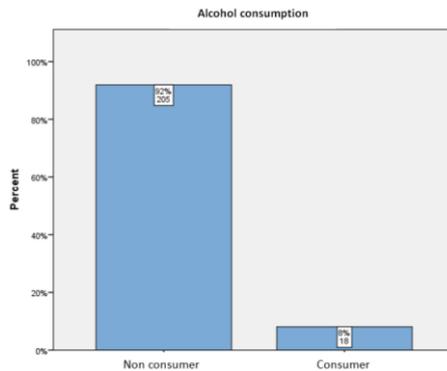
**Fig 2. How often do you add salt to your food?**

In terms of eating habits, results showed that 59.5% of the sample rarely added salt to their food, and 40.5% often added salt to their food.



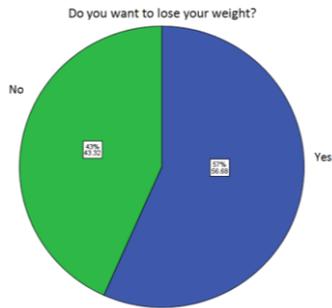
**Fig 3. What kind of fat you normally use for cooking (eg. Pasta, potatoes, sauces etc.)**

As it seems to fig 3 most of the participants 219 (96.5%) normally use oil, margarine or butter for cooking.



**Fig 4. Alcohol consumption**

Most of the participants (fig 4.) are non consumers of alcohol.



**Fig 5. Do you want to lose your weight?**

As it seems in fig 5 most of the participants were motivated to lose their weight.

## **Conclusions**

In this study findings are quite problematic in terms of health behaviors displayed by patients with hypertension. Patients seem to have unhealthy eating and drinking habits. However it is not clear from the findings of the study whether this unhealthy life style is due to lack of knowledge (they are not educated about healthy eating and drinking), but when we asked them if they were motivated to lose their weight (fig 5.) most of them were motivated to lose their weight (despite knowledge). Moreover, the involvement of culture specific factors might also be examined; e.g., red meat being part of the typical diet in Kosovo. Nonetheless these findings suggest the need to inform and educate patients into following a proper diet for healthy eating and drinking, two aspects which are crucial in keeping the condition under control. According to patients BMI results most of them were overweight or obese, this result is related to another question (fig 2.) where 82.3% eat three or more meals per day and most of them (96.5%) use oil, margarine or butter for cooking. In question "How often do you add salt to your food?" results showed that 59.5% of the sample rarely added salt to their food, and 40.5% often added salt to their food. Those findings about life style which need to change

are similar to literature review. [12, 13] This life style seems to be high risk for developing the incidence of hypertension in our population, also this growing epidemic of obesity as major risk factor for development of hypertension and other serious health problem was observed during literature review [3, 4]. During literature review was observed that alcohol was significantly associated with high blood pressure [3, 5] but in our study (fig 4.) most of the participants were non-consumers of alcohol. The implications are clear for health professionals dealing with these patients, especially in providing life-style advice and support. In this context future research might be suggested which investigates the real reasons behind these findings especially in terms of the roles that health professionals have in this process; for instance health professionals might be asked on the type of medical advice they provide to these patients and conversely patients might be asked the same about doctors. To conclude, despite the limitations (small sample, descriptive data etc.) the present study provides some important directions for future research.

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