



Nutritional habits in Diabetes Mellitus and Coronary Heart Disease patients in the community

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Background

- ▶ The prevalence of diabetes and coronary heart disease (CHD) is increasing worldwide.
- ▶ According to the recent global estimates of the World Health Organization (WHO), there will be 300 million people with diabetes by the year 2025.

- ▶ CHD is a major complication of diabetes and the leading cause of early death among people with diabetes.
- ▶ Diet is a potential risk factor and an important component of treatment for both diabetes and CHD.

- ▶ The aim of this study is to determine nutritional habits of people with diabetes, CHD and people without any of these diseases.

Design and Methods

- ▶ The participants were identified in a cardiovascular risk factor survey in İzmir, Turkey (Balcova Heart Study - BHS).
- ▶ The baseline survey was conducted in Balcova District population over 30 years of age as a community screening program from 2007 to 2009.

- ▶ In Balcova Heart Survey 16.080 people were interviewed and 12.914 fasting blood samples were collected for laboratory analyses
(response rate:36,5%).
- ▶ Blood samples were analysed in the Dokuz Eylul University Central Laboratory.

- ▶ Data on nutritional habits and disease history were collected using a face to face questionnaire.
- ▶ Diabetes was defined as having a fasting blood glucose level >126 mg/dL or being on any diabetes treatment.

Results

Table 1 General characteristics of the population

	n	%
Dm only	1350	10.5
CHD only	625	4.8
DM and CHD	314	2.0
Without DM or CHD	10616	82.5
Total	12905	100.0

*In total data from 4311 women (66.6%) and 8594 men (33.4%) were evaluated.

Table 2 Nutritional habits of people with diabetes, CHD and people without DM or CHD.

Nutritional habits	DM only		CHD only		DM and CHD		Without DM or CHD		TOTAL		p
	n	%	n	%	n	%	n	%	%		
White bread											
White bread	671	50	357	57.5	152	48.4	6966	66.8	64.1		<0.001
Whole wheat bread	672	50	264	42.5	162	51.6	3464	33.2	35.9		
TOTAL	1343	100	621	100.0	314	100.0	10430	100.0	100.0		
Butter											
Butter	8	0.6	3	0.5	0	0.0	84	0.8	0.7		0.520
Margarine	4	0.3	2	0.3	1	0.3	46	0.4	0.4		
Olive oil	758	56.4	356	57.2	180	57.3	5484	52.6	53.4		
Liquid oil	573	42.7	261	42.0	133	42.4	4820	46.2	45.5		
TOTAL	1343	100.0	622	100.0	314	100.0	10434	100.0	100.0		
Daily fruit consumption											
Yes	52	80.0	16	72.7	15	68.2	352	71.4	72.3		0.511
No	13	20.0	6	27.3	7	31.8	141	28.6	27.7		
TOTAL	65	100.0	22	100.0	22	100.0	493	100.0	100.0		
Daily vegetable consumption											
Yes	54	84.4	18	90.0	15	71.4	403	83.1	83.1		0,427
No	10	15.6	2	10.0	6	28.6	82	16.9	16.9		
TOTAL	64	100.0	20	100.0	21	100.0	485	100.0	100.0		

Table 2 Nutritional habits of people with diabetes, CHD and people without DM or CHD

Nutritional habits	DM only		CHD only		DM and CHD		Without DM or CHD		TOTAL %	p
	n	%	n	%	n	%	n	%		
Number of fruit/vegetable serving										
<5	685	50.7	108	58.1	43	53.2	2527	58.5	57.5	<0.001
≥5	665	49.3	516	41.9	271	46.8	7902	41.5	42.5	
TOTAL	1350	100.0	624	100.0	314	100.0	10429	100.0	100.0	
 Adding salt without tasting										
Yes	179	13.3	90	14.4	27	8.6	1806	17.3	16.5	<0.001
No	1164	86.7	534	85.6	287	91.4	8623	82.7	83.5	
TOTAL	1343	100.0	624	100	314	100.0	10429	100.0	100.0	
 Reading the food label										
Yes	249	18.5	108	17.3	43	13.7	2527	24.2	23.0	<0.001
No	1096	81.5	516	82.7	271	86.3	7902	75.8	77.0	
TOTAL	1345	100.0	624	100.0	314	100.0	10429	100.0	100.0	

Conclusion and Recommendations

- ▶ Consumption of whole wheat bread, reading food label is quite low in the study group.
- ▶ Patients who had DM and CHD showed worse nutritional habits than other groups usually.

- Nutritional habits of DM and CHD patients need to be improved.
- Patient groups should be targetted for motivating healthy eating behavior.
- A specialist health professional,usually a dietitian, is needed to motivate the patients and to clarify the nutritional recommendations into practical advice (personalized nutrition therapy).
- Nutrition and health professionals can be valuable advocates for legislation (local or state) that supports the nutritional well-being of the population.