PO 186: Individualised food plans: patient's compliance

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Introduction

Dietary intervention has a great influence in the treatment of several chronic diseases such as obesity, diabetes and dyslipidemia[1-2].

The dietitian promotes changes in the eating habits of patients who face a variety of risk factors and diseases through the promotion of nutritional and food literacy[3,4].

However, despite its benefits, low adherence to dietary prescriptions and recommendations are usual[5-7].

Aim

The aim of this research was to evaluate how patient's food intake is different from the previously prescribed food plan.

Sample and Methods

Eighty-eight patients with BMI over 25.0 kg/m^2 (mean= 32.1 kg/m^2, sd= 4.6) were included. Socio-demographic, anthropometric and physical activity data were collected.

The assessment of food intake was performed by collecting a usual food day and weekly frequency of extra food. The data was converted into food doses from the "Tabela Clássica de Equivalentes" and, subsequently, in macronutrients (g and %) and total energy (kcal).

The values suggested in the "Manual de Codificação do Serviço de Epidemiologia da Faculdade de Medicina da Universidade do Porto" were used to calculate the portion sizes of foods that do not exist in the "Tabela Clássica de Equivalentes". The nutritional composition of foods not included in the "Tabela Clássica de Equivalentes" was assessed using the "Tabela da Composição de Alimentos Portuguesa". The portions, macronutrients (g and %) and total energy (kcal) of the self-reported intake were compared with the previously prescribed food plan. Self-perception of the compliance with the food plan and the motivation to continue the therapy were evaluated in lykert scale from 1 to 10 (1 nothing motivated – 10 extremely motivated).

Food weighing habits were evaluated with a dichotomic question with yes or no option.

This research was approved by the Ethics Committee of CHUSJ, E.P.E., Porto.

Results

Table 1 – Discrepancy between food intake and the previously prescribed food plan by sample and gender

	Total (n=88)		Women (n=64)		Men (n=24)	
	Mean (sd)	p	Mean (sd)	p	Mean (sd)	p
% energy dif¥	0,7 (23,3)	0,771	2,1 (25,0)	0,504	-3,0 (17,8)	0,427
% protein dif	-4,7 (27,3)	0,112	-4,5 (29,0)	0,219	-5,2 (22,8)	0,280
% fat dif	40,9 (47,2)	**<0,001**	43,0 (50,3)	<0,001	33,9 (37,7)	<0,001
% carbohydrates dif	-24,0 (19,6)	**<0,001**	-22,3 (20,6)	<0,001	-28,5 (16,3)	<0,001
Dif. dairy doses	-0,1 (0,7)	0,125	-0,1 (0,7)	0,262	-0,1 (0,6)	0,243
Dif. vegetables doses	-1,2 (1,2)	**<0,001**	-1,1 (1,2)	<0,001	-1,4 (1,2)	<0,001
Dif. fruit doses	-0,9 (1,6)	**<0,001**	-0,7 (1,6)	<0,001	-0,9 (1,5)	0,007
Dif. bread doses	-3,1 (2,8)	**<0,001**	-2,6 (2,8)	<0,001	-4,1 (2,9)	<0,001
Dif. meat doses	0,8 (3,1)	**0,015**	0,8 (3,2)	0,056	0,9 (2,8)	0,120
Dif. fat doses	4,4 (5,3)	**<0,001**	4,3 (4,3)	<0,001	4,0 (4,5)	<0,001

¥ - difference ; sd – standard deviation

Table 2 - Compliance and motivation and the discrepancy between the food intake and the food plan by gender

	Women				Men			
	Compliance		Motivation		Compliance		Motivation	
	Correlação§	p	Correlação	p	Correlação	p	Correlação	p
% energy dif¥	-0,164	0,196	-0,086	0,498	0,090	0,677	0,081	0,707
% protein dif	-0,179	0,157	-0,162	0,200	0,182	0,394	0,195	0,360
% fat dif	-0,120	0,346	-0,072	0,570	-0,107	0,618	-0,051	0,814
% carbohydrates dif	-0,043	0,737	0,041	0,749	0,342	0,102	0,048	0,823
Dif. dairy doses	0,233	0,065	-0,031	0,806	-0,307	0,145	-0,339	0,105
Dif. vegetables doses	-0,302	**0,015**	0,109	0,392	0,224	0,293	-0,216	0,311
Dif. fruit doses	0,042	0,744	0,131	0,302	-0,525	**0,007**	0,089	0,678
Dif. bread doses	-0,060	0,637	-0,059	0,641	0,141	0,510	0,050	0,815
Dif. meat doses	-0,260	**0,036**	-0,153	0,226	0,140	0,516	0,299	0,156
Dif. fat doses	-0,071	0,578	-0,034	0,790	-0,085	0,694	-0,101	0,640

§ - Pearson Correlation; sd – standard deviation

Table 3 – Weighing food habits and discrepancy between food intake and food plan by gender

	Women			Men		
	Food weighing habits					
	Yes (n=16)	No (n=48)		Yes (n=2)	No (n=22)	
	Mean (sd)	Mean (sd)	p	Mean (sd)	Mean (sd)	p
% energy dif¥	7,9 (26,1)	0,2 (24,6)	0,286	-2,1 (11,2)	-3,0 (18,5)	0,944
% protein dif	1,8 (29,4)	-6,6 (28,9)	0,322	-12,1 (4,9)	-4,5 (23,7)	0,663
% fat dif	54,0 (48,9)	39,3 (50,8)	0,313	61,2 (10,1)	31,4 (38,4)	0,042
% carbohydrates dif	-19,7 (23,3)	-23,2 (19,7)	0,562	-34,6 (24,7)	-28,0 (16,0)	0,592
Dif. dairy doses	0,1 (0,7)	-0,2 (0,7)	0,150	-0,3 (0,4)	-0,1 (0,6)	0,792
Dif. vegetables doses	-1,0 (1,2)	-1,2 (1,2)	0,582	-2,0 (1,9)	-1,4 (1,2)	0,500
Dif. fruit doses	-1,5 (1,5)	-0,5 (1,6)	0,028	-1,0 (1,4)	-0,9 (1,5)	0,907
Dif. bread doses	-1,8 (2,8)	-2,9 (2,7)	0,206	-5,1 (4,7)	-4,0 (2,8)	0,596
Dif. meat doses	0,9 (2,9)	0,7 (3,3)	0,869	0,3 (0,4)	1,0 (2,9)	0,732
Dif. fat doses	5,4 (3,6)	4,0 (4,5)	0,240	9,0 (1,1)	3,6 (4,4)	0,107

¥ - difference ; sd – standard deviation

Table 4 – Discrepancy between food intake and the food plan by diseases

	Obesity			Dyslipidemia			Diabetes		
	Yes n=64	No n=24	p	Yes n=37	No n=51	p	Yes n=31	No n=57	p
	Mean (sd)			Mean (sd)			Mean (sd)		
% energy dif¥	0,7 (24,6)	0,7 (19,9)	0,996	-1,6 (22,2)	3,4 (24,1)	0,425	-1,4 (21,2)	1,9 (24,5)	0,537
% protein dif	-5,4 (27,9)	-2,7 (26,2)	0,675	-2,6 (26,9)	-6,2 (27,9)	0,546	-3,8 (24,2)	-5,2 (29,1)	0,825
% fat dif	41,4 (48,7)	32,8 (42,8)	0,353	29,3 (44,4)	48,6 (47,9)	0,058	34,6 (43,1)	43,7 (49,3)	0,388
% carbohydrates dif	-24,2 (19,3)	-23,5 (20,7)	0,897	-23,7 (14,4)	-24,7 (22,7)	0,919	-23,5 (19,6)	-24,2 (19,8)	0,865
Dif. dairy doses	-0,1 (0,7)	-0,1 (0,5)	0,907	-0,1 (0,6)	-0,1 (0,7)	0,823	0,1 (0,7)	-0,2 (0,7)	0,053
Dif. vegetables doses	-1,6 (1,0)	-1,1 (1,3)	0,073	-1,3 (1,0)	-1,1 (1,4)	0,412	-1,2 (1,0)	-1,2 (1,3)	0,872
Dif. fruit doses	-0,9 (1,7)	-0,6 (1,3)	0,375	-0,7 (1,3)	-0,9 (1,7)	0,559	-0,8 (1,3)	-0,8 (1,7)	0,961
Dif. bread doses	-3,1 (2,8)	-2,7 (3,0)	0,343	-2,8 (2,1)	-3,1 (3,3)	0,640	-3,0 (3,0)	-3,0 (2,8)	0,998
Dif. meat doses	0,7 (3,2)	1,0 (2,8)	0,693	1,1 (2,9)	0,6 (3,2)	0,498	0,7 (2,8)	0,9 (3,3)	0,766
Dif. fat doses	4,5 (4,3)	3,7(4,5)	0,459	6,0 (4,3)	3,1 (4,2)	0,025	3,6 (4,0)	4,6 (4,5)	0,268

¥ - difference ; sd – standard deviation

Discussion and Conclusions

The increase in the popularity of hypoglycemic diets may explain the low intake of carbohydrates. The low intake of fruit and vegetables and higher of meat is a common trend in the portuguese population. Vegetables and fruit are considered "healthy" so those who consider themselves more compliant eat more of these foods. The small sample size, the low number of people who weigh foods and the extrinsic motivation may influence the results. We found several discrepancies between the prescribed plan and the actual intake, which shows that compliance to the therapy is not optimal, despite self-perceived compliance and motivation being closer to the upper limit of the scale. Therefore, for a successful intervention, it is necessary to adequately communicate with the patient, reinforcing the importance of adherence to therapy, and providing solutions to the experienced difficulties.

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