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# Ambito Sociale: Abitudini Alimentari





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Ho Chi Minh City, Vietnam

12 – 15 NOVEMBER 2017

World Congress on Parkinson's Disease and Related Disorders

## Ambito Scientifico:

## XXII Worls Congress on Parkinson's Disease and Related Disorders











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### DIETARY HABITS IN PARKINSON'S DISEASE: ADHERENCE TO MEDITERRANEAN DIET

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#### INTRODUCTION

Our objective is to describe the dietary habits, food preferences and adherence to Mediterranean diet (MeDi) of a large sample of Italian Parkinson's Disease (PD) patients compared to a group of healthy controls.



#### **METHODS**

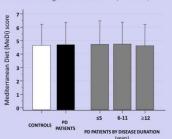
Dietary habits of 600 PD patients from throughout Italy and 600 healthy controls matched by gender, age, education, physical activity level and geographical residence, were collected using the ON-GP Food Frequency Questionnaire\*. Then, we compared patients by disease duration and the presence of swallowing disturbances

\* Available on www.educazionenutrizionale.granapadano.i

#### RESULTS

Adherence of PD patients (males, 53.8%; mean disease duration, 9.2 $\pm$ 7.0 years) to MeDi was similar to controls (score, 4.8 $\pm$ 1.7 vs. 4.9 $\pm$ 1.6; P=0.294)

Disease duration was associated with increased intake of several food groups but it was not was not associated with changes in MeDi score (P=0.721).



Patients with swallowing disturbances (n=72) preferred softer and more viscous food but preferences did not result in differences in dietary patiern. However, patients with dysphagia drank less fluids (P=0.043).

Variable	No swallowing disturbances (N=528)	Swallowing disturbances (N=72)	P-value *
Calorie intake, kcal/kg/day [Mean (SD)]	31.3 (10.7)	30.8 (10.5)	0.709
Protein intake, g/kg/day [Mean (SD)]	1.2 (0.4)	1.2 (0.3)	0.896
Carbohydrates intake, g/day [Mean (SD)]	293.3 (81.4)	291.7 (107.7)	0.881
Lipids intake, g/day [Mean (SD)]	84.0 (23.3)	81.6 (25.8)	0.419
Water intake, mL/day [Mean (SD)]	1110 (463)	958 (465)	0.011
Fluids intake, mL/day [Mean (SD)]	1611 (567)	1467 (562)	0.043
Fibers intake, g/day [Mean (SD)]	32.0 (8.5)	32.7 (9.5)	0.519
Calcium intake, mg/day [Mean (SD)]	1019 (278)	1058 (359)	0.283
Iron intake, mg/day [Mean (SD)]	13.9 (3.4)	13.9 (3.4)	0.920
Vitamin D intake, µg/day [Mean (SD)]	2.6 (1.1)	2.7 (1.1)	0.470
Vitamin B12 intake, µg /day [Mean (SD)]	4.6 (1.6)	4.3 (1.3)	0.128
Vitamin C intake, mg /day [Mean (SD)]	220 (88)	252 (95)	0.325
Folate intake, µg /day [Mean (SD)]	448 (127)	472 (124)	0.132

Patients consumed less alcohol and fish and drank significantly less water, coffee, and milk which resulted also in lower total fluids intake.

On the contrary, they are more fruit, cooked vegetables, cereals and baked items, more dressings and more sweets in general.

	Overall population (N = 1200)		
	Controls a ( N = 600 )	PD patients <sup>a</sup> ( N = 600 )	P-value b
DAIRY PRODUCTS			
Skimmed /partly skimmed milk (ml/day)	118 (75)	106 (78)	0.007
Whole milk (ml/day)	101 (105)	83 (86)	0.001
Soy milk or yogurt (ml/day)	54 (51)	86 (73)	< 0.001
Yogurt without sugar (g/day)	73 (90)	52 (72)	< 0.001
Sweetened yogurt (g/day)	56 (71)	68 (83)	0.007
Grated cheese (g/day)	9 (7)	13 (10)	< 0.001
BREAD, PASTA AND CEREALS	1		
Refined pasta, rice (g/day)	66 (40)	74 (48)	0.002
Whole grain pasta, rice (g/day)	22 (27)	18 (24)	0.007
Whole grain bread (g/day)	33 (36)	26 (36)	< 0.001
Pizza (g/day)	29 (21)	32 (23)	0.018
Pototoos (aldan)	40 (22)	62 (40)	<0.001

PROTEIN SOURCES (MEAT, FISH, CURED MEAT,	, EGGS AND LEGUME	ES)	
Fresh fish (g/day)	38 (27)	34 (26)	0.009
Preserved fish (g/day)	7 (7)	6 (5)	0.004
Eggs (g/day)	10 (7)	12 (8)	< 0.001

233 (157)	256 (141)	0.008
12 (15)	10 (12)	0.011
175 (131)	158 (100)	0.012
154 (104)	179 (120)	< 0.001
45 (28)	51 (34)	0.001
95 (82)	112 (81)	< 0.001
	12 (15) 175 (131) 154 (104) 45 (28)	12 (15) 10 (12) 175 (131) 158 (100) 154 (104) 179 (120) 45 (28) 51 (34)

Artificial sweeteners (g/day)	3.5 (2.8)	2.6 (2.5)	< 0.001
Milk puddings and custards (g/day)	12 (17)	17 (19)	< 0.001
Ice cream (g/day)	16 (23)	21 (25)	< 0.001
Candy bars, snacks (g/day)	6 (10)	4(7)	< 0.001

Olive oil (ml/day)	28 (15)	30 (13)	0.014
Seed oil (ml/day)	2.0 (4.5)	3.0 (7.5)	0.005
Margarine (g/day)	1.1 (1.3)	4.0 (7.8)	< 0.001

DRINKS			
Water (ml/day)	1344 (474)	1092 (443)	< 0.001
Wine (ml/day)	135 (128)	111 (116)	0.001
Other alcoholic drinks (ml/day)	7(11)	4 (6)	< 0.001
Blended vegetables/fruit, juices (ml/day)	77 (105)	95 (111)	0.004
Tea (ml/day)	108 (130)	87 (141)	0.009
Coffee (ml/day)	70 (50)	55 (47)	< 0.001

\*Data are provided as mean and standard deviation (between purentheses).

\*According to between group comparison by paired Student's t-test.

CHICAD AND CHIEFER

PD patients presented different dietary habits and food preferences compared to the general population and adherence to MeDi was not associated with disease duration. Self-reported dysphagia was associated with reduced intake of fluids.

These aspects may be amenable to change in order to improve the management of nutritional issues in this patient population.





DISCUSSION









#### REHABILITATION PROGRAM WITH OR WITHOUT A MUSCLE-TARGETED **NUTRITIONAL SUPPORT IN PATIENTS WITH PARKINSON'S DISEASE OR** PARKINSONISM: STUDY DESIGN OF A RANDOMIZED, CONTROLLED TRIAL

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#### INTRODUCTION

Physical rehabilitation is an important strategy for treating motor disability in patients suffering from Parkinson's disease (PD) or parkinsonism. Muscle dysfunction is highly prevalent in this patient population and previous studies in old adults have shown that the outcome of exercise-based treatments may be positively influenced by concomitant nutritional support.

#### **OBJECTIVE**

LEUCINE

To evaluate whether the use of a whey protein-based nutritional formula enriched with essential aminoacids – particularly leucine - and vitamin D have a beneficial effect on functional exercise-based rehabilitation.

#### REFERENCES

#### METHODS We designed a randomized, controlled trial.



A MULTIDISCIPLINARY INTENSIVE REHABILITATION

TREATMENT 50% 50%

STANDARD HOSPITAL DIET

STANDARD HOSPITAL DIET

NUTRITIONAL SUPPLEMENT

twice daily for 30 days

Clinical rating of activities of daily living and motor symptoms (by means of the Unified PD Rating Scale [UPDRS] part II and part III, respectively; the higher the value, the lower the performance)

timed up and go test, Berg balance scale, speed of 4 meters).

(Self-assessment Parkinson's Disease Disability Scale [SPDDS]).

PRIMARY EFFICACY END POINT

THE INCREASE IN THE DISTANCE WALKED DURING A 6-MINUTE WALKING TEST.

SECONDARY OUTCOME VARIABLES

evaluate effectiveness on other functional recovery and functional recovery measures perceived - Asses the effectiveness of body composition (bioimpedentimeter analysis) - Assess the effectiveness of body weight - Assess the effectiveness of nutrition - Assess the effectiveness of muscle strength (handgrip

#### RESULTS

In absence of preliminary data on this topic, considering an effect size of 0.5 (clinically meaningful according to Cohen), the sample size sufficient to have a power of 80% to detect a significant difference in the primary outcome measure with a two-tailed type-I error of 5%, we would need at least 64 patients per group. After assuming 10% withdrawal, we planned to enroll 140 patients (70 per treatment group).

#### CONCLUSION

Positive data from this trial would offer an effective adjuvant treatment options for patients with PD or parkinsonism undergoing a multidisciplinary intensive rehabilitation treatment.







