

## Supplementary materials

### **Mediterranean diet in a Sicilian student population. Second part: breakfast and its nutritional profile.**

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## **Mediterranean diet in a Sicilian student population. Second part: breakfast and its nutritional profile.**

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### **Abstract**

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Breakfast habits affect the nutritional status and health of people, in particular children and adolescents. This is the second part a previous study about the adherence to the Mediterranean diet in a Sicilian (Italy) student population. The investigation analysed both normal weight and overweight subjects in order to understand how eating habits, number of meals and daily calorie intakes could affect their body mass indexes (BMI). The aim of this second part was to analyse the breakfast nutritional profiles of this student population. The results highlighted that breakfast was regularly consumed by a percentage ranging from a maximum of 84% (in normal subjects) to a minimum value of 57.4% (in overweight/obese students). Milk, yoghurt, sugar, bread/rusk and tea contributed as main foods to the breakfast composition. The results highlighted that subjects who consumed breakfast showed lower BMI values with significant differences between normal and overweight/obese students.

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Keywords: Mediterranean diet, breakfast, student, Sicily

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### **Experimental**

This study was performed on the same student pattern reported in Metro et al. 2017. The investigation was carried out in primary and secondary schools of Messina (3 meters above sea level (AMSL)), San Piero Patti (448 AMSL) and Ragusa (502 AMSL). 337 subjects were involved, 96 students from primary schools and 241 from secondary schools, respectively. Students involved in this investigation were all aged between 9 and 13.

Normal anthropometric data were evaluated: weight, height and Body Mass Index (BMI).

Body weight and height were measured using standard techniques; BMI values were calculated as  $\text{Kg/m}^2$ . The subjects, using Cole's age threshold values, were then subdivided into two groups, normal and over weight or obese.

Table S1 shows the mean age values and the number of subjects involved in this study for both normal and over weight or obese group, respectively.

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Table S1. Mean values of age (years) of subjects tested.

Age (*n. students)	Normal weight		Over weight	
	primary school	secondary school	primary school	secondary school
Messina	9.26 (19*)	11.70 (59*)	9.27 (33*)	12.02 (45*)
S. Piero Patti	9.56 (9*)	12.15 (46*)	9.45 (11*)	12.17 (25*)
Ragusa	9.76 (17*)	12.46 (37*)	9.71 (7*)	12.28 (29*)

Table S2 shows the mean BMI values for subjects with normal weight and over weight or obese, respectively. From them it is shown that: in primary schools 45 children were classified as normal weight (BMI 16.9) and 51 children as over weighted or obese (mean BMI value 23.1); while in secondary schools, 142 students were in the normal weight group (BMI 18.9) and 99 in the over weight or obese ones (BMI 25.5).

Table S2. Body mass index (BMI) mean values of the Sicilian student population expressed as Kg/m<sup>2</sup>.

BMI (kg/m <sup>2</sup> )	Normal weight		Over weight	
	primary school	secondary school	primary school	secondary school
Messina	17.51	18.62	24.41	24.64
S. Piero Patti	16.12	18.94	23.10	26.17
Ragusa	17.21	19.21	21.52	25.64

Among student population, food and eating habits were monitored by surveys recording food consumption assumed both during breakfast and between meals (snacks). The surveys included also the quantitative assessment and the recording memories of habitually food.

The consumption of the various food groups has been qualified in terms of grams per day (g/day), obtaining the calories daily intakes.

The survey of the eating habits and individual food consumption of breakfast and snacks and soft drinks out of meals was carried out through questionnaires and the use of a reasoned nutrition atlas. A specifically developed 'breakfast and snacks form' was used for the survey. This specific survey was developed following the form on eating habits described by Fidanza and Liguori and the self-compiled food form in obese and non-obese subjects described by Lindroos et al. (1993).

#### References

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