



Fat quality among adolescents in the Balearic Islands (OBIB STUDY 2007-2008)

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INTRODUCTION

In the Mediterranean countries, the consumption of total fat intake (25-40%) in adults is higher than in the Western countries, mainly due to the high olive oil consumption⁽¹⁾. Although olive oil is a characteristic food of the Mediterranean diet, the consumption of other foods as industrial bakery, soft drinks and sausages, closely linked to SFA intake, is high in adolescents and is changing fat quality intake⁽²⁾.

OBJECTIVE

Evaluate fat intake and fat quality in Balearic Island's adolescents.

MATERIAL AND METHODS

A cross-sectional nutritional survey (2007-2008) was carried out among the Balearic Islands adolescents (12-17 years old; n=1231). Samples were classified according to the island of origin (Palma de Mallorca (Mallorca's capital), Mallorca, Menorca and Ibiza). Two non-consecutive 24 h recalls were used to assess usual energy and nutrient intake. To evaluate fat quality intake we used the ratio PUFA+MUFA/SFA, cholesterol intake/SFA.

RESULTS

Contribution of total fat to energy intake was 39%, SFA 13.6 energy %, MUFA 17.3 energy % and PUFA energy 4.2 energy %. Contribution of total fat (39.4%), MUFA (17.6%) and PUFA (4.3%) to energy intake were higher in girls, than boys (38.4%, 17.0% and 4.0% respectively). Fat diet quality extracted from PUFA+MUFA/SFA was higher in girls (1.7) than in boys (1.6), and the same occurred in cholesterol/SFA (boys = 58.8, girls =47.9). Cholesterol intake was higher in boys (401mg) than in girls (331mg). Differences between origins of Islands occurred in fat energy intake, being in Palma (39.4%) and Mallorca (39.5%) higher than Menorca (38.0%) and Ibiza (36.7%). Highest contribution to fat energy intake of girls was in Mallorca Island (40.6%), and the lowest in Ibiza (36.5%). Girls showed the same patterns of fat quality in PUFA+MUFA/SFA and cholesterol/SFA in all Islands.

Table 1: Percentage of total fat, SFA, MUFA, PUFA in Balearic Island's Adolescents.

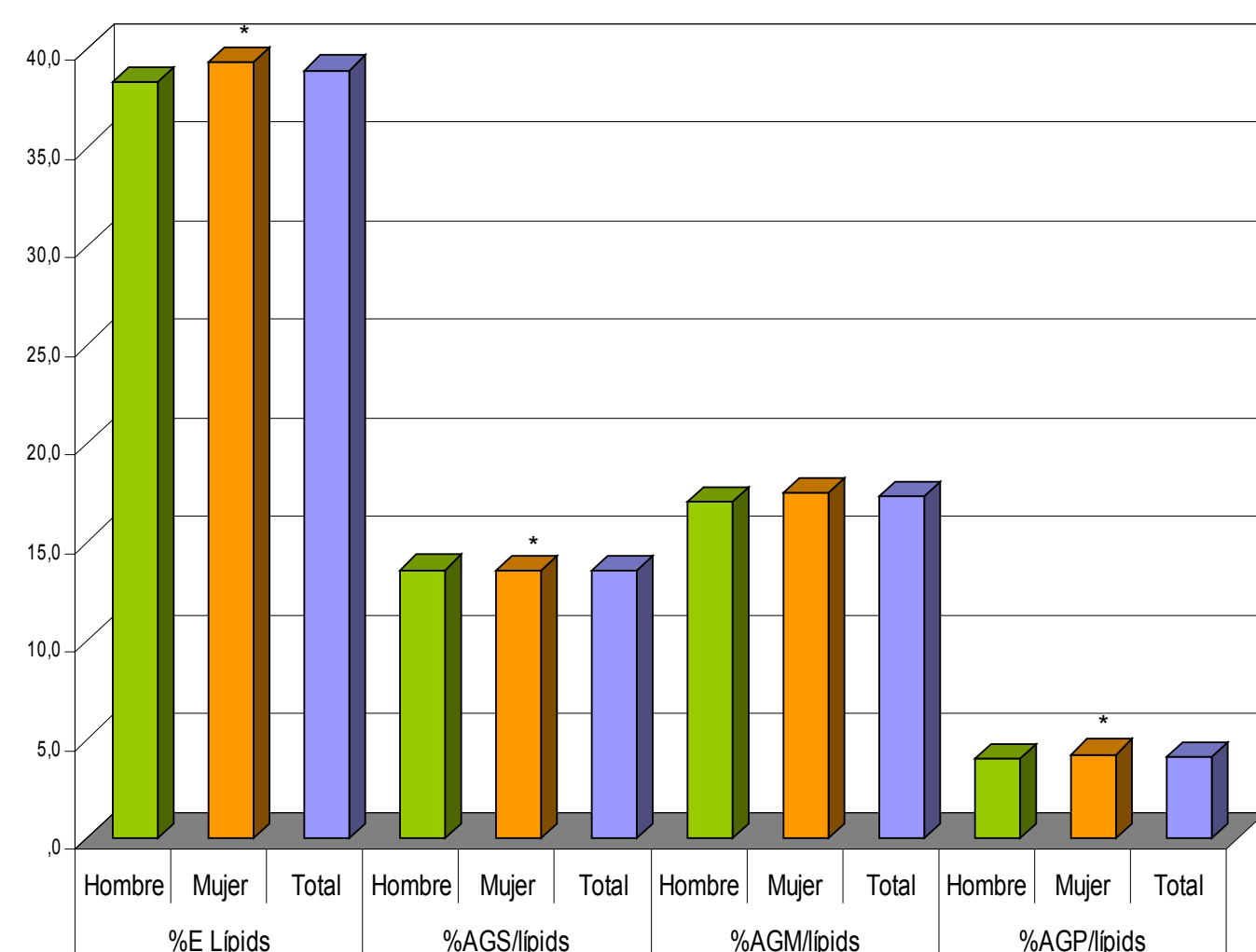


Table 2: Percentage of total fat, SFA, MUFA, PUFA and fat quality intake in each Balearic Island (Palma, Mallorca, Menorca and Ibiza)

	Palma			Mallorca			Menorca			Ibiza		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
% total fat energy intake***	39.2 (7.14)	39.6 (7.75)	39.4 (7.46)	38.3 (6.81)	40.6 (7.72)	39.5 (7.40)	38.6 (6.49)	38.0 (6.80)	38.3 (6.64)	37.0 (7.0)	36.5 (7.1)	36.7 (7.1)
%SFA energy intake	13.9 (3.5)	13.1 (3.77)	13.4 (3.67)	13.4 (3.72)	13.8 (3.85)	13.6 (3.80)	14.1 (3.21)	13.6 (3.72)	13.8 (3.50)	13.4 (4.1)	13.4 (3.8)	13.4 (3.9)
% MUFA energy intake***	17.4 (4.04)	18.2 (4.37)	17.8 (4.23)	17.1 (3.59)	18.2 (4.14)	17.7 (3.94)	16.8 (3.77)	16.2 (3.63)	16.5 (3.69)	16.2 (3.7)	15.6 (3.9)	15.8 (3.8)
% PUFA energy intake*	4.2 (1.73)	4.2 (1.32)	4.2 (1.52)	4.1 (1.38)	4.4 (1.82)	4.3 (1.64)	3.7 (1.03)	4.0 (1.57)	3.9 (1.37)	3.8 (1.3)	3.9 (1.3)	3.9 (1.3)
PUFA+MUFA/SFA**	1.6 (0.53)	1.8 (0.59)	1.7 (0.48)	1.7 (0.48)	1.7 (0.56)	1.7 (0.52)	1.5 (0.38)	1.6 (0.47)	1.6 (0.44)	1.6 (0.6)	1.6 (0.6)	1.6 (0.6)
Cholesterol total mg	427.4 (259.54)	325.4 (160.72)	372.6 (217.78)	387.9 (191.02)	327.5 (174.51)	355.2 (184.55)	397.8 (183.14)	366.6 (173.87)	380.1 (177.82)	431.2 (244.4)	322.8 (8169.4)	364.2 (207.4)
Cholesterol/energy MJ	41.1 (21.90)	39.5 (19.24)	40.3 (20.48)	40.6 (18.47)	41.2 (21.87)	40.9 (20.37)	39.0 (15.13)	45.2 (22.35)	42.5 (19.74)	43.5 (19.1)	40.8 (18.7)	41.9 (18.8)
Cholesterol/SFA*	62.9 (26.81)	47.2 (17.71)	54.5 (23.67)	55.6 (20.32)	47.2 (17.42)	51.0 (19.24)	62.7 (24.14)	52.7 (19.86)	57.1 (22.28)	60.8 (25.1)	47.2 (19.2)	52.4 (22.6)

*p≤0.05; **p≤0.01, ***p≤0.001

CONCLUSIONS

Total fat consumption is higher in Mediterranean countries (as Balearic Islands) than in western countries due to consumption of olive oil. But fat intake from SFA is higher than recommended, and that probably leads to a higher total fat intake, as MUFA intake is correct. Girls showed higher fat, MUFA and PUFA intake but lower cholesterol and SFA; and then a healthier fat intake quality than boys.

REFERENCES

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