

Nutritional analysis of current human diet: comparison between western, Mediterranean, vegetarian and vegan diets

INTRODUCTION AND OBJECTIVES

In the last few decades, there has been an important increase in the population who opt for a vegetarian diet.
However these diets still generate some distrust, mainly regarding its protein supply.

The objective of the present study is to analyse the importance of the composition and the proportion of animal products in the human diets according to the compliance with the established nutritional recommendations and requirements.

MATERIALS AND METHODS

Table 1 – Portions of each food groups depending on the diet regarding the food pyramids.

Food groups	Western	Mediterranean	Vegetarian	Vegan
Cereals and potatoes	2,25	2,00	2,00	2,00
Fruits and vegetables	1,75	3,75	4,00	4,00
Meat and derivatives	2,00	0,75	0	0
Fish	0,25	0,50	0	0
Eggs	0,25	0,25	0,50	0
Milk and derivatives	0,50	0,50	0,50	0
Pulses and nuts	0	0,25	1,00	1,50
Processed vegetal products	0	0	2,00	2,50



Nutritional requirements

“Standard model”

- 50 yo, 80 kg, 175 cm
- Sedentary lifestyle



FORMULATED
DIETS

Grams of fresh matter of each food group per day



Food nutritional values

- Isoenergetic diets
- Less portions as more concentrated foods
- 2 variants of each vegetarian diet: +/- processed vegetal products

FEATURES OF FORMULATED DIETS

Energy and fats

Figure 1 – Proportion of energy supply by nutrients depending on the diet.

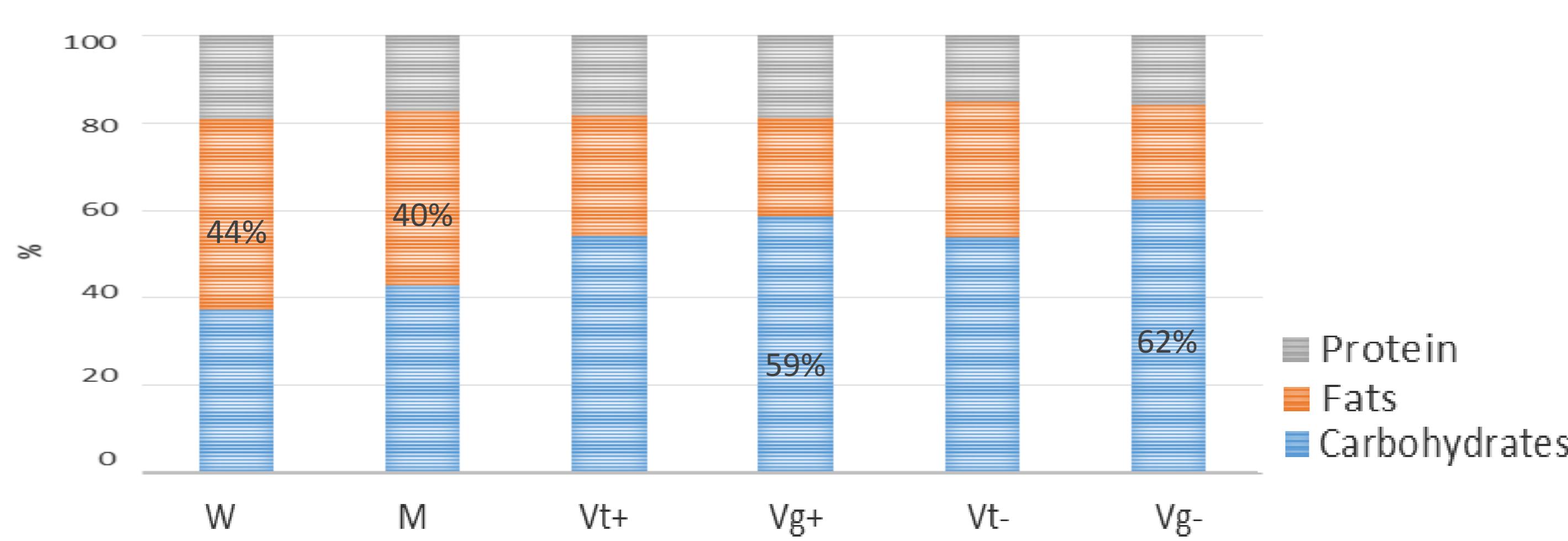


Table 2 – Deficiencies on nutrients depending on the diet and the physiological status.

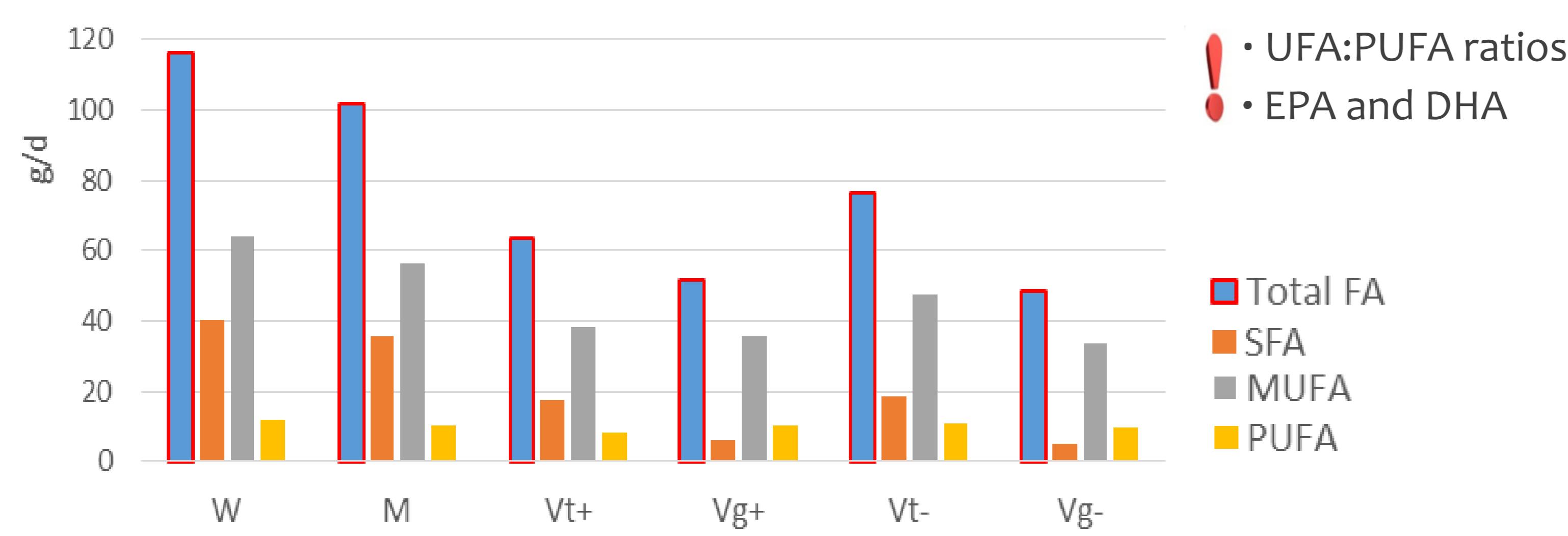
	W	M	Vt+	Vg+	Vt-	Vg-
Lysine				!	!	!
Calcium	!	!		!	!	!
Zinc	!			!		
Vit. C	!			!		
Vit. B12				!!	!!	!!

! Middle-aged man (standard model)

! Growing child

! Lactating woman

Figure 2 – Dairy intake of total fatty acids, and saturated, monounsaturated and polyunsaturated fatty acids depending on the diet.



The ideal diet vs. the real diet

- Necessary intake levels
- Fresh products
- Varied and equilibrated

↑ 15-20% intake

↑ Ultra-processed products

Excesses and deficits in certain food groups



↑ OBESITY

↑ Chronic diseases

CONCLUSIONS

The type of diet and its content in animal products does not determine the compliance with the nutritional requirements in human diets.

Western diet - not ideal : ↓ fruits and vegetables + fat content

Mediterranean diet - the best compliance of nutritional requirements *Fat content

Vegetarian diets - many benefits but can need supplementations : B12, calcium, lysine.