

Supplementary Materials I

Table S1 Mediterranean Diet Adherence Screener (MEDAS) items and allocation of food intake data from food records into its food groups

MEDAS item	Criteria for obtaining 1 point	Food (and sub-food) groups created from food record data to derive the MEDAS food groups	Data from food records used to calculate MEDAS food groups
1. Do you use olive oil as the principal source of fat for cooking?	Yes	<p>Olive oil:</p> <p>2F. Vegetables cooked with olive oil</p> <p>2J. Mixed vegetable dishes cooked with olive oil</p> <p>4B. Red meat cooked with olive oil</p> <p>4F. Mixed red meat dishes cooked with olive oil</p> <p>8B. Pulses cooked with olive oil</p> <p>8F. Mixed pulse dishes cooked with olive oil</p> <p>9B. Fish cooked with olive oil</p> <p>9F. Mixed fish dishes cooked with olive oil</p> <p>9J. Shellfish/seafood cooked with olive oil</p> <p>9N. Mixed shellfish/seafood dishes cooked with olive oil</p> <p>12B. Poultry and rabbit dishes cooked with olive oil</p> <p>14B. Miscellaneous foods cooked with olive oil</p> <p>Butter, margarine, cream:</p> <p>2G. Vegetables cooked with butter, margarine, cream</p> <p>2K. Mixed vegetable dishes cooked with butter, margarine, cream</p>	<p>Average olive oil per 100g of total dish = (olive oil quantity/100) * 13.5g</p> <p>Average butter/margarine/cream per 100g of total dish = (butter/margarine/cream quantity/100) * 12g</p> <p>Average other fats per 100g of total dish (other fats quantity/100)* 13.5g</p> <p>Total olive oil (g) = ‘2F’ (g) + ‘2J’ (g) + ‘4B’ (g) + ‘4F’ (g) + ‘8B’ (g) + ‘8F’ (g) + ‘9B’ (g) + ‘9F’ (g) + ‘9J’ (g) + ‘9N’ (g) + ‘12B’ (g) + ‘14B’ (g)</p> <p>Total butter, margarine, cream (g) = ‘2G’ (g) + ‘2K’ (g) + ‘4C’ (g) + ‘4G’ (g) + ‘8C’ (g) + ‘8G’ (g) + ‘9C’ (g) + ‘9G’ (g) + ‘9K’ (g) + ‘9O’ (g) + ‘12C’ (g) + ‘14C’ (g)</p> <p>Total other fats (g) = ‘2H’ (g) + ‘2L’ (g) + ‘4D’ (g) + ‘4H’ (g) + ‘8D’ (g) + ‘8H’ (g) + ‘9D’ (g) + ‘9H’ (g) +</p>

4C. Red meat cooked with butter, margarine, cream '9L' (g) + '9P' (g) + '12D' (g) + '14D' (g)

4G. Mixed red meat dishes cooked with butter, margarine, cream

1 point: Total olive oil (g) > [Total butter, margarine, cream (g) + Total other fats (g)]

8C. Pulses cooked with butter, margarine, cream

8G. Mixed pulse dishes cooked with butter, margarine, cream

9C. Fish cooked with butter, margarine, cream

9G. Mixed fish dishes cooked with butter, margarine, cream

9K. Shellfish/seafood cooked with butter, margarine, cream

9O. Mixed shellfish/seafood dishes cooked with butter, margarine, cream

12C. Poultry and rabbit dishes cooked with butter, margarine, cream

14C. Miscellaneous foods cooked with butter, margarine, cream

Other fats:

2H. Vegetables cooked with other fats

2L. Mixed vegetable dishes cooked with other fats

4D. Red meat cooked with other fats

4H. Mixed red meat dishes cooked with other fats

8D. Pulses cooked with other fats

8H. Mixed pulse dishes cooked with other fats

9D. Fish cooked with other fats

9H. Mixed fish dishes cooked with other fats

		9L. Shellfish/seafood cooked with other fats	
		9P. Mixed shellfish/seafood dishes cooked with other fats	
		12D. Poultry and rabbit dishes cooked with other fats	
		14D. Miscellaneous foods cooked with other fats	
2. How much olive oil do you consume per day (including that used in frying, meals eaten away from home, salads, etc.)? (1 tablespoon = 13.5g)	4 or more tablespoons	1. Olive oil (raw, e.g. added to salad)	Total olive oil (g) = '1' (g) + '2B' (g) + '2F' (g) + '2J' (g) + '4B' (g) + '4F' (g) + '8B' (g) + '8F' (g) + '9B' (g) + '9F' (g) + '9J' (g) + '9N' (g) + '12B' (g) + '14B' (g)
		2B. Salad and raw vegetables with olive oil	
		2F. Vegetables cooked with olive oil	
		2J. Mixed vegetable dishes cooked with olive oil	
		4B. Red meat cooked with olive oil	Total olive oil (servings) = Total olive oil (g)/13.5
		4F. Mixed red meat dishes cooked with olive oil	
		8B. Pulses cooked with olive oil	1 point: Total olive oil (servings) ≥4
		8F. Mixed pulse dishes cooked with olive oil	
		9B. Fish cooked with olive oil	
		9F. Mixed fish dishes cooked with olive oil	
		9J. Shellfish/seafood cooked with olive oil	
		9N. Mixed shellfish/seafood dishes cooked with olive oil	
		12B. Poultry and rabbit dishes cooked with olive oil	
		14B. Miscellaneous foods cooked with olive oil	
		All foods/meals prepared or cooked with olive oil	
3. How many servings of vegetables do you consume per day? (1 serving = 200g - side dishes count as ½ a serving, not including potatoes or sweetcorn)	2 or more (at least 1 portion raw or as salad)	2A. Salad and raw vegetables with no fat	All vegetables (raw/salad and cooked):
		2B. Salad and raw vegetables with olive oil	Total vegetables (g) = '2A' (g) + '2B' (g) + '2C' (g) + '2D' (g) + '2E' (g) + '2F' (g) + '2G' (g) + '2H' (g) + '2I' (g) + '2J' (g) + '2K' (g) + '2L' (g)
		2C. Salad and raw vegetables with butter, margarine, cream	
		2D. Salad and raw vegetables with other fats	

		2E. Vegetables cooked with no fat	Total vegetables (servings) = Total vegetables (g)/200
		2F. Vegetables cooked with olive oil	
		2G. Vegetables cooked with butter, margarine, cream	Raw vegetables/salad:
		2H. Vegetables cooked with other fats	Total raw vegetables (g) = '2A' (g) + '2B' (g) + '2C' (g) + '2D' (g)
		2I. Mixed vegetable dishes cooked with no fat	Total raw vegetables (servings) = Total raw vegetables (g)/200
		2J. Mixed vegetable dishes cooked with olive oil	
		2K. Mixed vegetable dishes cooked with butter, margarine, cream	
		2L. Mixed vegetable dishes cooked with other fats	1 point: Total vegetables (servings) ≥ 2 and total raw vegetables (servings) ≥ 1
		All vegetables (excluding potatoes and sweetcorn), including home-prepared, retail, in ready meals and canned varieties	
4. How many pieces of fruit (including fresh-squeezed fruit juice) do you consume per day? (<i>not including frozen or dried fruit</i>)	3 or more	3A. Raw fresh fruit (not canned)	Total fresh fruit (g) = '3A' (g) + '3C' (g)
		3B. Fresh fruit juice (freshly squeezed)	Total fresh fruit (servings) = Total fresh fruit (g)/80
		3C. Freshly cooked fruits	
			Total fresh fruit juice (ml) = '3B' (ml)
			Total fresh fruit juice (servings) = Total fresh fruit juice (ml)/100
			Total fruit (servings) = Total fresh fruit (servings) + Total fresh fruit juice (servings)
			1 point: Total fruit (servings) ≥ 3
5. How many servings of red meat, hamburger, or meat	Less than 1	4A. Red meat cooked with no fat	Total red meat (g) = '4A' (g) + '4B' (g) + '4C' (g) +

products (ham, sausage, etc.) do you consume per day? <i>(1 serving = 100-150g)</i>		4B. Red meat cooked with olive oil 4C. Red meat cooked with butter, margarine, cream 4D. Red meat cooked with other fats 4E. Mixed red meat dishes cooked with no fat 4F. Mixed red meat dishes cooked with olive oil 4G. Mixed red meat dishes cooked with butter, margarine, cream 4H. Mixed red meat dishes cooked with other fats All red meat (pork, lamb, beef, veal, meat products, including mixed dishes, homemade, retail, ready meals, take-away)	$'4D' (g) + '4E' (g) + '4F' (g) + '4G' (g) + '4H' (g)$ $\text{Total red meat (servings)} = \text{Total red meat (g)} / 125$ 1 point: $\text{Total red meat (servings)} < 1$
6. How many servings of butter, margarine, or cream do you consume per day? <i>(1 serving = 12g, 1 tablespoon)</i>	Less than 1	5. Butter, margarine and cream (all types of butter, margarine and fat spreads, and cream, including whipped), and: 2C. Salad and raw vegetables with butter, margarine, cream 2G. Vegetables cooked with butter, margarine, cream 2K. Mixed vegetable dishes cooked with butter, margarine, cream 4C. Red meat cooked with butter, margarine, cream 4G. Mixed red meat dishes cooked with butter, margarine, cream 8C. Pulses cooked with butter, margarine, cream 8G. Mixed pulse dishes cooked with butter, margarine, cream 9C. Fish cooked with butter, margarine, cream 9G. Mixed fish dishes cooked with butter, margarine, cream 9K. Shellfish/seafood cooked with butter, margarine, cream	$\text{Total butter, margarine, cream (g)} = '5' (g) + '2C' (g) + '2G' (g) + '2K' (g) + '4C' (g) + '4G' (g) + '8C' (g) + '8G' (g) + '9C' (g) + '9G' (g) + '9K' (g) + '9O' (g) + '12C' (g) + '14C' (g)$ $\text{Total butter, margarine, cream (servings)} = \text{Total butter, margarine, cream (g)} / 12$ 1 point: $\text{Total butter, margarine, cream (servings)} < 1$

		9O. Mixed shellfish/seafood dishes cooked with butter, margarine, cream	
		12C. Poultry and rabbit dishes cooked with butter, margarine, cream	
		14C. Miscellaneous foods/meals cooked with butter, margarine, cream	
7. How many sugar-sweetened beverages do you drink per day? (1 cup = 100 ml)	Less than 1 cup	6. All sugary soft drinks (whether carbonated or not, e.g. squash, cordial, soda, energy drinks). Does not include coffee and other warm beverages containing sugar	<p>Total sugar-sweetened beverages (ml) = '6' (ml)</p> <p>Total sugar-sweetened beverages (servings) = Total sugar-sweetened beverages (ml)/100</p> <p>1 point: Total sugar-sweetened beverages (servings) <1</p>
8. How much wine do you drink per week? (1 glass = 125 ml)	7 or more glasses	7. Wine (red, white, rose, including champagne and prosecco types)	<p>Total wine (ml) = '7' (ml)</p> <p>Total wine (servings) = Total wine (ml)/125</p> <p>Total wine (servings/week) = Total wine (servings)/3 *7</p> <p>1 point: Total wine (servings/week) ≥7</p>
9. How many servings of pulses do you consume per week? (1 serving = 150g) (including canned varieties)	3 or more	<p>8A. Pulses cooked with no fat</p> <p>8B. Pulses cooked with olive oil</p> <p>8C. Pulses cooked with butter, margarine, cream</p> <p>8D. Pulses cooked with other fats</p> <p>8E. Mixed pulse dishes cooked with no fat</p>	<p>Total pulses (g) = '8A' (g) + '8B' (g) + '8C' (g) + '8D' (g) + '8E' (g) + '8F' (g) + '8G' (g) + '8H' (g)</p> <p>Total pulses (servings) = Total pulses (g)/150</p> <p>Total pulses (servings/week) = Total pulses</p>

		8F. Mixed pulse dishes cooked with olive oil	(servings)/3 *7
		8G. Mixed pulse dishes cooked with butter, margarine, cream	
		8H. Mixed pulse dishes cooked with other fats	1 point: Total pulses (servings/week) ≥3
		All pulses (including mixed dishes, homemade, retail, ready meals, take-away, baked beans)	
10. How many servings of fish or shellfish/seafood do you consume per week? (1 serving = 100-150 g fish, or 4-5 pieces or 200 g shellfish)	3 or more	9A. Fish cooked with no fat	Fish:
		9B. Fish cooked with olive oil	Total fish (g) = '9A' (g) + '9B' (g) + '9C' (g) + '9D' (g) + '9E' (g) + '9F' (g) + '9G' (g) + '9H' (g)
		9C. Fish cooked with butter, margarine, cream	
		9D. Fish cooked with other fats	Total fish (servings) = Total fish (g)/125
		9E. Mixed fish dishes cooked with no fat	
		9F. Mixed fish dishes cooked with olive oil	Shellfish/seafood:
		9G. Mixed fish dishes cooked with butter, margarine, cream	Total shellfish/seafood (g) = '9I' (g) + '9J' (g) + '9K' (g) + '9L' (g) + '9M' (g) + '9N' (g) + '9O' (g) + '9P' (g)
		9H. Mixed fish dishes cooked with other fats	
		9I. Shellfish/seafood cooked with no fat	
		9J. Shellfish/seafood cooked with olive oil	Total shellfish/seafood (servings) = Total shellfish/seafood (g)/200
		9K. Shellfish/seafood cooked with butter, margarine, cream	
		9L. Shellfish/seafood cooked with other fats	
		9M. Mixed shellfish/seafood dishes cooked with no fat	Total fish and shellfish/seafood:
		9N. Mixed shellfish/seafood dishes cooked with olive oil	Total fish and shellfish/seafood (g) = Total fish (g) + Total shellfish/seafood (g)
		9O. Mixed shellfish/seafood dishes cooked with butter, margarine, cream	
		9P. Mixed shellfish/seafood dishes cooked with other fats	Total fish and shellfish/seafood (servings) = Total fish (servings) + Total shellfish/seafood (servings)
		All white and oily fish and shellfish/seafood (including mixed dishes, homemade, retail, ready meals, take-away)	Total fish and shellfish/seafood (servings/week) =

			Total fish and shellfish/seafood (servings)/3 *7
			1 point: Total fish and shellfish/seafood (servings/week) ≥3
11. How many times per week do you consume commercial sweets or pastries (not homemade), such as cakes, cookies, biscuits, or custard?	Less than 2	10. Commercial sweets and pastries (including all non-homemade sweets and bakery goods)	Frequency of consumption of commercial sweets and pastries (times/3 days) Frequency of consumption of commercial sweets and pastries (times/week) = Frequency of consumption of commercial sweets and pastries (times/3 days)/3 *7
			1 point: Frequency of consumption of commercial sweets and pastries (times/week) <2
12. How many servings of nuts (including peanuts) do you consume per week? (1 serving = 30g)	3 or more	11. Nuts (all types of salted and unsalted nuts and nut butters, eaten alone or in mixed dishes)	Total nuts (g) = '11' (g) Total nuts (servings) = Total nuts (g)/30 Total nuts (servings/week) = Total nuts (servings)/3 *7
			1 point: Total nut (servings/week) ≥3
13. Do you prefer to eat chicken, turkey, or rabbit meat instead of beef, pork, hamburgers, or sausages?	Yes = 1 point	12A. Poultry and rabbit dishes cooked with no fat 12B. Poultry and rabbit dishes cooked with olive oil 12C. Poultry and rabbit dishes cooked with butter, margarine, cream 12D. Poultry and rabbit dishes cooked with other fats All poultry (chicken, turkey, duck) and rabbit, including mixed	Total poultry and rabbit (g) = '12A' (g) + '12B' (g) + '12C' (g) + '12D' (g) Total red meat (g) ('4A' (g) + '4B' (g) + '4C' (g) + '4D' (g) + '4E' (g) + '4F' (g) + '4G' (g) + '4H' (g)
			1 point: Total poultry and rabbit (g) > Total red meat

		dishes, homemade, retail, ready meals, take-away)	(g)
14. How many times per week do you consume cooked vegetables, pasta, rice, or other dishes prepared with a sauce of tomato, garlic, onions or leeks sautéed in olive oil (sofrito)?	2 or more = 1 point	13. Tomato sauce with garlic, onions or leeks and other condiments sautéed in olive oil	Frequency of consumption of sofrito (times/3 days) Frequency of consumption of sofrito (times/week) = Frequency of consumption of sofrito (times/3 days)/3 *7 1 point: Frequency of consumption of sofrito (times/week) ≥2