

Table 1. MED diet, MIND diet and AnMED diet guidelines.

	MED	MIND	AnMED
White meat	Preferential consumption over red meat. No consumption guidelines.	2 or more times per week.	3 servings per week.
Red meat	Less than 1 per day.	Less than 4 times per week.	Not allowed.
Legumes	3 or more servings per week.	3 or more servings per week.	3 or more servings per week.
Refined grains	No guidelines.	No guidelines	Not allowed.
Vegetables	2 or more servings per day.	Green leafy vegetables 6 or more per week. Other vegetables daily.	Distinguish between green vegetables, non-green vegetables or other vegetables. 100g of each vegetable group daily.
Fruits	3 or more servings per day.	2 or more servings of berries per week.	Differentiate between enzymatic, antioxidant and other fruits. One piece of each type per day.
Fish	3 or more times per week.	1 or more times per week.	It distinguishes between blue and white fish. 3 or more servings of each type per week.
EVOO	Primary oil use. 4 or more tablespoons per day (60 ml).	Primary oil use. Not daily recommendations	3 tablespoons per day (approximately 45ml).
Nuts	3 or more times per week.	5 or more per week	1 serving per day.
Dairy products	No guidelines.	Less than one daily ration of milk. Occasional cheese, not weekly.	Cow milk not allowed, cured cheese or goat/sheep cheese, natural yogurt or kefir preferred.
Coffee	No guidelines.	No guidelines.	Maximum of 2 cups per day.
Alcohol	7 glasses of red wine per week.	7 glasses of red wine per week.	Not allowed.
Sugar and pastries	Less than 2servings per week.	Less than 5 servings per week.	Not allowed.
Saturated fats products	Less than 7 per week.	Less than 7 per week.	Not allowed.
Sweet or carbonated beverages	Less than 1 per day	Less than 1 per day	Not allowed.
Turmeric	No guidelines.	No guidelines.	5g per day.

Supplementary materials 2

		MED				MIND				AnMED			
		< 9	≥ 9	p-value	Effect and 95% CI	< 9	≥ 9	p-value	Effect and 95% CI	< 9	≥ 9	p-value	Effect and 95% CI
SCD	Positive	22 (20%)	54 (22.69%)	p-value: 0.319 Chi-square	OR: 0.8519 95% CI: (0.4880-1.4869)	10 (28.57%)	66 (21.09%)	p-value: 1.033 Chi-square	OR: 1.4970 95% CI: (0.6848-3.2723)	76 (22.82%)	0 (0%)	p-value: 0.0486 Fisher's exact test	OR: 9.2097 95% CI: (0.5447-155.7123)
	Negative	88 (80%)	184 (77.31%)			25 (71.43%)	247 (78.91%)			257 (77.18%)	15 (100%)		
	TOTAL	110 (100%)	238 (100%)			35 (100%)	313 (100%)			333 (100%)	15 (100%)		
Depression	Positive	17 (15.45%)	46 (19.33%)	p-value: 0.3830 Chi-square	OR: 0.7630 95% CI: (0.4150-1.4027)	7 (20%)	56 (17.89%)	p-value: 0.094 Chi-square	OR: 1.1473 95% CI: (0.4772-2.7584)	60 (18.02%)	3 (20%)	p-value: 0.7403 Fisher's exact test	OR: 0.8791 95% CI: (0.2406-3.2118)
	Negative	93 (84.55%)	192 (80.67%)			28 (80%)	257 (82.11%)			273 (81.98%)	12 (80%)		
	TOTAL	110 (100%)	238 (100%)			35 (100%)	313 (100%)			333 (100%)	15 (100%)		
Pain	≤ 3	20 (29.85%)	61 (44.85%)	p-value: 0.08118 Chi-square	Cramer's V: 0.16 95% CI: (0.00-1.00)	9 (31.03%)	72 (41.38%)	p-value: 0.5039 Chi-square	Cramer's V: 0.08 95% CI: (0.00-1.00)	78 (41.71%)	5 (33.33%)	p-value: 0.3134 Chi-square	Cramer's V: 0.11 95% CI: (0.00-1.00)
	[4-7]	31 (46.27%)	55 (40.44%)			15 (51.72%)	71 (40.80%)			77 (41.18%)	9 (60.00%)		
	≥ 8	16 (23.88%)	20 (14.71%)			5 (17.24%)	31 (17.82%)			32 (17.11%)	1 (6.67%)		
	TOTAL	67 (100%)	136 (100%)			29 (100%)	174 (100%)			187 (100%)	15 (100%)		
SMC	YES	70 (64.22%)	138 (57.98%)	p-value: 0.2711 Chi-square	OR: 1.3006 95% CI: (0.8140-2.0782)	25 (71.43%)	182 (58.33%)	p-value: 0.1343 Chi-square	OR: 1.7857 95% CI: (0.8292-3.8457)	207 (62.05%)	2 (13.33%)	p-value: 0.0002 Fisher's exact test	OR: 10.6270 95% CI: (2.3590-47.8723)
	NO	39 (35.78%)	101 (42.02%)			10 (28.57%)	131 (41.67%)			126 (37.95%)	13 (86.67%)		
	TOTAL	109 (100%)	239 (100%)			35 (100%)	313 (100%)			333 (100%)	15 (100%)		
Hypertension (Diagnosis)	YES	49 (44.55%)	99 (41.6%)	p-value: 0.0681 Chi-square	OR: 1.1278 95% CI: (0.7149-1.7792)	12 (34.29%)	136 (43.45%)	p-value: 0.2983 Chi-square	OR: 0.6790 95% CI: (0.3263-1.4131)	139 (41.74%)	9 (60%)	p-value: 0.1618 Chi-square	OR: 0.4777 95% CI: (0.1662-1.3728)
	NO	61 (55.45%)	139 (58.4%)			23 (65.71%)	177 (56.55%)			194 (58.26%)	6 (40%)		
	TOTAL	110 (100%)	238 (100%)			35 (100%)	313 (100%)			333 (100%)	15 (100%)		
Diabetes mellitus	YES	19 (17.27%)	26 (10.92%)	p-value: 0.1008 Chi-square	OR: 1.7025 95% CI: (0.8972-3.2304)	5 (14.29%)	40 (12.78%)	p-value: 0.0657 Fisher's exact test	OR: 1.1375 95% CI: (0.4171-3.1021)	43 (12.91%)	2 (13.33%)	p-value: 1.0000 Fisher's exact test	OR: 0.9638 95% CI: (0.2102-4.4190)
	NO	91 (82.73%)	212 (89.08%)			30 (85.71%)	273 (87.22%)			290 (87.09%)	13 (86.67%)		
	TOTAL	110 (100%)	238 (100%)			35 (100%)	313 (100%)			333 (100%)	15 (100%)		

The last column represents the 95% confidence interval for the expected odds ratio; *: p -value < 0.05; **: p -value < 0.01.

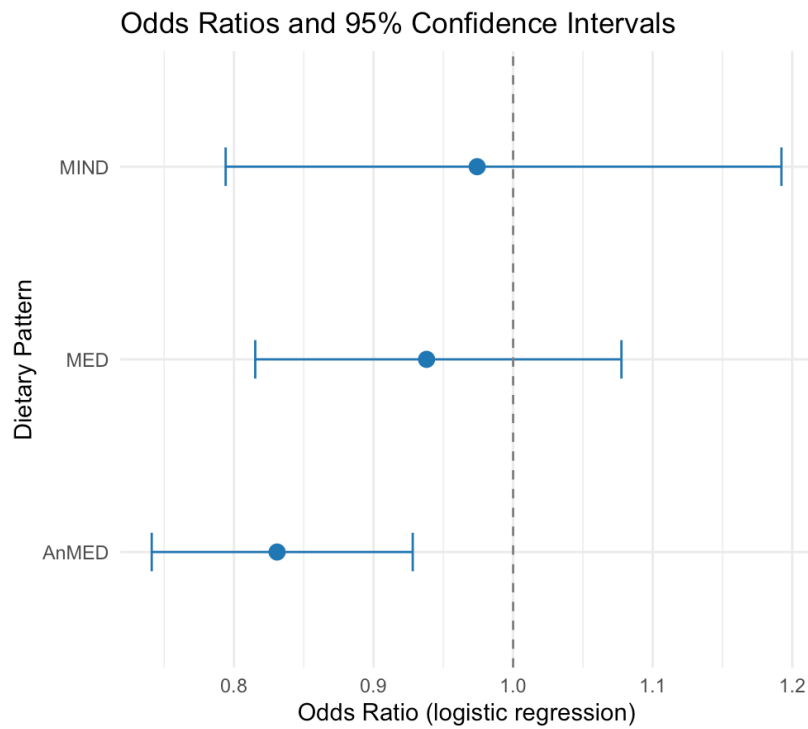


Figure 2. Odds Ratios and 95% Confidence Intervals in the three different dietary pattern from a logistic regression model.

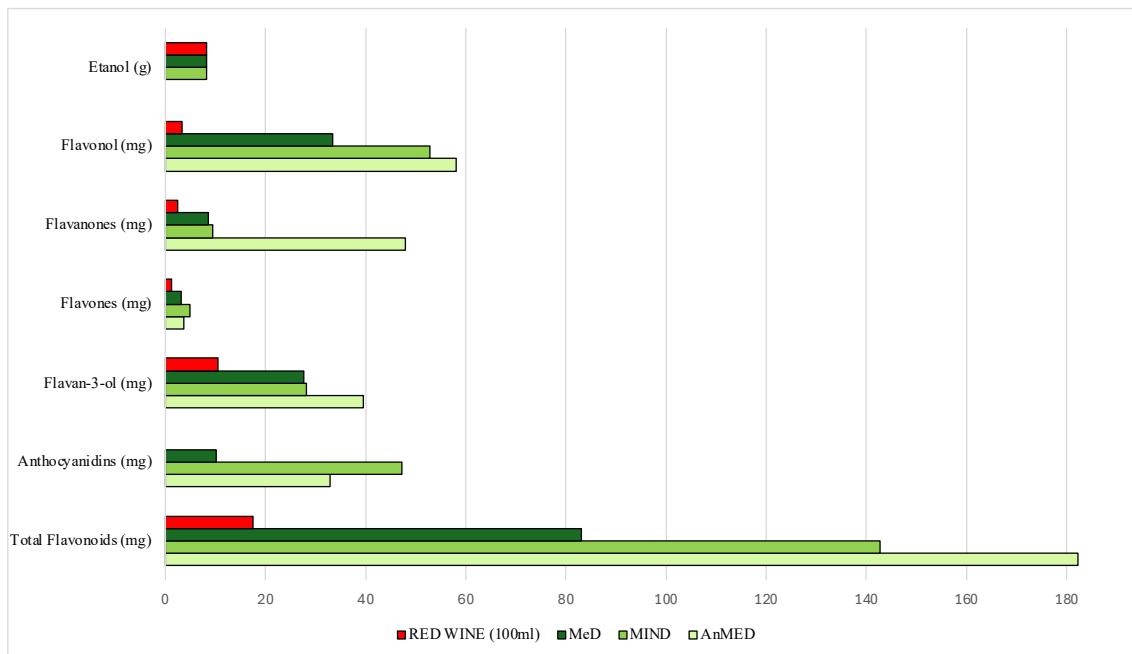


Figure 4. Contribution of wine flavonoids (red) compared with the contributions of the 3 dietary models studied.

Supplementary materials 4

MED meal plan;

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Milk (200mL) + coffee (8g) whole wheat bread (40g) with hummus (25g) Apple 200g	Milk (200mL) + coffee (8g) whole wheat bread (40g) with hummus (25g) Apple 200g	Milk (200mL) + coffee (8g) 35 g Mix hazelnuts walnuts y almonds Apple 200g	Milk (200mL) + coffee (8g) whole wheat bread (40g) with hummus (25g) Apple 200g	Milk (200mL) + coffee (8g) 35 g Mix hazelnuts, walnuts, almonds Apple 200g	Milk (200mL) + coffee (8g) whole wheat bread (40g) with EVOO y serrano ham(60g) Apple 200g	Milk (200mL) + coffee (8g) whole wheat bread (40g) with EVOO y serrano ham(60g) Apple 200g
Lunch	120 g turkey, 80 g potato, 50 g tomato 50g broccoli pear 200g red wine glass (100ml)	90 g lentils, 90 g spinach, 30 g potato 80g 70g carrot pineapple 130g red wine glass (100ml)	Brown rice 60g, chicken curry 100g, boiled cauliflower 80g watermelon 220g red wine glass (100ml)	90 g chickpeas, 90 g spinach, 30 g carrot, 60g green beans pineapple 130g red wine glass (100ml)	90g haricot beans with 30 g cucumber, 30 g carrot Mango 120g red wine glass (100ml)	100g chicken, mixed salad with lettuce 130g, tomato 50g, cucumber 40g, 20g carrot red wine glass (100ml) bell pepper (20g) Orange 140g	80g whole wheat pasta with shrimp 80g, mushrooms 60g and asparagus 85g 60g Mozzarella pineapple 130g red wine glass (100ml)
Snack	Yogurt 250g Banana 170g	Yogurt 125g Mix hazelnuts walnuts and almonds (30g)	Yogurt 125g Banana 170g	Yogurt 125g Mix hazelnuts walnuts and almonds (30g)	Yogurt 125g Banana 170g	Yogurt 125g Mix hazelnuts walnuts and almonds (30g)	Yogurt 125g Banana 170g
Dinner	120g salmon with carrot 40g, onion 30g and mushrooms (60g)	130g Cod with celery 40g, carrot 50g leek 40g and one egg (70g) Kiwi 100g provolone cheese (65g)	120g chicken with 50 g arugula, 30 g tomato, 25 g cucumber, 20g bell pepper and 60g Mozzarella cheese	120 g Tuna with 50 g arugula, 30 g tomato, 15 g olive and provolone cheese (65g) Banana 170g	Vegetable soup with carrot (50g), celery (60g), leek (50g), broccoli (50g), onion (30g) and potato (60g) Hake 160g	70g egg with bell pepper 50g, artichokes 40g y leek 40g provolone cheese (65g) Banana 170g	130g Cod with potato 60g, onion 40g and bell pepper 40g

60ml EVOO per day

3g maximum salt per day

2L of water per day

5g of pepper, oregano and rosemary per day

5g of saffron per week

Hummus (75g/sem): 59.25g chickpeas + 3.75g tahini + 3.75g EVOO + 0.75g garlic

EXPOSURE TO SUN 20MINS/DAY FIRST OR LAST HOUR OF THE DAY TO COMPLETE VITAMIN D INTAKE

MIND meal plan;

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Coffee (8g) Whole grain bread (40g) with tahini (25g) 1 Banana (170g) 1 date (10g)	Coffee (8g) Whole grain bread (40g) with grated tomato (20g) + sardines (25g) 1 apple (200g) 1 date (10g)	Coffee (8g) Whole grain bread (40g) with tahini (25g) blueberries (40g) 1 date (10g)	Coffee (8g) Whole grain bread (40g) with grated tomato (20g) + sardines (25g) 1 Banana (170g) 1 date (10g)	Coffee (8g) Whole grain bread (40g) with tahini (25g) strawberries (100g) 1 date (10g)	Coffee (8g) Whole grain bread (40g) with grated tomato (20g) + sardines (25g) 1 apple (200g) 1 date (10g)	Coffee (8g) Whole grain bread (40g) with tahini (25g) 1 apple (200g) 1 date (10g)
Lunch	Salad 1 lentils (80g) + rice (40g) + tomato (20g) + onion (60g) + potato (80g) 1 kiwi (100g) 1 glass of red wine (100ml)	Salad 2 mulletts (130g) + bell pepper (50g) + onion (40g) + rice (40g) Mango (170g) 1 glass of red wine (100ml)	Salad 1 Chickpeas (90g) + tomato (20g) + onion (60g) + potato (80g) + bell pepper (60g) + spinach (100g) 1 kiwi (100g) 1 glass of red wine (100ml)	Salad 2 whole wheat pasta (80g) + mushrooms (60g) + onion (30g) + bell pepper (40g) + 1 egg (70g) 1 Banana (170g) 1 glass of red wine (100ml)	Salad 1 Beans (90g) + tomato (30g) + onion (60g) + rice (40g) 1 Banana (170g) 1 glass of red wine (100ml)	Salad 2 Beef (120g) + asparagus (60g) + carrots (60g) 1 Orange (140g) 1 glass of red wine (100ml)	Salad 1 Chicken (120g) + sweet potato (60g) + rice (40g) Mango (170g) 1 glass of red wine (100ml)
Snack	200ml milk + oat flakes (40g) 30g mix of walnuts, almonds and hazelnuts 2 dried figs (20g)	200ml milk + oat flakes (40g) 30g mix of walnuts, almonds and hazelnuts 2 dried figs (20g)	200ml milk + oat flakes (40g) 30g mix of walnuts, almonds and hazelnuts 2 dried figs (20g)	200ml milk + oat flakes (40g) 30g mix of walnuts, almonds and hazelnuts 2 dried figs (20g)	200ml milk + oat flakes (40g) 30g mix of walnuts, almonds and hazelnuts 2 dried figs (20g)	200ml milk + oat flakes (40g) 30g mix of walnuts, almonds and hazelnuts 2 dried figs (20g)	200ml milk + oat flakes (40g) 30g mix of walnuts, almonds and hazelnuts 2 dried figs (20g)
Dinner	Sprat (120g) + potato (80g) + spinach (100g) + broccoli (40g) blueberries (40g)	Tuna (130g) Artichoke (60g) + Mushrooms (60g) + onion (40g) 1 apple (200g)	Turkey (120g) + potato (100g) + beans (60g) 1 Banana (170g)	Vegetable cream: leek (60g) + celery (40g) + tomato (30g) + onion (30g) + carrot (20g) + potato (40g) 1 pear (200g)	Herrings (130g) + bell peppers (60g) + onion (50g) 1 pear (200g)	Sweet potato (80g) + mushrooms (60g) + onion (30g) + 1 egg (70g) 1 Banana (170g)	Potato omelet (400g) with onion (80g) and 2 eggs (140g) sardines (50g) 1 pear (200g)

45ml EVOO per day

4g maximum salt per day

2L of water per day

5g of pepper, oregano and rosemary per day

5g of saffron per week

Salad 1: lettuce (130g) + tomato (50g) + cucumber (40g) + carrot (20g) + dried grapes (20g) + anchovies (25g)

Salad 2: arugula (80g) + spinach (80g) + onion (40g) + bell pepper (40g) + tahini (25g) + dried grapes (20g)

EXPOSURE TO SUN 20MINS/DAY FIRST OR LAST HOUR OF THE DAY TO COMPLETE VITAMIN D INTAKE

AnMED meal plan;

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	coffee (8g) with almond drink (200ml) Whole grain bread (40g) + 75g sardines 1 yogurt (125g) 1 date (10g) 1 apple (200g)	coffee (8g) with almond milk (200ml) 1 yogurt (125g) with oat flakes (20g) 1 date (10g) 1 apple (200g)	coffee (8g) with almond milk (200ml) Whole grain bread (40g) + tuna (80g) 1 yogurt (125g) 1 date (10g)	coffee (8g) with almond milk (200ml) 1 yogurt (125g) with oat flakes (20g) 1 date (10g) 1 apple (200g)	coffee (8g) with almond milk (200ml) Whole grain bread (40g) + 75g sardines 1 yogurt (125g) 1 date (10g) 1 orange (200g)	coffee (8g) with almond milk (200ml) 1 yogurt (125g) with oat flakes (20g) 1 date (10g) 1 pear (200g)	coffee (8g) with almond milk (200ml) 1 yogurt (125g) with oat flakes (20g) 1 date (10g) 1 apple (200g)
Lunch	Mixed salad with chicken (90g) lentils with rice 1 orange (200g)	Mixed salad with tuna (80g) Rice (60g) with spinach (90g) and turkey (100g)	Mixed salad Beans with rice breaded hake (150g) with 25g of gluten- free bread crumbs 1 apple (200g)	Mixed salad whole wheat pasta (80g) with tomato (40g), eggplant (40g), zucchini (20g), onion (60g) Trout (90g)	Chickpeas stew Chicken (90g) Spanish gazpacho (200g) 1 apple (200g)	Mixed salad Cod (90g) with eggplant (40g), sweet potato (60g), onion (60g) y bell pepper (60g) pineapple (170g)	Mixed salad Valencian paella 2 tangerines (200g)
Snack	kefir (125g) with blueberries (15g) 1 chocolate ounce (10g) walnuts (30g) 1 green tea (15g)	kefir (125g) with strawberries (40g) walnuts (30g) 1 green tea (15g) 1 dried grape (20g)	kefir (125g) with blueberries (15g) 1 chocolate ounce (10g) walnuts (30g) 1 green tea (15g) 1 dried grape (20g)	kefir with strawberries (40g) walnuts (30g) 1 green tea (15g) 1 dried grape (20g)	kefir (125g) with blueberries (15g) 1 chocolate ounce (10g) walnuts (30g) 1 green tea (15g) 1 dried grape (20g)	kefir with strawberries (40g) walnuts (30g) 1 green tea (15g) 1 dried grape (20g)	kefir (125g) with blueberries (15g) 1 chocolate ounce (10g) walnuts (30g) 1 green tea (15g)

	1 dried grape (20g)						1 dried grape (20g)
Dinner	Beetroot cream Whole grain bread (20g) with tahini (25g) cottage cheese with cinnamon (60g) 1 banana (170g)	Boiled of potato (70g), carrot (20g), onion (1/2) cottage cheese with cinnamon (60g) 1 banana	Potato omelet (500g), 1 egg (70g), zucchini (60g) and onion (80g) Whole grain bread (20g) with tahini (25g) 1 orange (200g)	Boiled of potato (70g), carrots (20g), onion (40g) broccoli (30g) Grilled artichokes (60g) cuttlefish (60g) with mushrooms (40g)	Boiled of potato (70g), carrots (20g), onion (40g) broccoli (30g) Whole grain bread (20g) with tahini (25g) pineapple (170g)	Avocado (80g) with tomato (60g) and egg (70g) Boiled of potato (70g), carrot (20g), onion (40g) and beans (30g) 1 apple (200g)	Boiled of potato (70g), carrot (20g), onion (40g) beans (30g), one egg (70g) and cauliflower (30g) Pineapple (170g)

45ml EVOO per day

4g maximum salt per day

2L of water per day

5g of pepper, oregano and rosemary per day

5g of saffron per week

5g of Turmeric each day, you can eat them mixed with some water, almond milk or add it to meals

Mixed salad: Lettuce (60g), tomato (20g), onion (30g), olives (10g), carrot (20g), radish (25g) and cucumber (30g)

Lentils with rice: lentils (80g), rice (40g), onion (40g), tomato (60g) and potato (40g)

Beans stew: Beans (90g), onion (40g), tomato (40g) and rice (40g)

Chikepeas stew: Chickpeas (90g), rice (40g), tomato (40g), onion (60g), potato (80g), spinach (90g), bell pepper (60g)

Valencian paella: Rice (60g), chicken (20g), rabbit (20g), artichoke (20g) beans (20g)

EXPOSURE TO SUN 20MINS/DAY FIRST OR LAST HOUR OF THE DAY TO COMPLETE VITAMIN D INTAKE

Supplementary Script 1

Below is the R script to calculate the Dietary Inflammatory Index (DII):

```
# Load the first dataset (DIIAssessDiet.csv)
# using read.csv # Assumes a comma-
# separated values format
B <- read.csv("Downloads/DIIAssessDiet.csv")
# Load the second dataset (DII.csv) using
# read.csv # Assumes a comma-separated
# values format
A <- read.csv("Downloads/DII.csv")
# Combine the two datasets column-wise (cbind
# ) after ordering
# Order dataset A by the column "Food.
# parameter" and dataset B by the column "
# Nutrients"
M <- cbind(A[order(A$Food.parameter)], B[
# order(B$Nutrients) ,])
# Convert specific columns to numeric type
# Ensures data is in the correct format for
# calculations M$Mean <- as.numeric(M$Mean)
M$std_d <- as.numeric(M$std_d)
M$MED <- as.numeric(M$MeD)
M$MIND <- as.numeric(M$MIND)
M$AnMED <- as.numeric(M$An-MeD)
M$RawIscore <- as.numeric(M$RawIscore)
M$OverallScore <- as.numeric(M$OverallScore)
# Add a new column to M: zscoreMed
# Calculate the z-score for the "
# Mediterranean" diet
parameter
# Formula: (An-MeD - Mean) / std_d
M <- M %>% mutate(zscoreMed = (An-MeD - Mean)
# / std_d)
# Add a new column to M: perMed
# Apply a transformation function to
# zscoreMed using sapply # Formula: 2 *
# pnorm(x) - 1 (maps z-scores to
# probabilities,
# scaled between -1 and 1)
M$perMed <- sapply(M$zscoreMed, function(x) {
# 2 * pnorm(x) - 1 })
# Calculate the weighted sum of perMed
# multiplied by OverallScore
# This is likely a summary measure of
# interest
sum(M$perMed * M$OverallScore)
```

Table 1: DII.csv

Variable	MED	MIND	AnMED
DII	-1.34	-2.47	-3.43
Alcohol (g)	8.19	8.19	0
Vitamin B12 (microg)	3.01	4.84	3.07
Vitamin B6 (mg)	1.99	3.25	2.91
Beta carotene (microg)	4642.70	14539.18	5184.47
Caffeine (g)	8	8	8
Carbohydrate (g)	122.21	210.92	197.52
Cholesterol (mg)	206.31	245.55	219.16
Energy (kcal)	2196.41	2269.45	2223.16
Eugenol (mg)	0	0	0
Fat Total (g)	66.51	77.51	51.43
Fibre (g)	86.49	47.13	47.96
Folic acid (microg)	392.76	486.66	443.12
Garlic (g)	3.14	3.00	3.00
Ginger (g)	0	0	0
Fe (mg)	28.27	21.91	18.81
Mg (mg)	514.41	550.89	517.60
MUFA (g)	48.81	49.49	49.40
Niacin (mg)	30.06	24.13	18.96
n-3 Fatty acids (g)	2.21	3.81	2.55
n-6 Fatty acids (g)	11.41	17.66	14.85
Onion (g)	14.30	85.70	122.86
Protein (g)	90.36	83.30	77.16
PUFA (g)	13.62	21.50	17.40
Riboflavin (mg)	28.06	1.94	1.75
Saffron (g)	0.71	0.71	0.71
Saturated fat (g)	25.09	20.41	15.35
Se (microg)	57.98	74.50	67.26
Thiamin (mg)	6.85	1.78	67.26
Trans fat (g)	0.51	0.42	0.01
Turmeric (mg)	0	0	5000
Vitamin A (RE)	1.06	2.67	1.31
Vitamin C (mg)	135.34	237.11	245.87
Vitamin D (microg)	3.31	5.50	6.03
Vitamin E (mg)	17.77	20.24	15.05
Zn (mg)	7.01	8.88	6.88
Green/black tea (g)	0	0	15
Flavan-3-ol (mg)	27.64	28.24	39.55
Flavones (mg)	3.22	4.96	3.71
Flavonols (mg)	33.43	52.83	58.02
Flavonones (mg)	8.60	9.44	47.97
Anthocyanidins (mg)	10.13	47.31	32.92
Isoflavones (mg)	0	0	0
Pepper (g)	5	5	5
Thyme/oregano (mg)	5000	5000	5000
Rosemary (mg)	5000	5000	5000