

## Aberystwyth University

### *Assessing Adherence to Healthy Dietary Habits Through the Urinary Food Metabolome*

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### *Supplementary Material*

**Supplementary Table S1.** Anthropometric variables and vital signs at baseline (M0) and M12 for French and Welsh populations.

France Group	Intervention	Control	p	Ni-Nc
Weight (kg), median [Q1 ; Q3]				
M0	78.0 [70.1 ; 83.6]	78.3 [72.0 ; 86.4]	.	50 - 50
M12	77.7 [69.7 ; 83.8]	76.5 [71.6 ; 86.5]	0,485	47 - 46
BMI (kg/m <sup>2</sup> )				
M0	27.1 [25.8 ; 28.3]	27.4 [26.2 ; 29.2]	.	50 - 50
M12	26.8 [25.5 ; 28.5]	27.0 [26.0 ; 28.3]	0,602	47 - 46
Systolic Blood Pressure (mmHg), median [Q1 ; Q3]				
M0	118.0 [110.0 ; 125.0]	118.0 [109.0 ; 124.0]	.	50 - 50
M12	114.0 [109.5 ; 122.5]	115.5 [107.0 ; 122.0]	0,779	48 - 46
Diastolic Blood Pressure (mmHg), median [Q1 ; Q3]				

	M0	70.0 [66.0 ; 74.0]	68.0 [62.0 ; 71.0]	.	50 - 50
	M12	66.0 [62.0 ; 73.0]	66.0 [62.0 ; 72.0]	0,501	48 - 46
Heart rate (bpm), median [Q1 ; Q3]					
	M0	65.5 [58.0 ; 71.0]	63.0 [57.0 ; 67.0]	.	50 - 50
	M12	67.0 [63.0 ; 71.0]	65.0 [59.0 ; 70.0]	0,288	48 - 46
Respiratory rate (bpm), median [Q1 ; Q3]					
	M0	20.0 [18.0 ; 20.0]	18.0 [16.0 ; 18.0]	.	14 - 24
	M12	14.0 [13.0 ; 16.0]	14.0 [13.0 ; 16.0]	0,348	47 - 44

Wales Group		Intervention	Control	p	Ni-Nc
Weight (kg), median [Q1 ; Q3]					
	M0	79.3 [70.2 ; 84.5]	77.3 [71.4 ; 88.6]	.	30 - 30
	M12	78.8 [68.6 ; 84.8]	76.4 [70.2 ; 86.6]	0,997	26 - 27
BMI (kg/m2)					

	M0	27.2 [26.1 ; 28.7]	27.0 [25.8 ; 29.2]	.	30 - 30
	M12	27.6 [25.2 ; 28.7]	26.8 [25.8 ; 29.9]	0,817	26 - 27
Systolic Blood Pressure (mmHg), median [Q1 ; Q3]					
	M0	128.0 [120.0 ; 136.0]	122.5 [115.0 ; 134.0]	.	30 - 30
	M12	120.5 [112.0 ; 127.0]	122.0 [108.0 ; 130.0]	0,414	26 - 27
Diastolic Blood Pressure (mmHg), median [Q1 ; Q3]					
	M0	76.5 [70.0 ; 85.0]	72.0 [69.0 ; 81.0]	.	30 - 30
	M12	75.5 [65.0 ; 83.0]	72.0 [69.0 ; 78.0]	0,283	26 - 27
Heart rate (bpm), median [Q1 ; Q3]					
	M0	67.0 [61.0 ; 70.0]	73.0 [69.0 ; 79.0]	.	30 - 30
	M12	63.5 [59.0 ; 70.0]	69.0 [63.0 ; 74.0]	0,593	26 - 27
Respiratory rate (bpm), median [Q1 ; Q3]					
	M0	19.0 [16.0 ; 22.0]	17.0 [16.0 ; 19.0]	.	30 - 30
	M12	18.0 [15.0 ; 20.0]	16.0 [14.0 ; 19.0]	0,098	25 - 27

**Supplementary Table S2.** AHEI-2010 individual components associated with their nutritional groups/categories.

AHEI-2010 component	Nutritional group
A1	Vegetables
A2	Fruits
A3	Whole grains
A4	Sugar sweetened drinks and fruit juice
A5	Nuts and legumes
A6	Red and processed meats
A7	Long-chain omega-3 fatty acids
A8	Polyunsaturated fatty acids (PUFA)
A9	Sodium
A10	Alcohol

**Supplementary Table S3.** AHEI-2010 individual component scores presented as mean  $\pm$  standard deviation at the three study time points. The individual components nutritional groups are described in the Table S2.

Time	Center	Sex	<i>n</i>	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
M0	Center 1	Men	40	6,4 $\pm$ 2,3	6,2 $\pm$ 3,3	0,8 $\pm$ 1,3	5 $\pm$ 4	2,9 $\pm$ 2,3	3,7 $\pm$ 2,6	8,8 $\pm$ 1,9	3,6 $\pm$ 1,6	5,1 $\pm$ 3,4	7,5 $\pm$ 2,8
		Women	57	6,8 $\pm$ 2,6	6,4 $\pm$ 2,9	0,9 $\pm$ 0,9	5,5 $\pm$ 4	3,2 $\pm$ 2,9	4,2 $\pm$ 2,7	8,4 $\pm$ 2	4,5 $\pm$ 2,1	5,7 $\pm$ 3,4	6,4 $\pm$ 2,9
	Center 2	Men	20	8,3 $\pm$ 2,6	5,8 $\pm$ 3,2	2,3 $\pm$ 1,9	2,8 $\pm$ 4	6 $\pm$ 3,4	3,9 $\pm$ 3,1	4,8 $\pm$ 2,1	4,6 $\pm$ 1,8	5,5 $\pm$ 3,8	7 $\pm$ 3,3
		Women	40	8,5 $\pm$ 2	6,6 $\pm$ 2,7	2,9 $\pm$ 2,1	3,6 $\pm$ 4,1	3,8 $\pm$ 3,2	4,6 $\pm$ 2,4	4,6 $\pm$ 2,4	4,6 $\pm$ 1,3	5,2 $\pm$ 3,2	7 $\pm$ 2,9
M6	Center 1	Men	37	6,1 $\pm$ 2,5	5,5 $\pm$ 2,7	0,8 $\pm$ 0,9	6,4 $\pm$ 3,2	3,1 $\pm$ 2,6	4,6 $\pm$ 2,8	8,2 $\pm$ 2,3	3,6 $\pm$ 1,8	5,7 $\pm$ 3,4	7,4 $\pm$ 2,8
		Women	54	6,7 $\pm$ 2,7	6 $\pm$ 2,9	1 $\pm$ 1,1	5,7 $\pm$ 4	4,2 $\pm$ 3,2	4,7 $\pm$ 2,5	8,4 $\pm$ 2,2	5,3 $\pm$ 2,8	6,2 $\pm$ 2,9	6,3 $\pm$ 2,8
	Center 2	Men	15	8 $\pm$ 2,4	5,5 $\pm$ 3,8	3,3 $\pm$ 2,7	2,9 $\pm$ 3,8	5,9 $\pm$ 3,6	4,5 $\pm$ 2,6	4,4 $\pm$ 2,1	5,1 $\pm$ 1,9	5 $\pm$ 3,4	7,6 $\pm$ 3,2
		Women	29	8,4 $\pm$ 2,2	6 $\pm$ 2,8	2,7 $\pm$ 1,8	4,4 $\pm$ 4,1	4,5 $\pm$ 3,5	4,9 $\pm$ 2,6	4,2 $\pm$ 2,1	4,7 $\pm$ 1,4	5,5 $\pm$ 3,2	6,6 $\pm$ 2,7
M12	Center 1	Men	31	5,9 $\pm$ 2,6	5,4 $\pm$ 3,1	0,6 $\pm$ 0,6	6,1 $\pm$ 3,6	3,3 $\pm$ 2,7	4,3 $\pm$ 2,8	8,6 $\pm$ 2	4,2 $\pm$ 2,1	6,2 $\pm$ 3,2	8 $\pm$ 2,5
		Women	50	6,9 $\pm$ 2,8	6,1 $\pm$ 2,9	1,1 $\pm$ 1,4	6,1 $\pm$ 3,8	3,9 $\pm$ 3	4,7 $\pm$ 2,4	8,3 $\pm$ 2,4	5,1 $\pm$ 2,4	6,2 $\pm$ 3	6,7 $\pm$ 2,8
	Center 2	Men	15	7,3 $\pm$ 2,4	4,7 $\pm$ 3,4	2,5 $\pm$ 1,6	3,7 $\pm$ 3,9	5,9 $\pm$ 4,1	4,2 $\pm$ 2,6	3,9 $\pm$ 2,4	4,6 $\pm$ 1	6,2 $\pm$ 3,4	7,9 $\pm$ 2,9
		Women	31	8,7 $\pm$ 2,1	6,8 $\pm$ 2,8	2,7 $\pm$ 1,9	4,3 $\pm$ 4,3	4,9 $\pm$ 3,1	4,9 $\pm$ 2,9	4,8 $\pm$ 2,5	4,8 $\pm$ 1,6	4,6 $\pm$ 3,5	7,3 $\pm$ 3

**Supplementary Table S4.** Pearson's correlation coefficients between the urinary levels of 5-(hydroxymethyl-2-furoyl)glycine (5-HMFG), 2-furoylglycine (2-FG) and other metabolites related to coffee intake.

	M0		M6		M12	
	5-HMFG	2-FG	5-HMFG	2-FG	5-HMFG	2-FG
2-FG	0.72	-	0.74	-	0.72	-
Caffeine	0.32	0.38	0.41	0.37	0.37	0.40
Paraxanthine	0.39	0.43	0.41	0.42	0.36	0.43
1-Methylxanthine	0.43	0.47	0.48	0.47	0.35	0.43
3-Methylxanthine	0.56	0.46	0.45	0.38	0.40	0.36
1-Methyluric acid	0.50	0.48	0.55	0.49	0.46	0.45
1,7-Dimethyluric acid	0.35	0.41	0.37	0.36	0.30	0.39
Cyclo(Leucyl-Proline)	0.29	0.45	0.33	0.43	0.33	0.53
Cyclo(Prolyl-Valine)	0.37	0.50	0.38	0.47	0.44	0.63
Trigonelline	0.35	0.49	0.40	0.56	0.38	0.50
N-Methylpyridinium	0.27	0.46	0.30	0.43	0.31	0.55

**Supplementary Figure S1.** Flow chart of participants in the study and samples available for analysis at each study time point (M0, M6 and M12).

