

Corrigendum

Clustering of adherence to personalised dietary recommendations and changes in healthy eating index within the Food4Me study – CORRIGENDUM

Katherine M Livingstone¹, Carlos Celis-Morales¹, Jose Lara¹, Clara Woolhead², Clare B O'Donovan², Hannah Forster², Cyril FM Marsaux³, Anna L Macready⁴, Rosalind Fallaize⁴, Santiago Navas-Carretero^{5,6}, Rodrigo San-Cristobal⁶, Silvia Kolossa⁷, Lydia Tsigoti⁸, Christina P Lambrinou⁸, George Moschonis⁸, Agnieszka Surwitto⁹, Christian A Drevon¹⁰, Yannis Manios⁸, Iwona Traczyk⁹, Eileen R Gibney², Lorraine Brennan², Marianne C Walsh², Julie A Lovegrove⁴, J Alfredo Martinez⁶, Wim HM Saris³, Hannelore Daniel⁷, Mike Gibney² and John C Mathers¹ on behalf of the FoodMe Study⁴

¹Human Nutrition Research Centre, Institute of Cellular Medicine, Newcastle University, Biomedical Research Building, Campus for Ageing and Vitality, Newcastle upon Tyne NE4 5PL, UK: ²UCD Institute of Food and Health, University College Dublin, Dublin, Republic of Ireland: ³Department of Human Biology, NUTRIM School of Nutrition and Translational Research in Metabolism, Maastricht University Medical Centre, Maastricht, The Netherlands: ⁴Hugh Sinclair Unit of Human Nutrition and Institute for Cardiovascular and Metabolic Research, University of Reading, Reading, UK: ⁵Center for Nutrition Research, University of Navarra, Pamplona, Spain: ⁶CIBER Fisiopatología Obesidad y Nutrición (CIBERObn), Instituto de Salud Carlos III, Madrid, Spain: ⁷ZIEL Research Center of Nutrition and Food Sciences, Biochemistry Unit, Technical University of Munich, Munich, Germany: ⁸Department of Nutrition and Dietetics, Harokopio University, Athens, Greece: ⁹National Food & Nutrition Institute (IZZ), Warsaw, Poland: ¹⁰Department of Nutrition, Institute of Basic Medical Sciences, Faculty of Medicine, University of Oslo, Oslo, Norway

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Original text and corrections:

ORIGINAL TEXT (page 3296, Abstract)

Subjects: Adults aged 18–79 years (n 1480).

CORRECTION

Subjects: Adults aged 18–79 years at baseline (n 1480).

ORIGINAL TEXT (page 3298, Results)

Of the 5562 individuals who registered on the Food4Me website, 1607 were randomised into the study and a total of 1480 provided baseline data on dietary intakes(17).

CORRECTION

Of the 5562 individuals who registered on the Food4Me website, 1607 were randomised into the study. A total of 1480 participants provided baseline data on dietary intakes⁽¹⁵⁾. Following exclusion of missing data for covariates the baseline sample was 1285. A total of 1147 participants provided complete follow up data.

ORIGINAL TEXT (page 3300, Results)

There were no significant differences in changes in HEI between clusters when PN was stratified by Level 1, Level 2 or Level 3 (data not shown).

CORRECTION

The results for when PN was stratified by L1, L2 or L3 are presented in **Supplementary Table 5**. For participants in L2, there were bigger improvements in HEI for participants in C4 compared with C1 ($P < 0.001$) and in C3 and C2 compared

with C1 ($P < 0.05$). For participants in L3, there were bigger improvements in HEI for participants in C4 compared with C1 and C2 ($P < 0.05$) (**Supplementary Table 5**). There were no significant differences for participants in L1.

ORIGINAL TEXT (page 3300, Results)

Exclusion of participants with reported intakes more than 3 SD above or below the mean dietary intakes of whole grains, oily fish, red meat and fruit and vegetables revealed similar clusters (see online supplementary material, Supplemental Table 5).

CORRECTION

Exclusion of participants with reported intakes more than 3 SD above or below the mean dietary intakes of wholegrain, oily fish, red meat and fruit and vegetables revealed similar clusters (**Supplementary Table 6**).

ORIGINAL TEXT (page 3302, Discussion)

We observed that individuals in the cluster where the fewest recommendations were met (C4) reported the biggest improvement in HEI following PN intervention but there were no differences between clusters in response to conventional, non-personalised dietary advice.

CORRECTION

We observed that individuals in the cluster where the fewest recommendations were met (C4) reported the biggest improvement in HEI following PN intervention.

ORIGINAL TEXT (page 3302, Discussion)

Fig. 1 Changes from baseline to month 6 in Healthy Eating Index 2010 (HEI) score by cluster of adherence to dietary recommendations at baseline among adults aged 18–79 years (n 1480), Food4Me study.

CORRECTION

Figure 1 Changes from baseline to month 6 in Healthy Eating Index by clusters of adherence to recommendations at baseline among adults aged 18–79 years (n 1,147), Food4Me study.

ORIGINAL TEXT (page 3300, Results)

Table needed

CORRECTION

Table 1 Food and nutrient and intakes by participants by clusters of adherence to recommendations at baseline among adults aged 18–79 years (n 1285), Food4Me study

	Clusters								P*
	1 (n=416)		2 (n=351)		3 (n=310)		4 (n=208)		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Dietary recommendations, g/d									
Oily fish	48	33 ^{2,3,4}	8	7	10	7	8	7	<0.001
Wholegrains	189	187 ^{2,4}	215	1643,4	204	1534	22	16	<0.001
Red meat	85	82 ^{2,3,4}	30	203,4	122	544	88	104	<0.001
Fruit and vegetables	594	354 ^{2,3,4}	479	3123,4	451	283	342	222	<0.001
Other food intakes, g/d									
Fruit Juice	119	182 ^{3,4}	116	165	90	130	78	111	0.008
Non-wholemeal	110	131 ^{2,4}	78	77 ⁴	116	1054	156	205	<0.001
Eggs	38	38 ^{2,3}	22	24	31	42	32	55	<0.001
Chicken, grilled or roast	34	37 ^{2,3,4}	16	21 ³	27	25	24	26	<0.001
White fish	25	26 ^{2,3,4}	9	11	12	13	12	14	<0.001
Fish products	19	31 ^{2,4}	9	10 ³	14	16	12	15	<0.001
Beans and lentils	28	35 ^{2,3}	15	24	16	27	22	27	<0.001
Butter	5	9 ³	6	10 ³	9	194	5	11	0.005
Low fat dairy	298	289 ^{2,3,4}	218	208	219	210	171	224	<0.001
High fat dairy	62	122	65	126	85	114	78	181	0.44
Sugar sweetened beverages	33	176	19	57	43	146	37	70	0.39
Low calorie soft drinks	69	199	44	159	75	231	75	205	0.53
Added sugar	4	9	4	11	6	13	6	13	0.11
Chocolate and sweets	21	37	18	23	23	30	15	18	0.10

Table 1 Continued

	Clusters								P*
	1 (n=416)		2 (n=351)		3 (n=310)		4 (n=208)		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Dietary recommendations, g/d									
Oily fish	48	33 ^{2,3,4}	8	7	10	7	8	7	<0.001
Wholegrains	189	187 ^{2,4}	215	1643,4	204	1534	22	16	<0.001
Red meat	85	82 ^{2,3,4}	30	203,4	122	544	88	104	<0.001
Fruit and vegetables	594	354 ^{2,3,4}	479	3123,4	451	283	342	222	<0.001
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Fruit Juice	119	182 ^{3,4}	116	165	90	130	78	111	0.008
Non-wholemeal	110	131 ^{2,4}	78	77 ⁴	116	1054	156	205	<0.001
Eggs	38	38 ^{2,3}	22	24	31	42	32	55	<0.001
Chicken, grilled or roast	34	37 ^{2,3,4}	16	21 ³	27	25	24	26	<0.001
White fish	25	26 ^{2,3,4}	9	11	12	13	12	14	<0.001
Fish products	19	31 ^{2,4}	9	10 ³	14	16	12	15	<0.001
Beans and lentils	28	35 ^{2,3}	15	24	16	27	22	27	<0.001
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Sugar sweetened beverages	33	176	19	57	43	146	37	70	0.39
Low calorie soft drinks	69	199	44	159	75	231	75	205	0.53
Added sugar	4	9	4	11	6	13	6	13	0.11
Chocolate and sweets	21	37	18	23	23	30	15	18	0.10
Cakes	21	30	17	23	21	25	21	27	0.08
Biscuits	27	49	22	38	36	91	27	54	0.38
Ice-cream	6	19	6	11	7	12	6	12	0.62
Pastries	8	36	4	7	6	10	8	13	0.49
Crisps	4	9	3	5 ³	5	8	4	9	0.06
Chips and pizza	29	40	23	22 ^{3,4}	35	30	35	37	0.001
Fried foods	32	52 ²	20	28 ^{3,4}	34	35	35	30	0.047
Nutrient intake									
Total energy, kcal/d	2813	1193 ^{2,4}	2230	729 ³	2867	10304	2110	983	<0.001
EI:BMR ratio	1.8	0.7 ^{2,4}	1.5	0.5 ³	1.8	0.64	1.4	0.6	<0.001
Total fat, % energy	35.9	5.8 ^{2,4}	34.2	5.5 ^{3,4}	36.5	5.3	37.8	6.8	<0.001
SFA, % energy	13.4	2.8 ^{3,4}	13.6	3.3 ^{3,4}	14.9	2.9	15.2	3.2	<0.001
MUFA, % energy	14.2	3.3 ^{2,3}	12.6	2.8 ^{3,4}	13.6	2.54	14.8	3.6	<0.001
PUFA, % energy	6.0	1.5 ^{2,4}	5.7	1.4	5.7	1.3	5.5	1.7	0.003
Protein, % energy	18.3	4.2 ^{2,3,4}	15.5	3.2 ^{3,4}	17.0	2.9	17.4	3.6	<0.001
Carbohydrate, % energy	44.5	7.6 ^{2,3}	49.5	6.8 ^{3,4}	45.5	6.2	44.0	8.5	<0.001
Sugars, % energy	21.0	5.9 ²	22.6	5.9 ^{3,4}	19.7	5.6	20.6	5.9	<0.001
Dietary fibre, g/d†	33.5	15.9 ^{2,4}	30.2	13.3 ⁴	31.6	12.34	18.9	8.5	<0.001
Salt, g/d†	8.2	3.9 ^{2,4}	6.1	2.5 ³	8.8	3.64	6.0	3.8	<0.001

Values represent means and SD.

†, P values are also adjusted for total energy intake.

*ANOVA were adjusted for age, sex, BMI, PAL, smoking habits and country; Posthoc Tukey tests were performed to test for significant differences between clusters Superscript numbers denote where the differences lie across the clusters. For example, 1 means significantly different from cluster 1.

ORIGINAL TEXT (page 3301, Discussion)

Table needed

CORRECTION

Table 2 Socio-demographic characteristics of participants by clusters of adherence to recommendations at baseline among adults aged 18–79 years (n 1285), Food4Me study

	Clusters								P*
	1 (n=416)		2 (n=351)		3 (n=310)		4 (n=208)		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Age, years	42.0	12.6 ^{2,3}	39.9	14.4 ⁴	41.2	12.7 ⁴	36.9	11.4	<0.001
Female, %	56.33		65.5		48.1		63.9		0.79
Ethnicity, %									
Caucasian	95.7		96.9		97.7		97.6		0.16
Occupation, %									
Professional and managerial	45.2 ⁴		39.0		41.0		30.8		0.014
Intermediate occupations	24.8		21.9		26.5		28.4		0.16
Routine and manual	7.9 ⁴		7.1		12.9		14.9		0.006
Student	12.0		20.8		9.7		15.4		0.18
Not currently working	10.1		11.1		10.0		10.6		0.38
Anthropometrics									
Body weight, kg	74.1	14.6 ³	70.9	15.3 ^{3,4}	80.4	16.5 ⁴	74.1	15.8	<0.001
BMI, kg/m ²	25.3	4.2 ^{2,3}	24.1	4.5 ^{3,4}	26.8	5.0	25.9	5.4	<0.001
Waist circumference, cm	85.1	12.6 ³	82.2	13.5	90.5	14.5	86.1	13.9	<0.001
Physical activity									
PAL	1.8	0.2 ^{2,4}	1.7	0.2 ³	1.8	0.2 ⁴	1.7	0.2	<0.001
SB, min/d	746	73	742	77	750	76	744	7	0.96
Dietary conditions, %									
Want to lose weight	45.7 ⁴		40.2		47.7		55.8		0.013
Restricted diet	5.5		12.0		3.6		6.3		0.47
Medication use, %									
Prescribed medication	26.4		35.6		30.0		25.5		0.79
Non-prescribed medication	8.9		11.7		9.7		11.5		0.18
Health and disease									
Current smoker, %	8.9 ⁴		9.4		9.7		22.1		0.005
Total cholesterol, mmol/L	4.6	0.9	4.5	1.0	4.6	1.0	4.6	0.9	0.09
High blood pressure, %	7.9		7.4		9.7		6.3		0.89
Heart disease, %	2.4		1.4		0.7		1.0		0.17

Values represent means and SD or percentages; PAL, physical activity level; SB, sedentary behaviour

*ANOVA and logistic regression were used to test for significant differences across clusters in continuous and categorical variables, respectively. Analyses were adjusted for age, sex, BMI, PAL, smoking habits and country. Post hoc Tukey tests (continuous data) and logistic regression (categorical) were used to test for significant differences between clusters. Superscripts denote where the differences lie across the clusters. For example, 2 means significantly different from cluster 2.

ORIGINAL TEXT (page 3302, Discussion)**Table needed****CORRECTION****Table 3** Healthy Eating Index (HEI) score and its constituents at baseline and month 6 by clusters of adherence to recommendations among adults aged 18–79 years Food4Me study

	Cluster								P†
	1 (n=416)		2 (n=351)		3 (n=310)		4 (n=208)		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Baseline score (n = 1285)									
Total HEI	53.5	8.8 ^{2,3,4}	50.6	8.6 ^{3,4}	47.3	8.8 ⁴	41.8	9.5	<0.001
Fatty acid ratio*	3.2	2.5 ^{2,3,4}	2.2	2.4 ^{3,4}	1.6	1.6	2.0	2.0	<0.001
Protein	3.7	0.7 ^{2,3,4}	3.2	0.6 ^{3,4}	3.5	0.6	3.5	0.7	<0.001
Salt	0.1	0.5	0.2	0.7	0.1	0.5	0.1	0.4	0.042
Empty calories	8.8	3.9 ²	7.6	4.2	8.5	3.8	7.9	3.9	<0.001
Refined grains	6.1	3.6 ^{2,3,4}	4.8	3.7	4.3	3.7	4.4	4.0	<0.001
Seafood and plant protein	5.0	0.2 ^{2,3,4}	4.5	1.0	4.3	1.2	4.5	1.0	<0.001
Fruit	3.8	1.3 ³	3.9	1.3 ³	3.2	1.4	3.3	1.5	<0.001
Whole fruit	4.2	1.3 ^{3,4}	4.2	1.2 ^{3,4}	3.6	1.5	3.6	1.6	<0.001
Vegetables	2.5	1.2 ^{3,4}	2.3	1.3 ^{3,4}	1.9	0.9	2.1	1.0	<0.001
Greens and beans	4.2	1.1 ^{2,3,4}	3.8	1.3 ³	3.5	1.3	3.7	1.3	<0.001
Wholegrains	7.5	3.5	9.5	1.1	8.8	1.9	2.8	2.3	<0.001
Dairy products	4.7	2.6 ^{2,3,4}	4.7	2.7 ⁴	4.3	2.2 ⁴	4.4	2.7	0.30
	1 (n = 379)		2 (n = 313)		3 (n = 275)		4 (n = 180)		
Follow up score (n = 1147)									
Total HEI	55.9	9.1 ^{1,3,4}	53.3	9.7 ⁴	51.2	8.7	48.4	10.1	<0.001
Fatty acid ratio ¹	3.9	2.7 ^{2,3,4}	3.1	2.7 ³	2.5	2.1	2.7	2.2	<0.001
Protein	3.8	0.7 ^{2,3,4}	3.3	0.6 ^{3,4}	3.6	0.6	3.6	0.6	<0.001
Salt	0.1	0.6	0.2	1.0 ³	0.1	0.6	0.1	0.7	0.016
Empty calories	8.7	4.0 ²	7.3	4.1	8.7	4.0	8.3	4.2	<0.001
Refined grains	6.2	3.8 ⁴	5.5	3.8	5.0	3.8	4.9	3.8	<0.001
Seafood and plant protein	5.0	0.2 ^{2,3}	4.7	0.8	4.6	1.0	4.7	0.9	<0.001
Fruit	4.1	1.2	4.2	1.2 ³	3.8	1.4	3.7	1.5	<0.001
Whole fruit	4.4	1.2	4.5	1.1	4.1	1.4	4.0	1.5	0.001
Vegetables	2.7	1.2 ^{3,4}	2.7	1.3 ^{3,4}	2.3	1.0	2.4	1.0	<0.001
Greens and beans	4.3	1.0 ^{2,3}	4.1	1.2	3.9	1.2	4.1	1.1	<0.001
Wholegrains	8.0	3.0 ^{2,3,4}	9.2	1.9 ⁴	8.6	2.7 ⁴	5.6	3.8	<0.001
Dairy products	4.8	2.7	4.7	2.8	4.4	2.3	4.6	2.6	0.85

Values represent means and SD.

*Fatty acid ratio is the ratio of unsaturated fatty acids (mono- and polyunsaturated fatty acids) to saturated fatty acids

†ANOVA were used to test for significant differences across clusters. Models were adjusted for age, sex, body mass index, physical activity level, smoking habits and country. Posthoc Tukey's tests used to test for significant differences between clusters. Superscript numbers denote where the differences lie across the clusters relative to the reference category (1). For example, 2 means significantly different from cluster 2.

ORIGINAL TEXT (Supplementary Materials)

The table below was previously omitted.

CORRECTION

Supplemental Table 5. Changes from baseline to month 6 in Healthy Eating Index 2010 (HEI) score by cluster (C) of adherence to dietary recommendations at baseline among adults aged 18–79 years in the Food4Me study stratified by level of personalised nutrition advice.

Level of PN	n	C1	C2	C3	C4	P-value
Level 1	281	3.55 (0.91)	2.93 (1.01)	3.93 (1.09)	4.39 (1.36)	0.83
Level 2	305	0.26 (0.94)	4.41 (1.06) ¹	3.97 (1.02) ¹	7.78 (1.30) ¹	<0.001
Level 3	287	2.60 (0.78)	2.93 (0.90)	5.48 (0.97)	7.78 (1.30) ^{1,2}	0.002

Values are predicted means and standard errors. ANOVA were used to test for significant differences across clusters. Models were adjusted for age, sex, BMI, physical activity level, smoking habits and country. Level 1 received personalised dietary advice on how their intakes of these food groups at baseline compared with guideline amounts. Level 2 received advice based on their dietary intake (as for Level 1) and also on their baseline phenotypic data. Level 3 received advice based on their dietary intake, phenotypic and genotypic data collected at baseline. Posthoc Tukey's tests used to test for significant differences between clusters. Superscript numbers denote where the differences lie across the clusters relative to the reference category. For example, 2 means significantly different from cluster 2.

Reference

Livingstone KM, Celis-Morales C, Lara J, Woolhead C, O'Donovan CB, Forster H, *et al.* Clustering of adherence to personalised dietary recommendations and changes in healthy eating index within the Food4Me study. *Public Health Nutrition*, **19**(18), 3296–305. doi:10.1017/S1368980016001932