



## Corrigendum

# Dietary patterns and cardiovascular risk factors in adolescents and young adults: the Northern Ireland Young Hearts Project – CORRIGENDUM

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The blood pressure data that was reported was incorrect. Revised tables of data are below.

In the abstract, the fifth sentence describing the results (page 1685) should be: In the *a posteriori* DP analysis, YH3 participants adhering most closely to the 'healthy' DP were found to have lower pulse wave velocity (PWV) and homocysteine concentrations, the 'sweet tooth' DP were found to have increased LDL concentrations and decreased HDL concentrations, the 'drinker/social' DP were found to have lower LDL and homocysteine concentrations, but exhibited a trend towards a higher TAG concentration, and finally the 'Western' DP were found to have elevated homocysteine and HDL concentrations.

In the first paragraph of the Results section (page 1688), sentence 5 should be: SBP and DBP increased significantly from YH1 to YH3 ( $P < 0.001$ ) for males, but decreased significantly from YH1 to YH3 ( $P < 0.05$  and  $P < 0.001$  respectively) for females.

In the fourth paragraph of the Results section (page 1691), sentences 5 and 6 should be: A high Western dietary pattern score was positively associated with HDL-cholesterol concentrations and homocysteine concentrations in fully adjusted analyses. The fourth and final PCA-derived dietary pattern, sweet tooth, was positively associated with LDL concentrations and inversely associated with HDL concentrations.

The authors apologise for this error.

## Reference

1. Hannah J. McCourt, Claire R. Draffin, Jayne V. Woodside, *et al.* (2014) Dietary patterns and cardiovascular risk factors in adolescents and young adults: the Northern Ireland Young Hearts Project. *Br J Nutr* **112**, 1685–1698.

**Table 1.** General health and lifestyle characteristics and dietary intake in males and females who participated in Young Hearts (YH)1 and YH3 (Mean values and standard deviations)

	Males (n=249)					Females (n=238)					All (n=487)				
	YH1		YH3		P*	YH1		YH3		P*	YH1		YH3		P*
	Mean	SD	Mean	SD		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Age (years)	13.9	1.5	22.4	1.6	<0.001	14.0	1.6	22.8	1.7	<0.001	13.9	1.5	22.6	1.6	<0.001
Height (m)	1.59	0.1	1.78	0.1	<0.001	1.57	0.1	1.64	0.1	<0.001	1.58	0.1	1.71	0.1	<0.001
Weight (kg)	49.5	11.1	75.3	11.5	<0.001	50.7	11.0	64.5	11.9	<0.001	50.1	11.1	70.0	12.9	<0.001
BMI (kg/m <sup>2</sup> )	19.4	2.8	23.8	3.1	<0.001	20.5	3.4	23.8	4.3	<0.001	19.9	3.1	23.8	3.7	<0.001
Smoker (n,%)	22	8.8	91	36.5	<0.001	19	8.0	86	36.1	0.002	41	8.4	117	36.3	<0.001
Cholesterol (mmol/l)	4.4	0.8	4.5	0.9	0.243	4.7	0.8	4.7	0.9	0.273	4.5	0.8	4.6	0.9	0.109
HDL (mmol/l)	1.3	0.3	1.3	0.3	<0.001	1.3	0.3	1.5	0.4	<0.001	1.3	0.3	1.3	0.4	0.774
SBP (mmHg)	115.4	12.9	118.7	11.7	<0.001	114.0	12.2	107.3	10.9	<0.001	114.7	12.6	113.1	12.7	<0.05
DBP (mmHg)	69.9	9.4	76.3	9.1	<0.001	72.5	9.4	71.4	9.3	<0.001	71.2	9.5	73.9	9.5	<0.001
Energy (kcal/d)	2901.6	772.0	3121.5	852.7	0.718	2264.4	643.8	1993.6	575.3	0.024	2590.2	779.7	2570.3	922.5	0.665
Total fat (/4.184 kJ)	42.6	4.6	36.2	6.2	0.009	43.1	5.0	36.7	6.7	0.286	42.8	4.8	36.4	6.5	0.010
Fibre (/4.184 kJ)	8.0	2.3	5.7	1.9	<0.001	8.7	2.3	7.0	4.4	<0.001	8.3	2.3	6.3	3.4	<0.001
MDS	4.1	1.5	3.7	0.9	0.019	4.0	1.5	3.7	0.9	0.004	4.1	1.5	3.7	0.9	<0.001

SBP, systolic blood pressure; DBP, diastolic blood pressure; MDS, Mediterranean Diet Score.

\* For each sex, differences between variables measure at YH1 and YH3 were assessed using paired sample t-tests and categorical data were assessed by McNemar's test.

**Table 3.** CVD risk factors for the five groups of four food patterns determined by *a posteriori* principal component analysis related to men and women participating in the Young Hearts (YH) 3 (Mean values and standard deviations; adjusted mean values and 95% confidence intervals)

		1st fifth (lowest intake)		2nd fifth		3rd fifth		4th fifth		5th fifth (highest intake)		P* for trend	R <sup>2</sup>	
<b>Factor 1 Drinker/ Social n=487</b>	Total cholesterol (mmol/l)	4.7	0.8	4.7	0.8	4.6	1.0	4.6	0.8	4.3	0.7	0.016	0.014	
	Full adjustments†	0.1	-0.3, 0.5	0.1	-0.2, 0.5	0.0	-0.3, 0.3	0.2	-0.1, 0.5	Reference		0.118	0.193	
	TAG (mmol/l)	0.7	0.3	0.7	0.4	0.8	0.4	0.9	0.4	0.8	0.5	0.002	0.023	
	Full adjustments†	-0.2	-0.4, 0.0	-0.2	-0.3, 0.0	-0.1	-0.2, 0.1	0.0	-0.1, 0.1	Reference		0.071	0.189	
	HDL (mmol/l)	1.5	0.4	1.4	0.4	1.3	0.3	1.2	0.3	1.3	0.3	<0.001	0.044	
	Full adjustments†	0.0	-0.2, 0.1	-0.1	-0.2, 0.1	-0.1	-0.2, 0.0	-0.1	-0.2, 0.0	Reference		0.775	0.176	
	LDL (mmol/l)	2.9	0.7	3.0	0.8	2.9	1.0	3.0	0.8	2.7	0.8	0.207	0.004	
	Full adjustments†	0.2	-0.2, 0.6	0.3	-0.1, 0.6	0.1	-0.2, 0.4	0.3	0.1, 0.6	Reference		0.027	0.199	
	SBP (mmHg)	107.9	10.8	108.6	11.9	112.4	12.0	118.8	12.0	118.2	12.6	<0.001	0.118	
	Full adjustments†	-4.4	-9.5, 0.8	-3.8	-8.5, 0.9	-3.6	-7.5, 0.4	0.2	-3.3, 3.6	Reference		0.059	0.281	
	DBP (mmHg)	70.9	9.5	71.8	9.8	75.4	9.3	77.2	8.9	74.1	8.9	<0.001	0.031	
	Full adjustments†	-0.2	-3.9, 4.3	0.3	-3.4, 4.0	2.0	-1.2, 5.1	3.4	0.6, 6.1	Reference		0.607	0.123	
	PWV (ms)	2.9	0.4	2.9	0.4	3.2	0.4	3.2	0.4	3.3	0.6	<0.001	0.125	
	Full adjustments†	-0.1	-0.3, 0.1	-0.1	-0.2, 0.1	0.1	-0.1, 0.2	0.0	-0.2, 0.1	Reference		0.323	0.260	
HOMA	2.5	2.1	2.3	1.5	2.5	1.2	2.5	2.0	2.6	2.6	0.531	0.001		
Homocysteine (µmol/l)	9.3	3.0	10.4	5.0	10.0	5.0	10.7	6.2	9.7	4.8	0.513	0.001		
Full adjustments†	2.2	-0.2, 4.5	2.5	0.4, 4.7	1.5	-0.3, 3.3	1.4	-0.1, 3.0	Reference		0.032	0.124		
<b>Factor 2 Healthy n=487</b>	Total cholesterol (mmol/l)	4.5	0.8	4.7	0.9	4.6	0.8	4.7	0.9	4.4	0.9	0.723	0.723	
	TAG (mmol/l)	0.8	0.4	0.8	0.4	0.7	0.4	0.8	0.3	0.8	0.5	0.994	<0.001	
	HDL (mmol/l)	1.3	0.3	1.4	0.3	1.4	0.3	1.3	0.3	1.3	0.4	0.892	<0.001	
	LDL (mmol/l)	2.9	0.7	2.9	0.9	2.8	0.7	3.1	0.9	2.7	0.8	0.683	<0.001	
	SBP (mmHg)	114.9	13.5	113.0	12.0	111.5	12.4	112.8	12.4	113.6	13.2	0.465	0.001	
	DBP (mmHg)	75.1	10.0	73.7	8.9	73.5	9.4	73.8	9.2	73.2	10.1	0.204	0.003	
	PWV (ms)	3.2	0.6	3.1	0.4	3.1	0.4	3.1	0.4	3.0	0.4	0.172	0.004	
	Full adjustments†	0.2	0.0, 0.3	0.1	0.0, 0.3	0.1	0.0, 0.3	0.2	0.0, 0.3	Reference		0.020	0.269	
	HOMA	2.9	2.8	2.3	1.2	2.3	1.4	2.3	1.1	2.6	2.6	0.324	0.003	
	Homocysteine (µmol/l)	11.9	7.3	10.7	5.1	9.8	4.1	9.4	4.0	8.4	2.2	<0.001	0.054	
	Full adjustments†	2.6	0.8, 4.3	2.1	0.5, 3.7	1.2	-0.4, 2.8	1.1	-0.4, 2.7	Reference		0.004	0.134	
	<b>Factor 3 Western n=487</b>	Total cholesterol (mmol/l)	4.7	1.0	4.5	0.9	4.6	0.9	4.6	0.9	4.6	0.9	0.720	<0.001
		TAG (mmol/l)	0.8	0.4	0.8	0.4	0.8	0.3	0.8	0.4	0.8	0.4	0.951	<0.001
		HDL (mmol/l)	1.3	0.3	1.3	0.3	1.4	0.4	1.4	0.3	1.3	0.4	0.328	0.002
Full adjustments†		-0.1	-0.2, 0.0	-0.1	-0.2, 0.0	-0.1	-0.2, 0.0	0.0	-0.2, 0.1	Reference		0.032	0.187	
LDL (mmol/l)		3.0	0.9	2.9	0.8	2.9	0.8	2.8	0.8	2.9	0.8	0.430	0.001	
SBP (mmHg)		112.6	14.3	112.1	11.5	112.1	10.9	113.8	13.7	115.2	12.7	0.095	0.006	
Full adjustments†		-1.7	-1.7, 5.0	1.1	-2.5, 4.6	0.9	-2.6, 4.3	2.8	-0.6, 6.1	Reference		0.692	0.275	
DBP (mmHg)		72.6	8.7	73.7	10.3	73.7	8.6	73.6	10.1	75.8	9.7	0.041	0.009	
Full adjustments†		-0.4	-3.1, 2.3	-0.2	-3.1, 2.6	0.3	-2.4, 3.1	-0.2	-2.8, 2.5	Reference		0.750	0.123	
PWV (ms)		3.1	0.4	3.1	0.6	3.0	0.4	3.1	0.4	3.2	0.4	0.152	0.005	
HOMA		2.6	2.6	2.6	2.4	2.3	1.5	2.6	1.9	2.2	1.0	0.211	0.004	
Homocysteine (µmol/l)		9.3	4.0	9.2	4.0	9.1	3.0	9.9	3.4	12.6	7.6	<0.001	0.044	
Full adjustments†		-3.2	-4.8, -1.7	-2.9	-4.5, -1.4	-3.2	-4.7, -1.6	-2.5	-4.0, -1.0	Reference		<0.001	0.161	
<b>Factor 4 Sweet Tooth n=487</b>		Total cholesterol (mmol/l)	4.6	0.9	4.6	0.9	4.7	0.9	4.5	0.9	4.6	0.9	0.987	<0.001
	TAG (mmol/l)	0.9	0.6	0.8	0.4	0.7	0.4	0.8	0.4	0.7	0.3	0.010	0.015	
	HDL (mmol/l)	1.3	0.4	1.4	0.4	1.4	0.4	1.3	0.3	1.3	0.3	0.224	0.003	
	Full adjustments†	0.1	0.0, 0.2	0.1	0.0, 0.2	0.1	0.0, 0.2	0.0	-0.1, 0.1	Reference		0.004	0.196	
	LDL (mmol/l)	2.9	0.8	2.8	0.8	2.9	0.8	2.9	0.8	2.9	0.9	0.327	0.002	
	Full adjustments†	-0.2	-0.5, 0.0	-0.3	-0.5, 0.0	-0.1	-0.4, 0.1	-0.1	-0.4, 0.1	Reference		0.008	0.204	
	SBP (mmHg)	114.0	13.5	111.6	13.8	112.6	12.5	113.4	10.9	114.3	12.5	0.543	0.001	
	DBP (mmHg)	74.4	9.5	72.6	10.0	73.5	10.2	74.6	8.7	74.3	9.1	0.592	0.001	
	PWV (ms)	3.2	0.6	3.0	0.4	3.0	0.4	3.1	0.5	3.1	0.5	0.904	<0.001	
	HOMA	2.4	2.2	2.5	2.2	2.2	1.0	2.8	2.2	2.4	1.9	0.792	<0.001	
	Homocysteine (µmol/l)	11.0	5.8	9.8	5.4	9.6	3.2	9.4	3.7	10.4	5.7	0.361	0.002	

SBP, systolic blood pressure; DBP, diastolic blood pressure; PWV, pulse wave velocity; HOMA, homeostatic model assessment.

\* Data analysed using linear regression (unadjusted, adjusted and further adjusted as described with CVD risk factors as the outcome and dietary patterns in quintiles as a continuous variable.)

† Fully adjusted for age (years), sex, BMI (kg/m<sup>2</sup>), social status, physical activity, smoking status and energy (kJ).

**Table 4.** CVD risk factors for the three groups using the Mediterranean Diet Score (MDS) in men and women participating in Young Hearts YH 3 (Mean values and standard deviations; adjusted mean values and 95 % confidence intervals)

	1 <sup>st</sup> third (lowest intake)		2 <sup>nd</sup> third		3 <sup>rd</sup> third (highest intake)		<i>P</i> for trend	R <sup>2</sup>
MDS ( <i>n</i> 487)								
Total cholesterol (mmol/l)	4.7	0.9	4.5	0.8	4.6	1.0	0.475	0.001
TAG (mmol/l)	0.7	0.3	0.8	0.4	0.8	0.4	0.197	0.004
HDL (mmol/l)	1.4	0.3	1.3	0.3	1.4	0.4	0.757	<0.001
LDL (mmol/l)	2.9	0.8	2.9	0.8	2.8	0.9	0.366	0.022
SBP (mmHg)	113.5	12.8	113.7	13.0	112.3	12.3	0.372	0.002
DBP (mmHg)	74.1	9.0	73.3	9.5	74.1	10.1	0.945	<0.001
PWV (ms)	3.1	0.5	3.1	0.4	3.1	0.5	0.259	0.003
Full adjustments†	0.1	0.0, 0.2	0.0	0.0, 0.2	Reference		0.089	0.264
HOMA	2.4	1.4	2.6	2.6	2.4	1.9	0.737	<0.001
Homocysteine (μmol/l)	9.9	3.8	10.3	5.9	9.9	5.1	0.935	<0.001

SBP, systolic blood pressure; DBP, diastolic blood pressure; PWV, pulse wave velocity; HOMA, homeostatic model assessment.

\* Data were analysed using linear regression (unadjusted, adjusted and further adjusted as described with CVD risk factors as the outcome and dietary patterns in tertiles as a continuous variable).

† Fully adjusted for age (years), sex, BMI (kg/m<sup>2</sup>), social status, physical activity, smoking status and energy (kJ).

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**Table 5.** Change in Mediterranean Diet Score (MDS) from Young Hearts (YH) 1 to YH3 and CVD risk biomarkers at young adulthood (YH3) (Mean values and standard deviations; adjusted mean values and 95 % confidence intervals)

YH3 CVD risk markers	Change in MDS from YH1 – YH3								<i>P</i> *
	Least adherent 1 – least adherent 3		Least adherent 1 – most adherent 3		Most adherent 1 – least adherent 3		Most adherent 1 – most adherent 3		
BMI (kg/m <sup>2</sup> )	23.9	3.9	23.3	3.3	24.4	3.7	24.5	3.9	0.160
Waist circumference (cm)	78.5	10.8	77.1	9.4	79.9	10.1	80.4	10.8	0.218
Cholesterol (mmol/l)	4.6	0.8	4.5	1.0	4.7	1.0	4.7	1.0	0.661
TAG (mmol/l)	0.8	0.4	0.8	0.5	0.9	0.5	0.8	0.3	0.425
HDL (mmol/l)	1.4	0.3	1.4	0.4	1.3	0.3	1.3	0.4	0.233
LDL (mmol/l)	2.9	0.8	2.7	0.8	3.0	0.9	3.1	0.9	0.157
SBP (mmHg)	113.4	12.0	112.4	10.2	116.9	16.3	111.5	11.7	0.461
DBP (mmHg)	74.2	9.4	74.8	9.8	74.2	9.7	74.8	11.0	0.987
PWV (ms)	3.1	0.4	3.1	0.5	3.1	0.5	3.1	0.4	0.791
HOMA	2.6	2.1	2.6	2.1	2.1	0.7	1.8	0.9	0.139
Homocysteine (μmol/l)	9.9	4.5	9.6	4.5	11.4	6.4	10.8	6.6	0.151
Full adjustments†	-2.5	-4.4, -0.6	-2.3	-4.3, -0.3	-0.3	-2.7, 2.1	Reference		0.009

SBP, systolic blood pressure; DBP, diastolic blood pressure; PWV, pulse wave velocity; HOMA, homeostatic model assessment.

\* Data analysed using multivariable regression analysis (unadjusted, adjusted and further adjusted as described).

† Fully adjusted for age (years), sex, BMI (kg/m<sup>2</sup>), social status, physical activity, smoking status and energy (kJ).

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**Table 6.** Change in the Mediterranean Diet Score (MDS) from Young Hearts (YH) 1 to YH3 and changes in CVD risk biomarkers from YH1 to YH3 (Mean values and standard deviations)

Change in cardiovascular risk markers from YH1 to YH3†	Change in MDS from YH1 to YH3								P*
	Least adherent YH1– least adherent YH3		Least adherent YH1– most adherent YH3		Most adherent YH1– least adherent YH3		Most adherent YH1– most adherent YH3		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
BMI (kg/m <sup>2</sup> )*	4.0	3.0	3.8	2.6	3.7	3.0	3.5	3.0	0.688
Cholesterol (mmo/l)*	0.0	0.8	0.2	0.9	0.1	0.9	0.1	0.9	0.559
HDL (mmo/l)*	0.0	0.3	0.0	0.4	0.0	0.3	0.0	0.4	0.482
SBP (mmHg)*	-1.6	17.1	-4.3	13.7	-1.2	16.2	-4.0	11.2	0.708
DBP (mmHg)*	4.0	11.3	1.3	9.5	2.4	12.7	1.1	11.5	0.516

SBP, systolic blood pressure; DBP, diastolic blood pressure.

\* Data analysed using multivariable regression analysis (unadjusted, adjusted and further adjusted as described).

† Change calculated as YH3 values minus YH1 values.