



## Correction to: Nuts as a replacement for carbohydrates in the diabetic diet: a reanalysis of a randomised controlled trial

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In contrast to statements made in the above paper, measurements of waist and hip circumference were in fact available. Table 2 (Biochemistry and anthropometric measurements at baseline and study end) and Table 3 (Treatment differences in change for blood and anthropometric measurements in the intention-to-treat analysis) are updated here to include the missing data for waist circumference, hip circumference and waist/hip ratio. Analysis of the data did not show any significant effects of the full-dose nut diet, full-dose muffin diet or the half-dose nut diet on waist circumference, hip circumference or waist/hip ratio within groups or between groups.

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**Table 2** Biochemistry and anthropometric measurements at baseline and study end

Variable	Baseline			Study end		
	Full-dose nut diet ( <i>n</i> = 40)	Half-dose nut diet ( <i>n</i> = 38)	Full-dose muffin diet ( <i>n</i> = 39)	Full-dose nut diet ( <i>n</i> = 39)	Half-dose nut diet ( <i>n</i> = 32)	Full-dose muffin diet ( <i>n</i> = 32)
Glucose, mmol/l <sup>a</sup>	7.17 (1.48)	6.95 (1.22)	7.33 (2.17)	7.20 (1.80)	6.55 (2.90)	7.20 (1.75)
HbA <sub>1c</sub> , mmol/mol <sup>a</sup>	52.6 (7.5)	52.3 (7.3)	53.7 (6.6)	50.8 (9.8)	50.3 (7.7)	52.4 (9.8)
HbA <sub>1c</sub> , % <sup>a</sup>	6.97 (0.68)	6.93 (0.67)	7.07 (0.60)	6.80 (0.90)	6.75 (0.70)	6.95 (0.90)
Total cholesterol, mmol/l <sup>a</sup>	4.10 (1.81)	3.98 (0.93)	4.27 (1.42)	3.96 (1.21)	3.93 (1.06)	4.20 (1.42)
LDL-c, mmol/l <sup>b</sup>	2.46 (1.05)	2.18 (0.60)	2.29 (0.78)	2.27 (1.00)	2.04 (0.61)	2.37 (0.84)
HDL-c, mmol/l <sup>a</sup>	1.12 (0.35)	1.10 (0.31)	1.11 (0.35)	1.23 (0.31)	1.16 (0.34)	1.18 (0.27)
Triacylglycerols, mmol/l <sup>a</sup>	1.43 (0.93)	1.32 (0.64)	1.40 (0.71)	1.35 (1.08)	1.45 (0.93)	1.42 (0.93)
Total cholesterol:HDL-c ratio <sup>a</sup>	3.79 (1.46)	3.39 (0.81)	3.44 (1.39)	3.44 (1.36)	3.27 (1.32)	3.49 (1.69)
LDL-c:HDL-c ratio <sup>a</sup>	1.96 (1.31)	1.86 (0.81)	1.81 (1.27)	1.77 (1.01)	1.73 (1.04)	1.97 (1.28)
Non-HDL-c, mmol/l <sup>a</sup>	3.18 (1.54)	2.78 (0.87)	2.91 (1.47)	3.03 (1.17)	2.73 (1.12)	3.11 (1.55)
Triacylglycerol:HDL-c ratio <sup>a</sup>	1.24 (1.31)	1.11 (0.91)	1.26 (1.15)	1.06 (1.35)	1.29 (1.05)	1.28 (1.05)
ApoA1, g/l <sup>a</sup>	1.43 (0.24)	1.44 (0.37)	1.43 (0.22)	1.43 (0.30)	1.48 (0.35)	1.46 (0.23)
ApoB, g/l <sup>a</sup>	0.84 (0.36)	0.73 (0.21)	0.75 (0.26)	0.78 (0.29)	0.74 (0.24)	0.78 (0.30)
ApoB:ApoA1 <sup>a</sup>	0.57 (0.20)	0.50 (0.23)	0.50 (0.25)	0.52 (0.21)	0.44 (0.25)	0.52 (0.28)
CRP, nmol/l <sup>a</sup>	1.04 (1.20)	0.87 (1.69)	1.23 (1.50)	0.86 (1.52)	1.01 (1.73)	0.92 (1.67)
Weight, kg <sup>b</sup>	80.0 (14.7)	86.2 (15.6)	82.9 (14.7)	79.1 (14.0)	84.8 (15.1)	82.6 (14.9)
BMI, kg/m <sup>2</sup> <sup>b</sup>	28.8 (4.5)	30.3 (5.0)	29.4 (4.2)	28.5 (4.4)	29.9 (5.2)	29.2 (4.1)
Waist (cm) <sup>b</sup>	102 (11)	106 (13)	106 (11)	101 (12)	105 (14)	104 (10)
Hip (cm) <sup>b</sup>	108 (8)	111 (10)	109 (9)	108 (8)	110 (10)	109 (9)
Waist/hip ratio <sup>b</sup>	0.95 (0.06)	0.96 (0.05)	0.97 (0.06)	0.94 (0.06)	0.95 (0.06)	0.96 (0.05)
Blood pressure, mmHg						
Systolic <sup>b</sup>	122 (11)	124 (13)	125 (13)	120 (13)	124 (15)	123 (12)
Diastolic <sup>b</sup>	70 (9)	72 (8)	72 (10)	69 (10)	72 (6)	72 (10)
LDL-c < 255 Å, mmol/l <sup>a</sup>	1.37 (0.81)	1.28 (0.84)	1.13 (0.80)	1.26 (0.73)	1.14 (0.63)	1.33 (0.90)
LDL-c 255–260 Å, mmol/l <sup>a</sup>	0.50 (0.68)	0.55 (0.36)	0.67 (0.57)	0.49 (0.64)	0.51 (0.37)	0.66 (0.34)
LDL-c > 255 Å, mmol/l <sup>a</sup>	0.20 (0.34)	0.30 (0.20)	0.31 (0.48)	0.19 (0.35)	0.27 (0.21)	0.32 (0.37)
Fibrinogen, µmol/l <sup>b</sup>	10.2 (1.3)	10.0 (1.9)	9.4 (1.5)	10.1 (2.0)	9.7 (1.8)	9.0 (1.8)
Factor VII, U/ml <sup>b</sup>	1.15 (0.25)	1.02 (0.28)	1.10 (0.21)	1.13 (0.26)	1.03 (0.23)	1.13 (0.21)
Factor VIII, U/ml <sup>b</sup>	1.08 (0.31)	1.20 (0.38)	1.17 (0.39)	1.20 (0.37)	1.32 (0.46)	1.33 (0.43)
PAI-1, pmol/l <sup>a</sup>	438 (434)	470 (227)	475 (438)	392 (215)	496 (368)	404 (381)
Antioxidants	( <i>n</i> = 38)	( <i>n</i> = 32)	( <i>n</i> = 31)	( <i>n</i> = 38)	( <i>n</i> = 32)	( <i>n</i> = 30)
Protein thiols (µmol/l) <sup>b</sup>	317.0 (71.8)	326.6 (72.2)	317.7 (53.8)	355.7 (76.3)	345.9 (6.4)	356.5 (88.7)
Conjugated dienes (µmol/l) <sup>b</sup>	25.2 (9.8)	22.6 (9.8)	24.2 (7.7)	23.0 (9.7)	22.1 (10.0)	21.8 (6.9)
TBARS (µmol/l) <sup>b</sup>	0.32 (0.10)	0.35 (0.12)	0.31 (0.10)	0.32 (0.10)	0.36 (0.12)	0.29 (0.11)

<sup>a</sup> Data are presented as median (interquartile range) for non-normally distributed data

<sup>b</sup> Data are presented as mean (SD) for normally distributed data

For baseline: HbA<sub>1c</sub>, glucose and blood pressure baseline values were calculated as the mean of values at screening and weeks -1 and 0; for weight, BMI, waist circumference, hip circumference, waist/hip ratio and antioxidants, values at week 0 were used; for lipids, lipoproteins and CRP, the mean of weeks -1 and 0 were used (*n* = 93), or screening and week 0 if week -1 was missing (*n* = 17). For *n* = 6, only week 0 data were available. Data were not available for *n* = 1 who was randomised to the half-dose nut group but dropped out prior to week 0; for particle size and clotting factors, week 0 was used (*n* = 113) or week -1 if week 0 had insufficient serum quantities or samples were missing (*n* = 4)

For study end: HbA<sub>1c</sub>, glucose and blood pressure study end values were calculated as the mean of weeks 8, 10 and 12 (final month); for lipid, lipoproteins and CRP, week 8, 10 and 12 samples were also used apart from for *n* = 3 who only had week 8 samples available; for weight, BMI, waist circumference, hip circumference and waist/hip ratio, week 12 values were used (*n* = 100) or, if not available, week 8 values (*n* = 3); for particle size and clotting factors, owing to limited sample availability, week 12 samples were used (*n* = 97) or, if not available, week 10 samples (*n* = 3), or week 8 samples (*n* = 3; where week 10 samples were also unavailable); for antioxidants, week 12 samples were used where serum samples were available (conjugates dienes and TBARS, *n* = 100; protein thiols, *n* = 99 [analytical failure lead to loss of data for *n* = 1 sample])

TBARS, thiobarbituric acid reactive substances

**Table 3** Treatment differences in change for blood and anthropometric measurements in the intention-to-treat analysis

	Full-dose nut vs full-dose muffin diet				Full-dose nut vs half-dose nut diet				Half-dose nut vs full-dose muffin diet						
	$\beta$	95% CI	<i>p</i>	Adj <i>p</i>	$\beta$	95% CI	<i>p</i>	Adj <i>p</i>	$\beta$	95% CI	<i>p</i>	Adj <i>p</i>			
Glucose (mmol/l) <sup>a</sup>	-0.02	(-0.09, 0.06)	0.610	(-0.11, 0.07)	0.867	-0.05	(-0.12, 0.03)	0.228	(-0.14, 0.04)	0.449	0.03	(-0.05, 0.10)	0.506	(-0.07, 0.12)	0.784
HbA <sub>1c</sub> (mmol/mol) <sup>b</sup>	-2.0	(-3.8, -0.3)	0.026	(-4.2, 0.1)	0.066	-1.8	(-3.6, -0.04)	0.045	(-4.0, 0.3)	0.111	-0.2	(-2.1, 1.6)	0.813	(-2.5, 2.0)	0.969
HbA <sub>1c</sub> (mmol/mol) <sup>a</sup>	-0.04	(-0.07, -0.01)	0.017	(-0.08, -0.001)	0.043	-0.03	(-0.07, -0.002)	0.038	(-0.07, 0.01)	0.095	-0.01	(-0.04, 0.03)	0.749	(-0.05, 0.04)	0.945
HbA <sub>1c</sub> (%) <sup>b</sup>	-0.19	(-0.35, -0.02)	0.026	(-0.38, 0.01)	0.066	-0.17	(-0.33, -0.004)	0.045	(-0.36, 0.03)	0.111	-0.02	(-0.19, 0.15)	0.813	(-0.23, 0.18)	0.969
HbA <sub>1c</sub> (%) <sup>a</sup>	-0.03	(-0.05, -0.005)	0.018	(-0.06, -0.0002)	0.048	-0.02	(-0.05, -0.001)	0.039	(-0.05, 0.003)	0.097	0.00	(-0.03, 0.02)	0.768	(-0.03, 0.03)	0.953
Total cholesterol (mmol/l) <sup>a</sup>	-0.06	(-0.12, -0.01)	0.026	(-0.13, 0.003)	0.066	-0.04	(-0.10, 0.01)	0.119	(-0.11, 0.02)	0.264	-0.02	(-0.08, 0.04)	0.508	(-0.09, 0.05)	0.785
LDL-c (mmol/L) <sup>a</sup>	-0.09	(-0.18, -0.0004)	0.049	(-0.20, 0.02)	0.120	-0.04	(-0.13, 0.05)	0.383	(-0.15, 0.07)	0.657	-0.05	(-0.15, 0.04)	0.288	(-0.17, 0.06)	0.537
Small LDL-c (<255 Å, mmol/l) <sup>a,c,d</sup>	-0.35	(-0.61, -0.10)	0.007	(-0.66, -0.05)	0.018	-0.07	(-0.32, 0.19)	0.601	(-0.37, 0.24)	0.860	-0.29	(-0.55, -0.02)	0.034	(-0.60, 0.03)	0.085
Medium LDL-c (255-260 Å, mmol/l) <sup>a,c,d</sup>	0.10	(-0.13, 0.33)	0.382	(-0.17, 0.38)	0.655	0.00	(-0.23, 0.24)	0.976	(-0.27, 0.28)	1.000	0.10	(-0.14, 0.34)	0.417	(-0.19, 0.38)	0.694
Large LDL-c (>255 Å, mmol/l) <sup>a,c,d</sup>	-0.08	(-0.52, 0.37)	0.732	(-0.61, 0.46)	0.937	0.18	(-0.27, 0.62)	0.433	(-0.36, 0.71)	0.711	-0.25	(-0.70, 0.19)	0.264	(-0.79, 0.28)	0.502
HDL-c (mmol/l)	0.00	(-0.05, 0.05)	0.987	(-0.06, 0.06)	1.000	0.02	(-0.03, 0.06)	0.472	(-0.04, 0.07)	0.752	-0.02	(-0.07, 0.03)	0.501	(-0.08, 0.04)	0.779
Triacylglycerols (mmol/l) <sup>a</sup>	-0.09	(-0.20, 0.03)	0.159	(-0.23, 0.06)	0.335	-0.11	(-0.23, 0.01)	0.064	(-0.25, 0.03)	0.153	0.03	(-0.10, 0.15)	0.678	(-0.12, 0.17)	0.909
Total cholesterol:HDL-c ratio <sup>a</sup>	-0.06	(-0.13, 0.01)	0.080	(-0.14, 0.02)	0.186	-0.05	(-0.12, 0.02)	0.127	(-0.14, 0.03)	0.277	-0.01	(-0.08, 0.06)	0.825	(-0.09, 0.08)	0.973
LDL-c:HDL-c ratio <sup>a</sup>	-0.09	(-0.19, 0.01)	0.084	(-0.21, 0.03)	0.195	-0.05	(-0.15, 0.05)	0.334	(-0.17, 0.07)	0.598	-0.04	(-0.15, 0.07)	0.460	(-0.17, 0.09)	0.740
Non-HDL-c (mmol/l) <sup>a</sup>	-0.09	(-0.17, -0.01)	0.026	(-0.19, 0.005)	0.067	-0.06	(-0.14, 0.02)	0.114	(-0.16, 0.03)	0.253	-0.03	(-0.11, 0.06)	0.526	(-0.13, 0.07)	0.801
Triacylglycerol:HDL-c ratio <sup>a</sup>	-0.08	(-0.22, 0.06)	0.238	(-0.25, 0.08)	0.464	-0.12	(-0.26, 0.02)	0.085	(-0.29, 0.04)	0.197	0.04	(-0.11, 0.18)	0.607	(-0.14, 0.21)	0.864
ApoA1 (g/l)	-0.03	(-0.08, 0.01)	0.131	(-0.09, 0.02)	0.286	-0.02	(-0.07, 0.02)	0.328	(-0.08, 0.03)	0.590	-0.01	(-0.06, 0.03)	0.604	(-0.07, 0.04)	0.862
ApoB (g/l) <sup>a</sup>	-0.09	(-0.16, -0.02)	0.015	(-0.17, -0.003)	0.039	-0.05	(-0.12, 0.02)	0.176	(-0.13, 0.04)	0.364	-0.04	(-0.11, 0.03)	0.290	(-0.13, 0.05)	0.540
ApoB:ApoA1 <sup>a</sup>	-0.06	(-0.14, 0.01)	0.096	(-0.16, 0.03)	0.218	-0.01	(-0.08, 0.07)	0.850	(-0.10, 0.08)	0.981	-0.06	(-0.14, 0.02)	0.155	(-0.15, 0.04)	0.328
Serum CRP (nmol/l) <sup>a</sup>	0.00	(-0.36, 0.36)	0.996	(-0.43, 0.43)	1.000	-0.17	(-0.52, 0.19)	0.359	(-0.59, 0.26)	0.628	0.17	(-0.20, 0.54)	0.375	(-0.28, 0.61)	0.648
Fibrinogen (μmol/l) <sup>a,c,d</sup>	0.04	(-0.04, 0.12)	0.330	(-0.06, 0.13)	0.592	-0.02	(-0.10, 0.06)	0.648	(-0.11, 0.08)	0.891	0.06	(-0.02, 0.14)	0.169	(-0.04, 0.16)	0.352
Factor VII (U/ml) <sup>c,d</sup>	-0.06	(-0.12, -0.002)	0.043	(-0.13, 0.01)	0.106	-0.01	(-0.07, 0.05)	0.715	(-0.08, 0.06)	0.929	-0.05	(-0.11, 0.01)	0.110	(-0.12, 0.02)	0.244
Factor VIII (U/ml) <sup>c,d</sup>	0.02	(-0.08, 0.13)	0.562	(-0.10, 0.15)	0.900	0.01	(-0.10, 0.11)	0.878	(-0.12, 0.13)	0.987	0.01	(-0.09, 0.12)	0.786	(-0.11, 0.14)	0.960
PAI-1 (pmol/l) <sup>c,d</sup>	-45.1	(-178, 87.7)	0.502	(-204, 114)	0.779	-147	(-281, -13.1)	0.032	(-308, 13.6)	0.080	102	(-35.9, 240)	0.145	(-63.4, 268)	0.311
Systolic blood pressure (mmHg)	-0.03	(-3.96, 3.90)	0.990	(-4.73, 4.68)	1.000	-2.84	(-6.75, 1.06)	0.153	(-7.52, 1.83)	0.325	2.82	(-1.27, 6.90)	0.176	(-2.07, 7.70)	0.364
Diastolic blood pressure (mmHg)	-0.68	(-3.05, 1.69)	0.572	(-3.52, 2.16)	0.839	-1.41	(-3.77, 0.95)	0.240	(-4.23, 1.41)	0.467	0.73	(-1.73, 3.19)	0.560	(-2.22, 3.68)	0.829
Weight (kg) <sup>c,e</sup>	-0.33	(-1.11, 0.45)	0.407	(-1.26, 0.61)	0.683	-0.73	(-1.52, 0.06)	0.070	(-1.67, 0.22)	0.164	0.40	(-0.41, 1.21)	0.330	(-0.57, 1.37)	0.592
BMI (kg/m <sup>2</sup> ) <sup>c,e</sup>	-0.12	(-0.40, 0.16)	0.391	(-0.45, 0.21)	0.666	-0.26	(-0.54, 0.02)	0.070	(-0.59, 0.08)	0.164	0.14	(-0.15, 0.42)	0.343	(-0.21, 0.48)	0.609

Table 3 (continued)

	Full-dose nut vs full-dose muffin diet			Full-dose nut vs half-dose nut diet			Half-dose nut vs full-dose muffin diet			
	$\beta$	95% CI	<i>p</i>	Adj CI	Adj <i>p</i>	$\beta$	95% CI	<i>p</i>	Adj CI	Adj <i>p</i>
Waist (cm) <sup>a,c,e</sup>	0	(-0.03, 0.02)	0.738	(-0.04, 0.03)	0.940	0	(-0.03, 0.02)	0.821	(-0.04, 0.03)	0.972
Hip (cm) <sup>c,e</sup>	1	(-1, 2)	0.241	(-1, 2)	0.467	0	(-1, 2)	0.721	(-1, 2)	0.932
Waist/hip ratio <sup>a,c,e</sup>	-0.01	(-0.03, 0.01)	0.315	(-0.03, 0.01)	0.573	0	(-0.02, 0.02)	0.726	(-0.03, 0.02)	0.934
Protein thiols ( $\mu\text{mol/l}$ ) <sup>c,f</sup>	0.42	(-31.2, 32.1)	0.979	(-37.6, 38.4)	1.000	13.0	(-18.7, 44.8)	0.417	(-25.0, 51.1)	0.695
Conjugated dienes ( $\mu\text{mol/l}$ ) <sup>a,c,e</sup>	0.09	(-0.07, 0.25)	0.262	(-0.10, 0.28)	0.499	-0.05	(-0.21, 0.11)	0.513	(-0.25, 0.14)	0.789
TBARS ( $\mu\text{mol/l}$ ) <sup>a,c,e</sup>	0.09	(-0.06, 0.23)	0.247	(-0.09, 0.26)	0.477	0.01	(-0.13, 0.16)	0.865	(-0.16, 0.19)	0.984

Unless otherwise indicated,  $n = 108/117$ ; nine participants (half-dose nut group,  $n = 5$ ; full-dose muffin group,  $n = 4$ ) without post-intervention data are not captured in this analysis

Unless otherwise indicated, the outcome reported is change, modelled as change from baseline. Estimates taken from a repeated measures model in PROC MIXED, SAS 9.4, with sex, binary HbA<sub>1c</sub> and lipid medications as covariates. Estimated from week 12 using least squares means with Tukey adjusted *p* values and confidence limits from all available data (week 2, 4, 8, 10 and 12)

<sup>a</sup> Data for which residuals were not normally distributed have been  $\log_e$  transformed

<sup>b</sup> No covariates (without sex, binary HbA<sub>1c</sub> or lipid medications as covariates). Values represent change from baseline, with estimates taken from a repeated measures model in PROC MIXED, SAS 9.4 (as above)

<sup>c</sup> *p* values taken from ANCOVA models; estimates taken from week 12 as change from baseline, outcome model against treatment with sex, binary HbA<sub>1c</sub> and lipid medication as covariates. Tukey adjustment was applied for pairwise comparisons between the three treatment groups

<sup>d</sup>  $n = 103$  (full-dose nut group,  $n = 39$ ; half-dose nut group,  $n = 32$ ; full-dose muffin group,  $n = 32$ )

<sup>e</sup>  $n = 100$  (full-dose nut group,  $n = 38$ ; half-dose nut group,  $n = 32$ ; full-dose muffin group,  $n = 30$ )

<sup>f</sup>  $n = 99$  (full-dose nut group,  $n = 38$ ; half-dose nut group,  $n = 31$ ; full-dose muffin group,  $n = 30$ ); loss of  $n = 1$  data point due to analytical failure for one participant in the half-dose nut group

Adj, adjusted; TBARS, thiobarbituric acid reactive substances