

SUPPLEMENTARY MATERIAL

Supplementary Table 1

Characteristics of the study population by quintiles of R-TFA intake. Median values with 5th and 95th percentiles.

	Q1(R-TFA 0.1 - 0.8 g/d)		Q2 (R-TFA 0.8 - 1.1 g/d)		Q3 (R-TFA 1.1 - 1.4 g/d)		Q4 (R-TFA 1.4 - 2.0 g/d)		Q5 (R-TFA 2.0 - 4.6 g/d)	
	Median	5th and 95th percentile	Median	5th and 95th percentile	Median	5th and 95th percentile	Median	5th and 95th percentile	Median	5th and 95th percentile
Men (%)	49		38		41		49		80	
Age > 50 y (%)	51		42		41		45		46	
Weight at baseline (kg)	67.8	49.6, 90.4	71.0	54.8, 94.0	72.0	53.4, 94.5	69.1	49.6, 90.2	71.4	59.0, 105.1
Annual weight change (kg)	0.3	-0.8, 2.2	0.6	-0.8, 1.8	0.4	-0.5, 1.9	0.4	-0.9, 1.4	0.2	-0.9, 2.0
Waist circumference at baseline	83.0	67.0, 103.5	83.5	69.5, 102.0	81.3	68.0, 102.5	80.0	65.0, 104.0	85.0	71.5, 104.5
Annual change in waist circumference (cm)	0.7	-1.6, 2.2	0.5	-1.5, 2.2	0.5	-0.9, 2.4	0.4	-1.2, 1.9	0.5	-1.0, 1.9
Hip circumference at baseline (cm)	97.0	87.0, 106.0	97.0	90.5, 109.5	97.5	87.5, 110.0	98.0	86.0, 111.0	96.0	88.5, 109.5
Annual change in hip circumference (cm)	0.1	-0.7, 1.5	0.4	-0.6, 1.6	0.1	-0.7, 1.1	0.2	-0.9, 1.2	0.0	-1.1, 1.2
Body fat at baseline (%)	27.1	16.4, 39.4	28.8	17.2, 39.1	27.0	11.7, 42.9	25.5	16.0, 40.0	23.3	13.0, 34.3
Annual change in body fat (% point)	0.4	-0.5, 1.5	0.6	-0.3, 1.6	0.4	-0.4, 1.8	0.4	-0.6, 1.2	0.3	-0.4, 1.2
Height (m)	1.66	1.54, 1.83	1.69	1.55, 1.83	1.69	1.55, 1.84	1.71	1.55, 1.89	1.74	1.58, 1.92
BMI at baseline (kg/m ²)	24.3	19.2, 31.3	24.9	20.5, 31.1	24.4	19.1, 31.9	23.9	19.3, 30.2	23.6	20.3, 30.5
Leisure time physical activity (%)										
Mostly sedentary	26		19		17		21		20	
Light physical activity (>4 h/week)	57		64		68		62		41	
Participating in sports (>3 h/week)	17		17		15		17		39	
Smoking (%)										
No or occasional	60		60		57		64		56	
Daily	40		40		43		36		44	
Education (%)										
≤ 7 y	24		13		28		23		20	
8 - 11 y	53		53		48		39		41	
≥ 12 y	23		34		24		38		39	
Energy intake (MJ per day)	7.1	4.5, 10.2	7.3	4.7, 12.3	7.8	5.3, 13.3	9.2	6.3, 16.2	10.8	7.2, 14.8
Intake of R-TFA										
g/day	0.5	0.1, 0.8	1.0	0.8, 1.1	1.3	1.1, 1.4	1.7	1.4, 1.9	2.5	2.1, 3.7
E %	0.2	0.1, 0.5	0.5	0.3, 0.8	0.6	0.3, 1.0	0.7	0.4, 1.0	0.9	0.6, 1.2
Weighted intake of foods high in I-TFA (g/day)	203	14, 432	189	21, 346	169	73, 356	171	35, 462	197	20, 343
Calcium intake (mg/day)	592	283, 1309	800	519, 1587	817	438, 1406	1085	476, 1865	1156	485, 1835
Protein										
g/day	61.0	37.9, 82.5	66.8	45.5, 96.6	65.9	48.5, 102.5	77.2	48.1, 124.2	91.5	54.2, 125.4
E %	14.1	11.1, 19.9	15.1	11.8, 19.9	14.1	11.0, 17.6	14.5	11.4, 19.9	13.9	10.8, 19.3

Abbreviations: E %, energy percentage; I-TFA, industrially produced *trans* fatty acids; R-TFA, ruminant *trans* fatty acids.

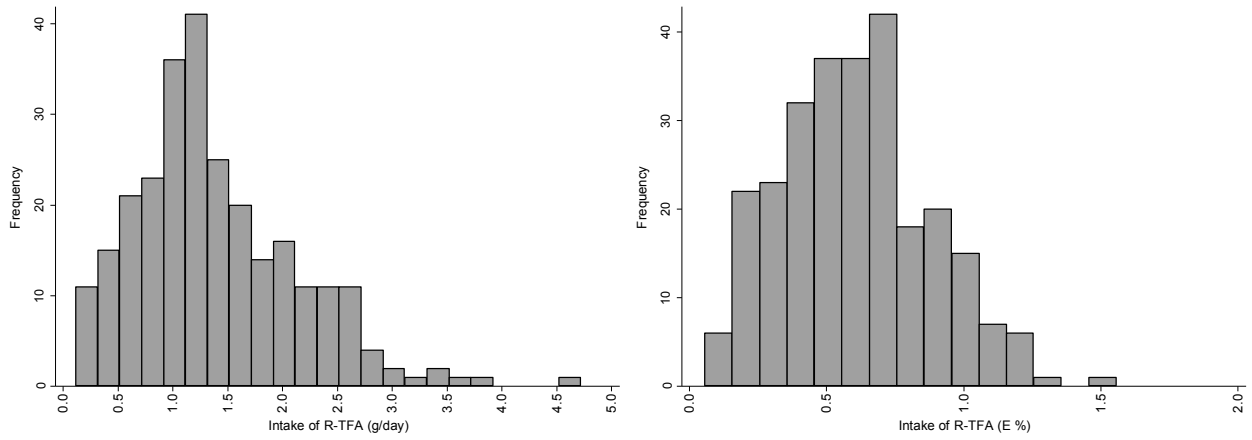
Supplementary Table 2

Linear regression coefficients for the associations between intake of ruminant *trans* fatty acids (R-TFA) and average annual changes in body weight, waist circumference, hip circumference and body fat. Analyses with additional adjustment for calcium and protein intake.

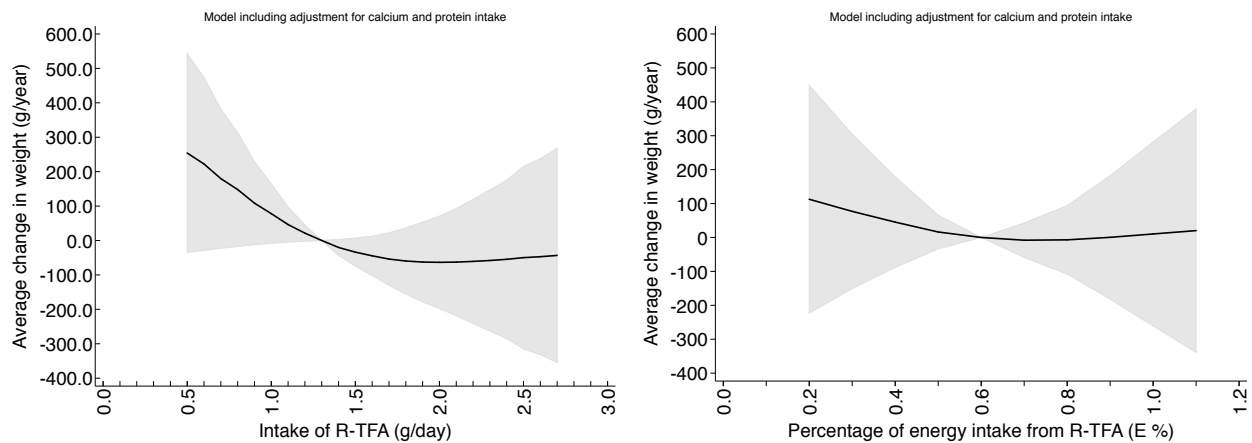
	R-TFA (g/day)	R-TFA (E %)
Weight (kg/year)	-0.115 (-0.301, 0.070) ¹	-0.101 (-0.563, 0.360)
Waist circumference (cm/year)	-0.03 (-0.23, 0.18)	0.15 (-0.36, 0.66)
Hip circumference (cm/year)	-0.08 (-0.24, 0.09)	-0.16 (-0.55, 0.23)
Body fat (% point/year)	-0.06 (-0.18, 0.05)	0.04 (-0.24, 0.32)

¹ β -coefficient for 1 unit difference in intake of R-TFA; 95 % confidence interval in parentheses (all such values).

Adjustments: gender, age, baseline BMI, baseline waist circumference (only in the analyses of change in waist circumference), baseline hip circumference (only in the analyses of change in hip circumference), baseline body fat percentage (only in the analyses of change in body fat), changes in smoking habits, education, weighted intake of foods containing high amounts of I-TFA, calcium intake, protein intake and in the analyses of percentage of energy intake from R-TFA, also leisure time physical activity and total energy intake.



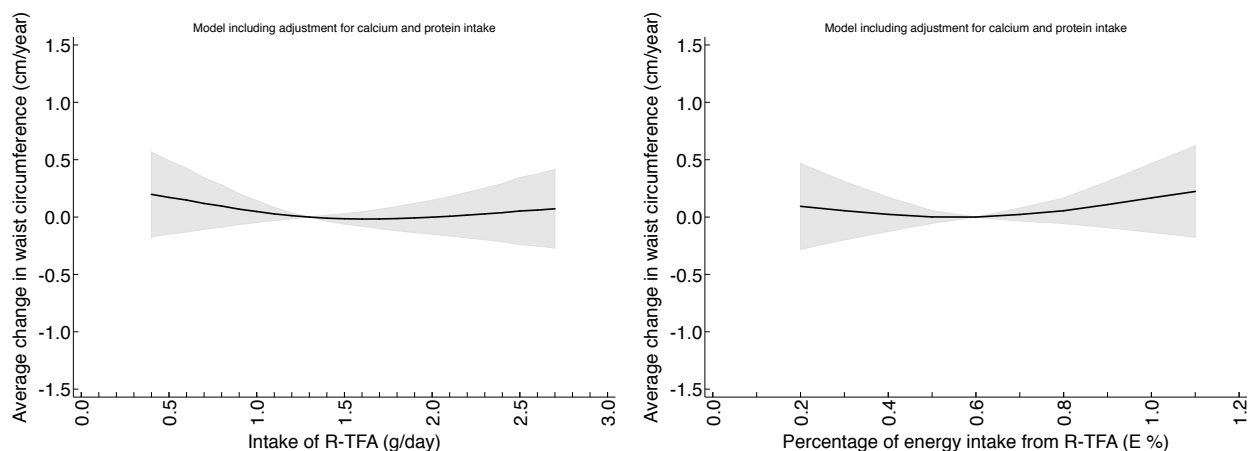
Supplementary Figure 1 Distribution of intake of ruminant *trans* fatty acids in the study population.



Supplementary Figure 2 Intake of ruminant *trans* fatty acids (R-TFA) and changes in body weight.

Solid lines show intake of R-TFA modelled with restricted cubic splines (three knots) and shaded areas are the 95 % confidence intervals. Adjustments: gender, age, baseline BMI, changes in smoking habits, education, intake of foods containing high amounts of industrially produced TFA, calcium intake, protein intake and in the analysis of percentage of energy intake from R-TFA (right panel), also leisure time physical activity and total energy intake. P-values from test of association: absolute intake (g/day) 0.21; percentage of energy intake from R-TFA (E %) 0.80.

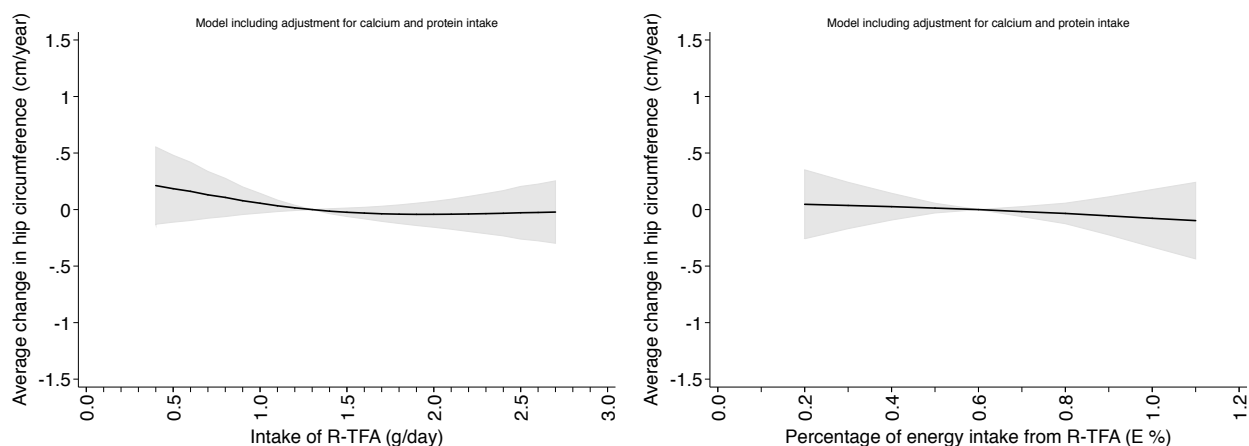
Abbreviations: E %, energy percentage; I-TFA, industrially produced *trans* fatty acids; R-TFA, ruminant *trans* fatty acids.



Supplementary Figure 3 Intake of ruminant *trans* fatty acids (R-TFA) and changes in waist circumference.

Solid lines show intake of R-TFA modelled with restricted cubic splines (three knots) and shaded areas are the 95 % confidence intervals. Adjustments: gender, age, baseline BMI, baseline waist circumference, changes in smoking habits, education, intake of foods containing high amounts of industrially produced TFA, calcium intake, protein intake and in the analysis of percentage of energy intake from R-TFA (right panel), also, leisure time physical activity and total energy intake. P-values from test of association: absolute intake (g/day) 0.55; percentage of energy intake from R-TFA (E %) 0.54.

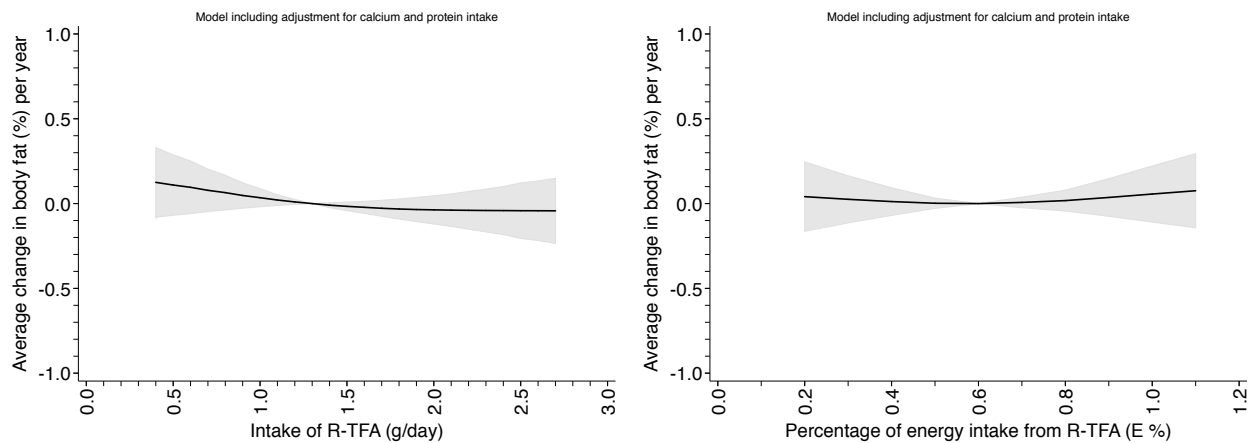
Abbreviations: E %, energy percentage; I-TFA, industrially produced *trans* fatty acids; R-TFA, ruminant *trans* fatty acids.



Supplementary Figure 4 Intake of ruminant *trans* fatty acids (R-TFA) and changes in hip circumference.

Solid lines show intake of R-TFA modelled with restricted cubic splines (three knots) and shaded areas are the 95 % confidence intervals. Adjustments: gender, age, baseline BMI, baseline hip circumference, changes in smoking habits, education, intake of foods containing high amounts of industrially produced TFA, calcium intake, protein intake and in the analysis of percentage of energy intake from R-TFA (right panel), also leisure time physical activity and total energy intake. P-values from test of association: absolute intake (g/day) 0.43; percentage of energy intake from R-TFA (E %) 0.71.

Abbreviations: E %, energy percentage; I-TFA, industrially produced *trans* fatty acids; R-TFA, ruminant *trans* fatty acids.



Supplementary Figure 5 Intake of ruminant *trans* fatty acids (R-TFA) and changes in fat mass (body fat %).

Solid lines show intake of ruminant TFA modelled with restricted cubic splines (three knots) and shaded areas are the 95 % confidence intervals. Adjustments: gender, age, baseline BMI, baseline body fat mass, changes in smoking habits, education, intake of foods containing high amounts of industrially produced TFA, calcium intake, protein intake and in the analysis of percentage of energy intake from R-TFA (right panel), also leisure time physical activity and total energy intake. P-values from test of association: absolute intake (g/day) 0.462 percentage of energy intake from R-TFA (E %) 0.78.

Abbreviations: E %, energy percentage; I-TFA, industrially produced *trans* fatty acids; R-TFA, ruminant *trans* fatty acids.