

Supplemental table 1. Distribution of individual fatty acids

Fatty acid	% of total FA at baseline	% of total FA at follow-up
Myristic (14:0)	3.14 ± 0.06	4.97 ± 0.01
Pentadecanoic (15:0)	0.49 ± 0.018	0.55 ± 0.016
Palmitic (16:0)	30.73 ± 0.20	28.56 ± 0.31
Palmitoleic (16:1, n-7)	4.79 ± 0.12	5.42 ± 0.13
Stearic (18:0)	13.88 ± 0.29	8.53 ± 0.14
Oleic (18:1, n-9)	30.32 ± 0.26	32.82 ± 0.25
Octadecanoic (18:1, n-7)	2.62 ± 0.04	3.51 ± 0.07
Linoleic (18:2 n-6)	10.61 ± 0.16	11.81 ± 0.16
α-linolenic (18:3, n-3)	0.86 ± 0.02	1.02 ± 0.03
Arachidonic (20:4, n-6)	0.78 ± 0.02	1.26 ± 0.04
Eicosapentaenoic (20:5 n-3)	1.63 ± 0.11	0.12 ± 0.03
Docosatetraenoic (22:4 n-6)	0.24± 0.00	0.36± 0.35
Docosapentaenoic (22:5 n-3)	0.19± 0.00	0.54± 0.02
Docosahexaenoic (22:6 n-3)	0.55 ± 0.03	0.24 ± 0.02
Lignoceric (24:0)	0.19 ± 0.01	0.23 ± 0.02
Hexacosanoic (26:0)	0.04 ± 0.00	0.02 ± 0.00

Values are means ± SE. Data at follow-up were available in 95 subjects.

Supplemental table 2. Demographics and metabolic characteristics of the subjects

	Baseline	Follow-up	p
Gender (males / females)	36 / 64		
Age (years)	45 ± 1	46 ± 1	.
Body weight (kg)	84.4 ± 1.7	81.9 ± 1.6	<0.0001
Body mass index (kg.m ⁻²)	29.0 ± 0.5	28.2 ± 0.5	<0.0001
Body fat (%)	32.3 ± 0.7	31.2 ± 0.9	0.007
Waist circumference (cm)	96.7 ± 1.4	93.6 ± 1.3	< 0.0001
Total body fat _{MRT} (kg)	25.5 ± 1.0	23.8 ± 1.0	0.0002
Visceral fat _{MRT} (kg)	3.02 ± 0.18	2.61 ± 0.17	< 0.0001
Liver fat _{MRS} (%)	6.17 ± 0.69	3.86 ± 0.43	< 0.0001
Fasting glucose (mmol/l)	5.17 ± 0.05	5.18 ± 0.05	0.57
2 h glucose (mmol/l)	7.05 ± 0.17	6.62 ± 0.18	0.004
Fasting insulin (pmol/l)	56 ± 3	52 ± 3	0.007
2 h insulin (pmol/l)	493 ± 40	432 ± 48	0.001
Fasting plasma FFA (μmol/l)	637 ± 24	626 ± 20	0.44
Insulin sensitivity _(OGTT) (arbitrary units)	14.1 ± 0.8	15.2 ± 0.8	0.03
Insulin sensitivity _(Clamp) (μmol·kg ⁻¹ ·min ⁻¹ ·pM ⁻¹)	0.073 ± 0.005	0.082 ± 0.008	0.03
VO ₂ max (ml·min ⁻¹ ·kg ⁻¹)	24.72 ± 0.63	25.92 ± 0.66	0.03
Triglycerides (mg/dl)	116 ± 5	112 ± 5	0.09
Total cholesterol (mg/dl)	192 ± 3	190 ± 3	0.13
HDL-cholesterol (mg/dl)	53.5 ± 1.3	54.2 ± 1.4	0.20
LDL-cholesterol (mg/dl)	122 ± 2	122 ± 3	0.16
Hs-CRP (mg/dl)	0.23 ± 0.03	0.18 ± 0.03	0.004
Energy intake (kcal day ⁻¹)	1951 ± 62	1821 ± 48	0.01
Carbohydrates (g)	231 ± 10	220 ± 7	0.11
Fat (g)	70 ± 3	63 ± 3	0.01
Protein (g)	75 ± 3	73 ± 3	0.46
Fibers (g)	22 ± 1	26 ± 1	<0.0001

Values are means ± SE. Differences between values at baseline and at follow-up were tested by matched pairs student's *t* test. Data for insulin sensitivity measured by the clamp were available in 79 subjects at baseline and 40 subjects at follow-up. Magnetic resonance tomography and-spectroscopy (MRT; MRS) data at follow-up were available in 93 subjects. VO₂ max, maximal aerobic capacity on a bicycle; complete data about diet were available in 59 subjects.

Supplemental table 3. Determinants of fold-change in insulin sensitivity_{OGTT} (insulin sensitivity at follow-up over insulin sensitivity at baseline) in a forward stepwise linear regression analysis

Parameter	F - Ratio	p
Female sex	0.032	0.86
Age	0.01	0.91
Insulin sensitivity at baseline	28.6	<0.0001
Body fat at baseline	0.48	0.49
Body fat at follow-up	24.0	<0.0001
Circulating palmitoleate at baseline	5.3	0.02