SUPPLEMENTARY

Adipose tissue resting energy expenditure and expression of genes involved in mitochondrial function are higher in women than in men

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Table S1. Characteristic of the subjects in the SOS Sib Pair study, the VLCD study and the Mölndal Metabolic study.

	SOS Sib Pair cohort[1]		SOS Sib Pair offspring cohort		SOS Sib pair offspring cohort (subset used for real-time PCR)	
	Women (n=446)	Men (n=286)	Women (n=292)	Men (n=132)	Women (n=30)	Men (n=28)
BMI (kg/m^2)	29.5 ± 7.7	27.6 ± 5.2	29.8 ± 8.7	27.7 ± 6.6	30.2 ± 7.8	29.7 ± 4.9
Waist circumference (cm)	95 ± 18	97 ± 14	95 ± 20	96 ± 17	95 ± 17	101 ± 12
Waist-hip-ratio	0.88 ± 0.09	0.94 ± 0.08	0.87 ± 0.10	0.92 ± 0.08	0.87 ± 0.07	0.96 ± 0.06
Body fat (% of total BM)	35.2 ± 10.6	25.7 ± 9.5	32.7 ± 11.3	22.0 ± 10.5	32.9 ± 9.6	24.8 ± 7.3
FFM (kg)	51.5 ± 8.6	65.6 ± 10.3	54.4 ± 8.2	71.0 ± 9.4	55.2 ± 11.2	72.2 ± 8.6
Systolic BP (mmHg)	120 ± 19	128 ± 19	114 ± 16	118 ± 14	117 ± 15	120 ± 16
Diastolic BP (mm Hg)	71 ± 11	75 ± 11	70 ± 11	72 ± 11	70 ± 9	73 ± 13
Fasting glucose (mmol/liter)[3]	5.1 ± 1.4	5.7 ± 2.6	4.9 ± 1.1	5.2 ± 1.4	4.8 ± 0.4	5.5 ± 1.7
HDL cholesterol (mmol/liter)	1.3 ± 0.3	1.2 ± 0.3	1.3± 0.3	1.1 ± 0.3	1.3 ± 0.3	1.1 ± 0.2
TG (mmol/liter)	1.1 ± 0.6	1.3 ± 0.8	0.9 ± 0.6	1.2 ± 0.9	1.0 ± 0.3	1.5 ± 1.2
Insulin (mU/liter)	9.7 ± 7.7	10.0 ± 8.7	9.4 ± 7.7	9.3 ± 6.8	9.1 ± 4.5	9.5 ± 4.6
RMR, Kcal per 24 h	1742 ± 341	2024 ± 348	1796 ± 355	2115 ± 359	1779 ± 335	2102 ± 301
	VLCD-study cohort Baseline		VLCD-study cohort After 16 weeks of diet		Mölndal Metabolic study	
	Women (n=6)	Men (n=18)	Women (n=6)	Men (n=18)	Women (n=39)	Men (n=44)
BMI (kg/m^2)	34.8 ± 3.8	38.6 ± 5.0	27.1 ± 3.3	29.1 ± 4.2	23.8 ± 3.5	25.3 ± 2.8
Waist circumference (cm)	113 ± 9	127 ± 11	92 ± 10	104 ± 12	80 ± 11	89 ± 9
Waist-hip-ratio	0.95 ± 0.07	1.05 ± 0.06	0.90 ± 0.08	0.97 ± 0.07	0.80 ± 0.07	0.89 ± 0.07
Body fat (% of total BM)	n.d.	n.d.	n.d.	n.d.	34.7 ± 8.1	25.5 ± 7.1
FFM (kg)	n.d.	n.d.	n.d.	n.d.	41.7 ± 3.9	60.7 ± 5.7
Systolic BP (mmHg)	140 ± 18	137 ± 17	117 ± 12	117 ± 15	124 ± 24	124 ± 16
Diastolic BP (mm Hg)	84 ± 7	90 ± 15	74 ± 14	71 ± 10	72 ± 11	75 ± 10
Fasting glucose (mmol/liter)[3]	5.3 ± 1.0	6.3 ± 1.7	4.5 ± 0.4	4.5 ± 0.8	4.2 ± 0.5	4.4 ± 0.7
HDL cholesterol (mmol/liter)	1.8 ± 0.3	1.2 ± 0.3	1.5 ± 0.3	1.3 ± 0.4	1.6 ± 0.3	1.4 ± 0.3
TG (mmol/liter)	1.4 ± 0.7	1.9 ± 1.1	0.9 ± 0.2	0.9 ± 0.2	0.9 ± 0.5	1.2 ± 0.8
Insulin (mU/liter)	8.5 ± 3.6	18.2 ± 6.7	3.3 ± 1.1	4.7 ± 2.4	6.9 ± 5.3	8.1 ± 3.5

BMI = Body mass index, BM = body mass, FFM = Fat free mass, BP = blood pressure, HDL = high density lipoprotein, TG = triglycerides, n.d. = not determined, n.d. = not determined, Values are mean ± SD

[1]Total Sib Pair cohort. Both body composition measurements and RMR measurements were available from 405 women and 257 men.

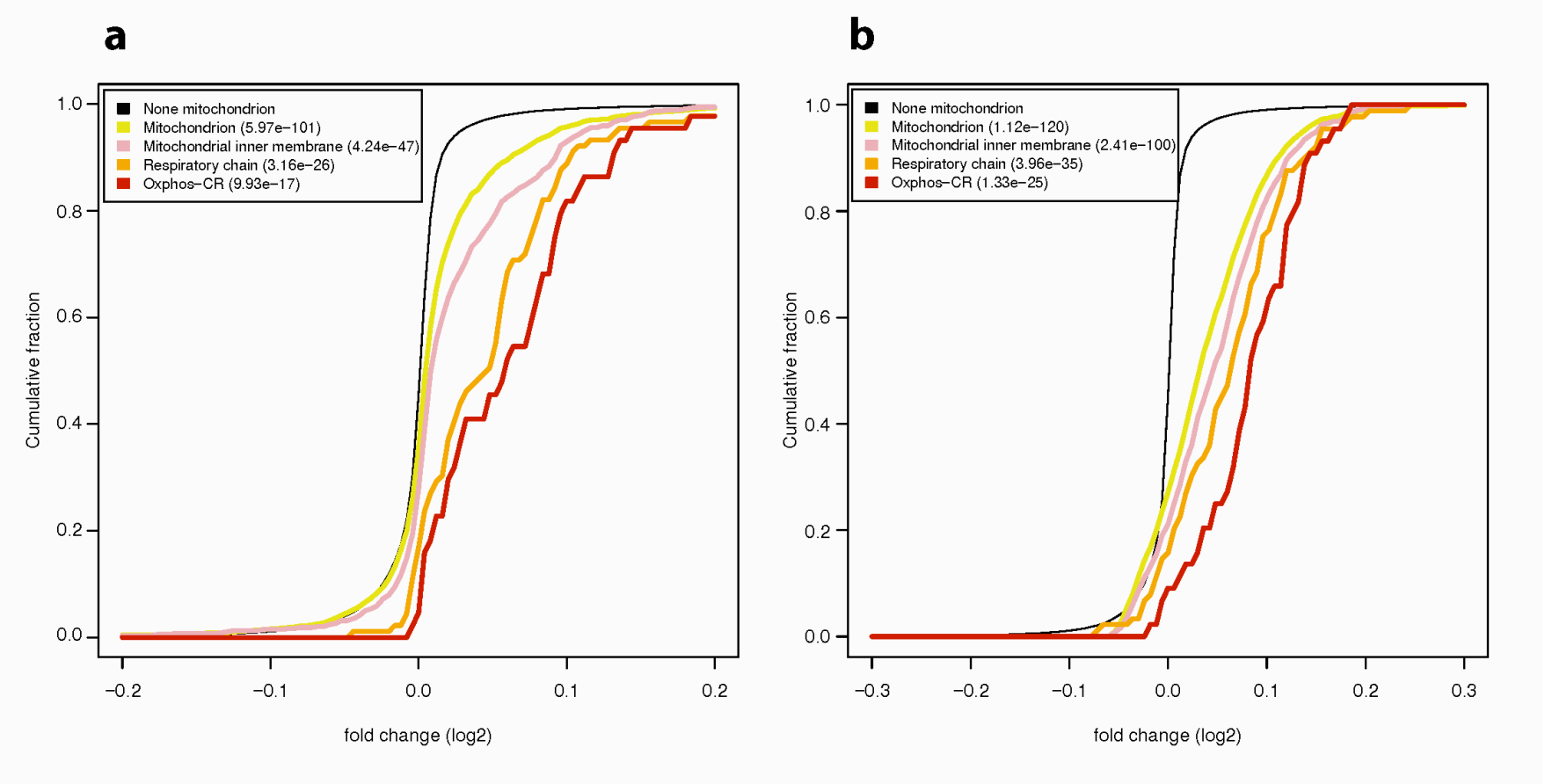

Figure S1. Empirical cumulative distribution of fold changes for selected GO terms in the mitochondrial gene signature and Oxphos-CR genes. a) Unadjusted empirical cumulative distribution of fold changes (same illustration as figure 4a in the main manuscript). b) Adjusted empirical cumulative distribution of fold changes. The gene expression data was adjusted for fat mass, waist circumference, and HOMA.