SUPPLEMENTARY TABLES

Supplementary Table I. Pairwise linkage disequilibrium (r^2) between *CPT1A* polymorphisms with minor allele frequency (MAF) ≥0.05 in Yup'ik Eskimo people.

SNP	rs2278908	rs2278907	rs3019598	P479L	rs2305508	rs4930248	rs3794020	rs2924697	rs11228372	rs11228373	rs3019594	rs597316
rs2278908		0.67	0.90	0.09	0.02	0.25	0.00	0.00	0.08	0.12	0.14	0.03
rs2278907	0.67		0.63	0.09	0.02	0.29	0.00	0.00	0.08	0.14	0.14	0.04
rs3019598	0.90	0.63		0.08	0.02	0.27	0.00	0.00	0.09	0.13	0.13	0.06
P479L (rs80356779)	0.09	0.09	0.08		0.00	0.25	0.07	0.00	0.44	0.58	0.61	0.09
rs2305508	0.02	0.02	0.02	0.00		0.08	0.75	0.00	0.00	0.00	0.00	0.01
rs4930248	0.25	0.29	0.27	0.25	0.08		0.01	0.00	0.25	0.29	0.28	0.01
rs3794020	0.00	0.00	0.00	0.07	0.75	0.01		0.00	0.02	0.04	0.04	0.01
rs2924697	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.01	0.01	0.01	0.01
rs11228372	0.08	0.08	0.09	0.44	0.00	0.25	0.02	0.01		0.74	0.74	0.00
rs11228373	0.12	0.14	0.13	0.58	0.00	0.29	0.04	0.01	0.74		0.95	0.16
rs3019594	0.14	0.14	0.13	0.61	0.00	0.28	0.04	0.01	0.74	0.95		0.16
rs597316	0.03	0.04	0.06	0.09	0.01	0.01	0.01	0.01	0.00	0.16	0.16	

Pairwise linkage disequilibrium (r^2) was calculated using the hapfreq command in FBAT (42).

Supplementary Table II. Association of *CPT1A* SNPs with obesity-related traits with correction for BMI[1,2].

SNP	Chol	HDL	ApoA1
rs2278908	0.0738 (β=-1.0, SE=0.5)	**0.0007** (β=-2.1, SE=0.6)	0.04843 (β=-1.5, SE=0.6)
rs2278907	0.1294 (β=-0.6, SE=0.4)	0.0542 (β=-1.0, SE=1.0)	0.4939 (β=-0.4, SE=0.6)
rs3019598	0.125 (β=-0.9, SE=0.6)	**0.0009** (β=-2.1, SE=0.6)	0.1886 (β=-1.0, SE=0.8)
P479L (rs80356779)	0.0489 (β=-0.4, SE=0.2)	**0.0023** (β=-0.7, SE=0.2)	0.0526 (β=-0.6, SE=0.3)
rs2305508	0.0247 (β=-0.4, SE=0.2)	0.628 (β=0.1, SE=0.2)	0.0453 (β=0.5, SE=0.2)
rs4930248	0.0743 (β=-0.6, SE=0.3)	0.4877 (β=-0.3, SE=0.4)	0.5947 (**β=0.3, SE=0.5)**
rs3794020	0.5055 (β=-0.1, SE=0.2)	0.2888 (β=0.2, SE=0.2)	0.0182 (β=0.6, SE=0.3)
rs11228372	0.0089 (β=-0.8, SE=0.3)	0.0097 (β=-0.9, SE=0.3)	0.0544 (β=-0.8, SE=0.4)
rs11228373	**0.0045** (β=-0.7, SE=0.2)	**<0.0001** (β=-1.1, SE=0.3)	**0.0025** (β=-1.0, SE=0.3)
rs3019594	**0.0018** (β=-0.8, SE=0.2)	**<0.0001** (β=-1.1, SE=0.3)	**0.0036** (β=-1.0, SE=0.4)
rs597316	0.2417 (β=-0.7, SE=0.6)	**0.0023** (β=-1.9, SE=0.6)	0.049 (β=-1.5, SE=0.8)

[1]Association of *CPT1A* SNPs in a linear regression model adjusted for age, sex, community membership, n-3 PUFA intake, and BMI. Estimates of effect size (β) are reported using transformed phenotypes.

[2]Results are significant at $p < 0.0063$ and highlighted in bold. Multiple test correction for 8 tests for a phenotype was estimated using the spectral decomposition of LD matrix (50). Total cholesterol (Chol), high-density lipoprotein (HDL), and apolipoprotein A-I (ApoA1).

Supplementary Table III. Interaction of *CPT1A* SNPs and n-3 PUFA intake on obesity-related traits[1].

	Obesity Measures					Lipid Measures					
SNP	**BMI**	**PBF**	**HC**	**ThC**	**WC**	**Chol**	**HDL**	**ApoA1**	**LDL**	**VLDL**	**TG**
rs2278908	0.6997	0.5860	0.5768	0.3308	0.7987	0.4877	0.5265	0.7858	0.7161	0.3411	0.8915
rs2278907	0.9279	0.8310	0.5648	0.5485	0.7775	0.1824	0.8763	0.1738	0.3854	0.2560	0.5888
rs3019598	0.6398	0.5636	0.6959	0.4958	0.7318	0.5335	0.4480	0.9069	0.7364	0.1764	0.6600
P479L (rs80356779)	0.1717	0.1691	0.4205	0.0149	0.2248	0.6630	0.9256	0.4393	0.6964	0.2751	0.2157
rs2305508	0.8947	0.8565	0.5823	0.8936	0.8734	0.4015	0.0154	**0.0062**	0.5506	0.3590	0.3774
rs4930248	0.1699	0.4673	0.0818	0.0330	0.1034	0.8452	0.9753	0.8425	0.7743	0.7788	0.9990
rs3794020	0.6887	0.6889	0.7234	0.4303	0.4022	0.3630	**0.0032**	**0.0023**	0.2954	0.2715	0.2295
rs11228372	0.4352	0.5819	0.5190	0.1252	0.8422	0.6257	0.7445	0.3664	0.3263	0.9185	0.9420
rs11228373	0.4592	0.6869	0.3925	0.2150	0.8676	0.5157	0.9752	0.6635	0.3784	0.9065	0.8485
rs3019594	0.2141	0.4457	0.2387	0.0885	0.5671	0.5007	0.7437	0.2070	0.3959	0.9058	0.9589
rs597316	0.7939	0.9907	0.5994	0.7873	0.9745	0.3530	0.2152	0.2169	0.6192	0.1509	0.3037

[1]Results are significant at $p < 0.0063$ and highlighted in bold. Multiple test correction for 8 tests for a phenotype was estimated using the spectral decomposition of LD matrix (50). Body mass index (BMI), percent body fat (PBF), hip circumference (HC), thigh circumference (ThC), waist circumference (WC), total cholesterol (Chol), high-density lipoprotein (HDL), apolipoprotein A-I (ApoA1), low-density lipoprotein (LDL), very-low density lipoprotein (VLDL), triglycerides (TG).