

Supplemental Table 1: Diet Composition

	Control- Low Fat		High Fat		High Fat – Fish Oil	
	gm%	kcal%	gm%	kcal%	gm%	kcal%
Protein	28	28.5	34	28.5	34	28.5
Carbohydrate	57	58.0	31	27	31	27
Fat	6	13.5	24	45	24	45
Total		100		100		100
kcal/gm	3.92		4.7		4.7	
Ingredient	gm	kcal	gm	kcal	gm	kcal
Casein, 30 mesh	286.1	1144	286	1144	286	1144
L-Cystine	3	12	3	12	3	12
Corn Starch	330	1320	11.8	47	11.8	47
Maltodextrin 10	75	300	75	300	75	300
Sucrose	172.8	691	172.8	691	172.8	691
Cellulose	50	0	50	0	50	0
Soybean Oil	25	225	25	225	25	225
Lard	36	324	177.5	1598	134.6	1211
MEG-3 Ultra High EPA EE oil (720 mg/g EPA)	0	0	0	0	42.91	386
Mineral Mix, S10026	10	0	10	0	10	0
DiCalcium Phosphate	13	0	13	0	13	0
Calcium Carbonate	5.5	0	5.5	0	5.5	0

Potassium Citrate, 1 H2O	16.5	0	16.5	0	16.5	0
Vitamin Mix, V10001	10	40	10	40	10	40
Choline Bitartrate	2	0	2	0	2	0
Vitamin E Acetate, 50% (500 IU/gm)	0	0	0.13	0	0.13	0
FD&C Yellow Dye #5	0	0	0	0	0.05	0
FD&C Red Dye #40	0.05	0	0.025	0	0	0
FD&C Blue Dye #1	0	0	0.025	0	0	0
Total	1034.95	4057	858.28	4057	858.29	4057

Supplemental Table -2

Gene	Forward	Reverse
<i>Acaca</i>	GCAGCAGTTACACCACATAC	TCCGCCATCTTCCACAATA
<i>Actin</i>	TGAGACCTTCAACACCCAGCCA	CGTAGATGGGCACAGTGTGGGTG
<i>Cd36</i>	AGGTCTATCTACGCTGTGTTC	AGGCATTGGCTGGAAGAA
<i>Cpt-1</i>	AAGGAATGCAGGTCCACATC	CCAGGCTACAGTGGGACATT
<i>Cpt-2</i>	GACCAGTGAGAACCGAGAT	AAGCAGAGGCAGAAGACA
<i>Dgat2</i>	TCCAGAAGAAGTCCAGAAGTAT	CAGGTGTCAGAGGAGAAGAG
<i>Fasn</i>	GTCGTCTATACCACTGCTTACT	ACACCACCTGAACCTGAG
<i>Foxo1</i>	GCTCTGTCCTGAAGAATCCT	CTAATCCTGCCACTGTCTGTA
<i>G6Pase</i>	AACGCCTTCTATGTCCTCTTTC	GTTGCTGTAGTAGTCGGTGTCC
<i>IL-6</i>	TCAGGTCAGCAATCACAGA	ACAGGTCTGTTGGGAGTGGT
<i>mTOR</i>	CAGCAACAGTGAGAGTGAAG	ACAAGGAGATAGAACGGAAGAA
<i>Pdk4</i>	TGTGATGTGGTAGCAGTAGT	TGGTGAAGGTGTGAAGGA
<i>Ppar-g</i>	ACGATCTGCCTGAGGTCTGT	CATCGAGGACATCCAAGACA
<i>Srebp-1c</i>	TCTGCCTTGATGAAGTGTGG	AGCAGCCCCTAGAACAAACA
<i>Tnf-α</i>	TCTCAAACT CGAGTGACAAGC	GGTTGTCTTTGAGA TCCATGC

Supplemental Table 3: F value for ANOVA analyses (F (DFn, DFd))

	Diet (D)	Sex (S)	Interactions (S x D)
Il-6	F (2, 43) = 9.327	F (1, 43) = 86.92	F (2, 43) = 13.19
Tnf- α	F (2, 48) = 0.06081	F (1, 48) = 0.01553	F (2, 48) = 5.211
Cd36	F (2, 43) = 0.7460	F (1, 43) = 9.770	F (2, 43) = 8.581
Fasn	F (2, 37) = 6.446	F (1, 37) = 32.45	F (2, 37) = 4.537
Acaca	F (2, 45) = 3.261	F (1, 45) = 49.90	F (2, 45) = 6.259
Srebp-1c	F (2, 43) = 9.825	F (1, 43) = 7.552	F (2, 43) = 3.264
Dgat2	F (2, 39) = 4.253	F (1, 39) = 0.7363	F (2, 39) = 1.680
Cpt-1	F (2, 41) = 2.884	F (1, 41) = 2.301	F (2, 41) = 1.498
Cpt-2	F (2, 48) = 1.296	F (1, 48) = 29.37	F (2, 48) = 3.046
Ppar-g	F (2, 41) = 1.646	F (1, 41) = 0.1245	F (2, 41) = 5.690
Foxo-1	F (2, 43) = 5.488	F (1, 43) = 0.3234	F (2, 43) = 0.1721
G6Pase	F (2, 49) = 1.607	F (1, 49) = 4.042	F (2, 49) = 1.383
mTOR	F (2, 50) = 0.02635	F (1, 50) = 14.00	F (2, 50) = 7.370
Pdk4	F (2, 33) = 1.249	F (1, 33) = 23.98	F (2, 33) = 7.471