

Dietary fat proportionately enhances oxidative stress and glucose intolerance followed by impaired expression of genes associated with mitochondrial biogenesis

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Supplementary Tables:

PARAMETERS	CONTROL	30%FAT	45%FAT	60%FAT
Weight(gm)	173.75±23.04	268±22.67	331.25±8.26	306.67±10.22
Blood glucose (mg/dl)	76±4.505	92.5±2.5	79.09±3.59	75.29±0.98
ALT(IU/L)	13.95±3.20	19.55±2.33	21.79±1.69	19.05±0.62

(A) 4weeks of feeding with diets containing different calories of fat

PARAMETERS	CONTROL	30%FAT	45%FAT	60%FAT
Weight(gm)	213.33±24.03	312.5±13.15	382.5±9.14**	358±8.22**
Blood glucose (mg/dl)	84.33±5.33	95.5±8.15	118.13±4.45*	117.5±4.87*
ALT(IU/L)	14.38±1.98	19.98±0.22	27.34±2.46	19.29±2.08

(B) 8weeks of feeding with diets containing different calories of fat

PARAMETERS	CONTROL	30%FAT	45%FAT	60%FAT
Weight(gm)	223.33±12.01	387.5±12.5	396.87±10.89	379.37±12.43
Blood glucose (mg/dl)	90.33±21.78	120±6.98	114.25±5.89*	121.25±11.67
ALT(IU/L)	16.26±0.20	19.13±0.1	30±2.02*	27.3±2.71#

(C) 10weeks of feeding with diets containing different calories of fat

PARAMETERS	CONTROL	30%FAT	45%FAT	60%FAT	WITHDRAWAL
Weight(gm)	250±20.41	397.5±19.3	406.25±15.18**	385±14.60*	378±12.84
Blood glucose (mg/dl)	93.75±14.57	119.5±8.11	140±9.34**	159.67±12.8**	105.25±2.49#
ALT(IU/L)	12.44±0.2	20.83±0.42	45±0.6*	50±6.62**	16.48±1.73#

(D) 12weeks of feeding with diets containing different calories of fat

Table1: (A-D) Estimation of weight, blood glucose, serum ALT levels in animal fed with diet containing different grades of fat during the feeding time intervals for 12weeks. *P < 0.05, **P < 0.001 vs Control. #P < 0.05 vs 60%FAT

	30% ENERGY FROM FAT	45% ENERGY FROM FAT	60% ENERGY FROM FAT
Total energy (kcal/g)²	5.07	4.60	5.10
Protein (kcal)	0.745(14.7%)	0.83(18.1%)	0.924(18.1%)
Fat (%)	30%	46%	61.6%
Saturated Fatty Acids	8.14	9.05%	13.68%
Monounsaturated Fatty Acids	9.9	9.32%	14%
Cholesterol (ppm)	143	197	301
Carbohydrates (kcal)	1.62(32%)	1.65(35.8%)	1.035(20.3%)

Table2. The composition of diet (Test diet, USA) used for the study. Nutrients expressed as percent of ration on an As Fed basis. Energy (kcal/gm) - Sum of decimal fractions of protein, fat and carbohydrate x 4, 9, 4 kcal/gm respectively.

	NORMAL STANDARD CHOW
Total energy (kcal/g)²	3.76
Protein (kcal)	0.75 (20.00%)
Fat (%)	4.80
Carbohydrates (kcal)	2.86 (76%)

Table3. The composition of normal standard diet used for the study.

Gene	Forward	Reverse
GSTM	GAGGATTCGTGTGGACATTCTG	CCCTGGCTTCAGCTTCTCAA
FABP12	GGCAAGGCCTGTAGTGACCAT	CTCTCCCAGCTTGAAGGAAATC
DUOX1	CCACCATGCTGTACATCTGTGA	AAGGGAGGGCGACCAAAGT
GGT1	AACAGAAGGCGCTGACGTATC	TGAGACACATCGACAACTTTGG
SPP1	TGACTTTAAGCAAGAACTCTTCAA	TCCTCGCTCTCTGCATGGT
GPX2	GAATGTGGCCTCGCTCTGA	AGGGAAGCCGAGAACCACTAG
GATM	AGCTACAGCTTCCTCCCAAATT	AGGGTCCCATTTCGTTGTAAGAG
PGC1	AATTAACAATGGCAGGGTTTG	AACAAACCCTGCCATTGTAA
MFN1	TGGGTTCTACGAATGCACA	TTTCCAGCCACTGTTTTTC
MFN2	GAGAGGCGATTTGAGGAGTG	AAGACAATAAACCCGCTGCT

18S RRNA	GATTCCGTGGGTGGTGGTGC	AAGAAGTTGGGGGACCCGA
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Table4. The sequences of rat specific oligonucleotides used for real time PCR during the study.