

Supplementary Information

Title: Exercise rescues obese mothers' insulin sensitivity, placental hypoxia and male offspring insulin sensitivity

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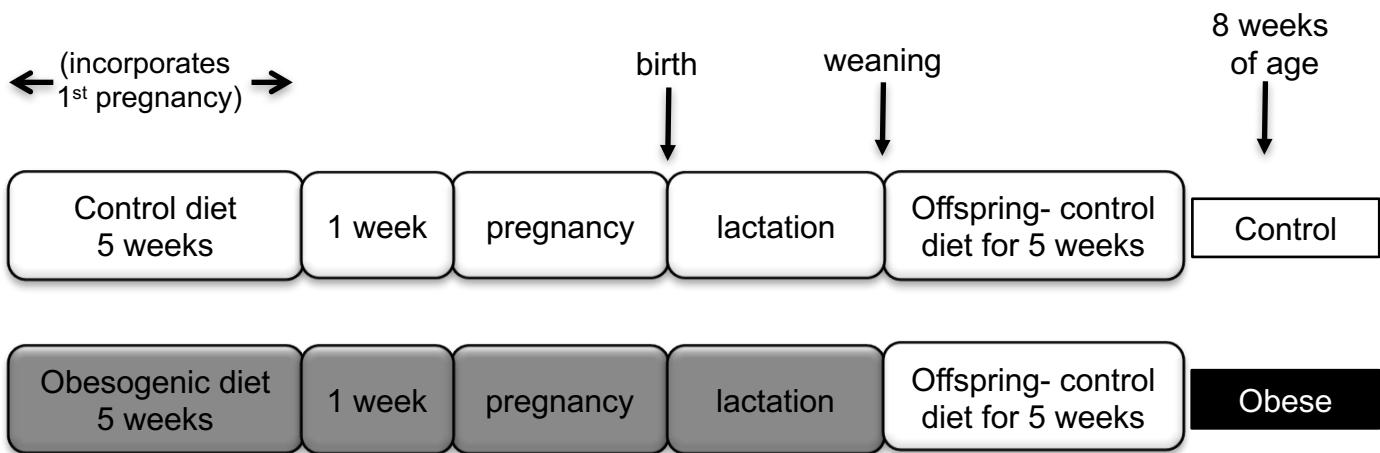


Figure S1: Experimental protocol to generate control and obese dams and their offspring. Blood for serum analysis was collected from dams at weaning and from 8 week old offspring (n=8 per group).

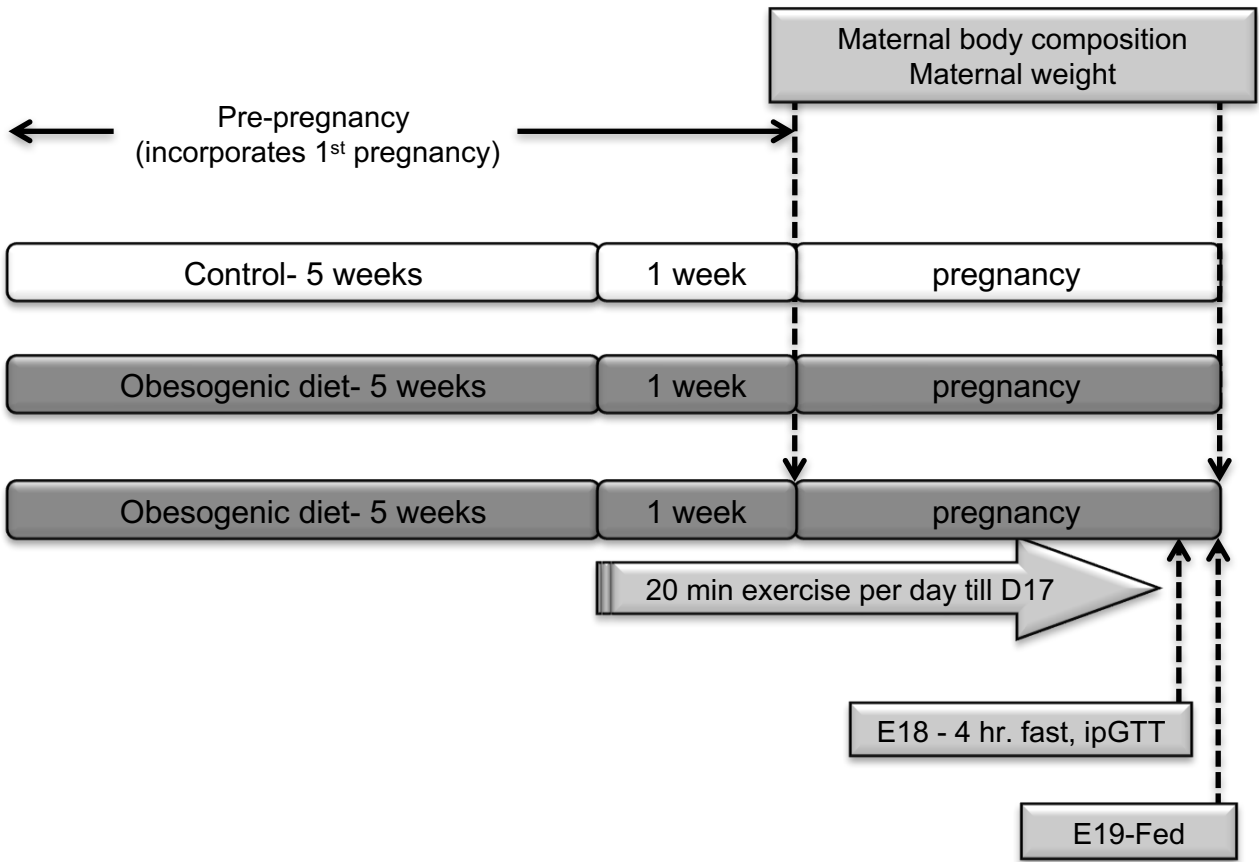


Figure S2: Schematic of study design incorporating an exercise regime for obese females prior to and during pregnancy (n=6 dams per group).

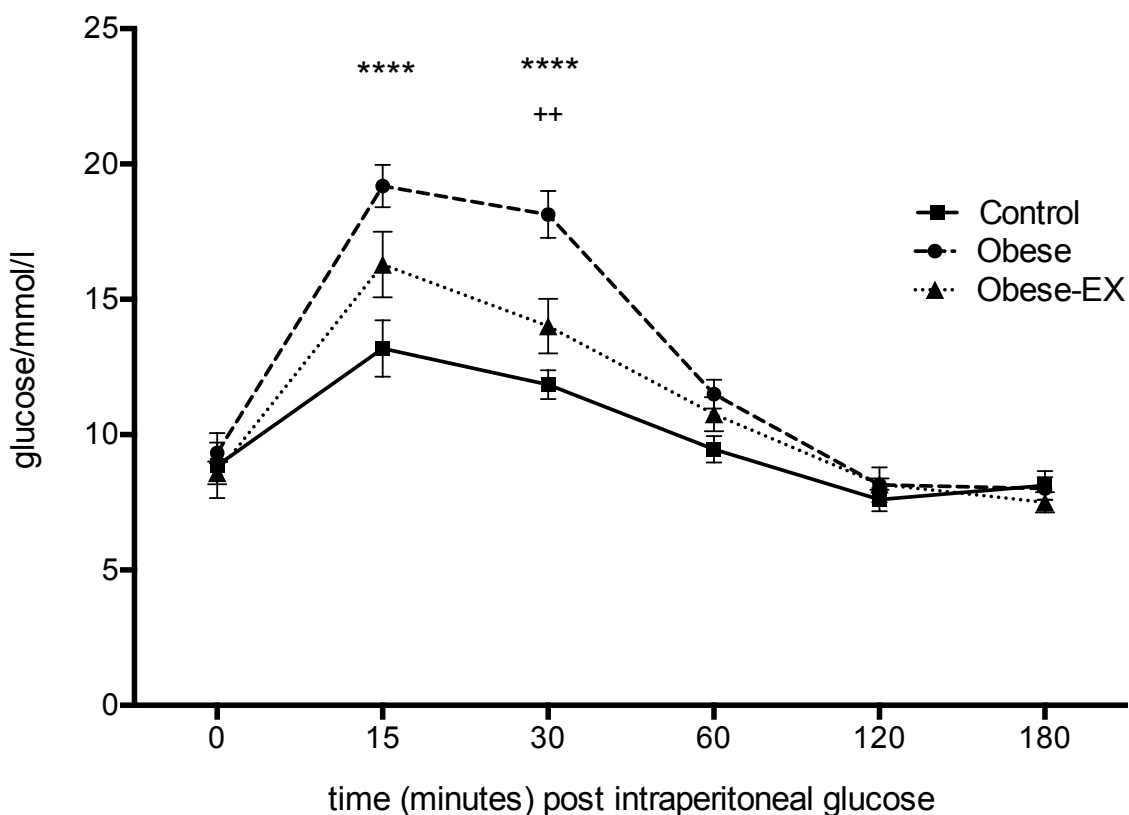


Figure S3 : Glucose tolerance test at D18 of pregnancy. On day 18 of gestation, dams were fasted for 4 hours, weighed and given an intraperitoneal dose of glucose (1g/kg). Tail blood glucose was measured at time 0 (before the injection) and then again at timed intervals from the time of injection. Tail blood glucose measurements throughout the GTT. Glucose levels (Controls- squares, Obese- circles, Obese-EX- triangles) are presented as means +/- SEM, n=6 dams per group and analyzed by two-way repeated measures ANOVA with Bonferroni multiple comparisons test. **** p<0.0001 Control vs. Obese; **p=0.0109 Obese-EX vs. Obese.

Supplementary Table 1: Forward and reverse primer sequences

Primer	Forward 5'-3'	Reverse 5'-3'
Sry	TCATGAGACTGCCAACCACAG	CATGACCACCACCACCACCAA
Hif1a	GCGAGAACGAGAAGAAAAAGATGA	GGGGAAGTGGCAACTGATGA
Hprt	GCTCGAGATGTCATGAAGGAGAT	AAAGAACTTATAGCCCCCCTTGA
B-Actin	TTCAACACCCCAGCCATGTA	TGTGGTACGACCAGAGGCATAC
Ppia	AGGGTGGTGACTTTACACGC	GATGCCAGGACCTGTATGCT
Pabp1	ATGTTGGGTGAACGGCTGTTTCCT	GAGCGGAGAGACTCTGGAGACTCG