

**Sleeve gastrectomy suppresses hepatic glucose production and increases
hepatic insulin clearance independent of weight-loss**

Supplementary Information

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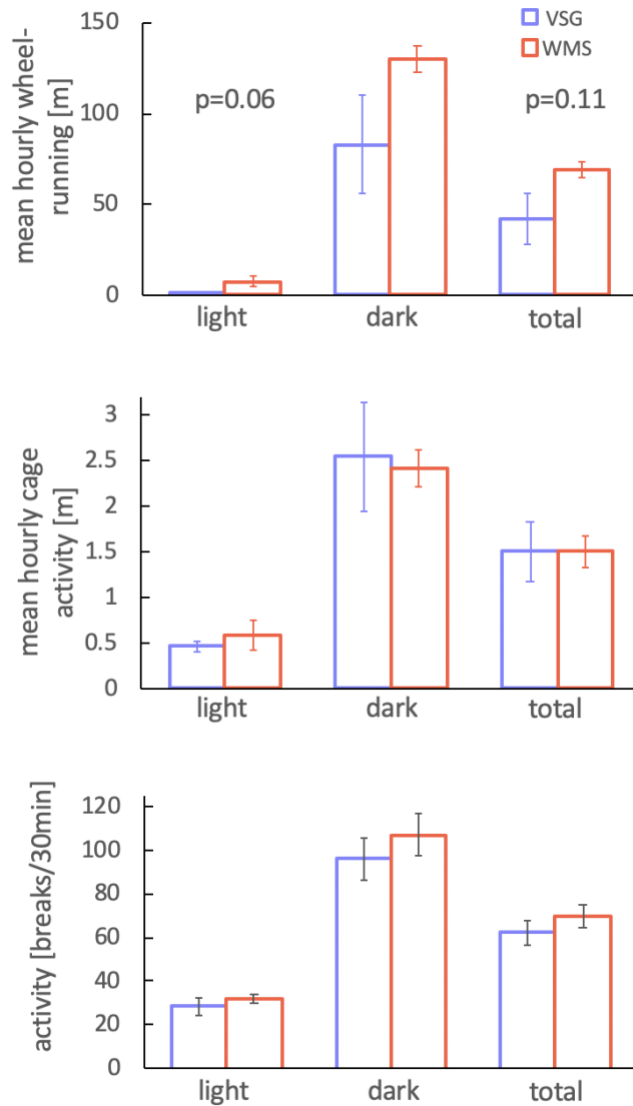


Figure S1: Activity of VSG and WMS operated mice.

A. Mean wheel running per hour in the light cycle (left), dark cycle (middle) and in 24 hours (total, right) in vertical sleeve gastrectomy (VSG, red), and weight matched sham (WMS, blue) operated mice.

B. Mean walking/running activity outside the wheel per hour. Colors as in A.

C. Activity as measured by number of beam-crossings per 30 minutes. Colors as in A. n=4,4.

p-values calculated by Student's t-test. No marking corresponds to values greater than 0.05.

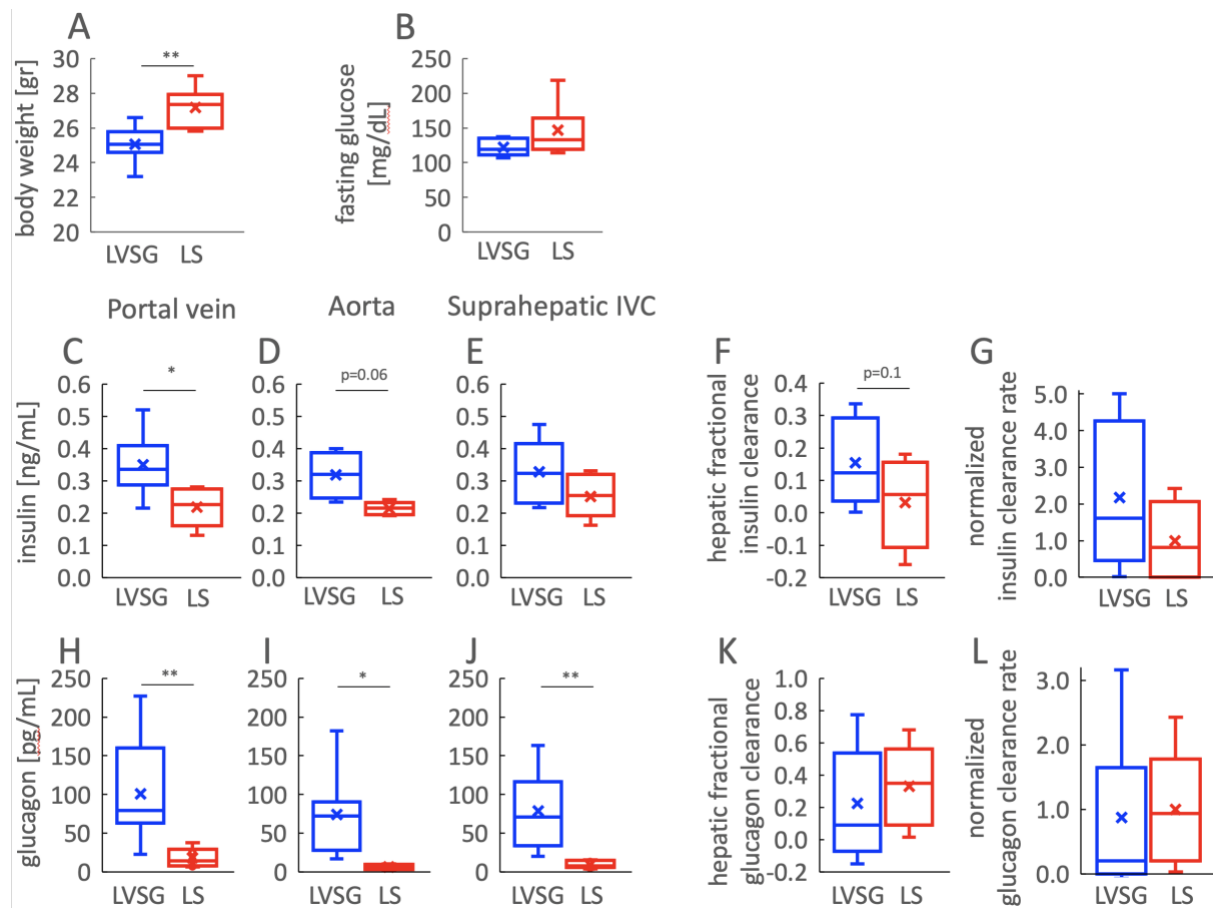


Figure S2. Fractional insulin and glucagon uptake in C57Bl6 lean sham and lean VSG-operated mice

A-B. Weight (A) and fasting blood glucose levels (B) of lean VSG (LVSG, bright red) and lean sham (LS, bright blue) operated mice 14 days after surgery.

C-E. Insulin levels in the portal vein (C), aorta (D), and suprahepatic IVC (E) in LVSG and LS-operated mice. Color code as in A.

F. Hepatic fractional insulin clearance in LVSG and LS operated mice.

G. Normalized hepatic insulin clearance rate in LVSG and LS operated mice.

H-J. Glucagon levels in the portal vein (H), aorta (I), and suprahepatic IVC (J) in LVSG and LS operated mice. Color code as in A.

K. Hepatic fractional glucagon clearance in LVSG and LS operated mice. Color code as in A.

L. Normalized glucagon clearance rate in LVSG and LS operated mice. Color code as in A.

n=7,7. **p<0.01. *p<0.05 by Student's t-test.

CEACAM1 F2	CTGCTCACAGCCTCACTTTTAG
CEACAM1 R2	TATAGCCGTAGTGTTCCCTTGT
HPRT1 F	GGACCTCTCGAAGTGTTGGA
HPRT1 R	AAACGTGATTCAAATCCCTGAAGTA
Ide F2	ACATGGCCTATTTGTACCTTGAG
Ide R2	TTGGCTGTTTGTCAATTGTAACC
IGF1R F2	CCAGTTGGCGATTTAGAGAAAC
IGF1R R2	CTTCAGACACCATCAAGTCCAA
InsR ex11F	TTGTCCCCAGAAAAACCTCTT
InsR ex11R	AAATCTGGAAGTGTGAGTGTGGT
InsR F	TGGTTGCCCATGATTTTACTG
InsR R	CCCAAAGGACCACATATCAGAA
IRS1 F	AGTAAGAGCCATGACAGATAGTACAGT
IRS1 R	AAGGCAGCATGAGGTAAATATG
PRKCE F	GGACTGCACAATGACAGAGAAG
PRKCE R	TTTACATATTCCATGACGAAGAAGAG
TBP F3	CCTATCACTCCTGCCACACCA
TBP R3	GTGCAATGGTCTTTAGGTCAAGTTTACA

Table S1: primers used in this study