Supplementary material

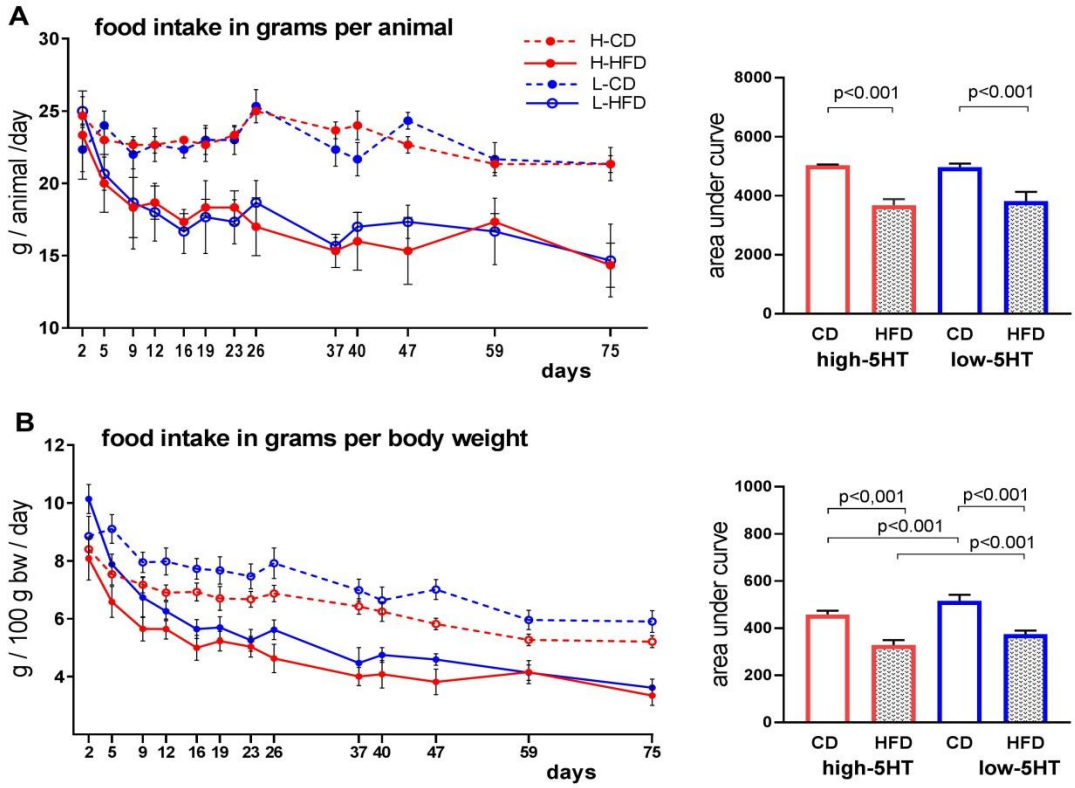

Figure S1. Daily food intake in animals from 5HT sublines over 11 weeks of feeding with control diet (CD) or high–fat diet (HFD), expressed in grams per animal (A), and grams per body weight (B). Corresponding AUC values are shown on the right. Data are presented as means ± SD; N = 9 per group; p-values obtained by LSD test after one-way ANOVA. H-CD = animals from high-5HT subline on control diet; L-CD = animals from low-5HT subline on control diet; H-HFD = animals from high-5HT subline on high-fat diet; L-HFD = animals from low-5HT subline on high-fat diet.

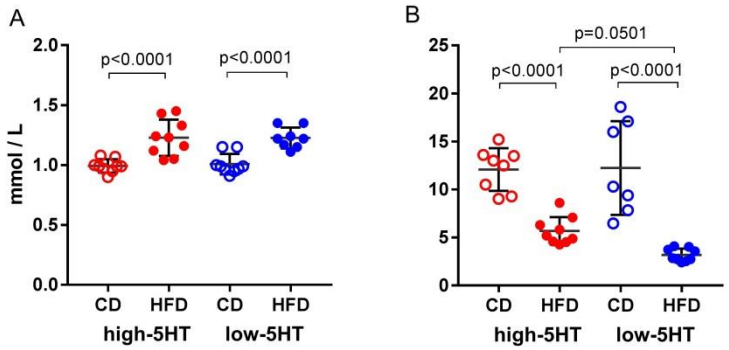

Figure S2. A) Serum concentration of high-density lipoprotein (HDL) and B) ratio between adiponectin and leptin plasma levels in high-5HT and low-5HT animals after 9 weeks of control diet (CD) or high-fat diet (HFD). Data are presented as individual values and mean ± SD; N = 9 per group; p-values obtained by LSD after one-way ANOVA are indicated on figures.

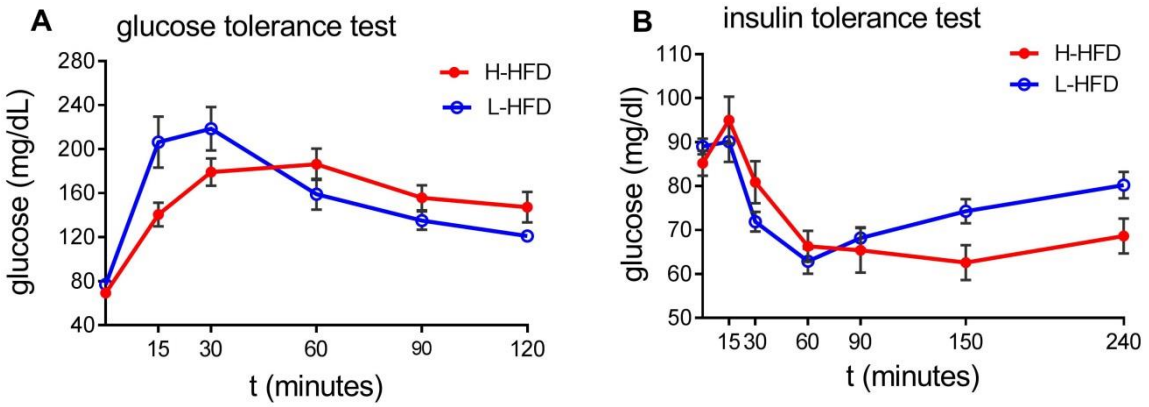

Figure S3. Comparison of glucose (A) and insulin (B) tolerance in animals of the high-5HT and low-5HT sublines after 9 weeks of feeding a high-fat diet. Results are presented as means ± SEM in groups of 9 animals. The same data are in Figure 6 in the main text.

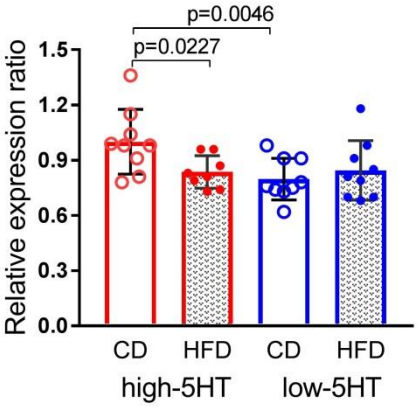

Figure S4. Hypothalamic mRNA expression levels of the serotonin transporter (*Sert*) in animals from high-5HT and low-5HT sublines after 11 weeks of control diet (CD) or high-fat diet (HFD). Expression levels were normalized to the mean of two reference genes (*Actb* and *Gapdh*) and are shown as a relative expression ratio between groups, with high-5HT animals receiving the control diet set at 1.00. Data are presented as means ± SD; N = 9 per group; p-values obtained by LSD post-hoc test after one-way ANOVA.

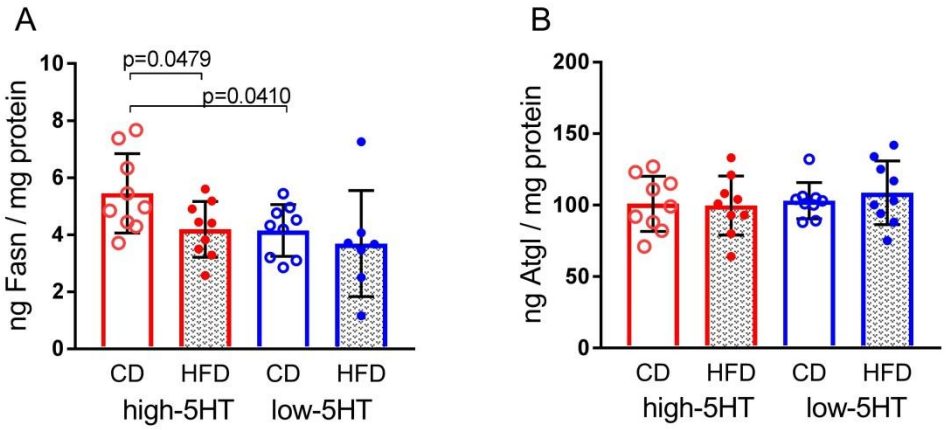

Figure S5. Concentration of A) fatty acid synthase (Fasn) and B) adipose triglyceride lipase (Atgl) in white adipose tissue of animals from the high-5HT and low-5HT sublines after 11 weeks on control diet (CD) or high-fat diet (HFD). Data are presented as individual values and mean ± SD; N = 9 per group; p-values obtained by LSD after one-way ANOVA are indicated on figures.

Table S1. Composition and energy content of control and high-fat diet

	Control diet	High-fat diet
Proteins (% by weight)	18.5	21.7
Carbohydrates (% by weight)	53.5	41.4
corn starch	42.6	8.5
sucrose	3.6	20
maltodextrin		11.5
Fats (% by weight)	3	22.7
% of total fat:		
saturated	19	35
monounsaturated	21	25
polyunsaturated	60	40
energy (Kcal/g)	2.66	4.6

Control diet: Mucedola 4RF21, Italy; High-fat diet: Envigo TD.06415 (45/Fat), USA

Table S2. Primer sequences used in RT-qPCR analysis

NCBI Symbol	Gene	Forward primer sequence	Reverse primer sequence
Actb	Actin beta	GCGCAAGTACTCTGTGTGGA	GGCATCATTGACGACATCGAG
Adipoq	Adiponectin	GAGACGCAGGTGTTCTTG	CCTACGCTGAATGCTGAG
Agrp	Agouti-related peptide	GCAGAGGTGCTAGATCCACAGAA	AGGACTCGTGCAGCCTTACAC
Atgl/ Pnpla2	Patatin like phospholipase domain containing 2	AGACTGTCTGAGCAGGTGGA	GTAGCAGAATCTCGGCATCTTCC
Cart	Cocaine- and amphetamine-regulated transcript	GCCAAGTCCCCATGTGTGAC	CACCCCTTCACAAGCACTTCA
Cebpa	CCAAT enhancer binding protein alpha	GACCATCCGCCTTGTGTGTA	CTGACATTGCACAAGGCACC
Cebpd	CCAAT/enhancer binding protein delta	GAATTGCTACAGTTTCTTGG	ATGCGCAGTCTCTTCCTC
Fabp4	Fatty acid binding protein 4	AGAAGTGGGAGTTGGCTTCG	ACTCTCTGACCGGATGACGA
Fasn	Fatty acid synthase	GGTAGGCTTGGTGAACTGTCTC	TCTAACTGGAAGTGACGGAAGG
Fgf10	Fibroblast growth factor 10	GAGATGTCCGCTGGAGAAAG	CCCCTTCTTGTTCATGGCTA
Fgf21	Fibroblast growth factor 21	AGGCTTTGACACCCAGGATT	ACAGATGACGACCAGGACAC
Gapdh	Glyceraldehyde-3-phosphate dehydrogenase	TGCCCCCATGTTTGTGATG	TGGTGGTGCAGGATGCATT
Glut1	Glucose transporter 1	TGGCCAAGGACACACGAATACTGA	TGGAAGAGACAGGAATGGGCGAAT
Glut3	Glucose transporter 3	TGGCTACAACACCGGAGTCATCAA	CTGCCAAAGCGGTTGACAAAGAGT
Glut4	Glucose transporter 4	ATCAACGCCCCACAGAAAGT	CCTGCCTACCCAGCCAAGT
Hcrt	Hypocretin neuropeptide precursor	TAGAGCCATATCCCTGCCCT	GCGAGGAGAGGGGAAAGTTAG
Hcrtr1	Hypocretin receptor 1	GCGCGATTATCTCTATCCGAA	AAGGCTATGAGAAACACGGCC
Insr	Insulin receptor	ATCTCCTGGGATTCATGCTG	TACTGGGTCCAGGGTTTGAG
Irs1	Insulin receptor substrate 1	GATTTAAGCACCTATGCCAG	GAATCGTGAAAGAGTTCGAG
Irs2	Insulin receptor substrate 2	CCACACACCTGTCCTCATTG	TAATCCGCTTTGCCAAAATC
Lep	Leptin	GACACCAAAACCCTCAT	CAGGGTCTGGTCCATCT
Lepr	Leptin receptor	CCTTGGAGGACTATGGGTGTC	GTGGCGCACAAAACAGCTTA
Lipe/Hsl	Lipase E, hormone sensitive type	CTCCTCATGGCTCAACTCC	ACTCCTGCGCATAGACTCC
Lpl	Lipoprotein lipase	TTGAGAAAGGGCTCTGCCTGAGTT	TGCTTCTCTTGGCTCTGACCTTGT
Npy	Neuropeptide Y	AGAGATCCAGCCCTGAGACA	TCACCACATGGAAGGGTCTT
Npyr	Neuropeptide Y receptor	GCTGTGGAACGTCATCAGCTA	TTGATAGATCACGAAGGGCAG
Pomc	Proopiomelanocortin	GAGGTTAAGGAGCAGTGACTAAGA	GTAGCAGAATCTCGGCATCTTCC
Ppargc1b	PPARG coactivator 1 beta	CTACCAGAGCCCACCCAGTA	CAGGATGAGGAGCCAGAACT
Retn	Resistin	ACTTCAGCTCCCTACTG	GTCTATGCTTCCGCACT
Rps29	Ribosomal protein S29	GCCAGGGTTCTCGCTCTTG	GGCACATGTTCAGCCCGTAT
Sert/5htt	Solute carrier family 6 member 4	TCTGAAAAGCCCCACTGGACT	TAGGACCGTGTCTTCATCAGGC
Tnf	Tumor necrosis factor	CATCTTCTCAAAACTCGAGTGACAA	TGGGAGTAGATAAGGTACAGCCC
Ucp1	Uncoupling protein 1	GGGCTGATTCCTTTTGGTCTCT	GGGTTGCACTTCGGAAGTTGT
Vegfa	Vascular endothelial growth factor A	CCGGTTTAAATCCTGGAGCG	TTTAACTCAAGCTGCCTCGC
Wnt10b	Wnt family member 10B	GTAATCACGACATGGACTTTGGAG	GCACTTCCGCTTCAGGTTTT