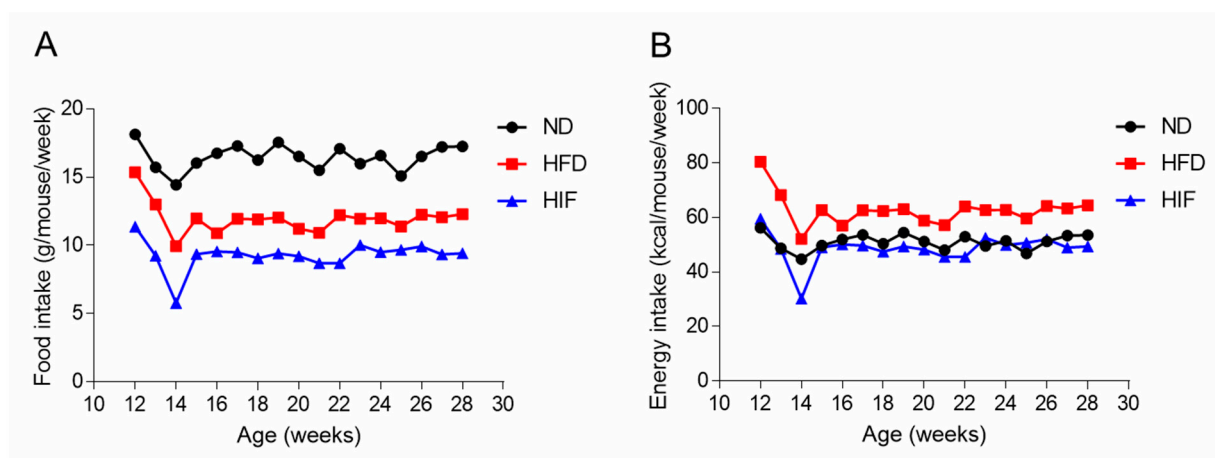


**Supplementary Figure S1. Experimental scheme of IF protocol in HFD mice.** Mice in the ND and HFD groups were fed a ND or HFD for 32 weeks, whereas mice in the HIF group were fed an HFD for 8 weeks and then switched to an IF protocol consisting of alternating 24-h periods of fasting and feeding for 22 weeks. ND; normal diet, HFD; high-fat diet, HIF; HFD + intermittent fasting (IF), GTT; glucose tolerance test, ITT; insulin tolerance test, MWM; Morris water maze.



**Supplementary Figure S2. Effects of IF on food intake and energy intake in HFD mice.** (A) Food intake and (B) Energy intake every other day for 16 weeks at 12 weeks.

**Supplementary Table S1. List of primary antibodies**

<b>Antibody</b>	<b>Company</b>	<b>Catalog No.</b>	<b>Dilution(s)</b>	<b>Applications</b>	<b>Source</b>
F4/80	Santa Cruz	sc-377009	1:200	IF	Mouse
Perilipin-1	Abcam	ab61682	1:200	IF	Goat
Bax	Santa Cruz	sc-7480	1:1000	WB	Mouse
Bcl-2	Santa Cruz	sc-492	1:1000	WB	Rabbit
LCN2	R&D	AF1857	1:1000, 1:200	WB IF	Goat
GAL3	Santa Cruz	sc-23938	1:1000 1:200	WB IF	Rat
$\alpha$ -tubulin	Sigma	T5168	1:5000	WB	Mouse
MMP9	Abcam	ab38898	1:1000	WB	Rabbit
ICAM-1	BD Bioscience	BD554967	1:1000	WB	Mouse
ZO-1	Santa Cruz	sc-33725	1:1000	WB	Rat
Claudin-5	Thermo Fisher	35-2500	1:1000	WB	Mouse
AQP4	Santa Cruz	sc-9888	1:200	IF	Goat
Albumin	Abcam	ab192603	1:200	IF	Rabbit
TNF- $\alpha$	Santa Cruz	sc-1351	1:1000	WB	Goat
TNFR1	Santa Cruz	sc-8436	1:1000	WB	Mouse
IL-6	MyBioScience	mbs3007753	1:1000	WB	Rabbit
HMGB1	Abcam	ab18256	1:1000	WB	Rabbit
RAGE	Abcam	ab3611	1:1000	WB	Rabbit
GFAP	Sigma	G3893	1:1000	IF	Goat
Iba-1	Wako	019-19741	1:200	IF	Rabbit
$\beta$ -actin	Sigma	A5441	1:3000	WB	Mouse

**Abbreviations:** AQP4, aquaporin4; GAL3, galectin-3; GFAP, glial fibrillary acidic protein; HMGB1, high mobility group box1; ICAM-1, intercellular adhesion molecule-1; IF, immunofluorescence; IL-6, interleukin-6; LCN2, lipocalin-2; MMP9, matrix metalloproteinase 9; RAGE, receptor for advanced glycation end products; TNF-  $\alpha$ , tumor necrosis factor- $\alpha$ ; TNFR1, tumor necrosis factor receptor1; WB, western blot; ZO-1, zonula occludens-1.