

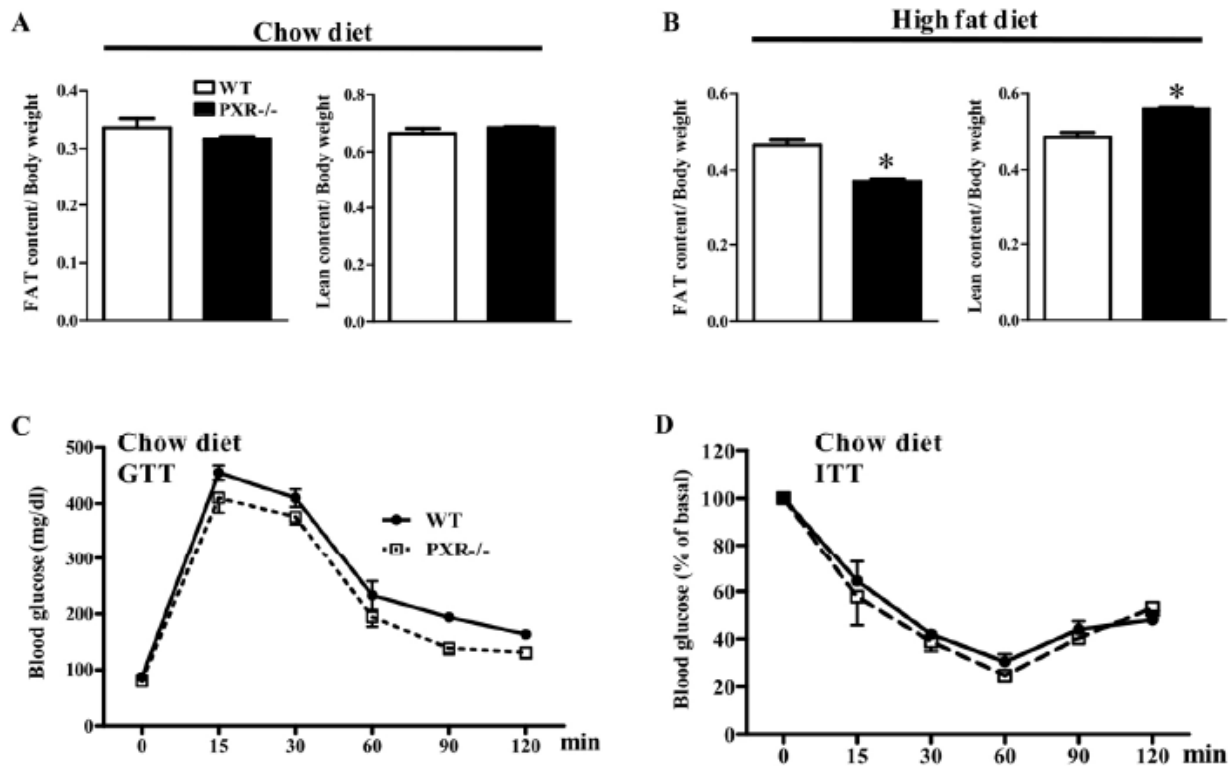
SUPPLEMENTARY DATA

Supplementary Table 1. Sequences of real-time PCR primers

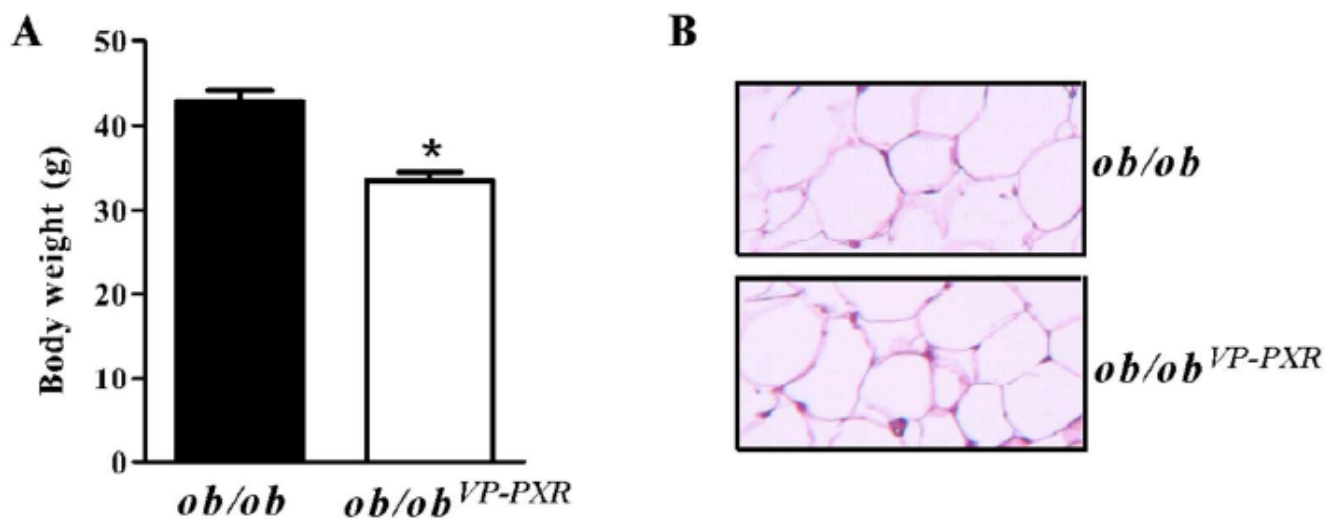
	FORWARD	REVERSE
Acc	GCCTCTTCCTGACAAACGAG	TGACTGCCGAAACATCTCTG
Adiponectin	AAAGGAGAGCCTGAGAAGC	CGAATGGGTACATTGGGAAC
Cpt-1 α	GGTCGCTTCTTCAAGGTCTG	CGAGGATTCTCTGGAAGTGC
Fas	CCCTTGATGAAGAGGGATCA	ACTCCACAGGTGGGAACAAG
G6p	TCTGCCCCAGGAATCAAAAAT	TGGGCAAAAATGGCAAGGA
Hmgcs2	GCCGTGAACTGGGTGCGAA	GCATATATAGCAATGTCTCCTGCAA
Il-6	CAGAATTGCCATCGTACAACCTTTTT	AAGTGCATCATCGTTGTTTCATACA
Lcad	TCTTTTCCTCGGAGCATGACA	GACCTCTCTACTCACTTCTCCAG
Leptin	AAGAAGATCCCAGGGAGGAA	TGATGAGGGTTTTGGTGTCA
lipin-1	TGCAGTTTGTGAACGAGGAG	TGGAAGGGGAATCTGTCTTG
Lpl	GAGAAGCCATCCGTGTGATT	TATGCTTTGCTGGGGTTTTTC
Mcad	GATGCATCACCTCGTGTAAC	AAGCCCTTTTCCCCTGAAG
Pepck	AGGAGGAGTACGGGCAGTTG	CTTCAGCTTGCGGATGACA
PPAR α	TGTCGAATATGTGGGGACAA	AATCTTGCAGCTCCGATCAC
PPAR γ	GATGGAAGACCACTCGCATT	AACCATTGGGTCAGCTCTTG
resistin	AGCTGTGGGACAGGAGCTAA	AGGAAAAGGAGGGGAAATGA
Scd-1	TGCCCTGCGGATCTT	GCCCATTTCGTACACGTCATT
Srebp-1c	ATCGGCGCGGAAGCTGTCTGGGGTAG	ACTGTCTTGGTTGTTGATGAGCTGGA
Tnf- α	CTGAGGTCAATCTGCCCAAGTAC	CTTCACAGAGCAATGACTCCAAAG
Vlcad	CCGTTCTTTGAGGAAGTGAA	AGTGTCGTCCTCCACCTTCTC

SUPPLEMENTARY DATA

Supplementary Figure 1. Metabolic parameters under chow diet or HFD. (A and B) Fat and lean mass of mice maintained on chow diet (A) or HFD (B). (C and D) Glucose tolerance test (C) and insulin tolerance test (D) in chow-fed mice. *, $P < 0.05$, PXR^{-/-} vs. WT.

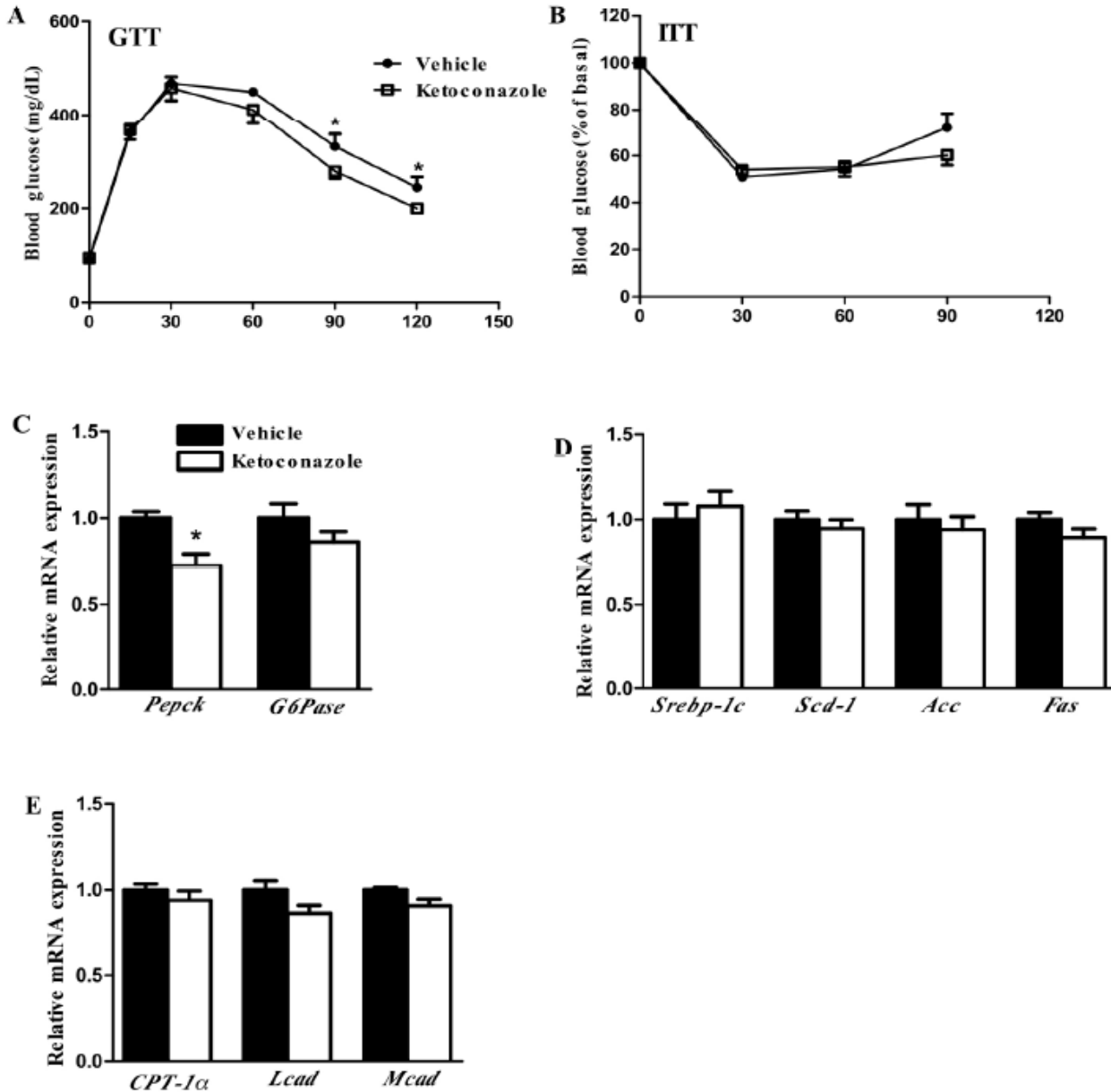


Supplementary Figure 2. The *ob/ob*^{VP-PXR} mice had a modest but significant decrease in their body weight compared to *ob/ob* mice. (A) Mouse body weights measured when mice were 10-week old. (B) H&E staining of the visceral fat. *, $P < 0.05$, *ob/ob* vs. *ob/ob*^{VP-PXR}.



SUPPLEMENTARY DATA

Supplementary Figure 3. Treatment with the PXR antagonist ketoconazole modestly improved the metabolic function of HFD-fed mice. C57BL/6J mice were fed with HFD for 10 weeks before being given daily i.p. injections of ketoconazole (20 mg/kg) or vehicle for 2 weeks while the mice remained on HFD. **(A and B)** Glucose tolerance test **(A)** and insulin tolerance test **(B)**. **(C to E)** The expression of gluconeogenic genes **(C)**, lipogenic genes **(D)**, and β -oxidation gene **(E)** was measured by real-time PCR. *, $P < 0.05$, vehicle vs. ketoconazole.



SUPPLEMENTARY DATA

Supplementary Figure 4. Lipin-1 is a PXR target gene. **(A)** Hepatic lipin-1 mRNA expression in HFD-fed WT and PXR^{-/-} (left panel), or *ob/ob* and *obp* mice (right panel), as measured by real-time PCR analysis. **(B)** Hepatic lipin-1 mRNA expression in mice treated with vehicle or PCN (40 mg/kg) (left panel), or *ob/ob* and *ob/ob*^{VP-PXR} mice (right panel). N = 5 for each group. **(C)** Sequences of the wild type and mutant DR3 with the mutated nucleotides underlined. The binding of PXR-RXR heterodimers to DR3 was shown by EMSA. **(D)** Activation of the wild type, but not the DR3 mutant, lipin-1 promoter luciferase reporter gene by PXR in the presence of PCN. *, P<0.05.

