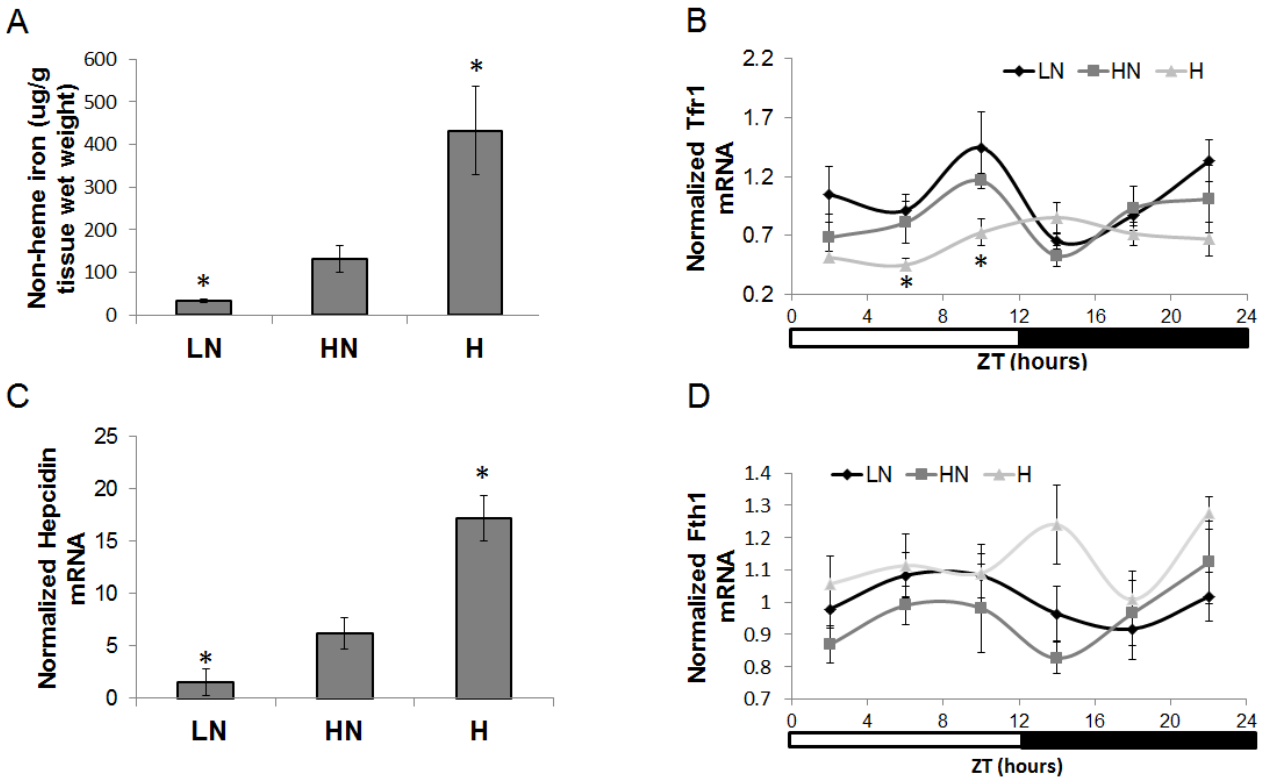
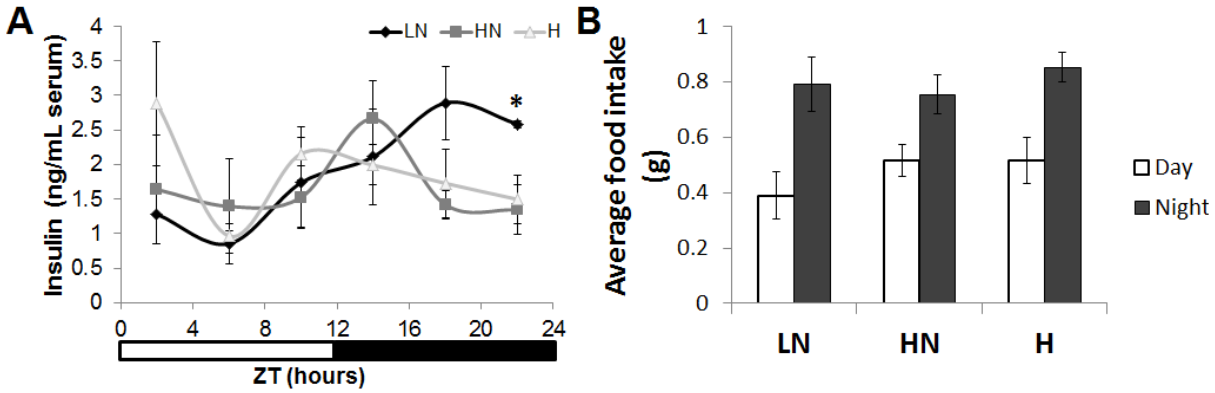
SUPPLEMENTARY DATA

Supplementary Figure 1. related to Table 1. Iron parameters in mice fed the different iron diets, measured at ZT10. A) Non-heme iron measurement in the liver (n=8); transcript levels of B) transferrin receptor 1 (n-6), C) hepcidin at ZT14 (n=6), and D) ferritin (n=6). (*p .05 compared to HN or 350mg/kg diet).

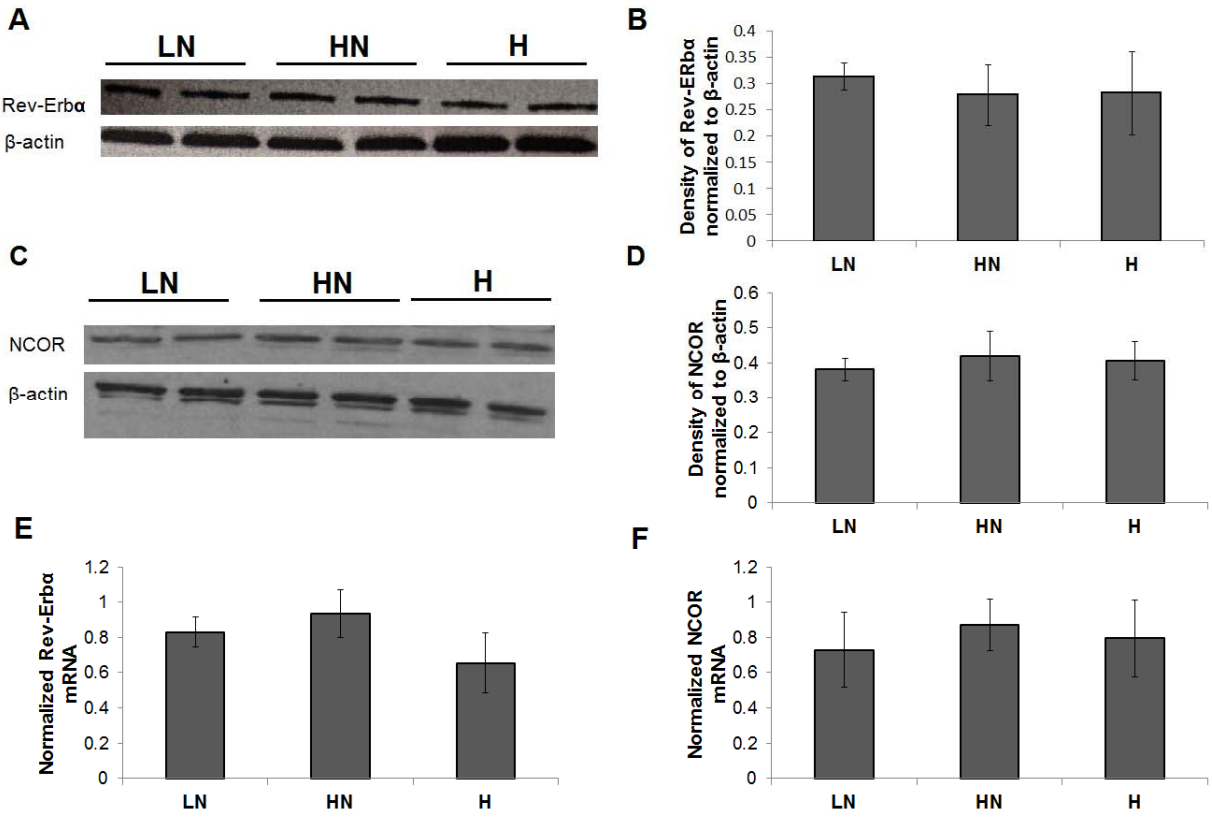


SUPPLEMENTARY DATA

Supplementary Figure 2. related to Figure 1. Circadian insulin and food intake in mice fed the different iron diets.. A) *Ad libitum* serum insulin (n=3-6, *p=.05, LN vs HN p=.04, LN vs H p=.04, HN vs H p=.77). B) Feeding behavior as measured by electronic scale in the Comprehensive Laboratory Animal Monitoring System (CLAMS; Columbus Instruments, Columbus, OH; N=6-8).

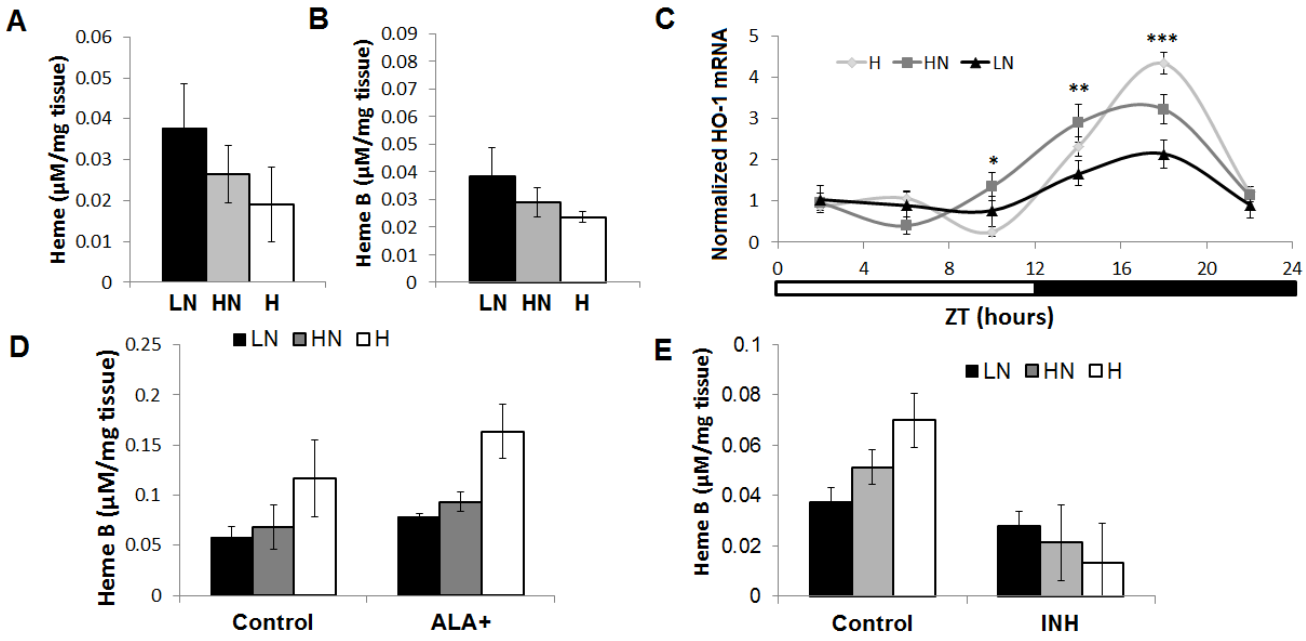


Supplementary Figure 3. related to Figure 2 .Assessment of Rev-Erbαand NCOR abundance at ZT14. A) Rev-Erb alpha blot B) quantification (n=4, ZT14) C) NCOR blot and quantification. C) NCOR blot D) quantification (n=5). Transcripts of E) Rev-Erbα and F) NCOR (n=5-6)



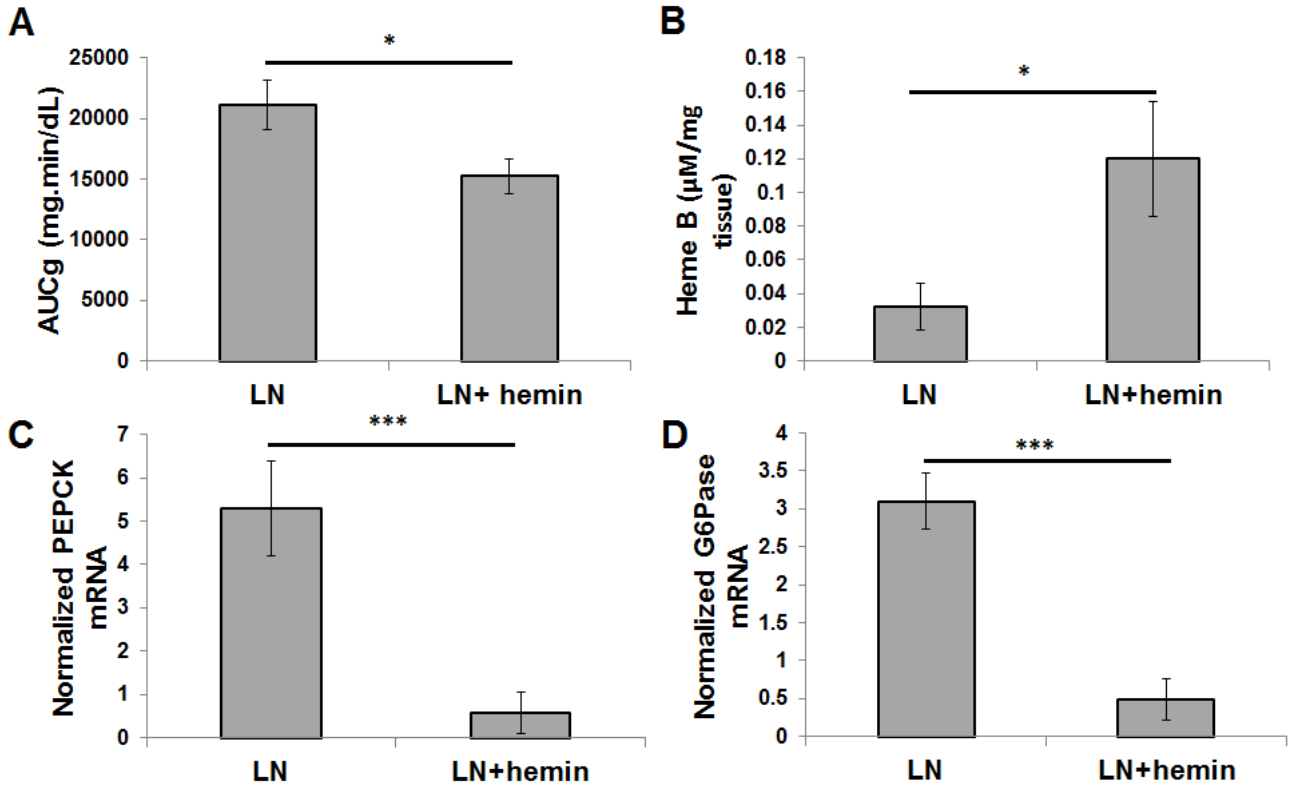
SUPPLEMENTARY DATA

Supplementary Figure 4. related to Figure 3. Hepatic iron and heme oxygenase mRNA in mice fed the different iron diets. A) ZT0 heme measured by HPLC (p=.3236); B) ZT0 heme B as measured by Hemochromogen pyridine (p=.6361); C) Hmox-1 transcript levels as normalized by RPL13 and cyclophilin B (ZT10 p=.0289, LN vs HN p=.3219, LN vs H p=.2193, HN vs H p=.0137; ZT14 p=.0018, LN vs HN p=.00237, LN vs H p=.0021, HN vs H p=.537; ZT18 p .0001, LN vs HN p=.0031, LN vs H p=.0002, HN vs H p=.0012). Heme B in D) ALA (n=5-8) and E) INH treated groups vs control (n=4-9)



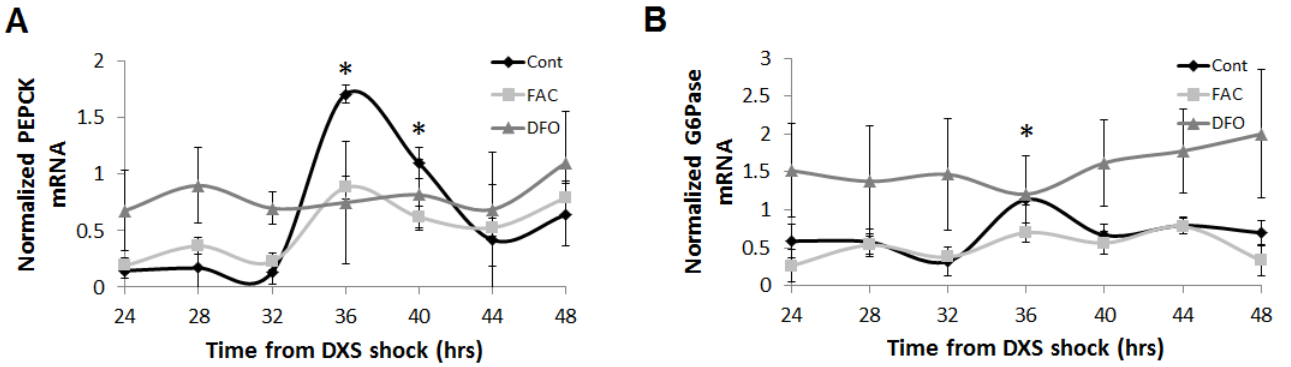
SUPPLEMENTARY DATA

Supplementary Figure 5. related to Figure 5. Regulation of hepatic gluconeogenesis and heme at ZT12 with .05μM hemin supplement to the LN diet A) AUCg for a PTT on mice fed LN or LN+Hemin for 6 weeks(n=6, p=.013). B) Heme B as measured by pyridine hemochromagen assay (n=5-6, p=.021). C) PEPCK mRNA (n=6, p .001) and D) G6Pase mRNA normalized to RPL13 and CyB (n=6, p .001). *p .05, **p .01, and ***p .001



SUPPLEMENTARY DATA

Supplementary Figure 6. related to Figure 5. Circadian expression of gluconeogenic genes in HepG2 cells. A) Circadian expression of PEPCK and B) G6Pase in DXS shocked HepG2 cells (n=18) in control, FAC, and deferoxamine.



Supplementary Figure 7. related to Figure 7 Circadian expression of hepatic transcripts sensitive to oxidative stress in mice fed LN, HN, and H iron diet A) Superoxide dismutase 1 (SOD1) and B) Catalase (n=6)(*p .05, **p .01, and ***p .001)