

**Supplementary Figure Legend**

**Supplementary Figure 1.** Mice were divided into two distinct feeding groups; *ad libitum* high fat diet fed or *ad libitum* control diet fed. Mice were fed diets for 12 weeks. The effects of these feeding regimes on caloric intake (A), body weight (B), percent body fat (C), glucose tolerance (D), as well as energy expenditure, respiratory quotient, and physical activity (E) were determined. Data are shown as mean +/- SEM for 5-25 independent observations. \* denotes  $p < 0.05$  main diet effect and \$ denotes  $p < 0.05$  diet effect at a specific ZT. For total daily caloric intake and percentage body fat, please see reference 8.

**Supplementary Figure 2.** Mice were divided into two distinct feeding groups; *ad libitum* high fat diet fed or *ad libitum* control diet fed. Mice were fed diets for 12 weeks. The effects of these feeding regimes on caloric intake (A), energy expenditure (B), respiratory quotient (C), and physical activity (D) were determined at 30-minute intervals. Data are shown as mean +/- SEM for 5 independent observations. \* denotes  $p < 0.05$  main diet effect.

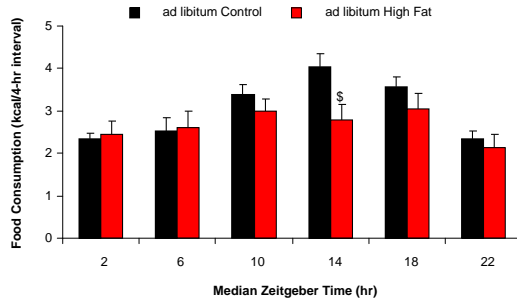
**Supplementary Figure 3.** Mice were divided into two distinct feeding groups, as depicted in Figure 1A. Mice were fed diets for 12 weeks. The effects of these feeding regimes on caloric intake (A), energy expenditure (B), respiratory quotient (C), and physical activity (D) were determined at 30-minute intervals. Data are shown as mean +/- SEM for 5 independent observations. \* denotes  $p < 0.05$  main diet effect.

**Supplementary Figure 4.** Mice were divided into two distinct feeding groups, as depicted in Figure 1B. Mice were fed diets for 12 weeks. The effects of these feeding regimes on caloric intake (A), energy expenditure (B), respiratory quotient (C), and physical activity (D) were determined at 30-minute intervals. Data are shown as mean +/- SEM for 5 independent observations. \* denotes  $p < 0.05$  main diet effect.

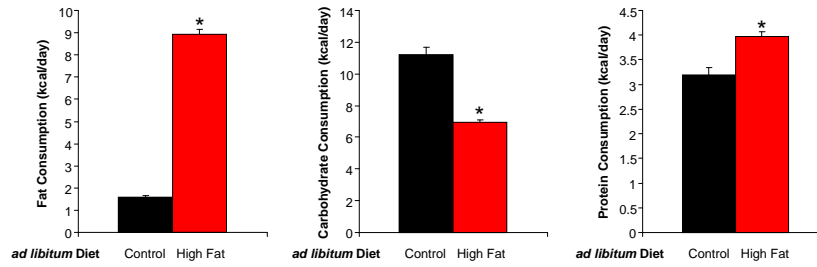
**Supplementary Figure 5.** Mice were divided into two distinct feeding groups, as depicted in Figure 1C. Mice were fed diets for 12 weeks. The effects of these feeding regimes on caloric intake (A), energy expenditure (B), respiratory quotient (C), and physical activity (D) were determined at 30-minute intervals. Data are shown as mean +/- SEM for 6 independent observations. \* denotes  $p < 0.05$  main diet effect.

**Supplementary Figure 6.** Mice were divided into two distinct feeding groups, as depicted in Figure 1D. Mice were fed diets for 12 weeks. The effects of these feeding regimes on caloric intake (A), energy expenditure (B), respiratory quotient (C), and physical activity (D) were determined at 30-minute intervals. Data are shown as mean +/- SEM for 5 independent observations. For respiratory quotient, please see Figure 6.

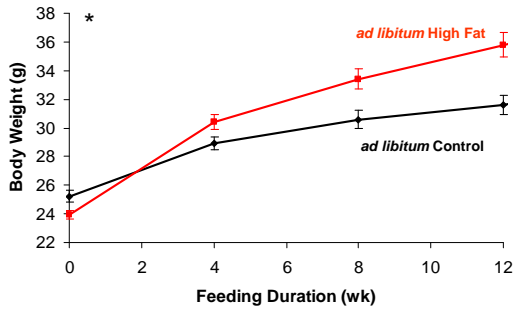
**A**



For food consumption in kcal/day, please see reference (8)



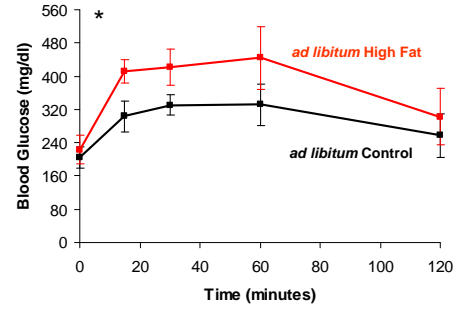
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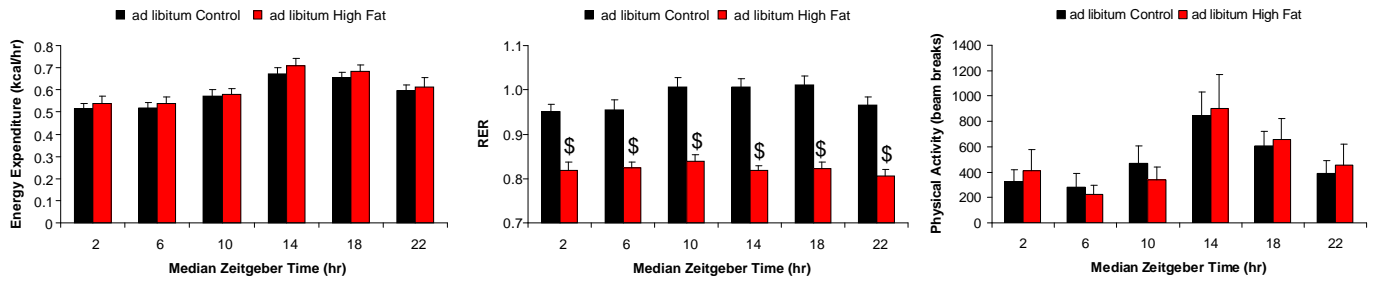
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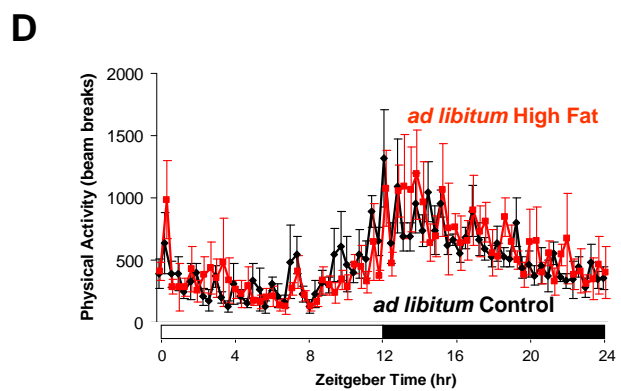
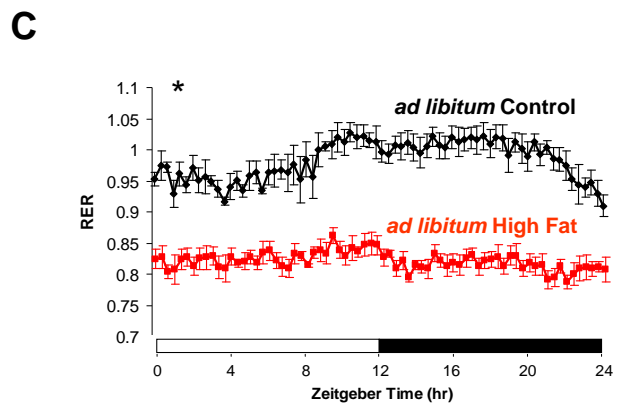
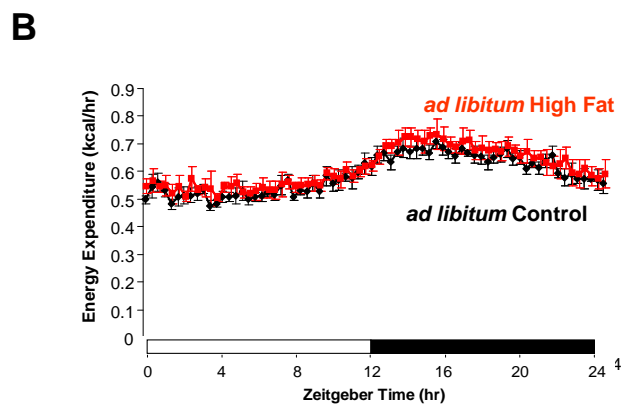
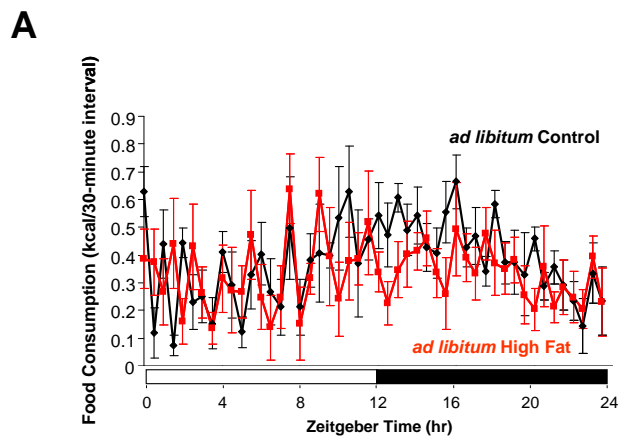
For % body fat, please see reference (8)

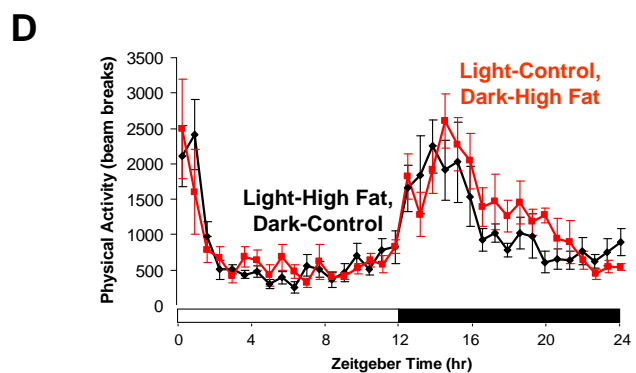
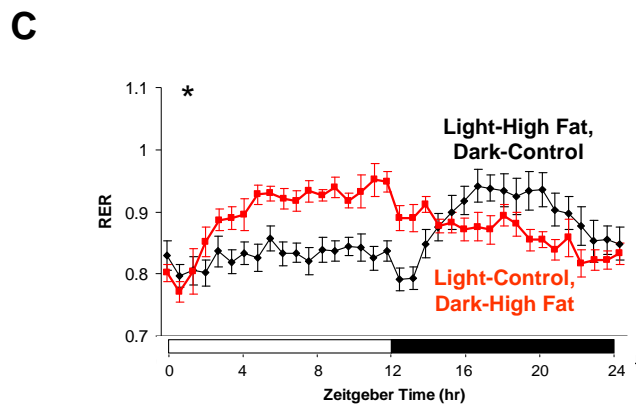
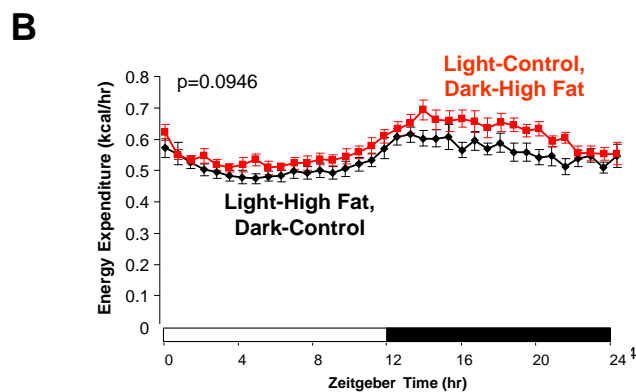
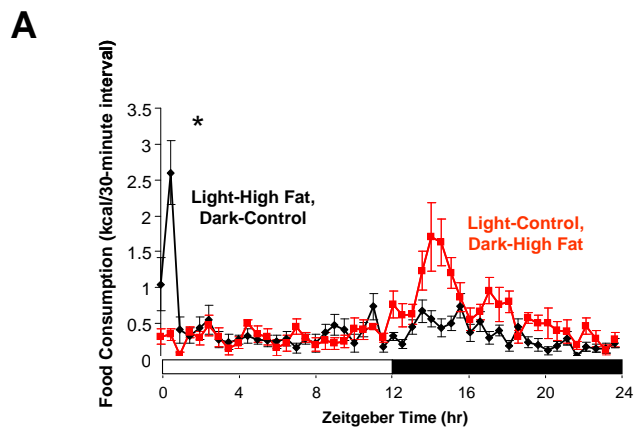
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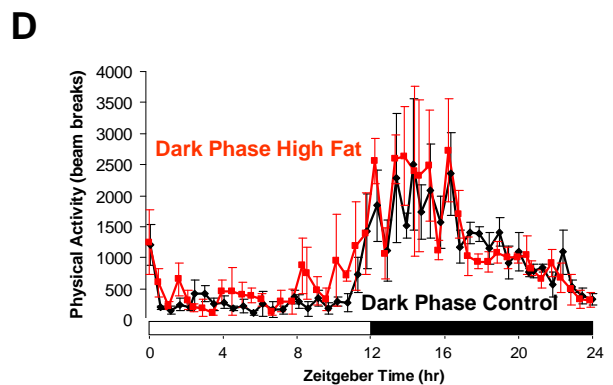
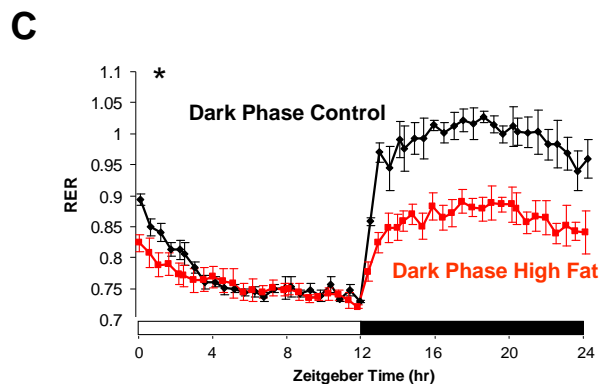
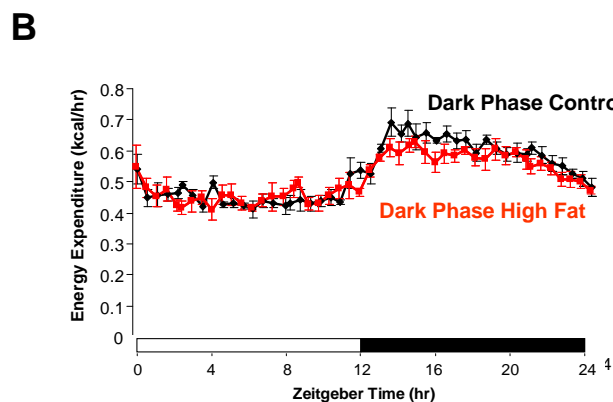
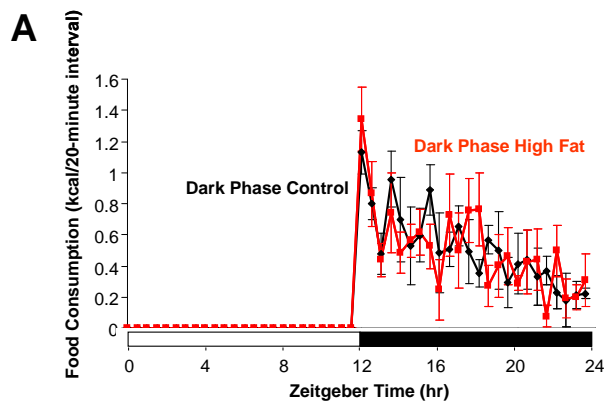


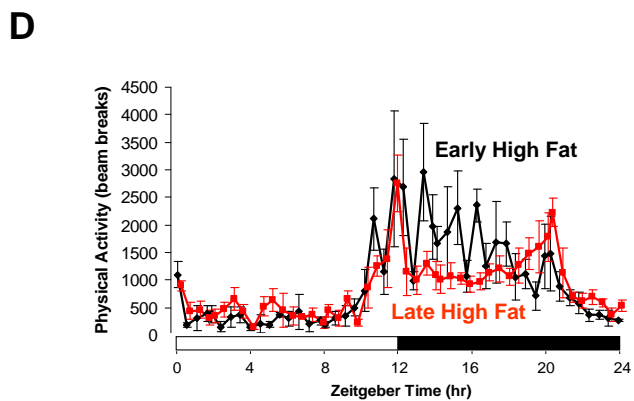
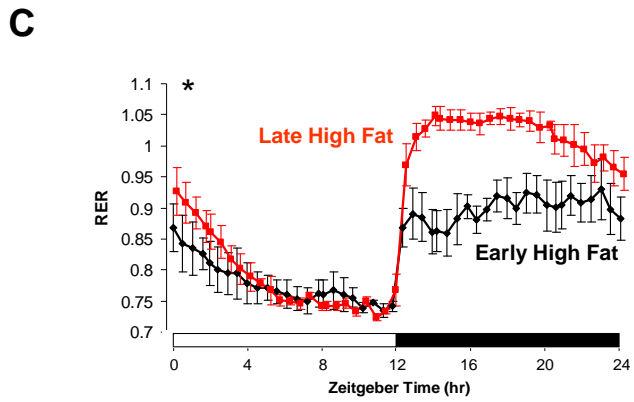
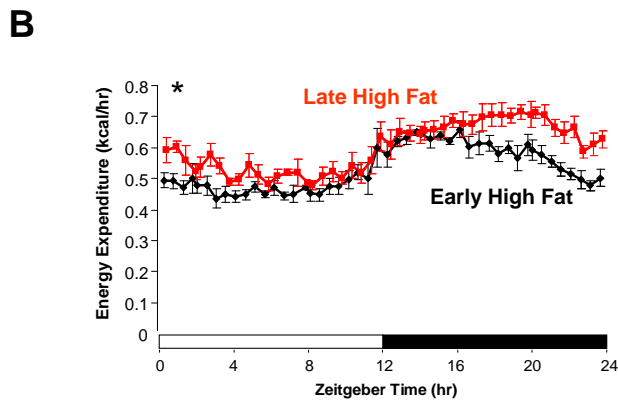
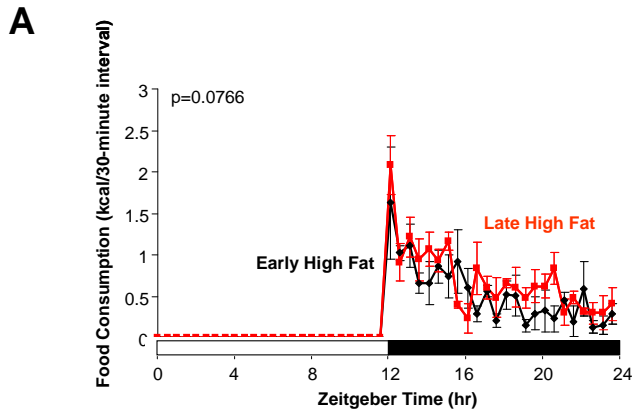
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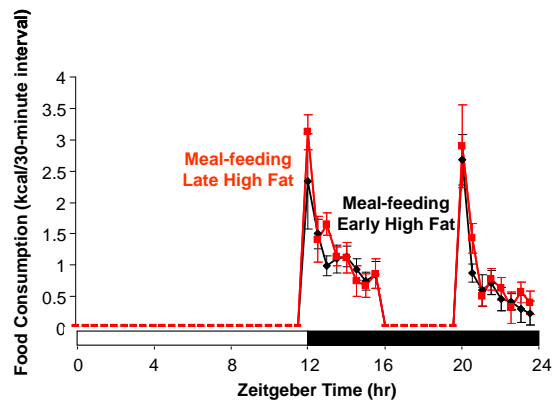




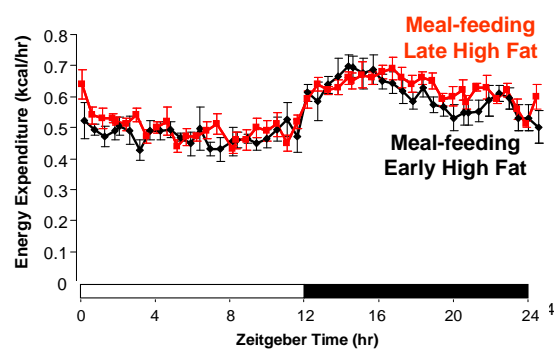




**A**



**B**



**C**

For RER,  
please see  
Figure 6

**D**

