A. 2-AG Correlation: 24 hour Mean Concentrations B. 2-OG Correlation: 24 hour Mean Concentrations 24 hour Mean (pmol/ml) 24 hr Mean (pmol/ml) Restricted Sleep Restricted Sleep 24-hr Mean (pmol/ml) 24 hr Mean (pmol/ml) Normal Sleep Normal Sleep C. 2-AG Amplitude Normal vs Restricted Sleep D. 2-OG Amplitude Normal vs Restricted Sleep 2-AG Amplitude 2-OG Amplitude Individual Participants Individual Participants

Figure S1: Correlation of 24-hr mean concentrations of 2-AG and 2-OG in the normal sleep and restricted sleep conditions were calculated using Pearson coefficient (**A-B**). Despite the two conditions being separated by at least a month, mean 24-hr concentrations of 2-AG and 2-OG were highly correlated (2-AG: $r^2 = 0.99$, p < 0.0001 and 2-OG: $r^2 = 0.96$, p < 0.0001), showing strong within-subject reproducibility. The wide inter-individual differences in mean eCB levels are apparent; a range of 50-400 pmol/ml in 13 of the 14 participants, with an outlier at 1000 pmol/ml for 2-AG and a range of 1000-3000 pmol/ml in 13 of 14 participants and an outlier at 6000 pmol/ml for 2-OG. The amplitude for 2-AG (**C**) and 2-OG (**D**) is plotted for each individual for the normal sleep (black dot) and restricted sleep (red dot) conditions. The increase in amplitude following sleep restriction can be observed.