

Supplemental figure S1. Longitudinal recordings of Fitbit sleep stages. Double-plotted actograms of a representative subject's sleep recordings. (a) light sleep; (b) deep sleep; (c) REM sleep. Bars indicate sleep stage activity; red dots indicate the respective acrophase.

Supplementary figure S2. Intraindividual timing of sleep stages relative to each other. Heatmaps of the Spearman correlation coefficients of the sleep stage percentiles in (a) minutes after sleep onset, and (b) clock time of one representative subject. Workdays (WD) and work-free days (FD) were evaluated separately to account for workday constraints, respectively.

Supplementary figure S3. Temporal relationship between deep and REM sleep with regard to the *homeostatic* component. Intraindividual correlation coefficients (ICC) of the deep sleep percentiles and the (a) 25 REM sleep percentile, (b) 50 REM sleep percentile, (c) 75 REM sleep percentile, (d) 100 REM sleep percentile. Workdays (green symbols) and work-free days (blue symbols) were evaluated separately to account for workday constraints. Middle lines and error bars show median with interquartile range ($N=59$). Wilcoxon test, *, $P<0.05$ between workdays and work-free days. \$, $P<0.05$ vs. the respective 25 percentile.

Supplementary figure S4. Temporal relationship between deep and REM sleep with regard to the *circadian* component. Intraindividual correlation coefficients (ICC) of the deep sleep percentiles and the (a) 25 REM sleep percentile, (b) 50 REM sleep percentile, (c) 75 REM sleep percentile, (d) 100 REM sleep percentile. Workdays (green symbols) and work-free days (blue symbols) were evaluated separately. Middle lines and error bars show median with interquartile range ($N=59$). Wilcoxon test, *, $P<0.05$ between workdays and work-free days. §, $P<0.05$ vs. the respective 100 percentile.