**Table Non-Parametric Measures of Actigraphy Data**From nparACT package

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| **Variables** | **Definition** | **Meaning** |
| Interdaily stability (IS) | The strength of coupling of a rhythm to stable markers like sunlight. Varies between 0 (Gaussian noise) and 1 for perfect IS. | the higher the more stable |
| Intradaily variability (IV) | The frequency and extent of transitions between rest and activity. Varies between 0 for perfect sine wave and about 2 for Gaussian noise. | the higher the more fragmented |
| Relative amplitude (RA) | Difference between M10 activity and L5 activity ((M10−L5)/(M10+L5)) | Higher RA means greater daytime activity and reduced activity during sleep |
| L5 | 5 hours with the lowest average actigraphy amplitude |  |
| M10 | 10 hours with the highest average amplitude |  |
| L5 starttime | L5 onset time |  |
| L5 start\_diff | L5 onset time as numeric |  |
| M10 starttime | M10 onset time |  |
| M10 start\_diff | M10 onset time as numeric |  |

**Table Circadian Rhythm Measures of the Extended Cosine Model**

The letters in the () after each variable are a part of the variable names in the output file.

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| **Variables** | **Definition** | **Meaning** |
| Amplitude (amp)  page1image3722432 | amplitude = maximum - minimum | page1image3722848page1image3703712  the lower the less rhythmic |
| Minimum (min) | the lowest point of the curve | the bigger the more activity during night, indicating poor sleep |
| Acrophase (hr) (phi) | time of day of the peak of the curve, or midpoint of activity plateau | page1image3711824page1image3711616  the later the time, the more delayed the phase |
| page1image3747392  Slope (beta) | Whether the activity rises more steeply or more gradually from minimum to maximum | the bigger the more rapid the change from high to low activity, and from low to high activity  page1image3730960page1image3731376 |
| Mesor (mesor)  page1image3732416 | value = minimum + 1/2 amplitude half-way between minimum and maximum | average of the observations, no definite meaning to the rhythm |
| Up-Mesor (hr) (upmesor) | the time of day when the women switched from low activity to high activity, i.e., from below the mesor to above the mesor | the bigger the later starting of higher activity |
| page1image3746144  Down-Mesor (hr) (downmesor) | the time of day when the woman switched from high activity to low activity, i.e., from above the mesor to below the mesor | the bigger the later decline of activity  page1image3744064page1image3747600 |
| Width (alph) | A parameter related to durations of relatively active time and relatively inactive time of day | Smaller values indicated longer durations of high activity |
| Width Ratio (widthratio) | The fraction of the day that activity is above the mesor | Smaller values indicated longer durations of low activity |
| page1image3751344  R Squared (rsq) | The reduction in squared error from using a model to summarize data (and predict future values) compared to using the mean, | The bigger the more rhythmic |
| F-statistic (f) | An adjustment to R-squared accounting for the number of observations and the number of parameters in the model | the bigger the more rhythmic |
| F-improve (fnlrg) | The reduction in variance from using the sigmoidally transformed cosine curve in place of the cosine curve to summarize data and predict future values, adjusted for the number of observations and the number of parameters in the model |  |

**Additional variables**

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| **Variables** | **Definition** | **Meaning** |
| Sleep efficiency | Daily SE calculated from sleep intervals. Equals: nocturnal sleep time / total rest interval time. Overall SE is mean of each daily SE. |  |
| Total physical activity | Mean of daily physical activity. Daily physical activity calculated from awake intervals, where PA = total activity counts / total awake interval time |  |
| Period | Number of days the participant wore the watch |  |