

**Title:** Modifiable lifestyle behaviors, but not a genetic risk score, associate with metabolic syndrome in evening chronotypes.

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## Appendix 1.

<b>Term</b>	<b>Definition</b>
<i>Acrophase</i>	Timing of the maximum value of the cosine function
<i>Circadian Function Index (CFI)</i>	A numerical index that determines the circadian robustness, based on three circadian parameters: Interdaily stability (IS), Intraday variability (IV) and Relative Amplitude (RA). CFI oscillates between 0 (absence of circadian rhythmicity) and 1 (a robust circadian rhythm).
<i>Interdaily Stability (IS)</i>	The similarity of the 24 h pattern over days; varied between 0 for Gaussian noise and 1 for perfect stability, where the pattern repeated itself exactly day after day.
<i>Intraday Variability</i>	Characterizes the rhythm fragmentation
<i>M5</i>	The average of the 5 consecutive hours of minimum activity values
<i>M10</i>	Average 10 consecutive hours of maximum activity value
<i>Percentage of rhythmicity (PR)</i>	Percentage of variance of data explained by the sinusoidal function. Higher values of this parameter mean a more sinusoidal curve.
<i>TM5</i>	Timing of M5
<i>TM10</i>	Timing of M10

**Supplemental table 1.** General characteristics of population with Genetic Risk Score

n=1,693	Mean	SD
Age (y)	40.53	12.42
% Women, n (%)	1363 (80.65)	-
BMI (kg/m <sup>2</sup> )	31.26	5.41
Body fat (%)	37.17	6.71
<b><i>Metabolic syndrome and insulin resistance</i></b>		
Waist (cm)	102.83	14.89
Fasting glucose (mg/dl)	85.15	15.03
Triglycerides (mg/dl)	102.00	51.90
HDL-c (mg/dl)	56.43	14.89
Systolic Pressure (mmHg)	11.67	1.49
Diastolic pressure (mmHg)	7.22	1.00
MetS Score	2.12	1.17
Insulin ( $\mu$ UI/ml)	7.27	6.52
HOMA-IR	1.59	1.60

Abbreviations: BMI; Body mass index. MetS; Metabolic Syndrome. HDL-c; High Density Lipoprotein. VLDL-c; Very Low Density Lipoprotein-Cholesterol. HOMA-IR; Homeostatic Model Assessment-Insulin Resistance

**Supplemental table 2.** Cross-validation of discriminant function of chronotype.

<b>Classification percent as</b>			
<b>Actual group</b>	<b>Evening</b>	<b>Morning</b>	<b>Total N</b>
Evening	56 (n= 441)	44 (n= 350)	791
Morning	42 (n= 370)	58 (n= 511)	881

Overall classification accuracy=**57%**