

# Circadian activity rhythm in adult attention-deficit hyperactivity disorder.

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J Psychiatr Res. 2018 May 6;103:1-4.  
doi: 10.1016/j.jpsychires.2018.05.002.

## Abstract

The aim of the present study was to analyze the features of circadian motor activity rhythm of adult attention-deficit hyperactivity disorder (ADHD) patients, by means of functional linear modeling, within the theoretical framework of the two-process model of sleep regulation. Thirty-two ADHD patients and 32 healthy controls (HCs) participated the study. Actiwatch AW64 actigraph was used to quantify motor activity data in 1-min epochs. Participants wore the actigraph on the non-dominant wrist for seven consecutive days. Results show that ADHD patients had significantly higher motor activity than HCs from 4:00 to 7:00, with a peak around 5:00, and from 12:00 to 18:00, with another peak around 14:00. According to the two-process model of sleep regulation, the circadian activity rhythm of ADHD patients may indicate a lower homeostatic sleep pressure, as reflected by the absence of post-lunch dip, which could be considered a potential trait marker of adult ADHD.