

Supplementary Material S5. Excluded studies and reason for exclusion

#	Author	Reason
1	Åkerstedt et al (2018)	Lack of relevant data: Only looking at REM, N1, N2, N3, etc. No direct comparison between sexes
2	Antonijevic et al (1999)	Intervention w/out control: Intervention (GHRH and isotonic saline), separate data for control not shared
3	Armitage et al (2001)	Report not retrieved: Article requested on Research Gate on February 28, 2021, but could not be obtained
4	Bódizs et al (2014)	Lack of relevant data: Data not obtained after contacting study author
5	Chellappa et al (2017)	Intervention w/out control: Intervention, light exposure. No data available that is not related to light exposure
6	Corsi–Cabrera et al (2003)	Lack of relevant data: No numerical wave data available, and the only table that compares males and females is with eyes open and during vigilance task performance
7	Gailard et al (1981)	Lack of relevant data: Does not include any wavelength categories or specific data, more like a review
8	Greenlund et al (2021)	Lack of relevant data: Different research question, relates to blood pressure and K–complexes
9	Mourtazaev et al (1995)	Lack of relevant data: Focuses on delta wave
10	Mongrain et al (2006)	Lack of relevant data: The paper doesn't share sex differences or data for the sexes evaluated for
11	Ujma et al (2017)	Lack of relevant data: The paper looks at sleep EEG in relation to intelligence and there is no data provided on sleep EEG irrespectively
12	Ujma et al (2019)	Lack of relevant data: Focuses on aging, does not account for any spindles or wave lengths
13	van Putten et al (2018)	Lack of relevant data: EEG was done on awake patients
14	Zhang et al (2021)	Lack of relevant data: Spindle maturation amplitude