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[Sleep](#). 2001 May 1;24(3):272-81.

A single dose of melatonin prevents the phase delay associated with a delayed weekend sleep pattern.

[Yang CM](#), [Spielman AJ](#), [D'Ambrosio P](#), [Serizawa S](#), [Nunes J](#), [Birnbaum J](#).

Source

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Abstract

STUDY OBJECTIVES: This study was designed to test the hypotheses that a delayed weekend sleep pattern may lead to a phase delay of the endogenous circadian rhythm, and that melatonin administration can counteract the phase delay and prevent the sleep and functional impairments associated with this sleep pattern.

DESIGN: A within-subject, counterbalanced design was used in which each subject participated in both placebo and melatonin conditions. Subjects' sleep-wake schedules were delayed by two hours on Friday and Saturday to simulate the delayed weekend sleep pattern. Six mg of melatonin or a placebo pill was administered double blind on Sunday late afternoon.

SETTING: N/A.

PARTICIPANTS: Ten healthy volunteers (mean age = 22.1 years old). **MEASUREMENTS** and

RESULTS: Salivary dim-light melatonin onset (DLMO) was measured on Friday and Monday nights. Subject's sleep was recorded with polysomnography on Sunday night and their levels of sleepiness, cognitive functioning and mood were assessed on Sunday night and Monday morning. Results show that the delayed weekend sleep pattern caused a 31.6 min delay of the endogenous melatonin rhythm. Melatonin administration counteracted the phase delay of endogenous melatonin onset. On Sunday, melatonin administration increased the sleepiness throughout the evening and reduced sleep onset latency at bedtime. On Monday morning, subjective sleepiness was decreased in the melatonin condition.

CONCLUSION: A delayed weekend sleep pattern did show a mild phase-delay effect on the endogenous circadian rhythm. A single dose of melatonin can acutely reverse the weekend drift.

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