



Time-of-day matters in text learning and recall: Evening lessons are advantageous for adults with ADHD though not for typical peers

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Highlights

- Persons with ADHD often struggle with learning and recalling new verbal materials.
- We show that these learning difficulties are related to the timing of the lesson.
- Typical adults better recall morning lessons; when they are at their daily peak.
- Adults with ADHD, more evening (on peak) chronotypes, recall evening lessons better.
- Evening or morning, there were no deficits in retention (8–10 days) in ADHD.

Abstract

Motor skill (“how-to” knowledge) consolidation is enhanced when individuals with ADHD practice at evening. We tested, in adults with and without ADHD, whether evening lessons are advantageous for recalling texts (declarative memory). Participants (N = 40) listened to and read narrative texts in morning and evening lessons (crossover study). Recall was tested immediately post-lesson and 24 h and 8–10 days later. Recall tended to decrease over time but independently of ADHD status or the time-of-day of the lesson. Nevertheless, typical participants showed a morning advantage immediately post-lesson and in later recall, correlated with stronger morning chronotype. In contrast, participants with ADHD benefited

more from evening lessons; nearer their preferred time-of-day. In adults with ADHD long-term declarative memory was no less durable than in typical adults after both morning and evening lessons, but a mismatch with their preferred diurnal “on-peak” time can lead to less effective engagement in learning during morning lessons.

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Keywords

long-Term memory; ADHD; Text learning; Chronotype; Time of day

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