Immediate night-time sleep helps memory consolidation in adolescents aged 13-14.

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There is accumulating evidence suggesting that sleep is involved in the consolidation of both declarative and procedural memories. Recent studies indicate that memory performance can be significantly promoted if it is followed by sleep (even a short episode of day-time nap). Our previous report has shown that increment of sleep time at night does not implicate pre-enhancement on memory tasks in adolescents. To continue our study in the association of sleep and memory consolidation in adolescents, post-enhancement on memory consolidation by immediate night-time sleep following memory acquisition is investigated. A time course (5, 10 and 30 minutes) study showed that an immediate night-time sleep of either 5 minutes or 10 minutes shortly after a memory task helped memory consolidation in adolescents aged 13-14. A significant decrease in the post-enhancement on memory performance was found in the 30-minute experimental group. The present results implicate that the first 5-10 minutes shortly after the newly formation of short-term memory is a crucial period for memory consolidation in adolescents.