

Gaming before bed negatively impacts teens' sleep, research finds

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(Medical Xpress)—Teenagers should steer clear of prolonged video gaming if they want a good night's sleep, new research from Flinders University shows.

The study – conducted at the University's [Sleep Laboratory](#) by masters student Daniel King – found that prolonged [video gaming](#) immediately before bed caused significant sleep disruptions in a group of [teenage boys](#), even when they fell asleep at their usual [bedtime](#).

The 17 participants played a newly released, fast-paced, [violent video game](#) for either 50 or 150 minutes on two different nights in the Sleep Lab, with sleep and heart-rate monitors as well as subjective reports from the teenagers used to assess the arousing effects of prolonged gaming.

Flinders University child sleep psychologist Dr Michael Gradisar, who supervised the study, said there was a 27-minute loss in total [sleep time](#) after 150 minutes of gaming based on the polysomnography tests and a 39-minute delay in sleep onset according to the participants' sleep diaries.

"While they went to bed at their regular bedtime, the adolescents' still experienced significant [sleep disruptions](#) caused by frequent awakenings throughout the night," Dr Gradisar said.

"Sleep is made up of many different stages and the REM sleep, also known as the dreaming sleep, was reduced by 12 minutes among the teens who played for over two hours," he said.

"This may not seem like a significant reduction but REM plays an important part in helping us remember content we learnt that day so for adolescents in their final years of school who are revising for exams, winding down at night with a video game might not be the best idea."

Dr Gradisar said the teens who played for 50 minutes had almost no trouble falling or staying asleep, yet significant disruptions were reported after 150 minutes of game time.

"Based on the self-reports, those who played for 50 minutes said it took them 22 minutes to fall asleep, which is within the normal amount of time teens take of 30 minutes or less.

"But their sleep onset delay almost doubled to 39 minutes when they played for two and a half hours so clearly there's a limit to how much you should play before bed."

Dr Gradisar said the study did not compare the effects of violent versus non-violent video games, although his past research showed little difference in teens who watched 50 minutes of the *March of the Penguins* documentary or played 50 minutes of *Call of Duty 4*, a violent videogame, before bed.

"The aim of this investigation wasn't to assess the content of video games but to look at the effect of the worst possible thing to do before bed because at the end of the day we want to better understand what affects [adolescents](#)' sleep. At the moment, less than one hour seems okay."

Results of the study have just been accepted in the international *Journal of [Sleep Research](#)*.

Provided by Flinders University

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