Younger adolescents exposed to movies that depict smoking are at greater risk of smoking than older adolescents, according to a study published March 14 in the Journal of the National Cancer Institute.

Exposure to smoking depicted in movies can influence adolescent smoking habits; however, few studies have examined the relationship between exposure to smoking depicted in movies and the acquisition of established smoking behavior. Whether exposure to smoking depicted in movies carries a greater influence in early or late adolescence remains unknown.

In order to determine the effects smoking has on younger and older adolescents, Brian A. Primack, M.D., Ph.D., of the Department of Medicine at the University of Pittsburgh School of Medicine and colleagues, gathered data from 2,074 public school students in Vermont and New Hampshire who were not established smokers at baseline. The students completed written surveys about their background, movies watched, and their use of tobacco in 1999 at ages 9-14 years (early exposure), and follow-up telephone interviews in 2006-2007 at ages 16-22 years (late exposure). Movie data was stratified according to ratings and assessed for smoking episodes.

The researchers found that established smoking behavior increased with the number of smoking episodes watched, with students aged 9-14 years at a 73% higher risk of becoming established smokers compared to their peers who watched less smoking episodes. Students aged 16-22 years were not at a statistically significantly greater risk than their peers who saw fewer smoking episodes. "These results indicate that early exposure to smoking depicted in movies is associated with established smoking in adolescents, whereas late exposure is not," the researchers write.

The researchers note the limitations of the study, namely that it focused on a very specific demographic-white students from northern New England public schools; also they did not look at data from students younger than the early cohort who were exposed to movie smoking, but they do note that a previous study showed movie-related childhood exposures to be just as influential as those occurring closer to the age of initiation. Still, the researchers conclude their findings should inform smoking prevention efforts. "These findings suggest that prevention efforts should focus on the reduction of exposure to smoking depicted in movies when children are at a young age."