

DISTRACTED WHILE DRIVING: A COMPARISON OF THE EFFECTS OF TEXTING AND TALKING ON A CELL PHONE

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In the United States, 39 states have passed legislation banning texting while driving. By comparison, no state bans hands-free cellular phone use by adults while driving. The concern regarding texting reflects an underlying assumption that it poses a greater risk than talking on a cellular phone. However, there have been few published studies directly comparing these two tasks and their effects on driving performance. We conducted two experiments comparing the effects of talking on a cell phone and texting on driving performance. Experiment 1 was to compare the effects of texting and talking on a cellular phone on simulated driving performance. The results show that texting has a pervasive negative effect on mean speed, reaction time and eye movements relative to talking on a phone. The difference in performance might be due to the fact that texting often takes longer to perform than replying verbally. Experiment 2 investigated the effects of texting and talking on a cellular phone on simulated driving performance while equating task duration. After equating the time spent on each task, texting still had a greater impact on driving performance. Drivers in the texting condition had significantly slower reaction times, had more eye movements, drove more slowly and failed to detect as many peripheral letter targets compared to during the calling condition. The visuo-motor demands associated with text entry including the need to look away from the roadway to enter and confirm the text reply may account for the deleterious effects of texting on driving performance.