

Attention Demands May Explain Why Texting While Driving Is So Dangerous

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(PhysOrg.com) -- A timely study in the journal *Human Factors* suggests why texting while driving is riskier than talking on a cell phone or with another passenger. Human factors/ergonomics researchers at the University of Utah found that texters in a driving simulator had more crashes, responded more slowly to brake lights on cars in front of them, and showed impairment in forward and lateral control than did drivers who talked on a cell phone while driving or drove without texting.

Researchers Frank Drews and colleagues found evidence that attention patterns differ for [drivers](#) who text versus those who converse on a [cell phone](#). In the latter case, the researchers say, "drivers apparently attempt to divide attention between a [phone conversation](#) and [driving](#), adjusting the processing priority of the two activities depending on task demands." But texting requires drivers to switch their attention from one task to the other. When such attention-switching occurs as drivers compose, read, or receive a text, their overall reaction times are substantially slower than when they're engaged in a phone conversation. The type of texting activity also appears to make a difference; in this study, reading messages affected braking times more than did composing them.

The hazards of texting while driving continue to receive broad national and international attention as accident rates attributed to this practice increase. As a result, a growing number of U.S. cities and states, as well as Canadian provinces, ban texting while operating a vehicle. Drews et al. noted that according to CTIA (www.ctia.org), more than 1 trillion text messages were sent in 2008 in the United States alone. To find why and how much drivers are impaired during texting, the researchers engaged 20 men and 20 women between the ages of 19 and 23 in both a single task (straight driving) and a dual task (driving and texting) in a high-fidelity simulator. The participants, experienced texters with an average

of 4.75 years of driving experience, received and sent messages while the researchers observed their brake onset time, following distance, lane maintenance, and collisions.

The crash risk attributable to texting is substantial. One possible explanation is that drivers who text tend to decrease their minimum following distance and also experience delayed reaction time. For example, in the Drews et al. study, drivers' median reaction time increased by 30 percent when they were texting and 9 percent when they talked on the phone, compared with their performance in a driving-only condition.

A copy of the paper, "Text Messaging During Simulated Driving," by Frank A. Drews, Hina Yazdani, Celeste N. Godfrey, Joel M. Cooper, and David L. Strayer is available at hfs.sagepub.com/cgi/rapidpdf/0...ype=ref&siteid=sphfs.

Provided by University of Utah

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