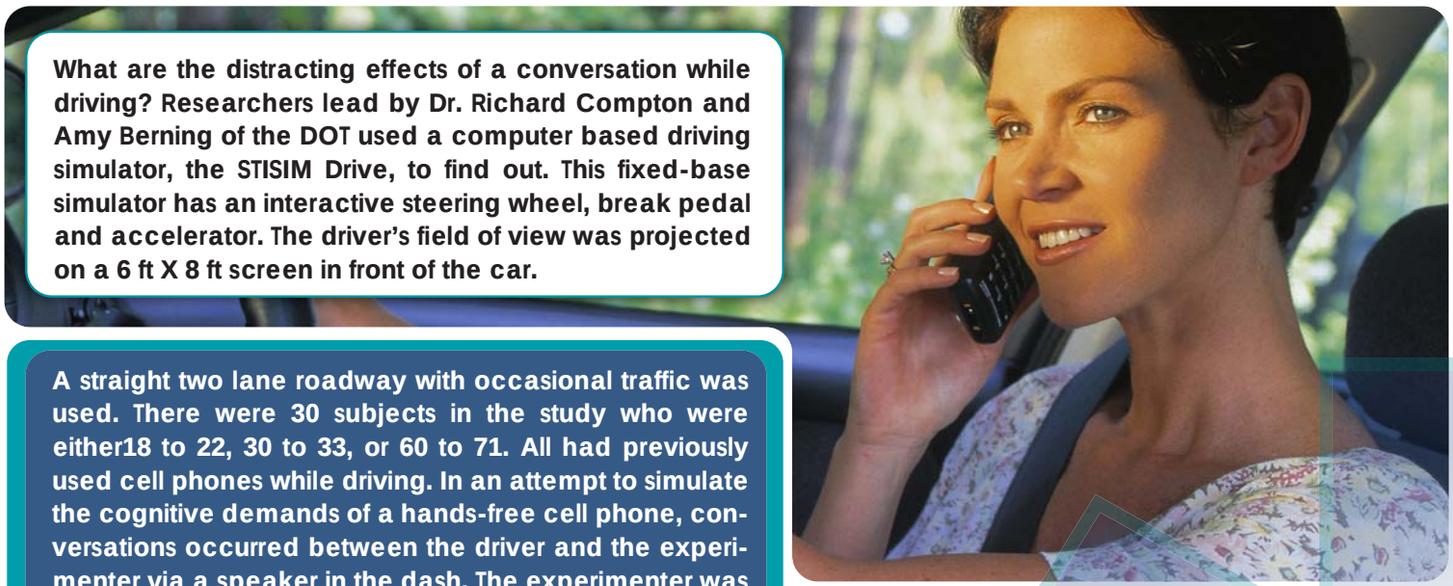
VITALS
For Medical Transport Professionals
A Weekly Safety Newsletter

Hands Free Conversations In A Driving Simulator



What are the distracting effects of a conversation while driving? Researchers lead by Dr. Richard Compton and Amy Berning of the DOT used a computer based driving simulator, the STISIM Drive, to find out. This fixed-base simulator has an interactive steering wheel, break pedal and accelerator. The driver's field of view was projected on a 6 ft X 8 ft screen in front of the car.

A straight two lane roadway with occasional traffic was used. There were 30 subjects in the study who were either18 to 22, 30 to 33, or 60 to 71. All had previously used cell phones while driving. In an attempt to simulate the cognitive demands of a hands-free cell phone, conversations occurred between the driver and the experimenter via a speaker in the dash. The experimenter was in another room. Two kinds of conversations were held: Math Computation Conversations and Emotionally-Involving Conversation. There was also a no conversation driving simulation period.

While driving in the simulator drivers were given a series of numbers and operations via the dash and asked to supply the final answer. The example given was: [(3+6+9-2+4) X 2 + 6] divided by 2=? (The answer is 23)

Emotionally Involving Conversations were developed from participant background information, i.e., a sports fan could discuss his favorite team's recent loss.

Subjects participated in five sessions over several days. In addition to the conversations, there were three driving scenarios: constant 65 mph, constant 50 mph and following a car that varied between 50 and 65 mph.

The Results Showed That:

- Performance measures were poorest at 65 mph
- Math computation conversation was a significant distraction.
- Emotionally Involving conversations were less distracting and sometimes the distraction was not significant.
- Older drivers performed worse that the younger ones.
- The interference from conversations decreased with practice, but the actual implications of this on driving remains unclear.

One interpretation is that combining a complicated driving scenario with a complicated distraction dramatically decreases performance. Since the driving scenario can rapidly and unexpectedly become complicated, it makes sense to always minimize distractions.