

Text Messaging and Driving Safety: When is it the Wrong Message?

Introduction

Cell Phone Statistics

- 974,000 vehicles on the road at any given daylight moment being driven by someone on a hand-held phone (NHTSA)
- Over 236 million people subscribe to wireless communication devices (Insurance Information Institute)
- Cell phone use accounts for 2,600 vehicle fatalities and 300,000 collisions annually

Many cell phone users like to stay in touch with friends and family constantly. That's fine when you're not driving, but it's a big concern when you are driving. Let's look at some of the numbers/statistics:

- Risk of collision increased by up to 400% when talking on a cell phone while driving
- Nearly 80% of collisions involve some form of driver inattention (distraction, fatigue or looking away)
- In one study[1] of 100 drivers, cell phones were associated with the highest frequency of distraction-related events for crashes and near-crashes
- Another study[2], done with driving simulators, found that when talking on a cell phone:
 - Young drivers' response times to brake lights ahead were as slow as those by elderly drivers
 - Drivers of all ages were 9% slower in hitting their brakes when needed
 - Crash rates were more than 5 times greater than for undistracted drivers.

So as you can see, cell phone use while driving is a major issue in today's society. Another driving safety issue related to the cell phone is text messaging.



Text Messaging

Not too long after cell phones became more widely used, the process of “texting” began. This involves the sending of short text messages through cell phones. Texting has grown in popularity, such that today many cell phone users use their phone to both talk and text.

How Texting Can Impact Driving

To understand the effects of texting on driving we need to understand the driving task.

At its simplest, driving can be divided into three main tasks:

1. Perception- the driver must perceive what’s going on in the driving environment
2. Decision- the driver must use the information gained through perception to make a decision on what to do about a particular situation
3. Action- the driver must execute his/her decision

Or, stated through an example:

- A. The driver perceives a car ahead stopping suddenly **(Perception)**
- B. To avoid colliding with the suddenly stopping car ahead, the driver must decide whether to apply the brakes or steer around **(Decision)**
- C. The driver avoids a collision by steering around the vehicle ahead **(Action)**.

It’s important to note that a driving error can take place during any one of these tasks. They’re all important; a mistake in any one of these could cause the chance of a collision to increase substantially. Let’s take a look at each of these three tasks, when texting is factored in.

1. Perception

If your attention is focused on texting, you could easily miss *perceiving* an important change in your driving environment

- o Such as a car pulling out in front of you
- o Or a signal light changing from yellow to red
- o Or a stop sign



2. Decision

If you are texting, your attention is divided, right? That's bad, because divided attention means that *all* decision making slows down. As you add more tasks, your performance on each one becomes slower.

3. Action

If you are texting, you could fail to *execute* the driving maneuver you selected in the decision step. For example, you could fail to turn the steering wheel far enough or fast enough. Remember that when texting, at least one hand is off the steering wheel and on the phone instead, and that steering control is greatly reduced when you steer with just one hand.

You need to keep *both* hands on the steering wheel to effectively steer, especially in emergency situations. You could also fail to brake or accelerate at the right time or with the proper amount of pressure on the pedal

Perhaps the largest concern is texting's ability to impair the first step, *perception*. If your attention is devoted to texting and you fail to perceive the car stopping or turning in front of you, you'll never even *get* to the second step (decision)! Even if you typically make great decisions and have excellent vehicle control skills, if you don't perceive the need to activate these skills because you failed in *perception*, you're far more likely to experience a collision.

Note that texting may be even *more* dangerous than talking on a cell phone. When texting, the driver must often take his/her eyes off the roadway to look at the small screen on the phone. This could be different than talking on the phone, which might allow the driver to keep his/her eyes on the road to a greater degree

Preventing Distractions

- Before you drive, turn your cell phone off
 - Let voicemail capture your messages, both voice and text
 - Pick up your messages later, once you've completed your journey
- If you have to call or text, pull off the road safely and stop

Summary

Some Positive Cell Phone Statistics

Although it is becoming apparent that cell phone use on the road is a risk management concern, it is also true that wireless technologies do provide benefits to safety and traffic management. The Cellular Telephone and Internet Association reported that drivers using cell phones place 139,000 emergency calls each day. Cell phones have also proven to be beneficial in a driver's personal security by allowing drivers to contact help quickly when they experience roadside mechanical problems.



When used properly, cell phones can be a great asset. However, as you have seen today, when you combine multiple tasks such as cell phone use and texting it has a measurable effect on ones ability to perceive, decide and take action to even minor situations.

Resources

AAA Public Affairs (www.aaapublicaffairs.com)

AAA Foundation for Traffic Safety (aaaafoundation.org)

CTIA- The Wireless Association (www.ctia.org)

Governors Highway Safety Association (www.ghsa.org)

National Highway Traffic Safety Administration (NHTSA; www.nhtsa.dot.gov)

U.S. Food and Drug Administration (www.fda.gov/cellphones)

References

[1] Strayer, D., Drews, F. and Crouch, D. (2003). Fatal distraction? A comparison of the cell-phone driver and the drunk driver. Department of Psychology, University of Utah.

[2] 100-Car Naturalistic Study (2005). Virginia Tech Transportation Institute (VTTI), sponsored by NHTSA, VDOT and VTRC.

