



San Diego Unified
SCHOOL DISTRICT

Transportation Department Safety & Training

Inattentional Blindness

A brief discussion on Inattentional Blindness and how it affects a professional school bus driver on his/her routes. Essentially, inattentional blindness is a primary cause to many of the driver errors on any given day. Learning how to recognize and counter inattentional blindness can help a driver stay focused on the important tasks a professional school bus driver must attend to. This paper is only a brief explanation of inattentional blindness and a few steps to help avoid inattentional blindness.

Most accidents are a result of a driver not paying attention to problems around his or her school bus. Everyday accidents occur and drivers, many times, will not fully understand why or how the accident happened. Many of these accidents are categorized as “Avoidable” because there are things that the driver could have done to prevent the accident from occurring in the first place. Have you ever wondered why you don’t remember seeing that car or seeing the pedestrian across the street when they were easily seen by others? Or you drive through an intersection and after you pass it you ask yourself, “Was that traffic light green?” This is called inattentional blindness. It is also known as perceptual blindness.

As a school bus driver goes through his/her day, he/she is constantly required to be at a high level of alertness to react to all the things happening around him/her. This high level of alertness causes a driver to be mentally tired in a very short period of time. The human brain has a certain level of mental capacity to process all the stimuli around it. If you become tired, you begin to lose that capacity to handle all the things happening around you. Your brain will begin to select what it thinks is important and process that information and store it. Other important information isn’t selected or properly processed by your brain. The information your brain doesn’t handle properly is lost. Your brain will also begin to shut down in other areas to conserve energy. It is kind of like your home computer going to sleep when not in use. Only in the case of your brain, parts of the brain begin to shut down because it is overworked. You will not be aware that part of your brain has shut down until you hit something you didn’t see or react to.

I encourage you to do some research on your own about inattentional blindness. You will discover just how much you are falling victim to this problem. If you are aware of inattentional blindness and how and why it affects the way you do your job, you can take effective steps to reduce or eliminate inattentional blindness from your daily routine. The research to date on inattentional blindness reveals four possible causes. These causes are:

- **Conspicuity.** This means the ability of an object to catch a person’s attention. The more mentally tired you are the harder objects have to work to get your attention. Flashing lights for example. Bright colors for warning signs, certain colors like national school bus yellow, or a red stop sign. All of these things are trying to grab your brain’s attention. After you become tired, your brain will begin to mishandle all of these stimuli.

- **Mental workload.** This refers to a person's cognitive resources. Basically you have only so much brain power to process all the stuff you have to process. If you focus on one task, you cannot focus on other tasks. You have to pick the stimuli around you to focus on and prioritize them correctly. This takes a lot of brain power.
- **Expectations.** A driver will expect certain things to happen. For example, you expect the car ahead will complete their turn into that driveway and be out of your way in a couple of seconds. Then, the car stops and stays in your way and you hit it. You didn't expect that car to stop before going into the driveway.
- **Capacity.** This refers to your ability to focus a level of attention needed to complete a task. An example would be the attention required to do a difficult task you never did before. You must focus a lot of attention to complete the task. If you have several new tasks to do that require a lot of mental focus you will begin to overload your ability to process all of the required information. Especially if you are tired. But a task you are very good at and have done many times requires far less attention to complete the task.

Inattentional blindness accidents are usually caused by a combination of several factors. Too many conspicuous items trying to get your attention, Too many things happening at the same time creating a high mental workload, expectation of the same thing happening that happened last time you encountered that thing, and exceeding your mental capacity to process all of the things you have to process over the given work day. It is difficult to reduce inattentional blindness because it is difficult to realize you are experiencing it. You can tell a driver to be sure to look for problem objects before making the turn, but the training will do nothing to prevent inattentional blindness if the driver is tired, overstressed, not feeling well and is in a hurry and in an unfamiliar part of town.

This image is an example of what a rested, focused driver sees.



This image is an example of what a tired, distracted driver sees.



If a driver is overstressed, tired, in a hurry, or otherwise not focused on driving their bus, they will begin to lose important information they need to safely do their job. It is very important that a driver get enough sleep and learn to cope effectively with all the things going on around him or her. Trying to do too many tasks and not getting enough rest can lead to inattentive blindness. The term “multi-tasking” comes to mind. Here are some things you can do to help you stay focused and mentally sharp during your day.

- Keep your brain healthy by exercising it. Do things that are new and challenging to keep your mind thinking. Play chess, build a puzzle, do a crossword puzzle etc.... Learn new things to keep your brain thinking and functioning.
- Exercise your body. Getting your body moving will increase your blood flow to the brain. This may help keep your brain from collecting plaque or other bad chemicals from building up in your brain.
- Get enough sleep. Sleep is a critical process that restores your brain's ability to work correctly.

- Talk to people, make and keep friends. Social interaction has shown to keep people's minds functioning.
- Most important, keep your stress levels in check. If you are overstressed, you will begin to make critical mistakes while driving.
 - Set realistic expectations in your life. Don't expect too much from others around you in your job. Constant complaining about how things are around you won't help you do your job any better. It will only make things worse.
 - Take breaks at regular intervals to recover your mental capacity.
 - Express your feelings in a healthy way. Don't keep negativity bottled up. Find ways to release those negative thoughts in a healthy way
 - Keep a healthy balance between work and home life. Too much focus on one or the other hurts them both.
 - Focus on one task at a time. Multi-tasking is counterproductive and inefficient.
- Try to enjoy laughter. Listen to positive jokes and don't take everything so serious.
- Eat healthy food. Overeating causes your body to want to shut down. Eat light before a stressful route so your body and brain can focus on the tasks that are important and not how terrible you feel from eating something you shouldn't have eaten or being too hungry.
- Lastly, try to keep health issues in check. If you have health problems they will tend to take some of your mental capacity away from driving your bus. Trying to drive your bus while fighting with flu symptoms is very stressful for example. Medications can take away your ability to stay focused on driving your bus safely.

Hopefully you will get a good understanding of how your individual brain works and rests by doing some research on your own about inattentive blindness. Doing your own research will also stimulate your brain and help keep it healthy. Knowing how and why you forget things while driving or can't remember if the last traffic light you passed was green or red can really help you be a better defensive driver.