

# Prevention and Countermeasures of Driving Hazards

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**Abstract:** As a modern means of transportation, cars have made travelling much easier. However, cars also lead to many traffic accidents, which are often dangerous. Through an investigation and analysis of traffic accidents, it was found that the hidden dangers of driving are one of the main causes of car accidents. In order to better ensure the safety of driving, the hidden dangers of driving should be better prevented, traffic safety measures should be improved, and better protection should be provided for people's lives and property. Therefore, we analyzed the hazards of driving and proposed prevention measures, in hopes of improving driving safety.

Keywords: Driving hazards; Prevention; Countermeasures

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#### 1. Introduction

The first ever driver's permit was issued in 1888, and it was given to the man who was credited to have invented the first ever "practical car" and revolutionized the technologies of transportation. He is the German inventor Carl Benz, who later founded the Mercedes-Benz company. The permit itself was a lousy piece of paper with handwriting that was fairly hard to understand, issued by the local German authority called Grand Ducal. The initial intent of the document was to regulate the noise and smells from cars on the street after such complaints by residents. However, it was not until 1904 that cars became increasingly popular and the technology surrounding it started to turn cars into a common tool, and the United Kingdom became the first nation to enforce mandatory driving license. As traffic-related accidents started to surface upon the newfound fascination of driving, the idea of driving safety and education came into the equation.

### 2. Driving hazards

### 2.1. Safety hazards on the driver's side

Why is it that there are so many teenagers who yearn and dream about the day when they can finally drive? As of today, driving has become such a fundamental and essential part of our lives, it would be impossible for kids to not imagine themselves one day yielding these four-wheeled metal cartridges, carrying an excited and aspiring young soul. In my perspective, together with the ones of those around me, the ability to drive is even more so a sign of freedom and control over our lives. In a high school environment where most people here are between the ages of 14 to 18, this is a topic that is frequently highlighted. Everyone wants to get their driver's permit sooner that it became a culture where the earlier a person gets their permit, the more respectable they are to others. But since there is a minimum age requirement enforced by the law, how young is too young? Here in California, the minimum age to start driving is 15 and a half years old,

whereas in Brazil the minimum age is 18. However, in certain states in the US such as Kansas and Iowa, the minimum age is at a whopping low number of 14. It seems as though some governments trust their teenagers more than others. People are aware that adolescence in development does require more care and control for an activity that can lead to dangers and fatalities. The DMV has reported that the rate of teenage traffic accidents per mile is 4 times greater than that of adults. Therefore, despite how hard it is to sit through the long wait, it is understandable that the law demanded it to be this way.

The young age of car drivers, driving skills as well as driving experience are very closely linked to driving safety, all of which can lay down hidden dangers for driving safety. In addition, the driver needs to have a good sense of safety; otherwise, it may lead to serious traffic offences or unsafe behaviors, which increases the probability of safety accidents tremendously. The driver, as the main person who is in charge of the car, should be capable of driving safely.

## 2.2. Condition of vehicle

The performance of the car directly affects driving safety. If the car is not in good condition, accidents are bound to happen. For example, if the tires are not in good condition, they might leak or even burst, causing the car to lose control, leading to accidents. In addition, the braking system of cars might also malfunction from time to time. Therefore, traffic accidents are prone to occur if the vehicle is in a bad condition.

## 2.3. Traffic environment

Driving hazards are often also related to external environmental conditions, especially in the traffic environment where the situation is more complex. Traffic environment safety hazards mainly include traffic flow and natural environment. The traffic flow will directly affect the driver's level of attention to the road, thus affecting the probability of traffic accidents. In a heavy traffic, there will be unstable traffic flow, which increases the probability of traffic accidents. In addition, the natural environment is beyond human control and has a serious impact on traffic safety. Unfavorable weather conditions can affect normal driving; especially for drivers with little experience, the probability of accidents would be higher.

# 3. Driving hazards prevention and countermeasures

# **3.1. Improving the construction of traffic facilities**

Traffic facilities are important for ensuring driving safety, which is of great significance for preventing hidden driving hazards. Drivers should have a certain safety awareness and follow the traffic rules. Good traffic facilities can provide drivers with reliable traffic information and protect the drivers. Besides, traffic facilities can also provide drivers with detailed road information for drivers to make corresponding judgment. In addition, road traffic facilities can also reduce the wear and tear on the car, increase the lifespan of the car, which makes driving safer.

# **3.2.** Strengthening the assessment and training of drivers

Drivers should constantly improve their driving skills and safety awareness to prevent driving hazards and improve driving behavior. Many car traffic accidents are caused by human factors, so relevant departments should improve the standard of driver assessment and training to ensure that the drivers are proficient. Driving schools should focus on cultivating safety awareness among drivers. Secondly the driving assessment systems should also be inspected regularly to eliminate all fraudulent behaviors, to ensure that the driver assessment systems are in line with the relevant regulations. Lastly, severe punishment should be given to those who break traffic rules, so that drivers can always keep road safety in mind.

## **3.3. Improving road safety management system**

The road safety management system should be improved to ensure the smooth flow of road traffic. Therefore, road safety management system should be improved to regulate the behavior of drivers. Advanced technology should also be utilized to form a database of road information for security management and to release corresponding road information in a timely manner. In this way, drivers can obtain comprehensive and detailed road information and road safety can be improved.

## 4. Personal experience

It is hard for me to describe how I felt when I got my own license. My first instruction was to get on Highway 57. It was a quick and challenging start to my driving life, to say the least. Driving was by no means easy or simple, but it really made me feel like an adult. There was this subtle feeling of bliss and confidence whenever I got out of the car. That aura of having more than what I usually possess was carried throughout the rest of my day. I cannot prove that this particular feeling was what led to how much I enjoyed those days, but I can tell you how much I enjoyed those days. Other than being able to drive myself around, I also no longer felt like a kid who needed their parents to take them to places they wanted to go to. There is a lot more to learn in driving and I would be responsible for my own safety and the safety of others.

### **Disclosure statement**

The author declares no conflict of interest.

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