



Graduated Driver Licensing

Nighttime driving is a high-risk activity for young drivers. How does driving at night relate to the crash rates of novice teen driver?



While teenage driver crashes and casualties decreased in the past decade, and in spite of recent attention to the issue, teens are still high risk drivers and unintentional injury from motor vehicle crashes remains the number one cause of death among teens in the United States. In absolute numbers, 3,889 teens aged 16-19 – more than 10 every day – died in passenger vehicles driven by a teen in 2005. Per population, teen drivers age 16-19 are involved in about twice as many crashes, fatal and non-fatal, as drivers aged 30-59 (Ferguson, Teoh, & McCartt, 2007).

Teen crash risk is particularly elevated when driving at night and when carrying teen passengers.

- In 1995, prior to most night restrictions being enacted, 14% of fatal crashes of 16- and 17-year-old drivers occurred from midnight to 5:59 am. With nighttime defined from 9:00 pm-5:59 am, 32% of all 16- and 17-year-old driver fatal crashes occurred during these hours. Driving after midnight is particularly risky, but not many crashes of 16- and 17-year-olds take place in that time frame. The majority of nighttime fatal crashes of young beginners take place before midnight (Williams, 2007).
- Between 1996 and 2005, according to the data in Tables 1 and 2, the most progress has been made in reducing crashes among the youngest drivers. Fatal and police-reported crashes per population declined about 40% for 16-year-old drivers compared with declines of about 25% for 17-year-old drivers and 15-19% for 18-year-old drivers. Reductions among 16-year-olds were consistently higher at night than during the day (Ferguson, Teoh, & McCartt, 2007).

Factors contributing to nighttime crashes include:

- Inexperience with night driving (and driving, in general).
- Lower visibility, including the glare of oncoming headlights.
- Being in a vehicle with teen passengers may cause distractions and influence risk-taking behaviors of young drivers.
- Fatigue.
- Alcohol and/or other drug use.

This fact sheet reflects current information presented at the International Symposium on Novice Teen Driving: GDL and Beyond – Research Foundations for Policy and Practice held in Tucson, Arizona on February 5-7, 2007. For more information, go to www.nsc.org/gdl/.

Table 1. Daytime & Nighttime Fatal Crashes per 100,000 Population by Driver Age, 1996 vs. 2005 FARS

Age	1996	2005	% reduction
Daytime (6 am to 8:59 pm)			
16	22	14	40
17	25	19	24
18	28	24	14
19	24	23	3
30-59	14	12	12
Nighttime (9 pm to 5:59 am)			
16	11	6	48
17	14	10	24
18	19	16	17
19	19	17	12
30-59	6	5	11

Table 2. Daytime & Nighttime Police-Reported Crashes per 100,000 Population by Driver Age, 1996 vs. 2005 NASS/GES

Age	1996	2005	% reduction
Daytime (6 am to 8:59 pm)			
16	80	49	39
17	91	69	24
18	92	75	18
19	80	68	14
30-59	47	36	24
Nighttime (9 pm to 5:59 am)			
16	14	7	47
17	16	11	29
18	20	17	16
19	18	17	4
30-59	7	5	30

Data from the Fatality Analysis Reporting System (FARS) and the National Automotive Sampling System/General Estimates System (NASS/GES), 2005 (Ferguson, Teoh, & McCartt, 2007). Crash rates and percent reductions were rounded to whole numbers.

Nighttime Driving Restrictions

Evidence from Current Research on the Effectiveness of Night Restrictions

Nighttime driving restrictions are a critical component of Graduated Driver Licensing (GDL) systems. The effectiveness of these restrictions in reducing crashes had long been established. A few states have had night restrictions since the 1960s or 1970s, starting anywhere from 9:00 pm to midnight.

The purpose of night restrictions on driving is to protect novice teen drivers by keeping them from driving unsupervised during high-risk nighttime hours. Typically, after a learner's permit period of at least 6 months, teenagers are given restricted licenses that often limit driving unsupervised at night.

In 45 of 51 jurisdictions, night driving restrictions are now the most widely implemented feature of a GDL system. (Williams, 2007). Even before nighttime restrictions were introduced as part of GDL, many parents restricted their teen's driving during nighttime hours. This is a restriction that parents are likely to enforce.

Table 3 shows the wide range in starting times for night driving restrictions, with the most popular starting at midnight or later. Table 4 indicates the effectiveness of night restrictions in jurisdictions that have reported effects during both restricted and unrestricted time periods. Similar to positive trends in crash data presented in Tables 1 and 2, the data below shows much greater reductions during restricted hours (Williams, 2007).

Table 3. Beginning Hours for Night Driving Restrictions*

Hour	Number of Jurisdictions
6 pm	1
Sunset	1
9 pm	2
10 pm	4
11 pm	12
Midnight	17
12:30 am	2
1 am	6
No restriction	6

*Five states have different start times depending on day of week or time of year; the table tallies the earlier starting hour

Attempts to Increase Effectiveness of Night Restrictions & Next Steps

Exemptions, such as work and school-related activities that are allowed for unsupervised night driving and thought to be essential and entail lower risk, may lower the effects of nighttime restrictions. Exemptions should be carefully reviewed and considered for elimination to increase the effectiveness of nighttime restrictions.

A North Carolina study indicates that, in urban and rural areas, most parents and teens support the 9:00 pm restriction. Support is shown through 88% of parents in urban/suburban areas and 86% in rural areas agreeing with it, as did 56% of teens in urban/suburban areas and 63% in rural areas. Studies are needed in other states with early-starting restrictions to determine effectiveness and acceptability (Williams, 2007).

Table 4. Percent Crash Reductions, Nighttime vs. Daytime*

Jurisdiction	Restricted hours	Percent reduction	
		Night	Day
Florida	11-6	16	9
Michigan	12-5	59	32
North Carolina	9-5	47	22
Nova Scotia	12-5	49	5

*Data are for 16 year-olds in Florida, Michigan, and North Carolina and for 16-17 year-olds in Nova Scotia

References

- Ferguson, S.A., Teoh, E.R., & McCartt, A.T. (2007). Progress in teenage crash risk during the last decade. *Journal of Safety Research*, 38(2), 137-145.
- Williams, A.F. (2007). Contribution of the components of graduated licensing to crash reductions. *Journal of Safety Research*, 38(2), 177-184.
- NOTE:** James Hedlund summarizes information presented and discussed at the Symposium. This summary contains a complete listing of secondary references. See: Hedlund, J. (2007). Novice teen driving: GDL and beyond. *Journal of Safety Research*, 38(2), 259-266.